BOOK NO.
151

THE FAUNA OF BRITISH INDIA,

INCLUDING

CEYLON AND BURMA.

Published under the authority of the Secretary of State for India in Council.

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PRESENTED BY ORDER OF H. E. THE GOVERNOR OF BOMBAY IN COUNCIL
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COLEOPTERA.

STAPHYLINIDÆ.—VOL. I.

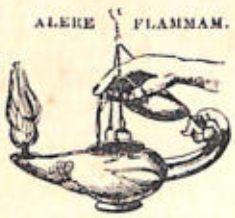
BY

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LONDON:
TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.
March, 1930.

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PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

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AUTHOR'S PREFACE.

It is hoped that this work, which must necessarily be very imperfect owing to the small amount of material so far collected over such a large area as British India, will induce those interested in Entomology to devote more time to this much neglected family, and this is the reason for a publication which perhaps may be regarded as premature. At present, however, it is practically impossible for a student in India to get a grasp of the subject, the descriptions of genera and species being scattered widely through various journals over many years, and this book, I trust, will remove this obstacle. By far the largest collections are those of Mr. H. E. Andrewes, chiefly from the Nilgiri Hills, and my own from Dehra Dun, the adjacent ranges of the Himalayas and Siwaliks, and the vicinity of Simla; my sincere thanks are due to Mr. Andrewes for placing his collection at my disposal. Amongst the smaller nes in this country is that of the late George Lewis, chiefly comprising species collected in Ceylon; Mr. H. Stevens, chiefly from Sikkim; and that of Major R. W. G. Hingston, I.M.S., taken during the last Everest Expedition: all three are in the British Museum. Other small collections are in the following Continental museums: that of L. Fea (chiefly comprising species collected in Burma), in the Museo Civico di Storia Naturale in Genoa; that of J. Nietner, in the Deutsches Entomologisches Institut, Berlin-Dahlem. Eppelsheim's types are in the National Museum, Vienna. The collection of the late Albert Fauvel, which contains the types of many species of our Fauna is unfortunately not accessible, nor have I been able to see the types of Motschoulsky's species,

which I believe are in the University Museum of Moscow. In India there are collections in the Calcutta Museum ; the Forest Research Institute, Dehra Dun ; the Agricultural Research Institute, Pusa ; and in Ceylon in the Colombo Museum. My best thanks are due to Dr. Walther Horn, of the Deutsches Entomologisches Institut, Berlin-Dahlem, for the privilege of examining the types of Kraatz ; to Dr. Holdhaus, of the National Museum, Vienna, for those of Eppelsheim ; to Professors Gestro and Gridelli, of the Museo Civico di Storia Naturale, Genoa, for those of Fauvel ; to Dr. Max Bernhauer, Horn, Lower Austria, for co-types and other material sent for examination. To Dr. C. F. C. Beeson and Mr. J. C. M. Gardner, of the Forest Research Institute, Dehra Dun ; to the late Dr. Annandale and Dr. Baini Prashad, of the Indian Museum, Calcutta ; to Mr. T. Bainbrigge Fletcher, Imperial Entomologist, Pusa ; and to Mr. G. M. Henry, of the Colombo Museum, my best thanks are due for material sent from time to time. I am also indebted to Mr. G. J. Arrow, of the British Museum, for his kindness in getting together the undescribed material in that Institution, thus saving me considerable time and trouble.

The Text-figures and Plates are the work of Miss Barbara Hopkins, to whom I tender my best thanks. To the Editor, Lieut.-Col. J. Stephenson, C.I.E., I am much indebted for superintending the preparation of the plates and for his careful revision of the proof, but for which numerous discrepancies would doubtless have been overlooked.

M. CAMERON.

January, 1930.

GLOSSARY OF TECHNICAL TERMS.

(♂ *indicates the male,* ♀ *the female.*)

Acicular, sharply pointed like a needle.
Acuminate, ending in a point.
Ædeagus, the chitinous capsule containing the penis.
Æneous, brassy.
Alutaceous, covered with a fine network of lines like those on the human skin.
Anal, relating to the extreme end of the abdomen.
Apterous, without membranous wings.
Arcuate, curved like a bow.
Asperate, rough.
Attenuated, gradually narrowed.

Bi-, in composition means two, as bifid, split into two parts.
Bordered, having a raised edge or margin.
Buccal, relating to the mouth.

Callus, an elevation or boss.
Canaliculate, channelled or grooved.
Carina, a keel or raised line.
Carinate, furnished with a keel.
Castaneous, chestnut-coloured.
Chitin, a horny substance forming the integuments, etc.
Ciliate, furnished with a row of more or less parallel hairs.
Clavate, forming a club.
Compressed, flattened from side to side.
Concolorous, of uniform colour.
Confluent, running into each other.
Cordate, cordiform, heart-shaped.
Coriaceous, having a surface like leather.
Corneous, horny.
Costate, having raised ridges.
Crenate, crenulate, an edge with small projections which are rounded at the apex.
Cupuliform, bowl-shaped.
Cusp, a projecting point.
Cyaneous, dark blue.

Declivous, sloping downwards.
Deflexed, bent downwards.
Dehiscent, gaping apart.
Dentate, furnished with pointed teeth.
Denticulate, furnished with very small pointed teeth.
Depressed, flattened from above.
Disc, the central part of an area.
Distal, furthest from the central line of the body.

Edentate, without teeth.
Emarginate, notched.
Explanate, widened out or expanded.

Facies, the general appearance.
Fascia, a broad band.
Ferruginous, rust-red.
Filiform, thread-like and almost the same width throughout.
Fossa, a large pit or depression.
Fovea, a small pit or depression.
Fulvous, tawny yellow.
Fundus, the bottom of a pit or depression.
Fuscous, dark brown, almost black.
Fusiform, spindle-shaped.

Geniculate, elbowed or abruptly bent; applied to antennæ in which the 1st joint is much longer than the following.
Glabrous, devoid of hairs.
Granular, granulate, covered with small elevations or granules.
Gular, pertaining to the central region of the under surface of the head.

Hirsute, furnished with long close hairs.
Humeral, relating to the shoulder.

Imbricate, an appearance like the tiles of a roof.
Impunctate, without punctures.
Incrassate, thickened.
Infuscate, darkened.
Interstices, the spaces between punctures.
Interstriæ, the spaces between rows of regular punctures.
Iridescent, having prismatic colours varying according to the direction of the light.

Juxta, in composition means near or close to.

Laminate, like a flat plate.
Linear, narrow, elongate, parallel-sided.

Maculate, spotted.
Membranous, of parchment-like consistency.
Mental, relating to the mentum.
Moniliform, like a string of beads.

Obconical, in a reversed cone.
Ochraceous, reddish-yellow.
Oval, a figure with curved sides equally pointed at each end.
Ovate, a figure with curved sides more pointed at one end; egg-shaped.

Pectinate, toothed like a comb.
Piceous, dark brown; pitchy.
Pilose, hairy.
Pitchy, dark brown.
Plicate, furnished with a fold or folds.
Pore, a large puncture.
Porrect, projecting forwards.
Proximal, the part nearer the central line of the body; the converse of distal.
Pubescent, furnished with hairs.
Punctate, furnished with punctures.
Punctate-striate, furnished with grooves each having one or more rows of punctures.
Puncturation, the presence of punctures.
Puncture, a very small depression of the integument.
Pygidium, the last dorsal segment of the abdomen.

Quadrate, square.

Reflexed, bent upwards.
Reticulate, retiform, having a network of fine interlacing lines.
Rufous, reddish.
Rugose, with uneven surface.

Scape, the 1st antennal joint when unusually elongate, as in *Cryptobium*.
Sculpture, the modification of the integument by punctures, striæ, etc.
Scutellary, near the scutellum.
Securiform, hatchet-shaped.
Serrate, with pointed teeth like a saw.
Seta, a stiff hair.
Setiferous, setigerous, setose, furnished with setæ.
Shagreened, see *Coriaceous*.
Sinuate, having two curves in opposite directions.
Squamose, covered with scales or of scaly aspect.
Stria, an impressed line.
Striate, furnished with striæ.

Striate-punctate, having rows of punctures.
Strigose, having fine scratches.
Sub-, in composition signifies almost or slightly.
Subulate, like an awl.
Sulcate, furnished with a groove or grooves.
Suture, the line of junction of any two parts.

Testaceous, yellowish.
Transverse, (1) broader than long ; (2) in a crosswise direction.
Trapezoidal, form of an irregular four-sided figure.
Truncate, ending abruptly.
Tubercle, a small abrupt elevation.

Umbilicate, as applied to puncturation, signifies a puncture within which is yet another smaller one.
Umbonate, a surface broadly raised above the general level, as if a cushion had been placed on it.

Vermicular, vermiculate, furnished with wavy interrupted striæ.

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INTRODUCTION.

THE name *Staphylinus* appears to have been first used by Linnæus (Syst. Nat. 1758), and included all the species of STAPHYLINIDÆ then known; some of them have since then been removed from what is now known as the genus *Staphylinus*. Fabricius (Syst. Ent. 1775) founded the genera *Oxyporus* and *Pæderus*. Paykull published his 'Monographia Staphylinorum Sueciæ' in 1789; Latreille, in his Hist. Nat. Crust. et Insectes (1802–05) and Gen. Crust. et Insectes (1806-07), further extended our knowledge. In 1802 Gravenhorst's 'Micropterа Brunsviciensia' appeared, and in 1806 the 'Monographia Micropterorum.' Stephens's Illust. Brit. Ent., Mandibulata (1827), Mannerheim's 'Brachelytra' (1830), Nordmann's 'Symbolæ ad Monographiam Staphylinorum' (1837), all added to the number of genera and species. It was, however, Erichson, in his classical work, 'Genera et Species Staphylinorum' (1840), who redescribed all the genera and species then known, together with many others from all parts of the world, and may be credited with having placed the family on a sound footing, and his classification is still largely followed at the present time. Heer, in 1842, published the 'Fauna Coleopterorum Helvetica,' containing descriptions of several STAPHYLINIDÆ. Lacordaire's 'Genera des Coléoptères' (ii, 1855) and Jaquelin du Val's 'Genera des Coléoptères d'Europe' (ii, 1857–59) increase our genera. Motschoulsky, between the years 1844 and 1861, and Kraatz, between 1853 and 1868, contributed many important papers on tropical and European species; Mulsant and Rey, much on the European fauna; C. G. Thomson, on the Scandinavian in his 'Skandinaviens Coleoptera,' iii, 1861; J. Sahlberg, various papers between 1870 and 1911. Fauvel, from 1862 to 1908, published many important contributions; Sharp, from 1862 to 1920, wrote much on the subject; Eppelsheim, between 1873 and 1895, added to our knowledge of the group. Wollaston, in his publications between 1854 and 1877 on the insects of Madeira, the Canaries, etc., described many new species. Casey, since 1884, has written much, chiefly on the North American species; Eichelbaum has written on the African fauna between the years 1908 and 1913. Amongst

contemporary writers may be mentioned Benick, Bernhauer, Fenyes, Gridelli, Lea, Peyerimhoff, Rambousek, Scheerpeltz, Silvestri, Wasmann, and Wendeler. The above brief account by no means includes all who have contributed to our knowledge of the family, which numbers 12,740 species according to the latest catalogue (Bernhauer, Schubert, and Scheerpeltz, 1910–26), but several hundreds have been described since.

This family of Coleoptera is, with few exceptions, readily recognized by the short elytra with straight suture, and the consequent exposure of the greater number of the abdominal segments, which are freely movable (only exceptionally in the females of some of the species of *Anthobium* do the elytra cover the abdomen), and the presence of ocelli on the head at once distinguishes them from all other Coleoptera. Certain more or less aberrant species of other families have short elytra, and also the SILPHIDÆ and PSELAPHIDÆ; but the two latter families have a straight suture and wings concealed in repose, whilst the others have a suture dehiscent from the scutellum and exposed wings. The family is closely related to the SILPHIDÆ and PSELAPHIDÆ, and, indeed, it is doubtful whether satisfactory distinctions exist: such as they are may be shown in the following table :—

Species with short elytra, the suture at most dehiscent behind, the wings in repose completely concealed under the elytra.

1. Segments of the abdomen immobile	PSELAPHIDÆ.
Segments of the abdomen freely movable	2.
2. The first three or four dorsal abdominal segments membranous.....	SILPHIDÆ.
The first one or two dorsal abdominal segments membranous	STAPHYLINIDÆ.

In England they are popularly known as "Rover beetles," and have also been named MICROPTERA and BRACHELYTRA. The "Devil's Coach-horse" is a familiar British species.

METAMORPHOSES.

As in most insects four stages are recognized during their life-history—the egg, larva, pupa, and imago; but owing to the obscure habits and small size of most species and the difficulty in rearing the early stages when removed from their natural surroundings, but little is known about them. The following account of the larvæ is taken from Schiödte (Naturhist. Tidsskr. 3 Raekke, iii, 1864–65, pp. 193–215, and 3 Raekke, viii, 1872–73, pp. 548–564). They are active six-legged creatures,

and three types are recognized—the Oxyteline, Stenine, and Staphyline; the differences are indicated below:—

Oxyteline type. (*Oxyporus, Platystethus, Bledius.*)	Stenine type. (*Stenus, Tachinus, Tachyporus, Syntomium.*)	Staphyline type. (Staphylininæ.)
Head deflexed, not constricted behind.	Head deflexed, constricted behind. Clypeus spinose.	Head prominent, constricted behind. Clypeus toothed.
Antennæ 3-jointed.	Antennæ 4-jointed.	Antennæ 4-jointed.
Mouth-parts retracted.	Mouth-parts prominent.	Mouth-parts prominent.
Mandibles toothed.	Mandibles falciform, toothed.	Mandibles falciform, simple.
Labium not lobed.	Labium bilobed.	Labium trilobed.
Dorsal plates of thorax entire.	Dorsal plates of thorax entire.	Dorsal plates of thorax entire.
Prosternum membranous.	Prosternum membranous.	Prosternum chitinous.
Cerci 1- or 2-jointed, short.	Cerci 2-jointed, long, setaceous.	Cerci 2-jointed, setaceous.

The pupæ are quiescent and somewhat similar to those of the Lepidoptera, but with the limbs etc. more evident.

Structure of the Imago.

The adult is divided into three principal parts—the head, thorax, and abdomen.

The *head* is a chitinous capsule of variable form protecting the chief sensory apparatus and the mouth-parts. It is pierced by six openings: the *occipital* behind for the passage of the gullet and nerve-cords, the *buccal* in front containing the mouth-parts, a large *optic* on either side for the optic nerves, and a smaller *antennal* for those of the antenna. The upper surface (fig. 1), *disc* or *epicranium*, sometimes shows a more or less abbreviated median suture; the frontal region is sometimes separated behind from the rest of the surface by a more or less transverse suture, and is known as the *clypeus*; the central point of the *epicranium* and its immediate neighbourhood is the vertex. The *neck* is that portion articulating with the thorax and pierced by the occipital foramen; it is usually surrounded by a raised margin or *collar*; it may be thick and inserted into the thorax or very slender and free; every gradation is found between these extreme forms. The side of the head behind the eye may form an unbroken line or curve to the neck, or it may be more or less suddenly constricted; in the former case (fig. 2) it is known as the *post-ocular region*, in the latter (fig. 1) the anterior portion is

called the *temple*, and the rest the *base*; the more or less evident angle at the point of union is the *posterior angle*. The under surface is somewhat variable; on each side of the middle line it may present a suture extending from the buccal to the occipital foramen; these are the *gular sutures*, the space between is the *gular plate* (fig. 4): or the sutures are

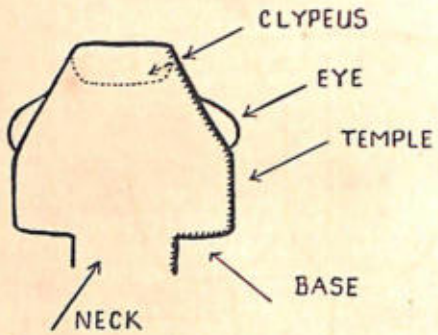


Fig. 1.—Diagram of upper surface of head.

fused to a greater or less extent, forming a median *gular suture*, so that only the anterior part of the gular plate is present, which is called the *submentum* (fig. 3). Often a ridge or crest external to the gular suture extends from the neck forwards to the buccal orifice and sometimes reaching it; it is known as the *infra-orbital ridge* or *crest*, and when present the temple is

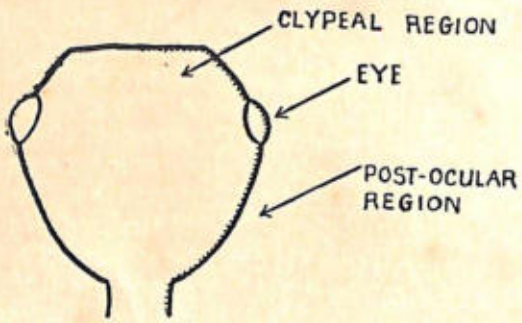


Fig. 2.—Diagram of under surface of head.

said to be bordered below. The *eyes* are variable in size; they are variably situated on the sides of the head and are occasionally absent. *Ocelli* are found only in the OMALIINI; they are two in number, one on either side of the vertex. *Antennæ*, two in number, may be freely inserted on the front or side of the head before the eyes, or the insertion

may be more or less concealed under a ridge or projection; they consist of 9 (MICROPEPLINÆ), 10, 11 or 12 (ADINOPSINI) joints, the most usual number being 11; the ADINOPSINI have not been recorded from India. The form of the joints is very variable.

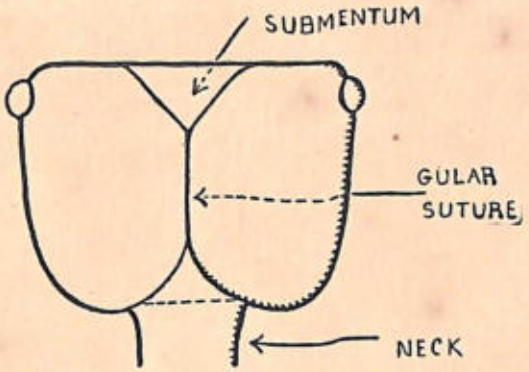


Fig. 3.—Diagram of under surface of head.

Parts of the Mouth (figs. 5, 6).—The *labrum*, or upper lip, is usually a more or less transverse plate chitinous behind and more or less membranous in front, often bilobed or furnished with spines; it is united to the clypeus by a membrane,

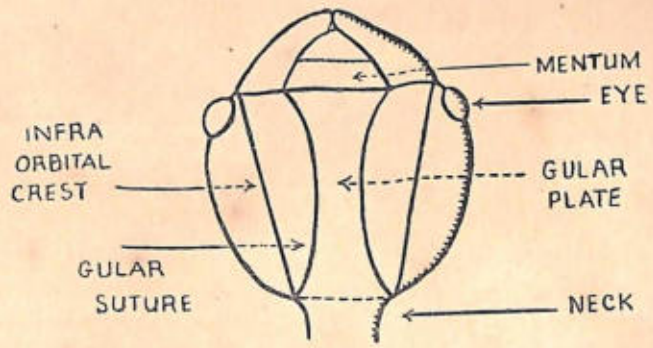


Fig. 4.—Diagram of under surface of head.

and limits the buccal orifice above. The *mentum* is a chitinous, usually more or less trapezoidal plate united to the *submentum* or *gular plate* by a membrane; in front it supports the *labium*. The *labium* is more or less membranous and transverse (except in the STENINÆ, where it is elongate and can be much exserted); at rest it lies above the *mentum*,

to which it is attached. In the middle it carries the *tongue* or *lingua*, which is entirely or in part membranous and very variable in shape. On either side and overlying the tongue are the *paraglossæ*; each is a slender chitinous rod furnished internally with numerous hairs or setæ; occasionally these structures are rudimentary or absent. Arising from the labium external to the paraglossæ on each side are the *labial palpi*; these are very variable in size and are composed of from one to four joints, usually however of three; occasionally the third joint is much modified (*Oxyporus*). External to the mentum and articulating with the margin of the buccal orifice

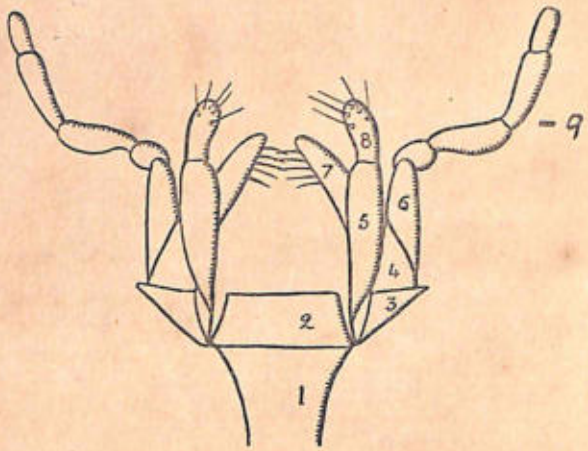


Fig. 5.—Diagram of the maxillary lobes etc.

1. Submentum or gular plate.
2. Mentum.
3. Cardo.
4. Stipes.
5. Lacinia.
6. Squama.
7. Inner lobe of maxilla.
8. Outer lobe of maxilla.
9. Maxillary palp.

by a small more or less triangular joint (*cardo* or *hinge joint*) is the *maxillary lobe*, which consists of the following parts—the *stipes*, a more or less triangular plate, the base articulating with the cardo, its outer side carrying a piece known as the *squama* or *palpifer*, which bears the *maxillary palpus*; its inner side similarly supports another piece, the *lacinia*, to which are articulated the *inner* and *outer lobes of the maxilla*. The *maxillary palpus* is composed of four, more rarely of five or three joints; the first of these is usually small, but in the STENINÆ is elongate: the relative size of the joints is very variable, the terminal one is frequently very small. The *inner lobe of the maxilla* is partly chitinous and partly membranous,

usually narrow and pointed at the apex, often hooked, the inner border furnished with teeth, spines or cilia, or all three combined ; the *outer lobe* is usually broader than the inner, with a truncate or rounded apex, usually more or less densely ciliate, but sometimes with spines. The *mandibles* are articulated to the buccal margin outside the cardo ; they are very variable, sometimes long, slender, and pointed with long sharp teeth, sometimes stout with broad crushing teeth, sometimes edentate, or one with a tooth and the other without ; at the base behind the last tooth is usually found a fine ciliated membrane. Occasionally the whole outer surface is longitudinally grooved.

The thorax is the division of the body immediately following the head, and to it are attached the organs of locomotion. It consists of three parts, the pro-, meso-, and metathorax ; each part is composed of an upper and lower plate, the *pro-*,

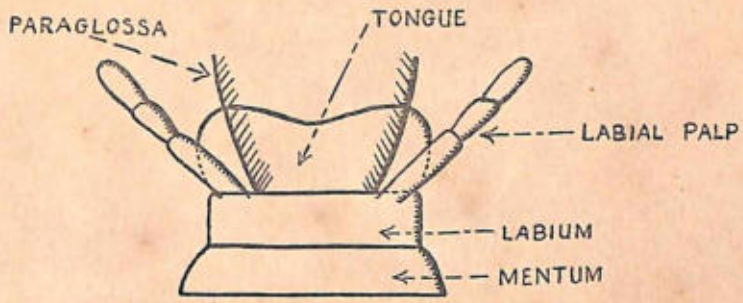


Fig. 6.—Diagram of labial palpi etc.

meso-, and *metanotum* above and the *pro-*, *meso-*, and *metasternum* below, with certain additional plates. Seen from above the *pronotum* comprises the greater part of the visible thorax, and is usually spoken of as the " thorax " in systematic works ; this, though convenient and so used here, is not correct ; the part should be referred to as the pronotum. Its lateral margins, bent downwards and inwards, form the *pronotal epipleura*, the sharp line of reflexion forms the *superior lateral line* of Sharp, the free lower margin the *inferior lateral line* of that author.

The only part of the *mesonotum* visible from above without dissection is known as the *scutellum* ; it presents as a small triangular or rounded plate in the middle line at the base of the elytra. In some groups it is invisible. The *metanotum* is entirely concealed by the elytra. Passing now to the under surface (fig. 7), we have in front the *prosternum ;* this is a plate of very variable development. In the middle it is more or less produced backwards into a process between the anterior coxæ ; antero-externally it is fused with the under surface

of the pronotum or the pronotal epipleura when present limiting the coxal cavities in front. The *prosternal epimeron* is a triangular or tongue-shaped plate fused with the epipleura externally or free; it limits the coxal cavity behind and conceals the spiracle or respiratory aperture of the prothorax; in the LEPTOCHIRI it extends to the apex of the prosternal process, so that the coxal cavity is completely closed behind; when absent the spiracle is exposed. The epimera are well developed in the MICROPEPLINÆ, OXYTELINÆ, STENINÆ, and PÆDERINÆ, wanting in the STAPHYLININÆ and ALEOCHARINÆ, present as a small free plate in the TACHYPORINÆ.

The *trochantin*, usually concealed at the base of the coxa, is sometimes larger and exposed as a narrow plate between the posterior margin of the prosternum and the anterior margin

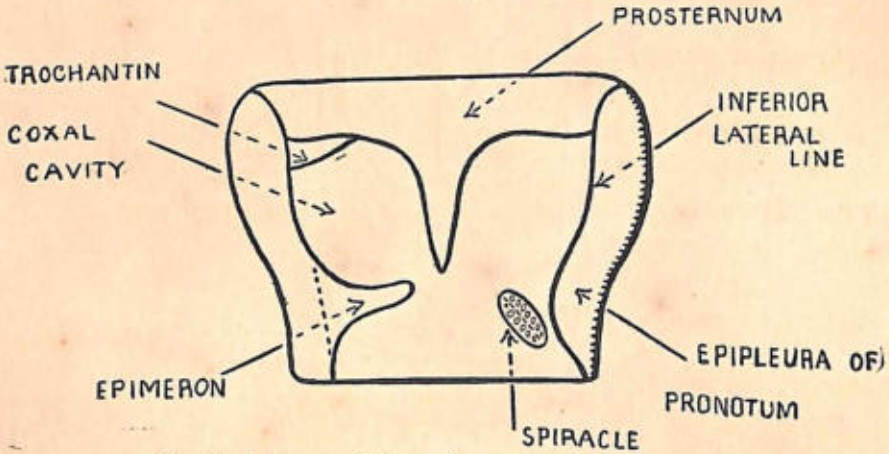


Fig. 7.—Diagram of the under surface of the prothorax.

of the epimeron when present. It is well seen in *Eleusis* and *Platystethus*. It is possible it may represent the *prosternal episternum*, but is usually regarded as pertaining to the coxa.

The *mesosternum* (fig. 8 (1)) is a more or less triangular plate, in the middle more or less produced backwards between the intermediate coxæ, occasionally meeting a forwardly-directed process of the metasternum or separated from it by an intersternal piece (fig. 8 (8)). Sometimes it is keeled along the middle. Externally it unites with the *mesosternal episternum* (fig. 8 (2)), completing the boundary of the middle coxal cavities in front. The *mesosternal epimeron* (fig. 8 (3)) is united to the corresponding episternum in front, and limits the coxal cavity externally. The *metasternum* (fig. 8 (7)) is a large plate sometimes more or less produced in the middle line in front between the intermediate coxæ; behind it ends in a free border, which forms

the anterior margin of the posterior coxal cavities, whilst its front border bounds the middle coxal cavities behind. The *metasternal episternum* (fig. 8 (4)) is usually a long narrow plate lying along the outer border of the metasternum ; the *metasternal epimeron* (fig. 8 (5)) is a somewhat similar plate contiguous with the outer edge of the preceding.

The appendages of the thorax consist of three pairs of legs, a pair of elytra or wing-cases, and a pair of wings ; these are sometimes wanting and in rare cases the elytra also.

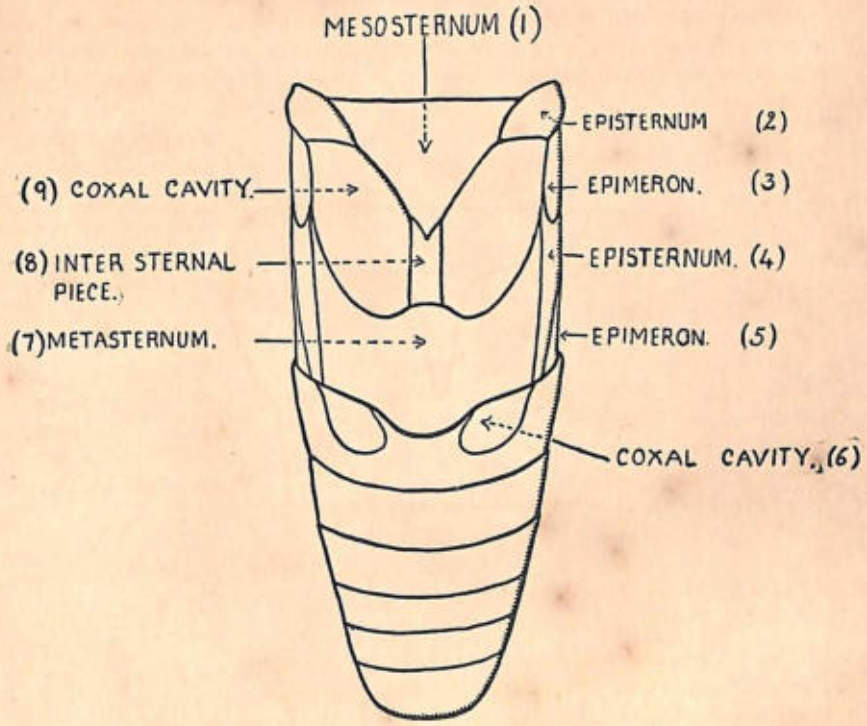


Fig. 8.—Diagram of under surface of the mesothorax, metathorax, and abdomen.

The *elytra* or *wing-cases* are usually short, only in some females of the genus *Anthobium* do they entirely cover the abdomen ; the *suture* or division between is usually straight, occasionally dehiscent behind, as in *Platystethus* and *Thinobius* ; sometimes, as in some XANTHOLININI, one elytron overlaps the other and is said to be imbricate. The sides are often reflexed downwards and inwards ; these reflexed parts are the *epipleura* of the elytra ; the line of reflexion is frequently marked by a fine sharp keel. *The wings* are membranous with chitinous veins ; the venation is comparatively simple ; it has not yet

been employed as an aid to classification, and so need not concern us here. A beautiful hinge mechanism exists in some of the veins, so that the wings may be folded away when not in use.

The legs.—Each leg consists of five parts, the *coxa, trochanter, femur, tibia,* and *tarsus.* The *coxæ* are very variable in shape, globular, cylindrical, etc.; they are inserted in the coxal cavities. The *trochanter* is a usually small splint-like plate which binds the coxa to the femur. The *femora* are more or less elongate; occasionally their under surface carries spines. The *tibiæ* articulate with the femora and present a greater variety of forms than those structures, the anterior often being more modified than the others; they may be dentate, spinose, or ciliate externally, occasionally in some males they present sexual characters in being curved, sinuate, or spurred, as in some species of the genera *Megarthrus* and *Stenus.* The *tarsus* or *foot* articulates with the tibia and consists of from one (*Doryloxenus*) to five joints, more usually the latter number; frequently the anterior or anterior and middle are of four and the posterior of five joints, rarely (*Atanygnathus*), the anterior are of five and the middle and posterior of four joints. The relations of the joints amongst themselves in regard to length etc. vary greatly; in many the fourth joint is bilobed or furnished with an appendage below. The last joint is almost always furnished with a pair of lightly-curved claws; in the HYGRONOMINI they are sharply angulate near the base. In some males (and occasionally females) a variable number of the joints of the anterior tarsus may be dilated; in one genus (*Ctenandropus*) the second joint of the middle tarsus in the male is pectinate below.

The abdomen.—This is a segmented structure containing the digestive and reproductive organs. A good deal has been written on the actual number of segments, owing to the fact that certain of the anterior segments have been replaced by membrane and certain of the posterior ones appear to have been withdrawn more or less within the abdomen and become modified to serve in copulation. Each unmodified segment consists of a dorsal and ventral plate, and for the purpose of this work it will be taken that there are eight dorsal and seven ventral plates, the first two dorsal plates being membranous and concealed by the elytra. Both the dorsal and ventral segments may present secondary sexual characters in the male. Usually more or less elongate, it is said to be bordered when the side-margins form an edge more or less upturned; most of the groups have the abdomen bordered, a few (LEPTOCHIRI, OSORIINI, some STENINI, etc.) have not. In some the bases of the more anterior segments are transversely impressed. As before stated, the abdomen is freely movable, and the tip

may be elevated and turned forwards to assist in packing the wings under the elytra.

A good deal has recently been written on the *œdeagus*, the partly membranous and partly chitinous capsule which contains the intromittent organ and which when not in use is concealed within the abdomen, and many species have been founded on the differences observed. Arrow, in this series (Lamellicornia, pt. ii, p. 11, pl. v, figs. 4–10), has drawn attention to the variations of this structure; moreover, being partly chitinous and partly membranous, different methods of preparation are likely to cause distortion. As this structure is not used for the determination of species in this work it will not be further dealt with.

Sculpture.

This consists of *punctures* of various kinds and a *ground sculpture*: one may be present without the other, or both may be absent. A puncture may be a small, round, simple depression, or its margin may be elevated at some point, when it is said to be *asperate*; or it may be elongate; or *umbilicate* when a smaller puncture is contained within a larger. Puncturation is *regular* when the punctures are uniformly distributed over the surface, *irregular* when bare spaces are left in places, *double* when consisting of a mixture of larger and smaller punctures. The *ground-sculpture* is, as a rule, of a finer pattern, and consists of fine lines occupying the intervals between the punctures; it is *coriaceous* or *alutaceous* when the interlacing lines give an appearance like leather; *granular* or *shagreened* when the surface is rougher, like a shark's skin. Often it is difficult to say whether the sculpture is an extremely dense and fine puncturation or whether it should be called coriaceous.

Pubescence.

Most STAPHYLINIDÆ are more or less hairy or pubescent. Longer and stouter hairs are known as *seta*. Surfaces devoid of pubescence are *glabrous*.

ŒCOLOGY.

The habits of the family are most diverse; for the most part their lives are concealed and little is known concerning them. Doubtless many are scavengers. Many are found in dung and carcases; amongst these are *Oxytelus*, *Platystethus*, *Lithocharis*, *Philonthus*, *Staphylinus*, *Creophilus*, *Tachinus*, many ALEOCHARINÆ; in fungus when fresh, *Oxyporus*, *Conosoma*, *Gyrophæna*, and many other ALEOCHARINÆ (also

when decomposing, most of the genera frequenting dung and carrion) ; rotting fruit is a great attraction to many *Oxytelus* (chiefly the more or less red species), *Thyreocephalus, Philonthus, Staphylinus, Tachinomorphus, Atheta, Aleochara,* and *Pseudoplandria* : amongst dead leaves and vegetable debris, *Omalium, Delopsis, Oxytelopsis, Astenus, Stilicus, Thinocharis, Acanthoglossa, Medon, Xantholinus, Thyreocephalus, Philonthus, Staphylinus, Quedius, Coproporus,* and many ALEOCHARINÆ ; under the bark of decaying trees is the habitat of *Eleusis,* the LEPTOCHIRI, *Holosus, Lispinus, Phyllodrepa, Phlœonomus, Conosoma, Placusa, Homalota, Leptusa,* and many other ALEOCHARINÆ ; a few, such as *Philorinum* and *Amphichroum,* are pollen-feeders : a large number of genera are found near water ; in the moss on boulders in streams are found *Lesteva, Geodromicus, Ancyrophorus,* some *Trogophlœus, Stenus, Dianous*; under stones partly submerged, *Hygrogœus,* some *Trogophlœus, Scopœus,* many *Lathrobium, Pseudobium,* and *Cryptobium, Actobius, Neobisnius,* some *Philonthus,* some *Quedius, Atanygnathus, Acylophorus, Anchocerus, Myllæna,* and many genera of ALEOCHARINÆ ; in sandy banks of streams, *Bledius,* some *Osorius* ; on the sea-shore under seaweed are found certain *Trogophlœus, Thinobius, Cafius, Phucobius,* and numerous ALEOCHARINÆ ; under stones in open places, *Scimbalium, Achenium, Dolicaon, Xantholinus, Leptacinus,* some *Philonthus, Staphylinus,* and ALEOCHARINÆ. Amongst those found freely wandering about are some *Stenus, Pæderus, Palaminus* (on leaves of trees), *Hesperus, Staphylinus, Trichocosmetes, Parapalæstrinus, Naddia, Tympanophorus,* etc ; these are probably all hunters. Under ground in the nests of mammals in Europe certain *Oxytelus, Philonthus, Quedius,* and ALEOCHARINÆ have been found quite special to these habitats, and doubtless in India such will also be discovered too ; birds' nests likewise have similar guests. In South America the genus *Amblyopinus* is actually parasitic on certain Mammals. In Europe many species are found under stones at the edge of the snow-fields. Several genera are associated with Ants and Termites. From the above brief survey it will be gathered that the habits of the family are very diverse.

Association with Ants and Termites.—Species so associated may be roughly divided into the following classes :—(1) Simple scavengers, which do not interfere with their hosts and are not interfered with by them and do not present any special peculiarities ; such are *Oxytelus myrmecophilus* Cam., found with *Phidologiton diversus* Jerd., and in Europe *Leptacinus formicetorum* etc. (2) Species which devour the young or provisions of the host. This section may be subdivided into (*a*) species yielding a secretion agreeable to the host, who tolerate them on this account, although very vulnerable to attack (these are

specially modified forms, and the European *Lomechusa* is an example); (*b*) species purely predatory and yielding nothing to their hosts (these are small, hard, highly polished, and more or less contractile species, and so slip through the jaws when seized; such are *Pygostenus* and *Doryloxenus*, both associated with Termites in India, but the former in Africa is found with the Ant *Dorylus*). (3) Species not living in the nests but in the vicinity, and attacking the Ant or Termite in the open; amongst these is the large genus *Zyras*, and I have seen one seize an Ant by the thorax and shake it much as a terrier does a rat; so intent was it on its victim that, even after being captured in a glass tube, it still continued to shake it. *Parapalæstrinus* and *Naddia* are probably myrmecophagous, and perhaps also *Tympanophorus* and some allied genera. *Eusteniamorpha* is associated with the genus *Pheidole*, and one species, *E. wasmanni* Cam., from the Malay Peninsula, has a very ant-like facies. Very shortly after exposing a comb from a Termite's nest a number of species arrive which in my experience are never found otherwise; such are *Quediosoma*, *Rhopalinda*, *Demerinda*, *Pelioptera*, etc. If, however, the comb is removed to a zone above the limit of the Termite, practically nothing is attracted to it until it is again brought into the region inhabited by the Termites. These genera are then, I believe, in some way dependent on Termites. There is in India a great field for study in respect of their relationships.

Association with other Hymenoptera.—Champion has described a *Velleius*, and as this genus lives in Europe in the nests of the hornet, it is probable that our species has a similar habitat.

Mimicry.—So far no examples of resemblance to flowers, leaves, etc., such as are frequently found in other families, have been recorded from our Fauna amongst the STAPHYLINIDÆ; even the species associated with Ants do not present that extreme modification not uncommon in other parts of the world.

Protective Coloration.—So far as our Fauna is concerned, there are few large and brilliantly-coloured species such as are found in Tropical America, New Guinea, etc., and nothing is apparently known as to whether these are distasteful to birds or small reptiles. The bright, mostly red and black, *Pæderus* are probably distasteful, for, as mentioned below, two species are capable of causing an eruption on the human skin; the great majority probably owe their safety to their obscure habits and sombre coloration.

Migration.—Frequently before rainfall on still evenings, I found have large numbers of STAPHYLINIDÆ attracted to light; they are, for the most part, genera living on the banks of streams, such as *Trogophlæus*, *Scopæus*, *Bledius*, etc., but,

besides these, *Platyprosopus* and *Zyras* not infrequently occur. On such occasions I have often found species which I have not met with in their normal habitats.

Swarming.—I know of only one Indian species presenting this phenomenon, viz., *Leptacinus filum* Fauv., which I have seen in great numbers towards sunset running rapidly about in all directions on the surface of the warm boulders in the nullahs about Dehra Dun. Some boulders for no obvious reason do not attract the swarms although similarly situated and exposed. Copulation, however, does not apparently take place on these occasions, and probably the insects retire to the grass-roots at the foot for this purpose.

Economic Relations.

Apart from their function as scavengers, very little is known as to species which may be of economic importance; certain large *Staphylinus* are known to devour small worms. *Palaminus* probably feeds on Aphidæ or Thysanoptera. *Pœderus fuscipes*, which is found in great abundance in the rice-fields, may assist in devouring pests of that crop. *Oligota pallidicornis* Cam., from Mauritius, has been found feeding on "Red Spider"; an apparently undescribed *Atheta* (or allied genus) from Australia is recorded as eating *Thrips* *. The widely-distributed *Aleochara bilineata* Gyll. in its larval state enters the puparium of the Cabbage Fly (*Chortophila brassicæ* Bouché) and devours the pupa †. It is possible that knowledge of the early stages may show that the family is of greater economic importance than as yet has been ascribed to it.

Medical Aspects.

Two species of *Pœderus*, *crebrepunctatus* Epp., from East Africa, and *irritans* Chapin, from Ecuador, have been noted as causing a rash by walking on the human skin.

Sexual Dimorphism.

The males are frequently distinguished from the females by special characters; the head is often more developed, as in some *Oxytelus*, *Philonthus*, *Belonuchus*, and *Staphylinus*, and it may be furnished with horns or spines as in some *Eupiestus*, *Oxytelus*, and *Bledius*, or with a median pore as in some *Thamiarœa* and *Zyras*; in *Mœnidius* the fourth joint of the

* I find this species was described as *Gnypeta fulgida* by Fauvel; it is, however, not a *Gnypeta*, and I have based the genus *Thripsophaga* on it (see Ann. Mag. Nat. Hist. (10) iii. 1929, p. 600).

† Wadsworth, Journ. Econ. Biol. x, 1915, pp. 1–27, pls. i, ii, gives a detailed account of the life-history.

maxillary palpi is cupuliform in the male, cylindrical in the female; the thorax in certain *Bledius* is furnished with a spine; the elytra may be flattened and explanate at the postero-external angle as in some *Thamiaræa* and *Gyrophæna*, or studded with granules in some *Gyrophæna*, or with a sutural crest in some *Brachida* and *Pseudoplandria*, or much longer in the female than in the male, as in some *Anthobium*; the dorsal segments of the abdomen may present tubercles, horns, or processes; the posterior margin of the sixth (visible) segment is often dentate or furnished with long spines; the posterior margins of the fifth to seventh ventral segments (and occasionally those anterior) are often variously modified, the commonest being a more or less triangular or crescentic emargination of the sixth segment. The anterior tarsi are frequently dilated in the male sex, more rarely in both; the second joint of the middle tarsus is pectinate below in *Ctenandropus*; in some *Megarthrus* and *Stenus* the tibiæ may be furnished with an apical spur, or may be curved or sinuate.

Species.

No satisfactory definition of a species has yet been given, and it follows that what one author regards as a species another regards as a subspecies, variety, or aberration. It is practically certain that hybridisation occurs resulting in "intermediates" or very rare "species." I have seen two species of *Phyllobius in cop.*, also two genera, *Morica* and *Akis*, the species concerned being respectively *M. planata* F. and *A. acuminata* F.; both species occurred freely together, and amongst them were undoubted intermediates. Although none of these belong to the Staphylinidæ, it can scarcely be doubted that the same thing occurs amongst them.

Classification.

It must be remembered that any system of classification is artificial and merely represents a convenient way of indexing an otherwise unwieldy mass of material. It is true that many groups stand alone, but the majority have definite affinities, and often genera will be found to pass into one another although the genotypes are very distinct. Various systems of classification have been devised, but their merits will not be discussed in this work, in which thirteen subfamilies will be dealt with.

Family STAPHYLINIDÆ.

Microptera Gr., Col. Microp. Brunsv. 1802, vii.
Staphylinii Lat., Hist. Nat. Crust. Ins. ix, 1804, p. 172; Gen. Crust. Ins. i, 1806, p. 203; Kraatz, Naturg. Ins. Deutsch. ii, 1856–58, p. 1.
Brachyptera Lat., Fam. nat. règne anim. 1825, p. 243.
Brachyelytres Lat. in Cuv., Règne Anim. iv, 1829, p. 431; Mannerh., Mém. Acad. Petersb. i, 1830, p. 415.
Staphylinidæ Westw., Int. mod. class. Ins. i, 1839, p. 162; Thoms., Skand. Col. i, 1859, pp. 22, 71; ii, 1860, p. 136; iv, 1863, p. 195; Leconte, Class. Col. N. Amer. 1861–62, p. 58; Lec. & Horn, Class. Col. N. Amer. 1883, p. 89; Arribalzaga, Bol. Acad. Cordoba, vii, 1884, p. 5; Ganglb., Käf. Mitt. Eur. ii, 1895; Reitter, Faun. Germ. ii, 1909.
Staphylini Er., Gen. Spec. Staph. 1839–40, p. 5.
Staphyliniens Lac., Gen. Col. ii, 1855, p. 17.
Staphylinides Jacq. du Val, Gen. Col. d'Eur. ii, 1857–59, p. 1; Fauv., Faune Gallo-Rhén. iii, p. 1.
Brévipennes Muls. et Rey, Ann. Soc. Agric. Lyon, (5) viii, 1875, p. 145.

STRUCTURE etc.—Verhoeff, Stud. über d. Organization der Staphylinoidea, Zeit. f. Wiss. Insektbiol. xii, 1916, pp. 245–249; xiii, 1917, pp. 105–109; xiv, pp. 42–47, 167–171; Hatch, Univ. Minnesota Tech. Bull. No. 48, 1927, pp. 8–10.

CATALOGUES.—Gemminger & Harold, Cat. Col. ii, 1868, pp. 502–680; Duvivier, Enum. Staph. Ann. Soc. Ent. Belge, xxvii, 1883, pp. 93–215; Eichelbaum, Kat. Staphyliniden-Gattungen, Mem. Soc. Ent. Belge, xvii, 1909, pp. 95–280; Bernhauer, Schubert & Scheerpeltz, 1910–1926; Cameron, Cat. Ind. Insects, pt. vi, 1925.

Key to the Subfamilies.

1. Thorax excavated below to receive the antennæ; these 9-jointed, the last joint large and globose. Tarsi 3-jointed. Thorax and elytra carinate ..... [p. 19. I. **Micropeplinæ**,
   Thorax not excavated below for the antennæ: these 9, 10, or 11-jointed (usually the latter). Tarsi variable ..... 2.
2. Antennæ exceedingly slender, hair-like, 11-jointed ..... IX. **Trichophyinæ**.
   Antennæ not hair-like..... 3.

3. Prothoracic spiracles concealed [except in *Platystethus* and *Thinobius* (but then the suture dehiscent) and *Lithocharis* and *Cryptobium*] by the triangular epimera, which externally are fused with the pronotal epipleura ..... 4.
Prothoracic spiracles exposed, or, if concealed, the epimera are free ..... 9.
4. Last joint of the labial palpi very large, semilunar ..... [p. 308.
Last joint of the labial palpi normal ..... III. **Oxyporinæ**,
5. 1st joint of the maxillary palpi elongate. Posterior coxæ conical ..... 5.
1st joint of the maxillary palpi very short. 6.
6. Tarsi 5, 5, 5 ..... 7.
Tarsi 4, 4, 4 or 4, 4, 5 ..... V. **Steninæ**, p. 318.
7. Thorax subcylindrical, transversely sulcate. Eyes very large and prominent ..... VI. **Euæsthetinæ**, [p. 444.
Thorax not transversely sulcate ..... IV. **Megalopinæ**, [p. 315.
8. Antennæ inserted under a thickened marginal border. Tarsi variable ..... 8. [p. 23.
Antennæ inserted under the prominent anterior angles of the front. Tarsi 5-jointed ..... II. **Oxytelinæ**,
9. Antennæ thick, pointed, horn-like, the joints closely approximated ..... VII. **Pæderinæ**.
Antennæ filiform or clavate ..... XI. **Pygosteninæ**.
10. Antennæ very slender at the base, which is short; the club abrupt and elongate. Head completely concealed under the thorax ..... 10.
Antennæ filiform or gradually clavate. Head rarely completely concealed (*Leucocraspedum*) ..... [cinæ.
X. **Termitodis-**
11. Antennæ inserted on the front margin of the head. Prothoracic spiracles exposed. 11.
Antennæ inserted at the inner border of the eye. Prothoracic spiracles exposed or covered by a free-lying epimeron ..... VIII. **Staphylininæ**.
12. Elytra not extending beyond the metathorax; the prothoracic spiracles exposed. 12.
Elytra usually extending beyond the metathorax; the epipleura separated by a fine sharp keel from the dorsal surface. The prothoracic spiracles usually exposed, but covered by free-lying epimera in *Tachinus*, *Tachinomorphus*, and *Tachinoderus* ..... XIII. **Aleocharinæ**.
XII. **Tachyporinæ**.

LIST OF THE SUBFAMILIES AND TRIBES.

Subfamily I. Micropeplinæ.
„ II. Oxytelinæ.
Tribe 1. Piestini.
„ 2. Eleusiini.
„ 3. Leptochirini.
„ 4. Pseudopsini.
„ 5. Proteinini.
„ 6. Omaliini.
„ 7. Oxytelini.
„ 8. Osoriini.
Subfamily III. Oxyporinæ.
„ IV. Megalopinæ.
„ V. Steninæ.
„ VI. Euæsthetinæ.
Subfamily VII. Pæderinæ.
Tribe 1. Pinophilini.
„ 2. Pæderini.
Subfamily VIII. Staphylininæ.
Tribe 1. Xantholinini.
„ 2. Staphylinini.
„ 3. Quediini.
Subfamily IX. Trichophyinæ.
„ X. Termitodiscinæ.
„ XI. Pygosteninæ.
„ XII. Tachyporinæ.
Tribe 1. Bolitobiini.
„ 2. Tachyporini.
„ 3. Symmixini.
„ 4. Hypocyptini.
Subfamily XIII. Aleocharinæ.
Tribe 1. Leucocraspedini.
„ 2. Deinopsini.
„ 3. Myllænini.
„ 4. Pronomæini.
„ 5. Oligotini.
„ 6. Eusteniamorphini.
„ 7. Hygronomini.
„ 8. Bolitocharini.
„ 9. Myrmedoniini.
„ 10. Aleocharini.

Subfamily I. MICROPEPLINÆ.

Micropeplida Heer, Fn. Helv. i, p. 169.
Micropeplini Kr., Nat. Ins. Deutsch. ii, p. 1049; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 766.
Micropeplidæ Thoms., Skand. Col. i, 1859, p. 71; iv, 1862, p. 194; Leconte, Class. Col. N. Amer. i, 1862, p. 72; Fauvel, Fn. Gallo-Rhén. iii, 1872, p. 8.
Micropeplides Muls. et Rey, Ann. Soc. Agr. Lyon, (5) viii, 1875, p. 205; Rey, Ann. Soc. Linn. Lyon, xxx, 1888, p. 153.
Micropeplinæ Lec. & Horn, Class. Col. N. Amer. 1883, p. 106; Sharp, Biol. Cent.-Amer. i, 2, 1887, p. 747; Reitter, Fn. Germ. ii, 1909, p. 200.
Micropeplines Motsch., Bull. Mosc. xxxiii, 1860, i, p. 541.

MORPHOLOGY.—Verhoeff, Zeit. Wiss. Insektenbiol. xii, p. 245.

This subfamily is scarcely to be confused with any other; it is at once recognized by the 9-jointed antennæ, the last joint being considerably dilated and forming a club, and the deep recesses on the under surface of the prothorax for their reception. Of the two genera, only one, *Micropeplus*, is found in our Fauna, which, apart from the characters just given, is distinguished by the costate head, thorax, elytra, and abdomen.

Genus **MICROPEPLUS** Latr.

Micropeplus Latr., Gen. Crust. Ins. iv, 1809, p. 377; Er., Käf. Mark. Brand. 1837, p. 646; Gen. Spec. Staph. 1840, p. 911; Lac., Gen. Col. 1854, p. 150; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 82; Kr., Nat. Ins. Deutsch. ii, 1858, p. 1050; Thoms., Skand. Col. iv, 1863, p. 195; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 8; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 153; Reitt., D. E. Z. xxix, 1885, p. 365; Sharp, Biol. Cent.-Amer. 1887, i, 2, p. 747; Ganglb., Käf. Mitt. Eur. ii. 1895, p. 766; Falzoni, Riv. Col. Ital. iii, 1905, p. 1; Reitt., Fn. Germ. ii, 1909, p. 200.

Biology.—Lubbock, Tr. Ent. Soc. Lond. 1868, p. 275, pl. xiii.

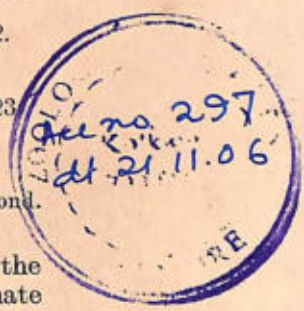
Small, oblong-ovate species, the whole upper surface strongly costate. Gular sutures united in front, widely divergent behind, gular plate foveate on either side; below the eyes deeply sulcate for reception of the antennæ, these 9-jointed, the 1st joint narrow at the base, much dilated apically and lightly curved, 9th large, clavate. Labrum corneous, transverse, narrowed in front, the anterior margin truncate. Mentum corneous, transverse, narrowed in front, anterior border truncate, the sides strongly notched. Tongue short broad, membranous, truncate in front with two long cilia. Labial palpi very short, stout, 3-jointed, the 1st and 2nd joints transverse, 3rd scarcely longer than broad, truncate at apex. Inner lobe of maxilla narrow, the apex with three strong, short, curved teeth, inner margin finely and sparingly ciliate; outer lobe broader and a little longer than the inner, the apex truncate and densely ciliate. Maxillary palpi 4-jointed, the 1st joint very small, 2nd very narrow at the base and from thence strongly dilated, 3rd transverse, narrower than the apex of the preceding, 4th about two and a half times longer than broad, apex narrower and obliquely truncate. Mandibles short and broad, the apex bifid, the inner border with a ciliated membrane. Prosternum moderately well developed, keeled in the middle and with three deep transverse impressions on either side, prosternal process narrow, parallel-sided, sulcate, extending to the posterior margins of the coxæ: epimera not reaching the prosternal process, the coxal cavities widely open behind; between the prosternum, epipleura, and epimera with a deep oval depression for the reception of the antennæ. Mesosternum with three large impressions on either side; mesosternal process broad, impressed, apex truncate, extending fully half the length of the coxæ. Metasternum large, its process broad and meeting the mesosternal process, posteriorly emarginate, the posterior coxæ rather widely separated. Abdomen with the 1st ventral segment with a central and three lateral

grooves on either side separated by sharp ridges, the 2nd to 4th transversely impressed at the base, the dorsal surface margined laterally and strongly sulcate. Prothorax narrowed in front, deeply fossulate, the chitin thin and translucent over the antennal cavity. Scutellum small, visible. Elytra costate. Winged. Anterior and middle coxæ small, the posterior transversely conical; anterior and middle trochanters small, the posterior elongate. Tibiæ finely spinulose. Tarsi 3-jointed, the first two joints very short, the 3rd much longer than the two preceding together.

The genus is found throughout most of the world, usually in dead leaves or other vegetable débris, moss, etc. Three species are found in our Fauna.

Key to the Species.

1.	One or both of the discal costæ of the elytra sinuate posteriorly	2.
	Discal costæ of the elytra not sinuate; humeral angle with a minute tooth	*fulvus* Er., var. *japonicus* Shp., p. 21.
2.	2nd costa of the elytra sinuate; humeral angle with minute tooth; scutellum bifoveolate	*sikkimi* Fauv., p. 22.
	1st and 2nd costæ of the elytra sinuate; humeral angle without tooth; scutellum not bifoveolate	*vulcanus* Fauv., p. 23.



1. **Micropeplus fulvus** var. **japonicus**. (Plate I, fig. 7.)

Micropeplus fulvus Er., var. *japonicus*, Shp.*, Trans. Ent. Soc. Lond. 1874, p. 101.

Oblong, pitchy black, slightly shining; thorax with the extreme lateral margins, an auriculate spot on the explanate area, and the outer fifth of the basal border reddish-yellow. Antennæ with the 1st joint and the club pitchy, the rest reddish. Legs reddish. Length 2·3 mm.

Very similar to *M. marietti* Duv., but differs in the sides of the head before the eyes being almost or quite straight, the less-developed keels at the base, and the shorter, more transverse thorax with less produced anterior angles.

Head triangular, impunctate, coriaceous, the sides before the eyes quite straight and meeting at a right angle in front, posteriorly with 5 small keels, one central and two lateral, the outermost sinuate. Antennæ with 3rd to 5th joints a little longer than broad, gradually decreasing in length, 6th to 8th globular. Thorax strongly transverse, widest just before the base, the sides explanate, gently rounded and narrowed to the prominent anterior angles, and with traces of two or

* An asterisk in this position means that I have seen the type-specimen.—M.C.

three denticulations, posterior angles acute, with a minute emargination in front; disc on either side of the middle with two strong sinuate ridges extending the whole length and enclosing a median, somewhat hour-glass-shaped impression, the anterior portion shorter than the posterior, externally with two other shorter and less developed ridges; the whole surface coriaceous and impunctate. Scutellum without foveæ. Elytra longer than the thorax, about as long as broad, the shoulders with a minute tooth, transversely depressed before the posterior margin, each with three sharp straight keels, the suture also costate, interspaces with confused rows of coarse punctures: epipleura carinate. Abdomen with the first three segments with a median and lateral keel enclosing foveæ, 4th segment with broader tuberculate elevation at the middle of the base, the apical half of the segment strongly declivous: sculpture very fine and moderately close.

Chakrata District: Kanassar, Dodora Khud, 7000 to 8000 feet above the sea. Also in Japan.

2. **Micropeplus sikkimi.**

Micropeplus sikkimi Fauv., Rev. d'Ent. xxi, 1902, p. 8.

A little smaller than *M. cælatus* Er.; notably shorter and broader and otherwise quite distinct. Black, the antennæ, except the last three joints, pitchy-testaceous, legs reddish-testaceous, the sides of the thorax dirty red, the two penultimate joints of the antennæ much shorter than the preceding. Head dull, seen from above with the front broadly arcuately emarginate, from the eyes to the emargination finely keeled, the disc on each side with another sinuate keel prolonged obliquely to the emargination. Thorax subopaque, very short, more than twice as broad as long, in the middle with six foveæ, the central pair larger, explanate laterally, the explanate part transversely convex in the middle, the sides strongly, obliquely narrowed from base to apex, before the base itself almost straight. Scutellum somewhat shining, the base bifoveate. Elytra somewhat shining, somewhat convex, a little wider than the thorax, deeply depressed before the apex, with three strong keels as well as a sutural keel, the two first keels reaching the apex, the first straight, the second a little sinuate internally at the apex, the third abbreviated before the impression, the first and third interspaces biseriately, the second almost triseriately and rather closely punctured, from the shoulder another fine sinuate keel reaches the apex, the adjacent internal sulcus with a single row of punctures; inflexed margin also with a fine curved

keel, internally near the keel with four large punctures; shoulders dentate. Abdomen with the three first segments broadly quadrifossulate. Length 1·5 mm.

Sikkim: Darjeeling. Unique (ex *Fauvel*).

3. **Micropeplus vulcanus.**

Micropeplus vulcanus, Fauv., Rev. d'Ent. xxi, 1902, p. 9.

Near the preceding (*M. sikkimi*), but the head with two keeled elevations situated close together and almost united in front, sides of thorax less narrowed from the middle to the base, the scutellum scarcely foveate; elytra with all the ridges sinuate, twice as high, the first strongly elevated and compressed in the apical depression, behind angulately prolonged, the interspaces with large, confused punctures, scarcely biseriate; the abdomen with much higher keels. Length 1·5 mm.

Sikkim: Darjeeling (ex *Fauvel*).

Subfamily II. OXYTELINÆ.

Oxytelini + *Phlœocharini* + *Omalini* + *Proteinini* Er., Käf. Mark. Brand. i, 1837, pp. 576, 612, 613, 641.

Oxytelini (excl. *Megalopini*) + *Piestini* + *Phlœocharini* + *Omalini* + *Proteini* Er., Gen. Spec. Staph. 1839–40, pp. 749, 823, 842, 846, 901.

Oxytelini (excl. *Oxyporus*) + *Omaliini* + *Proteini* + *Phlœocharini* + *Piestini* (excl. *Micropeplini*) Kraatz, Nat. Ins. Deutsch. ii, 1856–58, pp. 798, 904, 1019, 1034, 1039, 1049.

Oxytélites + *Piestites* + *Phlœocharites* + *Omalites* + *Proteinites* Jacq. du Val, Gen. Col. d'Eur. ii, 1857–59, pp. 54, 62, 64, 66, 78.

Oxytelina + *Phlœocharina* + *Olisthœrina* + *Omaliina* (excl. *Micropeplidæ*) Thoms., Skand. Col. iii, 1861, pp. 113, 117, 175, 177; iv, 1862, p. 194.

Piestini + *Phlœocharini* + *Protimini* + *Homalini* + *Oxytelini* (excl. *Oxypori* and *Micropeplidæ*) Fauv., Faun. Gallo-Rhén. iii, 1872, pp. 14, 19, 24, 33, 124.

Oxytéliens + *Phléochariens* + *Trigonuriens* + *Protéiniens* + *Phléobiens* + *Omaliens* + *Pholidiens* (excl. *Micropeplides*) Muls. et Rey, Ann. Soc. d'Agric. Lyon, (5) viii. 1875, pp. 205, 209.

Phlœocharini + *Oxytelini* (excl. *Megalopes* and *Oxypori*) + *Homalin* + *Protimini* + *Piestini* Lec. & Horn, Class. Col. N. Amer. 1883, pp. 101–105.

Oxytelinæ + *Omaliinæ* (excl. *Micropeplinæ*) Sharp, B.C.-A. i, 2, 1882–87, pp. 677, 744, 747.

Oxytelinæ (excl. *Micropeplinæ*) Ganglb., Käf. Mitt. Eur. ii, 1895, pp. 608, 765.

Phlœocharinæ + *Olisthœrinæ* + *Oxytelinæ* + *Piestinæ* + *Omalinæ* + *Proteininæ* + *Euphaniæ* + *Pseudopsinæ* + *Thoracophorinæ* (excl. *Micropeplinæ*) Reitter, Faun. Germ. ii, 1909, pp. 14, 16.

The species of this large subfamily are very variable in build. The head is prominent, usually constricted behind. The antennæ are inserted under a ledge or lobiform projection at the side of the front and are of 11 joints. The maxillary palpi have 4 and the labial 3 joints. In the OMALIINI the head has 2 ocelli. The elytra do not usually extend much beyond the metathorax, except in some of the genus *Anthobium*, where the abdomen may be completely concealed. In *Platystethus* and *Thinobius* the suture is dehiscent. Prosternum well developed, the epimera concealing the spiracle (except in *Platystethus* and *Thinobius*), in the LEPTOCHIRINI meeting the apex of the prosternal process and so completely closing the coxal cavities behind. The legs very variable, the tarsi 3-, 4-, or 5-jointed. Their habits are of great variety.

Key to the Tribes.

1.	Head with two ocelli (except occasionally in *Hygrogeus*). First ventral segment of the abdomen keeled in the middle. The posterior trochanters large	OMALIINI, p. 133.
	Head without ocelli	2.
2.	Anterior coxal cavities closed behind	LEPTOCHIRINI, p. 89.
	Anterior coxal cavities open behind	3.
3.	First ventral segment of the abdomen keeled in the middle	6.
	First ventral segment not keeled (except in *Apocellagria*, but then with the facies of *Falagria* and 3-jointed tarsi)	4.
4.	Posterior trochanters large	5.
	Posterior trochanters small	OXYTELINI, p. 168.
5.	Head, thorax, and elytra carinate	PSEUDOPSINI, p. 121.
	Head, thorax, and elytra not carinate	PROTEININI, p. 123.
6.	Anterior coxæ very small, not prominent. Tongue at least in part membranous	7.
	Anterior coxæ large, prominent. Tongue entirely corneous; more or less cylindrical species	OSORIINI, p. 289.
7.	Anterior trochantin exposed as a long tongue-shaped process behind the posterior margin of the prosternum and separated from the epipleura by a suture. Parallel depressed species. Tarsi 5-jointed	ELEUSIINI, p. 74.
	Anterior trochantin small, not or but slightly exposed	PIESTINI, p. 25.

Tribe 1. PIESTINI.

Piestini Er. (excl. *Eleusiini* and *Leptochirini*), Gen. Spec. Staph. 1839–40, p. 823; Kraatz (excl. *Eleusiini* and *Leptochirini*), Nat. Ins. Deutsch. ii, 1856–58, p. 1039; Fauvel, Faun. Gallo-Rhén. iii, 1872, p. 14; Lec. & Horn (excl. *Eleusiini*), Class. Col. N. Amer. 1883, p. 105; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 681.
Piestites Jacq. du Val, Gen. Col. d'Eur. ii, 1857–59, p. 62.
Piestidæ Lec., Class. Col. N. Amer. i, 1862, p. 72.
Trigonuriens Muls. et Rey, Ann. Soc. Linn. Lyon, xxv, 1878, p. 211 + *Prognathaires* id., Hist. Nat. Col. Fr. Brévip. 1879, p. 385.
Piestina (excl. *Eleusiina* and *Leptochirina*), Sharp, B. C.-A. i, 2, 1882–87, pp. 710, 728, 733.

Distinguished by the ventral surface of the abdomen presenting a little keel between the posterior coxæ, the small anterior coxæ, which are somewhat peg-shaped and do not project much from the cavities, and the small posterior trochanters. For the most part they are more or less subdepressed insects, but *Apatetica* and *Nodynus*† are very similar in build to *Silpha*. The characters separating the PIESTINI from the OXYTELINI are not very satisfactory, as in *Apocellagria* the abdomen is keeled, yet undoubtedly the affinities of this genus are with *Trogophlœus*.

Key to the Genera.

1.	Abdomen bordered	2.
	Abdomen not bordered	6.
2.	Thorax keeled	3.
	Thorax not keeled	4.
3.	Tarsi 5-jointed. Scutellum concealed	EUPIESTUS Kr., p. 35.
	Tarsi 3-jointed. Scutellum visible	THORACOPHORUS Motsch., p. 72.
4.	More or less oblong or oval species, the elytra extending beyond the 3rd ventral segment of the abdomen	5.
	Elongate depressed species, the elytra not extending to the 3rd ventral segment of the abdomen	SIAGONIUM Kirby, p. 40.
5.	Antennæ with 5-jointed club; 4th tarsal joint simple	NODYNUS Waterh., p. 33.
	Antennæ scarcely clavate; 4th tarsal joint dilated	APATETICA Westw., p. 26.
6.	Elytra each with four keels, the sutural and the humeral united in an arch behind the discal ones	TETRAPLEURUS Bernh., p. 68.
	Elytra without such keels	7.
7.	Tarsi 5-jointed. Elytra without subhumeral stria	8.
	Tarsi not 5-jointed	10.

† These two genera were originally placed in the SILPHIDÆ, and in my opinion they should be retained there.

8. Abdomen striate at the sides. Fourth joint of the maxillary palpi elongate. More or less convex species with the facies of certain *Tachyporinæ* ..... [p. 43. HOLOSUS Motsch.,
Abdomen rarely striate at the sides. Fourth joint of the maxillary palpi less elongate. More or less parallel, depressed or subdepressed species ..... 9.
9. Middle and posterior tibiæ finely spinose or setose externally ..... LISPINUS Er., p. 51.
Middle and posterior tibiæ practically glabrous ..... [p. 42. PARALISPINUS Bernh.,
10. Tarsi 4-jointed †. Elytra with a fine stria passing from the shoulder to the apical border ..... [Bernh., p. 65. PSEUDOLISPINODES
Tarsi 3-jointed. Elytra without stria .... BOTHRYS Fauv., p. 67.

Genus APATETICA Westw.

Apatetica Westw., Cab. Or. Ent. 1848, p. 86; id., Proc. Ent. Soc. Lond. 1864, p. 71; Fauv., Rev. d'Ent. xiv, 1895, p. 190; Bondroit, Ann. Soc. Ent. Belge, lv, 1911, p. 365.
Trigæus (*Tryyæus*) Sharp, Tr. Ent. Soc. Lond. 1874, p. 420.
Idiochila Friv., Term. Füzet. vi, 1883, p. 135, t. 2, ff. 1–3.

Head inserted in the thorax up to the eyes. Epistome not distinct from the front. Antennæ slender, not clavate. Gular sutures distinct, contiguous at the middle; infra-orbital crest wanting. Prosternum large, produced behind in the middle into a narrow, sharp, triangular process. Epipleura of prothorax broad; epimera large, triangular. Anterior coxal cavities narrow, transverse. Mesosternum simple, its process sharply pointed and extending three-quarters the length of the middle coxæ, not prominent; middle coxæ moderately separated; epimera triangular, episterna narrow, parallel. Metasternum slightly emarginate in front to receive the mesosternal process. Abdomen with the first two ventral segments strongly keeled medially, the sides margined above. Elytral epipleura complete, separated from the dorsal surface by a keel; elytra striate-punctate, reaching far beyond the metathorax. Anterior coxæ elongate, not prominent. Tibiæ grooved, spinose. Tarsi with the joints short, 5-jointed, the 4th joint feebly bilobed, the 5th shorter than the four preceding together, claws simple. The facies of this and the following genus is suggestive of certain SILPHIDÆ (*Phosphuga* or *Necrophilus*), in which family they were originally placed; all the dorsal

† 4- or 5-jointed, according to Bernhauer.

abdominal segments, except the first, are, however, corneous, and the last three segments are uncovered by the elytra. Some of the species have a spine at the postero-external angle of the elytra, but such have not as yet been recorded from this region. The genus is restricted to the Orient.

Key to the Species.

1. Species entirely or in great part black; striæ of the elytra finely punctured ..... 2.
   Species in part metallic; striæ of the elytra moderately coarsely punctured ..... 6.
2. Antennæ with the first 5 joints reddish. Anterior angles of the thorax completely rounded ..... [p. 28. *rotundicollis* Fauv.,
   Antennæ black, the 10th and 11th joints often reddish. Anterior angles of the thorax distinct ..... 3.
3. Entirely black species ..... 4.
   Black, a spot near the eyes, prosternum, reflexed margin of the elytra, and abdomen in great part reddish. Thorax umbonate . *sikkimi* Fauv., p. 28.
4. Thorax umbonate. Penultimate joints of antennæ longer than broad ..... *indica*, sp. n., p. 29.
   Thorax not umbonate. Penultimate joints of antennæ as long as broad .. .. 5.
5. Thorax coarsely, closely, and uniformly punctured, except the lateral explanate margins; sides quite straight for the anterior two-thirds ..... *javanica* Shp., p. 29
   Thorax behind with large, irregular, impunctate spaces, otherwise rather closely punctured; sides feebly rounded for the anterior two-thirds ..... *intermedia*, sp. n., p. 30.
6. Thorax unicolorous black ..... 7.
   Thorax with the explanate margins distinctly rufo-testaceous; elytra metallic, coppery, blue, or green. Antennæ reddish-testaceous ..... [p. 31. *lebioides* Westw.,
7. Thorax with irregular impunctate spaces. Tarsi reddish yellow .... 8.
   Thorax uniformly closely and coarsely punctured (except the explanate margins). Antennæ with the first 4 joints black (rest wanting). Tarsi pitchy ..... [p. 32. *cæruleipennis*, sp. n.,
8. Postero-external angle of the elytra obtuse. Antennæ dark, the last two or three joints reddish-yellow. Striæ more finely punctured ..... *birmana*, sp. n., p. 33.
   Postero-external angle of the elytra rounded. Antennæ reddish-yellow. Striæ less finely punctured ..... [p. 31. *viridipennis* Fauv.,

4. **Apatetica rotundicollis.**

Apatetica rotundicollis Fauv., Rev. d'Ent. xxiii, 1904, p. 85.

Distinguished from all the other species by the very broad thorax, which is strongly narrowed in front, and the rounded anterior angles. Very black, very shining, the palpi, first five joints of the antennæ and the tarsi dirty red. Antennæ long, the 2nd to 5th joints especially long and slender. Head closely and finely punctured, the disc with two smooth plaques. Thorax very short, behind the middle twice as broad as long, from thence to the posterior angles strongly rounded, the sides behind strongly explanate, scarcely bordered, in front narrowly explanate and bordered, rather strongly and rather closely punctured, on the disc with two areas of finer punctures, behind the middle with a round fovea. Scutellum large, the base nearly twice as broad as long. Elytra slightly transverse, as broad as the thorax, deeply striate, the striæ strongly punctured, the apical external angle rounded. Abdomen rather finely, at the sides more densely punctured. Legs robust. Length 8·5 mm.

Khasia Hills. Unique (ex *Fauvel*).

5. **Apatetica sikkimi.**

Apatetica sikkimi Fauv., Rev. d'Ent. xiv, 1895, p. 193.

Black, shining, the head somewhat dull, the mandibles, apex of the palpi, the thorax below in front of the anterior coxæ, and a spot before the eyes, the reflexed margin of the elytra, almost all the abdomen and the legs reddish, the tibiæ brownish, the last two joints of the antennæ and the tarsi reddish-testaceous: a little larger than *A. javanica* Shp., longer and more convex, the antennæ longer, all the joints longer than broad, the head closely and more roughly punctured; thorax longer, much more convex, more conical and umbonate in front, the disc more strongly punctured, the punctures scarcely confluent, the sides in front not, posteriorly a little explanate, impunctate, the side-margins scarcely raised, the base with broad irregular impunctate spaces, anterior angles acute; scutellum much larger and broader; elytra a third longer than broad, the striæ narrow, more densely crenulate-punctate, the intervals much broader, rather convex; abdomen more closely and more finely punctured, the three last segments more distinctly, the penultimate in the middle narrowly impunctate. Length 7 mm.

Sikkim: Darjeeling. A female (ex *Fauvel*).

6. **Apatetica indica**, sp. n. (Fig. 9.)

Oblong-ovate, black, shining. Antennæ black, the last two joints ferruginous. Tarsi ferruginous. Thorax umbonate on disc. Length 6·5 mm.

Head closely, moderately finely, rugosely punctured throughout, on either side above the base of the antennæ with a rounded impression. Antennæ with the 3rd joint much longer than 2nd, 4th to 10th all longer than broad, gradually decreasing in length, the penultimate only slightly longer than broad. Thorax transverse, conical, the whole of the disc umbonate, broadest a little in front of the posterior angles, the posterior half of the sides rounded, explanate, and impunctate, but scarcely raised, the anterior half strongly narrowed in a straight line to the prominent acute anterior angles and narrowly margined, base broadly 3-emarginate; puncturation rather strong and close, except on the explanate



Fig. 9.—*Apatetica indica*, head and thorax.

sides. Scutellum impunctate. Elytra much broader and longer than the thorax, a little longer than broad, deeply sulcate and finely crenulate, the interstriæ broad and slightly convex, impunctate. Abdomen with the last three segments exposed, coriaceous, finely and closely punctured. Appears to be closely allied to *A. sikkimi*, but to differ in the colour.

Bhutan (*M. Basti*, 1899). Unique. In British Museum.

7. **Apatetica javanica.** (Fig. 10.)

Trygæus javanica Shp., Not. Leyd. Mus. xiv, 1892, p. 61; Fauv., Rev. d'Ent. xiv, 1895, p. 194.

Oblong-ovate, black, shining. Thorax strongly transverse, not umbonate, the sides for the anterior two-thirds practically straight. Antennæ black, the last joint reddish. Legs black, tarsi ferruginous. Length 6 to 7 mm.

Differs from *A. indica* by the shorter, less conical, and not umbonate thorax. Head strongly impressed on either side within the antennal tubercles, less deeply on the middle of the vertex, rather closely and finely punctured. Antennæ extending a little beyond the base of the thorax, the 3rd joint twice as long as the 2nd, 4th to 7th a little longer than broad, 8th to 10th about as long as broad. Thorax strongly transverse, convex, the sides almost straight and converging for the anterior two-thirds, before the base rounded and retracted to the rectangular posterior angles, explanate; the disc with four rather large impressions, coarsely and closely punctured, except for the explanate sides, which are much more finely and sparingly punctured; the ground-sculpture is much finer than on the head. Scutellum large, impunctate, with a very fine, transverse, wavy ground-sculpture.

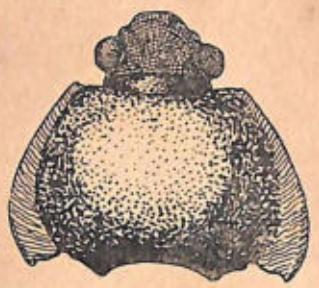


Fig. 10.—*Apatetica javanica*, head and thorax.

Elytra nearly twice as long as the thorax, deeply sulcate, obsoletely punctate-crenate, the interstriæ convex. Abdomen conical, with four and a half segments exposed, finely, moderately closely punctured in front, rather more strongly and closely behind, densely and finely coriaceous.

Assam: Manipur. Bengal. Also in Java and Sumatra.

8. **Apatetica intermedia**, sp. n.

Oblong-ovate, black, shining. Antennæ black, the last two joints ferruginous. Legs black, tarsi ferruginous. Thorax not umbonate. Length 6 to 7 mm.

Very near *A. javanica* Shp., but the thorax has less prominent anterior angles, the anterior two-thirds of the sides are feebly rounded and not straight as in that species, so that they form a uniform curve between the anterior and posterior angles, the disc has large irregular impunctate spaces posteriorly, the antennæ are a little shorter, the 9th and 10th joints about as long as broad. Head closely and moderately finely punctured. Antennæ slender, the 4th to

8th joints longer than broad, gradually decreasing in length, the 9th and 10th about as long as broad. Thorax strongly transverse, normally convex, widest at the posterior third, the sides from thence strongly contracted and very feebly rounded and narrowly margined to the obtuse anterior angles, the posterior third of the sides explanate and impunctate, much more strongly rounded, disc closely and rather coarsely punctured, posteriorly with large irregular impunctate spaces. Elytra broader and much longer than the thorax, a little longer than broad, deeply striate, the striæ closely and finely punctured, interspaces convex, rather narrow. Abdomen with last three abdominal segments finely, rather closely punctured, coriaceous.

Burma : Ruby Mines. Bengal.

9. Apatetica lebioides.

Apatetica lebioides West.*, Cab. Or. Ent. 1848, p. 86, pl. 41, fig. 6 ; Lac., Gen. Col. t. 16, fig. 6 ; Fauv., Rev. d'Ent. xiv, 1895, p. 193.

Oblong-ovate ; head and thorax black and shining, the explanate margins of the latter reddish-testaceous. Elytra metallic green, blue or coppery, striate-punctate. Antennæ reddish testaceous. Femora black, tibiæ and tarsi reddish. Length 6 to 7 mm.

Head rather finely punctured on the front, more coarsely at the base, the whole area between the eyes impunctate. Antennæ long and slender extending backwards beyond the posterior angles of the thorax, the 4th to 7th and 8th to 10th joints subequal amongst themselves, all longer than broad. Thorax transverse, convex, widest just behind the middle, narrower at the rounded anterior angles than at the obtuse posterior angles, the sides regularly rounded and explanate, the base 3-emarginate, the surface rather closely and moderately finely punctured, the explanate side-margins more coarsely. Scutellum smooth, semicircular. Elytra slightly broader and much longer than the thorax, a little longer than broad, the striæ superficial, with moderate-sized and close punctures, interstriæ rather flat, broad. Abdomen with the last three segments finely coriaceous, scarcely perceptibly punctured.

Sikkim : Manipur. Type in the British Museum.

10. Apatetica viridipennis

Apatetica viridipennis Fauv., Rev. d'Ent. xiv, 1895, p. 192.

Black, very shining ; elytra metallic violet, coppery, green, or blue, coarsely punctate-striate. Antennæ reddish-testaceous, the 1st or 1st, 2nd, and 3rd joints sometimes pitchy.

Legs black, tarsi and sometimes the base of the femora reddish. Length 7·5 mm.

Head with front and vertex practically impunctate, before the base deeply transversely impressed, supra- and post-ocular regions coarsely and densely punctured. Antennæ long and slender, all the joints distinctly longer than broad, the 4th to 7th and 8th to 10th subequal in length between themselves. Thorax strongly transverse, convex, widest at the junction of the middle and posterior thirds, the sides rounded, explanate, and raised throughout with a few coarse punctures, more contracted in front to the rounded anterior angles, posterior angles obtuse; the whole of the median area broadly irregularly impunctate, at the sides closely and coarsely punctured. Scutellum transverse, impunctate. Elytra a little broader than the thorax, nearly parallel, a little longer than broad, each with nine rather coarsely punctured striæ, the interspaces rather broad and flat. Abdomen with the last three segments finely and sparingly punctured.

Sikkim: Darjeeling. Assam: Sylhet; Manipur (*Doherty*). Burma: Ruby Mines (*Doherty*).

11. **Apatetica cæruleipennis**, sp. n. (Fig. 11.)

Oblong-ovate, black, shining; elytra shining violet-blue. Antennæ with the first four joints black (the rest wanting). Legs black, tarsi pitchy. Length 8·4 mm.

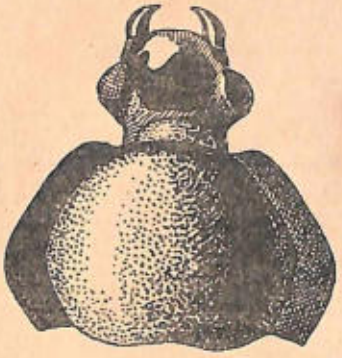


Fig. 11.—*Apatetica cæruleipennis*, head and thorax.

Very similar to the preceding in build, but differs in the base of the antennæ being entirely black and the thorax being uniformly coarsely and closely punctured, except on the explanate sides, on which are a few large superficial punctures only.

Manipur (*Doherty*). British Museum. Unique.

12. Apatetica birmana, sp. n.

Shining; head and thorax black; elytra olive-green. Antennæ pitchy, the last two or three joints reddish-testaceous. Legs pitchy, tarsi reddish-testaceous. Length 8·5 mm.

Very near *A. viridipennis* Fauv., but a little larger, the elytra with the postero-external angle obtusely angulate, the punctures of the striæ finer, the puncturation at the sides of the thorax a little less, the vertex of the head with more numerous punctures. Head coarsely and closely punctured within the eyes, the front and a space on either side of the vertex smooth, except for some extremely fine and scattered punctures. All the joints of the antennæ longer than broad, gradually decreasing in length. Thorax widest before the slightly obtuse posterior angles, narrowed and feebly rounded towards the front, the side-margins broadly explanate, especially behind, in the middle before the base with a broad impunctate space extending forwards and narrowing towards the centre, externally with a similar but much smaller space; the rest of the surface moderately finely, and moderately closely punctured, except the posterior part of the explanate side-margins, between the larger punctures with an extremely fine and sparing puncturation. Elytra with the postero-external angle obtuse, the striæ rather finely punctured, the broad interstriæ with some extremely fine and scattered punctures. Under surface black.

Upper Burma: Seinghku Valley, alt. 5000 feet (*F. K. Ward*). A single example in the British Museum.

Genus **NODYNUS** Waterh.

Nodynus Waterh., Trans. Ent. Soc. Lond. 1876, p. 12; Sharp, Ann. Mag. Nat. Hist. (6) iii, 1889, p. 467; Ganglb., Käf. Mitt. Eur. iii, 1899, p. 67.

Antennæ with the last five joints forming a slender club. Epistome not distinct from the front. Gular sutures indistinct, narrowly separated medially. Infra-temporal crest wanting. Labrum reniform, the sides and anterior margin membranous, the anterior margin with numerous, closely-set, long setæ. Labial palpi short, 3-jointed, the first two joints equal, about as long as broad, the 3rd oval-oblong, longer than the two preceding together. Tongue very broad, broadly emarginate in front, in the middle with a chitinous rod. Paraglossæ well developed, strongly ciliate. Mandibles short and stout, pointed, edentate. Maxillary palpi 4-jointed, the 1st joint very small, 2nd and 3rd scarcely differing in size or form, gradually widened from base to apex, 4th elongate, pointed, about as

long as the two preceding together. Outer lobe of the maxilla broad, densely ciliated apically and along the outer border; inner lobe densely ciliated apically, without spines or teeth. Prosternum large, in the middle of the anterior border with a small tubercle, posteriorly sharply pointed medially. Epipleura of the pronotum broad, epimera well developed, triangular, fused with the preceding. Anterior coxal cavities long, narrow, transverse. Mesosternal process convex, prominent, rounded, extending about two-thirds of the length of the intermediate coxæ, the sides and apex finely margined, meeting the broadly-rounded apex of the metasternum. Intermediate coxæ rather widely separated. Epimera of the mesosternum subtriangular. Episterna of metathorax narrow and elongate. Posterior coxæ transverse, approximate, not prominent. Abdomen with 1st ventral segment medially carinate, the 2nd carinate anteriorly; dorsal segments margined. Epipleura of the elytra separated by a keel from the dorsal surface. Anterior coxæ elongate, not prominent. Tibiæ grooved, spinose. Tarsi short, 5-jointed, the first four joints short and subequal, the 5th longer than the four preceding together; claws simple, gradually curved.

Of very similar facies to the preceding genus, from which it is readily distinguished by the clavate antennæ and the simple 4th joint of the tarsi.

Only two species of this genus are recorded: one from Japan (*leucofasciatus* Shp.) and one from India. The above account is taken from a specimen of *leucofasciatus*.

13. **Nodynus nitidus.**

Nodynus nitidus Waterh.*, Trans. Ent. Soc. Lond. 1876, p. 13.

Oblong, subdepressed, shining black, the elytra with purplish reflex. Antennæ black, the last joint testaceous. Legs black. Length 9 mm.

Head much narrower than the thorax, inserted therein to the level of the eyes, the upper surface closely, moderately coarsely, subrugosely punctured. Antennæ with 2nd joint shorter than 3rd, 4th and 5th slightly longer than broad, 6th to 10th transverse, gradually increasing in width, 11th narrower than 10th, short and conical. Thorax about one-third broader than long, broadly emarginate in front, base bisinuate, the sides rounded and reflexed, narrower in front than behind, posterior angles rounded and a little prominent; the greater part of the surface extremely finely and moderately closely punctured, along the sides and base with some coarser punctures. Scutellum smooth. Elytra much longer, but as

wide as the thorax, apex truncate, the postero-external angle rounded, each with nine rows of fine close punctures not reaching the posterior margin, the interspaces flat and extremely finely punctured. Abdomen with two segments exposed, these finely coriaceous, very finely and sparingly punctured.

East Indies. Type in British Museum.

Genus **EUPIESTUS** Kraatz.

Eupiestus Kraatz, Arch. Naturg. xxv, 1859, i, p. 182; Fauvel, Rev d'Ent. xxi, 1902, p. 27 (note).

Head distinctly constricted behind the eyes, neck thick. Antennæ 11-jointed. Gular sutures fused. Labrum transverse, deeply emarginate, the antero-external angles with a stout spine, the anterior border spinose and ciliate. Mandibles short, stout, pointed, edentate, the inner margin with a ciliated membrane. Outer lobe of the maxilla broader and a little longer than the inner, the apex rounded, densely ciliate; inner lobe narrow, pointed, the apex and inner margin densely ciliate. Maxillary palpi with 1st joint very small, 2nd moderately long, curved, thickened apically, 3rd short, 4th a little longer than 2nd. Tongue broad, membranous, broadly obtusely emarginate, the antero-external angles rounded, densely and finely ciliate, in the middle with a corneous rod, supporting two fine spines in front. Labial palpi short, 1st and 2nd joints broader than long, 3rd about $2\frac{1}{2}$ times longer than broad. Prosternum well developed before the coxæ, prosternal process narrow, bluntly pointed, the coxæ narrowly separated, coxal cavities open behind, epipleura broad, epimera triangular, fused with the epipleura. Mesosternum large, convex, its process rather narrow, with rounded apex extending half the length of the coxæ; intersternal piece short, separated from the broadly-rounded apex of the metasternum by a suture. Abdomen keeled below at the base, the sides margined above. Thorax sulcate and costate, elytra costate. Scutellum concealed. Winged. Tibiæ more or less longitudinally sulcate, spinose. Tarsi short, 5-jointed, the first four joints short and subequal, the 5th longer than all the preceding together; claws simple, normally curved. Pubescence scanty, subsquamous.

The genus comprises black or brown subparallel species, more or less rugosely sculptured and often covered with a secretion difficult to remove. The males of some species are furnished with spines or processes on the head. They probably live mostly in drying *dejecta* and decaying wood and are confined to the Oriental Region.

Key to the Species.

1.	Penultimate joints of the antennæ distinctly longer than broad	2.
	Penultimate joints of the antennæ not longer than broad	3.
2.	Size larger, 8–9 mm. Head in ♂ armed.	*spinifer* Fauv., p. 36.
	Size smaller, 3 mm. Head in ♂ unarmed.	*angulatus* Fauv., p. 39.
3.	Species subopaque	4.
	Species rather shining	5.
4.	Post-ocular space rounded; eyes small and flat	*fecæ* Fauv., p. 37.
	Post-ocular space subangulate; eyes larger, more prominent	*temporalis* Fauv., p. 38.
5.	Penultimate joints of antennæ strongly transverse; the anterior keels of the thorax united in front.....	6.
	Penultimate joints of the antennæ less strongly transverse; the anterior keels of the thorax scarcely united in front ..	*sikkimi* Fauv., p. 39.
6.	Head broader, much more finely punctured; thorax broader, abruptly constricted at the base, keels less elevated, less sharp; puncturation of the fossæ finer	*sculpticollis* Kr., p. 38.
	Head narrower, much less finely punctured; thorax narrower, gradually constricted at the base, keels more elevated, sharper; puncturation of the fossæ much coarser.	*jacobsoni* Cam., p. 40.

14. Eupiestus spinifer.

Eupiestus spinifer Fauv., Rev. d'Ent. xiv, 1895, p. 186.

Black, moderately shining, the elytra obscurely ferruginous between the costæ. Antennæ very long, black. Legs reddish. Length 8 to 9 mm.

♂. Head large, subtriangular; the front on either side with a long, curved, pointed spine directed forwards and upwards, the margin between the spines rounded; antennal tubercles greatly developed, forming a large callus produced forwards into a stout spine; middle of front slightly longitudinally raised; the tubercles and excavated area between coarsely and closely punctured, the front smooth; eyes prominent, the base of the head transversely truncate immediately behind the eyes. Antennæ longer than the body, all the joints much longer than broad, cylindrical, 6th to 11th equal in length.

♀. Head smaller, unarmed, the tubercles smaller and not spined, the front punctured, the posterior margin of the head obliquely truncate immediately behind the eyes. Antennæ a little shorter than the body, constructed as in ♂; thorax narrower.

Thorax wider than the head, slightly transverse, strongly contracted for about the posterior third, considerably dilated and rounded in front, the anterior angles rounded, the posterior rectangular; disc with five foveæ, a large median extending the whole length and wider in front, a lateral on each side of similar extent and much wider in front and a smaller more or less triangular one on either side at the base between the median and lateral; the foveæ separated from each other on either side by three irregular keels, the whole surface coarsely and closely punctured. Elytra as long as, but slightly wider than, the thorax, transverse, each with three keels and the suture elevated; interspaces closely and coarsely punctured. Abdomen subconical, closely and less strongly punctured than the fore-parts, coriaceous and with scanty subsquamous pubescence.

Burma: Ruby Mines (*Doherty*); Carin **Ghécu**; Carin Cheba; Carin Asciuii Cheba (*L. Fea*).

15. Eupiestus feæ.

Eupiestus feæ Fauv., Rev. d'Ent. xiv, 1895, p. 187.

Subopaque black. Head in ♂ subquadrate, in ♀ suborbicular. Eyes small, not prominent. Antennæ ferruginous, extending to the posterior margin of the elytra in ♀, beyond in ♂. Legs ferruginous. Length 3·5 to 4 mm.

♂. Head subquadrate, eyes small, not prominent, post-ocular space rounded; vertex deeply sulcate in middle, front convex, the anterior margin rounded, obliquely impressed internal to the antennal tubercles, finely and closely punctured. Antennæ extending beyond the posterior margin of the elytra, 2nd and 3rd joints of equal length, 4th to 6th scarcely longer than broad, 7th a little longer than broad, stouter than the 6th and 8th, 8th to 10th scarcely longer than broad.

♀. Head suborbicular. Antennæ shorter and more slender, but similarly constructed.

Thorax slightly transverse, widest in front, strongly contracted before the base, the anterior angles rounded and thickened, the sides with a small emargination before the middle; disc with six foveæ, three large, a median and two lateral situated before the middle, a narrow median basal and a subtriangular lateral basal on either side; against the lateral emargination with a fovea; the fossæ more shining than the keels, these with subsquamous pubescence, the whole surface closely and moderately coarsely punctured. Elytra wider, but scarcely as long as the thorax, transverse, tricarinate, with suture also raised; interspaces each with a single row of moderately coarse punctures. Abdomen slightly narrowed behind, closely and rather finely punctured

(less finely at the bases of the segments) and with sparing subsquamous pubescence.

Burma: Carin Cheba; Tenasserim, Thagata (*L. Fea*). Abor Country: Kobo, in rotten wood (*Kemp*).

16. **Eupiestus temporalis.**

Eupiestus temporalis Fauv.*, Rev. d'Ent. xiv, 1895, p. 188.

Near *E. feæ* Fauv. ♀, but with the antennæ a little shorter and stouter, the eyes much larger and rather prominent, the temples feebly angulate. Internal to the eye there is a fine keel. Thorax broader, the sides in front more parallel, the fossæ broader, rather more coarsely sculptured. Elytra a little shorter.

Burma: Carin Ghécu, 1300 to 1400 m.; Carin Asciuii Ghécu, 1400 to 1500 m. (*L. Fea*). Also in Sumatra.

17. **Eupiestus sculpticollis.** (Fig. 12.) (Plate I, fig. 1.)

Eupiestus sculpticollis Kr.*, Arch. Naturg. xxv, 1859, i, p. 182, Taf. 3, fig. 4 *a–b*.

Black, shining; elytra pitchy. Antennæ black, the first two joints ferruginous. Legs reddish. Length 2·5 mm.

Smaller than *E. feæ* Fauv. and more shining, the head subtriangular, antennæ much shorter, eyes more prominent, post-ocular area obliquely truncate to the neck, thorax with the sides in front more parallel and not emarginate, intercostal spaces of elytra more finely punctured.

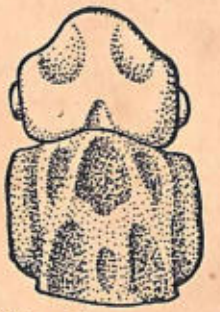


Fig. 12.—*Eupiestus sculpticollis*, head and thorax †.

Head subtriangular, base foveate in the middle, front deeply impressed on either side; eyes prominent, post-ocular space obliquely truncate, supra-ocular region with a sulcus; the base finely and moderately closely punctured, much more sparingly elsewhere. Antennæ with 2nd and 3rd joints equal, 4th shorter, a little longer than broad, 5th to 10th transverse,

† In the figure the head should be more triangular.

gradually increasing in breadth. Thorax slightly transverse, scarcely wider than the head, strongly contracted before the base, the posterior angles acute, the anterior rounded, the sides in front almost parallel, the disc with 8 fossæ: (1) a small median basal; (2) a large median between this and the anterior border; (3) a large lateral on either side extending from the anterior border to the level of the constriction; (4) a small triangular one between 2 and 3; (5) a lateral basal on either side; the keels are practically impunctate, the foveæ show a few moderately large and close punctures. Elytra a little longer and wider than the thorax, square, with three parallel keels and raised suture, the interspaces with a row of moderate-sized punctures closely placed. Abdomen slightly narrowed behind, shining, moderately closely and moderately finely punctured throughout, with sparing subsquamous pubescence.

Ceylon. Nilgiri Hills (*H. L. Andrewes*). Sikkim. Burma. Also Lombok.

18. Eupiestus angulatus.

Eupiestus angulatus Fauv., Rev. d'Ent. xxi, 1902, p. 29.

♂. Size and colour of *sculpticollis*, but with the head elongate, narrow, and triangular, opaque like the thorax and with the temples much less rectangular. Antennæ long, stout, all the joints longer than broad, the 6th to 11th much thicker. Head flattened, the front conical, the apex nearly truncate, depressed, coriaceous, antennal tubercles thick, short, rather shining, the vertex finely longitudinally striate, the base rather deeply arcuately margined. Thorax narrow, longer than broad, rugosely punctured, the sides with the two calli stronger, the foveæ larger than in *sculpticollis*, the keels higher, acute, and opaque. Elytra shorter, rather transverse, the interspaces twice as strongly and sparingly punctured. Abdomen narrowly smooth along the middle, the 6th segment closely, finely, rugosely punctured. ♀ unknown. Length 3 mm.

Sikkim: Darjeeling (ex *Fauvel*).

19. Eupiestus sikkimi.

Eupiestus sikkimi Fauv., Rev. d'Ent. xxi, 1902, p. 30.

Build and colour as in *E. sculpticollis* Kr., but a little larger, the antennæ thicker and longer, with the joints, especially the 6th to 10th, less transverse, the front more deeply bi-impressed; the thoracic keels higher, the two anterior ones scarcely united in front, but subparallel and thickened, strongly raised, the antemarginal keel straighter; the elytra

more strongly, the abdomen more closely punctured, especially on the 6th segment. Length 3 to 3⅓ mm.

Sexual differences unknown.

Sikkim: Darjeeling. Two examples, perhaps ♀ (ex *Fauvel*). I do not know this species. Perhaps identical with *E. jacobsoni*.

20. Eupiestus jacobsoni.

Eupiestus jacobsoni Cam., Ent. Mitt. Berlin, xvii, 1928, p. 90.

This species is closely allied to *E. sculpticollis* Kr., of the same colour and lustre, but the head and thorax are narrower and both are much more coarsely punctured; the keels on the thorax are sharper and higher, the elytra are more deeply and the abdomen more closely punctured. The antennæ are a little longer and stouter. Length 2·5 to 3 mm.

Perhaps identical with E. *sikkimi* Fauv.

Assam: Naga Hills. Also in Sumatra.

Genus **SIAGONIUM** Kirby & Spence.

Siagonium Kirby & Spence, Introd. Ent. i, 1815, pl. 1; Curtis, Brit. Ent. i, 1824, pl. 23; Fauv., Faun. Gallo-Rhén. iii, p. 15; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 684.

Prognatha Lat. in Cuv., Règne Anim. iv, 1829, p. 439; Er., Gen. Spec. Staph. 1839–40, p. 836; Lac., Gen. Col. ii, 1854, p. 128; Jacq. du Val, Gen. Col. d'Eur. ii. 1857–59 (1858), p. 63; Kraatz, Naturg. Ins. Deutsch. ii, 1856–58, p. 1043; Muls. et Rey, Brévipennes, 1879, p. 386.

Biology.—Westw., Zool. Journ. iii, 1827–28, p. 56, pl. 2, f. 1.

Elongate, parallel, depressed or subdepressed species. The head large, scarcely or not at all constricted behind, the neck thick and inserted in the thorax; eyes rather prominent. In the ♂ the head is larger than in the ♀, the antennal tubercles usually produced in front into a spine, the antennæ longer; small-headed unarmed males are, however, found as in the genus *Oxytelus*. Gular sutures parallel, obsolete. Labrum crescentic, finely ciliated, and with long setæ. Mentum transverse, narrowed towards the front, the sides and anterior margin rounded. Tongue membranous, broad, divided by a broad obtuse emargination into two rounded lobes, in the middle with a strong chitinous supporting rod. Paraglossæ well developed, extending to the apex of the lobes. Labial palpi short and stout, 3-jointed, the 1st joint broader than long, the 2nd shorter and a little narrower than the 1st, transverse, the 3rd oval, about as long as the two preceding

together. Inner lobe of the maxilla narrow, straight, pointed, the inner margin with closely-set curved teeth and cilia. Outer lobe broad, obliquely truncate at the apex, thickly ciliated. Maxillary palpi 4-jointed, the 1st joint small, the 2nd and 3rd subequal, obconical, the 4th a little narrower than the 3rd, about as long as the three preceding together. Mandibles pointed, the left with a strong tooth, both with a well-developed ciliated membrane towards the base; in the ♂ each with a curved, upwardly- and inwardly-directed horn. Thorax transverse, contracted behind; prosternum large, its process narrow and projecting back to behind the coxæ, these not prominent. Epimera triangular, pointed. Mesosternum with a narrow process extending beyond the middle of the coxæ and meeting the apex of the broader metasternal process. Metasternum long. Anterior coxæ oval, not prominent, the middle globose, the posterior transverse. Anterior tibiæ dentate, the middle spinose, the posterior scarcely spinose. Tarsi 5-jointed, the first four joints short and subequal, together about as long as the 5th. Elytra with well-defined epipleura, more or less seriately punctured. Abdomen keeled below, the sides bordered above.

The species are found under the bark of trees in the Palæarctic, Nearctic, and Australian regions. Only one species is so far known from our region; the species described by Walker from Ceylon as *decisum* is a Cucujid of the genus *Ino*.

21. Siagonium indicum.

Siagonium indicum Fauv., Rev. d'Ent. xxi, 1902, p. 21.

♂. Of the size of S. *quadricorne* Kirby, but narrower, subconvex, the head and thorax less shining, black, the elytra at the base and sides obscurely pitchy, palpi, base of the antennæ, anus, and legs pitchy red. Antennæ a little thicker. Mandibles longer, more slender. Head more finely punctured, the antennal tubercles at the apex internally deeply sinuate, thence produced into long, slender, sharp, converging spines; the frontal space between about half as wide as in *quadricorne*, more deeply excavated; eyes a little larger. Thorax more convex and narrower, much less transverse, with a short scarcely perceptible groove before the base, twice as finely punctured. Elytra subconvex, a little longer, with the rows of punctures, especially the inner, straighter. Abdomen much more finely, obsoletely, and sparingly punctured. ♀ unknown. Length 5·5 mm.

Sikkim: Darjeeling. Unique (ex *Fauvel*).

Genus **PARALISPINUS** Bernhauer.

Paralispinus Bernh., D. E. Z. 1921, p. 67.
Ancæus Fauv., Bull. Soc. Norm. ix, 1865, p. 60; Sharp, B. C.-A. i, 2, 1882-87 (1887), p. 716.
Holotrochus Shp. (pars), Trans. Ent. Soc. Lond. 1876, p. 67.

It is very doubtful if this genus can be retained. It was separated by Fauvel from *Lispinus* on the grounds that two spines were present externally before the apex of the anterior tibiæ, that the claws were denticulate, and that the tongue was furnished in front with a single chitinous rod. As to the first character, similar spines are found in *Lispinus*, the second I have failed to verify, and the third is incorrect, two little rods being present as in *Lispinus*. The only differences I can detect are that the femora are rather thicker than in *Lispinus* and that the middle and posterior tibiæ are practically glabrous, whereas in *Lispinus* they are closely and finely spinose or setose for about the apical half externally.

22. **Paralispinus exiguus.** (Plate I, fig. 2.)

Lispinus exiguus Er., Gen. Spec. Staph. 1840, p. 830; Fauv., Bull. Soc. Norm. ix, 1865, p. 59.
Lispinus aruensis Fauv., Ann. Mus. Civ. Gen. xii, 1878, p. 200.
Lispinus fauveli Shp., Trans. Ent. Soc. Lond. 1876, p. 392.
Lispinus lævigatus Kr., Arch. Naturg. xxv, 1859, i, p. 188.
Lispinus pallescens Blackb., Trans. Roy. Dublin Soc. (2) iii, 1902, p. 126.
Lispinus rufescens Lec., New Spec. Col. i, 1863, p. 59; Sharp, B. C.-A. i, 2, 1887, p. 718.

Narrow, elongate, shining reddish-testaceous, almost impunctate, but with distinct ground-sculpture. Antennæ and legs reddish-testaceous. Length 2 mm.

Head a little narrower than the thorax, eyes small, prominent, temples parallel; front bi-impressed, frontal margin broadly rounded, practically impunctate. Antennæ short, the 2nd joint a little shorter than 3rd, 4th to 10th transverse, the penultimate twice as broad as long. Thorax scarcely broader than long, subconvex, the sides in front feebly rounded, sinuated and contracted before the rectangular posterior angles, these foveate within, in the middle with a fine impressed line, impunctate, finely longitudinally coriaceous. Elytra as broad as, but one-fourth longer than, the thorax, longer than broad. Abdomen with the usual setiferous punctures only.

Assam: Naga Hills, alt. 6000 feet.

Widely distributed throughout the Tropics.

Genus **HOLOSUS** Motschoulsky.

Holosus Motsch., Bull. Soc. Mosc. xxx, 1857, iv, p. 496.

Mostly black, shining species, many having a facies recalling certain genera of TACHYPORINÆ, others again certain species of *Lispinus*. Head slightly constricted behind, neck broad. Gular sutures wanting, temples not margined below. Labrum crescentic, ciliate, and with numerous longer and shorter setæ. Mandibles short, stout, curved, pointed, edentate, with a fine ciliate membrane within. Maxillary palpi with the 1st joint very small, 2nd stout, the outer margin curved and much longer than the inner, 3rd transverse, 4th elongate, about four times longer than the preceding, narrowed at the apex. Outer lobe of the maxilla with broad apex, ciliate and furnished with numerous angulate teeth; inner lobe narrow, its apex hooked, behind with two stout teeth, more posteriorly ciliate. Tongue broad and membranous, ciliate, divided into two lobes separated by a pair of chitinous rods. Labial palpi short, 3-jointed, 2nd joint transverse, 3rd oblong, a little longer than the 1st. Paraglossæ well developed. Prosternum large, its process rather broad, extending a little behind the coxæ, its apex rounded, depressed, the coxæ moderately separated, globose. Epimera oblong, coxal cavities open behind. Mesosternum medially sulcate, its process rather broad, sulcate longitudinally, the apex truncate, extending about half the length of the coxæ, these moderately separated. Metasternal process truncate, reaching the mesosternal. Abdomen strongly keeled at the base ventrally; the sides not margined, obliquely striate. Tibiæ finely setose. Tarsal formula 5, 5, 5, the first four joints very short, the 5th longer than the preceding together. Elytral epipleura separated by a distinct keel from the dorsal surface.

The above characters are taken from *H. tachiniformis* Motsch. The genus is found in the Oriental tropics and in Africa, usually in decaying tree-trunks. It is doubtful whether this genus can be satisfactorily separated from *Lispinus*. As a rule, they are more convex and less parallel species with the abdomen striate, whereas *Lispinus* is composed of more depressed, parallel insects with the abdomen rarely striate.

Key to the Species.

1. Thorax not deeply impressed at the posterior angles. Facies of *Olisthærus* ..... *olisthæriformis* Motsch., [p. 47.
   Thorax with deep impression at the posterior angles ..... 2.

2. Thorax not transversely impressed before the base ..... 3.
Thorax transversely impressed before the base ..... 8.
3. Elongate subparallel species ..... 4.
Navicular species with facies of certain *Tachyporinæ* ..... 6.
4. Penultimate joints of antennæ fully as long as broad. Elytra distinctly longer than broad ..... *longipennis* Cam., p. 49.
Penultimate joints of antennæ distinctly transverse ..... 5.
5. Thoracic fossa at the posterior angles rounded; facies of *Holotrochus*; apex of abdomen red; 4th to 7th joints of the antennæ moniliform. Length 3·5 mm. ..... *aberrans* Fauv., p. 51.
Thoracic fossa oblong; facies of *Lispinus*; apex of abdomen black; 4th to 7th joints of antennæ transverse. Length 4·5 mm. ..... *fossulatus* Motsch., p. 48.
6. Sides of thorax obtusely angulate about the middle. Species broader and shorter ..... *tachiniformis* Motsch., p. 44.
Sides of thorax not angulate, straight from base to apex. Species narrower and longer ..... 7.
7. Thorax broader ($10\frac{1}{2} : 6$), indistinctly punctured, elytra extremely finely and sparingly punctured ..... *conuriformis* Motsch., [p. 45.
Thorax narrower ($7 : 5\frac{3}{4}$), distinctly punctured, elytra impunctate ..... *distinguendus* Cam., p. 45.
8. Elytra each with two longitudinal sulci, one extending the whole length of the suture, the other on the middle of the disc, shorter ..... *foveolatus* Motsch., p. 48.
Elytra not longitudinally bisulcate .. 9.
9. Basal impression of the thorax bifoveate ..... *mycetoporiformis* Motsch., [p. 46.
Basal impression not bifoveate ..... 10.
10. Smaller species 2·75 mm., facies of *Tachyporus* ..... *tachyporiformis* Motsch., [p. 46.
Larger species 3 to 3·5 mm., facies of *Lispinus* ..... 11.
11. Elytra sparingly obsoletely punctured. *brevipennis* Fauv., p. 50.
Elytra rather closely, finely punctured. *ambigenus* Fauv., p. 50.

23. Holosus tachiniformis. (Plate I, fig. 3.)

Holosus tachiniformis Motsch., Bull. Mosc. xxx, 1857, iv, p. 498; Kraatz, Arch. Naturg. xxv, 1859, i, pl. 3, fig. 5 *a*, *b*.

Black, shining, narrowed behind. Sides of the thorax obtusely angulate in the middle, deeply and broadly impressed at the posterior angles. Very finely and not closely punctured.

Posterior margins of the abdominal segments rufescent. Antennæ ferruginous. Legs reddish-testaceous. Length 4 mm.

In general appearance somewhat similar to *Tachinus fimetarius* Gr. Head much narrower than the thorax, the sides before the eyes slightly rounded, the front truncate, finely and moderately closely punctured with extremely fine strigose ground-sculpture. Antennæ extending a little beyond the posterior angles of the thorax, the 2nd joint shorter than the 3rd, 4th to 7th a little longer than broad, gradually decreasing in length, 8th to 10th transverse, gradually increasing in breadth. Thorax nearly twice as broad as long (9 : 5), the sides obtusely angulate just behind the middle, from there nearly straight and a little retracted to the slightly acute posterior angles, nearly straight but more retracted to the rounded anterior angles; broadly deeply foveate at the posterior angles, not transversely impressed before the base, more finely but about as closely punctured as the head and with similar very fine ground-sculpture. Scutellum impunctate. Elytra a little longer (7 : 5) and broader than the thorax, transverse, the sides evenly rounded, sutural stria distinct but fine; puncturation yet finer and less close than on the thorax and without ground-sculpture. Abdomen distinctly narrowed from base to apex, the first 4 segments each with 6 or 7 oblique striæ on either side, practically impunctate and with a very fine transverse ground-sculpture.

"Ind. or." Also in Java and Perak.

24. Holosus conuriformis.

Holosus conuriformis Motsch., Bull. Mosc. xxx, 1857, iv, p. 499.

Narrower and more elongate than *H. tachiniformis* Motsch. Black, shining, the last joint of the antennæ, palpi, legs, and posterior margins of the abdominal segments and anus more or less reddish-brown. Head less punctured than in *tachiniformis*, thorax narrower, the sides straight, widest behind, posterior angles pointed and prominent, lateral impression as deep but more transverse than in *tachiniformis*, puncturation very fine. Elytra a little longer and broader than the thorax, extremely finely and sparingly punctured. Abdomen with the oblique striæ more marked than in *tachiniformis*. Length 4 mm.

"Ind. or."

25. Holosus distinguendus.

Holosus distinguendus Cam., E. M. M. lxi, 1925, p. 233.

Closely allied to *H. conuriformis* Motsch. but narrower, the thorax distinctly less transverse and moderately finely and

moderately closely punctured, whilst the elytra are scarcely perceptibly punctured, the 4th to 6th joints of the antennæ are shorter; in other respects similar to *conuriformis*. Length 4 mm.

Assam : Margherita. W. Almora (*H. G. Champion*). Also in Indo-China.

26. **Holosus tachyporiformis.**

Holosus tachyporiformis Motsch., Bull. Mosc. xxx, 1857, iv. p. 498.

Black, shining, narrowed behind. Abdomen with the posterior margins of the segments rufescent. Thorax with the sides very gently rounded for the anterior two-thirds, the posterior one-third slightly retracted and almost straight to the rectangular posterior angles, these with a large rounded fovea united by a shallow transverse groove before the base. Antennæ ferruginous. Legs reddish-testaceous. Length 2·3 mm.

About the size and build of *Tachyporus macropterus* Steph., but more depressed. Head finely and moderately closely punctured. Antennæ short, 2nd joint about as long as broad, 3rd about twice as long, 4th and 5th scarcely longer than broad, 6th moniliform, 7th to 10th transverse, gradually increasing in breadth. Thorax transverse ($4\frac{1}{2}$: 3), of the build above indicated, the puncturation less fine and more close than that of the head and with a very fine strigose ground-sculpture. Scutellum impunctate. Elytra a little longer (4 : 3) and broader (at the middle) than the thorax, slightly transverse, the sides evenly rounded, sutural stria fine, puncturation distinctly finer, but scarcely less close than that of the thorax, ground-sculpture wanting. Abdomen gradually narrowed from base to apex, the 1st segment with fine subtransverse striæ united in a curve across the middle, the 2nd and 3rd with finer oblique striæ, scarcely perceptibly punctured, finely transversely strigose.

"Ind. or." Also Malay Peninsula and Singapore.

27. **Holosus mycetoporiformis.**

Holosus mycetoporiformis Motsch., Bull. Mosc. xxx, 1857, iv, p. 500.

Black, shining; abdomen gradually narrowed from base to apex. Thorax transverse, widest at the middle, the sides gently retracted, but not sinuate for the posterior third, gently rounded and narrowed anteriorly; posterior angles rectangular, with a broad, deep, rounded impression adjacent, very indistinctly impressed before the middle of the base. Antennæ brownish-red. Legs reddish-testaceous. Length 4·75 mm.

Facies somewhat of *Mycetoporus rufescens* Steph., but more robust and remarkable by the comparatively strong punctuation. Head rather finely and moderately closely punctured, except at the front, ground-sculpture scarcely visible. Antennæ with the 2nd joint transverse, 3rd about 2½ times longer, 4th to 6th slightly, 7th to 10th strongly transverse. Thorax transverse (8 : 5¼), at the posterior angles with a deep rounded impression extending nearly to the level of the middle, before the base scarcely impressed; puncturation moderately close, a little less fine than that of the head, the ground-sculpture feeble. Scutellum with 7 or 8 fine punctures, transversely strigose. Elytra longer (6½ : 5¼) and a little broader than the thorax, broader than long, the sides gently rounded, sutural stria fine, the puncturation very similar to that of the thorax, but without ground-sculpture. Abdomen with oblique striæ (8 or 9) on either side of each segment, the striæ connected by fine lines at right angles, practically impunctate, the bases of the segments coriaceous.

Tenasserim, Thagata (*L. Fea*).

28. **Holosus olisthæriformis.**

Holosus olisthæriformis Motsch., Bull. Mosc. xxx, 1857, iv, p. 500.

Black, shining, very finely coriaceous (except elytra). Thorax transverse, broadly, superficially impressed near the posterior angles, without impression before the middle of the base. Abdomen gradually narrowed from base to apex, the segments on either side each with 10 or 11 oblique striæ. Antennæ reddish-brown. Legs reddish-testaceous. Length 5 mm.

Head very finely, rather sparingly punctured. Antennæ with the 2nd joint transverse, the 3rd twice as long as broad, 4th to 6th moniliform, 7th as long as broad, larger than the preceding, 8th to 10th transverse. Thorax transverse (7½ : 6), widest at the posterior third, the sides from thence very slightly retracted to the rectangular posterior angles, in front very slightly rounded and narrowed, the puncturation etc. as on the head. Scutellum with 4 or 5 very fine punctures. Elytra longer (8¼ : 6) and broader than the thorax, a little broader than long, sutural stria fine, the sides very slightly rounded, sparingly, distinctly more finely punctured than the thorax. Abdomen with the segments on either side with 10 or 11 well marked oblique striæ without connecting striæ, extremely finely and very sparingly punctured and with a fine transverse strigose ground-sculpture.

"Ind. or."

29. Holosus fossulatus.

Holosus fossulatus Motsch., Bull. Mosc. xxx, 1857, iv, p. 495.

Black, shining, subparallel; posterior margins of the abdominal segments rufescent. Thorax with large deep fossa at the posterior angles, not impressed before the middle of the base. Scutellum punctured. Antennæ short, pitchy. Legs reddish-brown. Length 4·5 mm.

Facies of a large *Lispinus*. Head rather broad, but narrower than the thorax, subconvex, eyes prominent, finely and moderately closely punctured, with scarcely visible ground-sculpture. Antennæ with the 2nd joint slightly transverse, 3rd more than twice as long, 4th to 10th transverse, gradually increasing in width. Thorax transverse ($5\frac{1}{2}$: 4), the sides retracted and nearly straight for the posterior third, the anterior two-thirds gently rounded and widened, anterior angles rounded, posterior rectangular, adjacent to them with a large deep oblong impunctate fossa, median line very narrowly impunctate, the rest of the surface moderately finely and moderately closely punctured, distinctly less finely than the head and with similar ground-sculpture. Scutellum with a few moderate-sized superficial punctures. Elytra longer (6 : 4) and a little broader than the thorax, slightly longer than broad, the sides scarcely rounded, sutural stria rather wide, distinctly more finely and rather less closely punctured than the thorax and without ground-sculpture. Abdomen elongate, scarcely narrowed behind, coriaceous, very obsoletely punctured, with 9 or 10 oblique striæ on either side of the anterior segments.

"Ind. or." Also Sumatra.

30. Holosus foveolatus.

Holosus foveolatus Motsch., Bull. Mosc. xxx, 1857, iv, p. 496.

Elongate, subparallel, pitchy black, shining; posterior margins of the abdominal segments rufescent. Thorax transverse, with four foveæ before the base, the lateral much deeper. Elytra deeply sulcate along the suture, the disc with short deep sulcus. Antennæ ferruginous. Legs reddish-testaceous. Length 3·3 mm.

Head moderately finely and moderately closely punctured, finely transversely strigose. Antennæ extending slightly beyond the posterior angles of the thorax, 2nd joint about as long as broad, 3rd longer than broad, 4th and 5th scarcely longer than broad, 6th as long as broad, 7th to 10th transverse, gradually increasing in breadth. Thorax transverse ($5\frac{1}{2}$: 4), the posterior third of the sides gradually retracted to the base and nearly straight to the rectangular posterior angles, the anterior

two-thirds gradually widened and rounded to the rounded anterior angles, the base adjacent to the posterior angles with a large deep oblong fovea, on either side of the middle line with a large shallow impression reaching the middle; puncturation and ground-sculpture as on the head. Elytra longer ($5\frac{1}{2}$: 4) and a little broader than the thorax, slightly transverse, the sides a little rounded, deeply and rather broadly impressed along the suture, on the middle of the disc with a shorter but broader and shallower impression, puncturation rather finer and more superficial than that of the thorax and without ground-sculpture. Abdomen scarcely narrowed behind, the first four segments with fine oblique striæ, scarcely perceptibly punctured, finely transversely strigose.

"Ind. or." Also Singapore and Borneo.

31. **Holosus longipennis.** (Plate I, fig. 4.)

Holosus longipennis Cam., E. M. M. lxi, 1925, p. 235.

Elongate, parallel, black, shining; posterior margins of the abdominal segments narrowly rufescent. Thorax quadrate, deeply and broadly foveate at the posterior angles, otherwise not impressed. Elytra distinctly longer than the thorax. Abdomen elongate, scarcely narrowed behind, finely obliquely striate at the sides. Antennæ long and stout, pitchy, the penultimate joints fully as long as broad. Legs reddish. Length 5 mm.

Near *H. fossulatus* Motsch., but a little longer and narrower, the antennæ distinctly longer, the thorax narrower, the impressions longer, the elytra longer, the puncturation is however very similar. Head rather broad, a little narrower than the thorax, rather finely and moderately closely punctured without ground-sculpture. Antennæ with 2nd joint scarcely as long as broad, the 3rd clavate, 4th as long as broad, 5th to 10th all fully as long as broad, gradually increasing in length and breadth. Thorax scarcely broader than long ($5\frac{1}{3}$: 5), the sides parallel and nearly straight for the posterior one-fifth, very slightly widened and rounded from thence to the anterior angles, broadest about the middle, posterior angles rectangular, with long deep impression adjacent, not impressed before the middle of the base, puncturation scarcely less fine, but a little closer than that of the head and without ground-sculpture, the fossæ less punctate. Scutellum with 4 or 5 small punctures. Elytra longer ($7\frac{1}{2}$: 5) and broader than the thorax, longer than broad, the sides scarcely rounded, sutural stria well marked, much more finely and less closely punctured than the thorax and without ground-sculpture. Abdomen elongate, scarcely narrowed behind, the segments with 8 or 9 oblique

striæ on each side, coriaceous and with a few very fine obsolete punctures.

Nilgiri Hills (*H. L. Andrewes*). Anamalai Hills (*T. B. Fletcher*).

32. **Holosus brevipennis.**

Holosus brevipennis Fauv., Rev. d'Ent. xxiii, 1904, p. 77.
Holosus transversus Cam., E. M. M. lxi, 1925, p. 234.

Elongate, subparallel, black, shining; the posterior margins of the abdominal segments narrowly and obscurely ferruginous. Thorax deeply foveate at the posterior angles, transversely impressed before the base, in the middle with fine longitudinal sulcus. Abdominal striæ transverse on the first three segments and united across the middle. Antennæ ferruginous. Legs reddish-testaceous. Length 3·2 to 3·5 mm.

Head without impressions, finely and moderately closely punctured and with a fine ground-sculpture. Antennæ with the 2nd joint slightly longer than broad, about half as long as the 3rd, 4th and 5th as long as broad, 6th slightly, 7th to 10th more strongly transverse. Thorax transverse ($5\frac{1}{2}$: 4), the sides straight and slightly retracted for the posterior third, in front very gently rounded and widened to the rounded anterior angles, widest about the middle, posterior angles rectangular, with a deep, broad, nearly impunctate fossa, before the middle of the base slightly transversely impressed, the impression not connected with the lateral fossæ, puncturation a little less fine than on the head, the ground-sculpture similar. Elytra a little longer and broader than the thorax, transverse, more finely and less distinctly punctured than the thorax and without ground-sculpture. Abdomen scarcely narrowed behind, with transverse striæ (5 or 6) united across the middle on the first three segments, oblique and gradually less distinct on the posterior segments, 5th (visible) segment more distinctly punctured than the others, finely coriaceous.

Siwaliks. Also Sumatra, Hong-Kong, Tonkin, Hué.

33. **Holosus ambigenus.**

Holosus ambigenus Fauv., Rev. d'Ent. xiv, 1895, p. 183.

Resembling a large *Lispinus*, but more convex; black, shining, antennæ pitchy, mouth, apical margins of the segments narrowly and the legs reddish; antennæ short, rather stout, with 7th to 10th joints broader, 11th red; head convex, frontal margin truncate, closely, rather strongly punctured; thorax scarcely transverse, subquadrate, more strongly and more sparingly punctured than the head, the sides parallel, a little narrowed behind the anterior angles, the posterior rectangular, scarcely prominent, base arcuate, in the middle

before the basal margin broadly transversely impressed, the impression scarcely bifoveate, near the posterior angles with a large, deep, oblong fossa; elytra a little longer and broader than the thorax, convex, more finely punctured than the thorax, the punctures often a little elongate; abdomen nearly parallel, with oblique striæ, very sparingly and finely punctured when examined by a strong lens, 2nd segment at the base rather broadly alutaceous, in the middle scarcely visibly plicate. Length $4\frac{2}{3}$ to 5 mm.

This insect perhaps belongs to the genus *Lispinus*.

Burma: Carin Asciuii Cheba, Carin Cheba (*L. Fea*) (ex *Fauvel*).

34. **Holosus aberrans.**

Holosus aberrans Fauv., Rev. d'Ent. xxiii, 1904, p. 78.

Resembling the smaller species of the genus *Holotrochus* in the convex and elongate build, but less cylindrical. Black, shining, glabrous, the fore-parts without ground-sculpture, mouth, antennæ, apical margins of the abdominal segments narrowly, anus and legs red. Antennæ short, somewhat stout, of the length of the head and thorax, the 3rd joint scarcely longer than the 2nd, 4th to 7th moniliform, 8th to 10th transverse, the last five joints scarcely wider than the preceding, the 11th more or less testaceous. Head convex, rather closely and finely punctured, even, the antennal tubercles almost absent, behind the large and prominent eyes very slightly co-arctate, frontal margin strongly rounded. Thorax a little wider than the head, quadrate, convex, more strongly and more sparingly punctured, from the middle to the base scarcely sinuate and a little narrowed, the posterior angles rectangular, the impression broad, subrotundate, rather deep, median sulcus very short, obsolete. Elytra parallel, a little broader and a fourth longer than the thorax, finely punctured, and with fine longitudinal vermiculate striæ. Abdomen less shining, scarcely alutaceous, very finely and densely obliquely striate laterally, obsolete along the middle. Length 3·5 mm.

Ceylon. Unique (ex *Fauvel*).

Genus **LISPINUS** Er.

Lispinus Er., Gen. et Spec. Staph. 1840, p. 828; Lacord., Gen. Col. ii, 1854, p. 126; Fauv., Bull. Soc. Norm. ix, 1865, p. 44; id., Not. Ent. ii, p. 40; Sharp, Tr. Ent. Soc. Lond. 1876, p. 411.

More or less elongate, parallel, depressed or subdepressed species of subcortical habitus. It is closely allied to *Holosus*. The mouth-parts are similar in most respects, but the 4th joint of the maxillary palpi is shorter, only about $2\frac{1}{2}$ times

longer than the 3rd, and the mandibles internally behind the apex have each in some species a narrow emargination (but are not toothed), the outer margin does not form an even curve from base to apex, but a little before the apex is suddenly contracted. Prosternum large, its process long, pointed, extending about the whole length of the coxæ, these narrowly separated. Epimera triangular. Mesosternum convex, its process triangularly impressed at the base, extending half the length of the coxæ, these narrowly separated; metasternal process short, rounded at apex, meeting the preceding. Abdomen strongly keeled below at the base; sides not bordered above, occasionally obliquely striate. Tibiæ externally finely spinose, the subapical spine much larger than the others. Tarsal formula 5, 5, 5, the first four joints very short, together shorter than the 5th. Claws simple.

Key to the Species.

1. Thorax without median impressions before the base ..... 2.
   Thorax with more or less distinct median impressions ..... 10.
2. Abdomen distinctly striate at the sides 3.
   Abdomen not or scarcely striate at the sides ..... 7.
3. Thorax fully as long as broad, more depressed vermiform species, the segments of the abdomen more elongate. *quadrinotatus* Fauv., p. 54.
   Thorax transverse, less depressed, not vermiform, segments of the abdomen shorter ..... 4.
4. Penultimate joints of the antennæ a little longer than broad; thorax distinctly transverse, the sides distinctly emarginate behind ..... *andrewesi*, sp. n., p. 56.
   Penultimate joints of the antennæ transverse; thorax slightly transverse, the sides scarcely emarginate behind ..... 5.
5. Elytra extremely finely, scarcely perceptibly punctured on the disc .. *lævipennis* Kr., p. 54.
   Elytra finely but distinctly punctured on the disc ..... 6.
6. Lateral impressions of the thorax deep and narrow; thorax more finely and less closely punctured; elytra more sparingly punctured ..... *strigiventris* Kr., p. 55.
   Lateral impressions broader and less deep; thorax less finely and more closely punctured; elytra less sparingly punctured ..... *quadricollis* Cam., p. 55.
7. Penultimate joints of the antennæ scarcely transverse ..... *tenuicornis* Kr., p. 57.
   Penultimate joints of the antennæ distinctly transverse ..... 8.

8.	Larger (4·5 mm.). Thorax strongly emarginate before the posterior angles; more robust. Abdomen rather closely, distinctly punctured .	*birmanus* Fauv., p. 58.
	Smaller (3·6 mm.). Thorax scarcely emarginate	9.
9.	Broader. Thorax at the posterior angles with a very narrow impression distinctly limited internally. Elytra a little longer than broad.....	*coarcticollis* Kr., p. 58.
	Narrower. Thorax scarcely impressed at the posterior angles. Elytra much longer than broad	*brevicornis* Kr., p. 57.
10.	Entirely testaceous, very shining species.....	*testaceus* Kr., p. 64.
	Otherwise coloured	11.
11.	Thorax with four quadrately-placed punctures	12.
	Thorax without such punctures.....	14.
12.	Larger, 3·2 to 4 mm.; black species ..	13.
	Smaller, 2·75 mm.; thorax and elytra reddish-brown, head and abdomen blackish; head and thorax usually with greenish reflex, elytra obsoletely and sparingly punctured	*subopacus* Kr., p. 62.
13.	Larger, 3·4 to 4 mm.; more robust, more shining, blacker, more finely punctured, thorax more dilated in front, antennæ longer, the penultimate joints less transverse	*intermedius* Cam., p. 59.
	Smaller, 3·2 mm., less robust, less shining, more pitchy, less finely punctured, thorax less dilated in front, antennæ shorter, the penultimate joints more transverse	*madurensis* Bernh., p. 59.
14.	Finely coriaceous species.....	15.
	Strongly coriaceous depressed species .	19.
15.	Brightly coloured, reddish or reddish-yellow species	16.
	Black or pitchy species	17.
16.	Median thoracic impressions distinct; sides of the thorax less sinuate behind; puncturation finer	*fulvus* Motsch., p. 63.
	Median thoracic impressions feeble; sides of thorax more sinuate behind; puncturation less fine	*amherstanus* Bernh., p. 64.
17.	Closely and strongly punctured species .	*beesoni* Cam., p. 61.
	Moderately closely, finely punctured species.....	18.
18.	More shining; ground-sculpture less distinct, antennæ stouter	*impressicollis* Motsch., p. 60.
	Less shining; ground-sculpture more distinct, antennæ more slender	*sublucens* Fauv., p. 60.
19.	Larger, 3·2 mm.; darker and more coarsely punctured species	*coriaceus* Fauv., p. 62.
	Smaller, 2·2 mm.; lighter and more finely punctured species	*iyeri* Bernh., p. 63.

35. Lispinus quadrinotatus.

Lispinus quadrinotatus Fauv., Rev. d'Ent. xxiii, 1904, p. 80.
Lispinus kempi Bernh.*, W. E. Z. xliii, 1926, p. 20.

Narrow, elongate, depressed, vermiform ; black, moderately shining, the apex of the abdomen reddish. Thorax without median impressions, the elytra with two larger punctures on each ; abdomen striate at the sides. Antennæ and legs reddish-brown. Length 5·5 to 6 mm.

Allied to *L. macropterus* Fauv. and very similar in build. Head on each side in front with a rather long impression, rather finely, moderately closely punctured, finely coriaceous. Antennæ with the 6th to 10th joints transverse. Thorax fully as long as broad, the sides very slightly rounded in front, a little narrowed before the rectangular posterior angles, in the middle with a very fine impressed line, adjacent to the posterior angle, with a deep and rather narrow sulcus, extending forwards nearly to the level of the middle, moderately finely and moderately closely punctured on the disc, more sparingly at the sides, the sulcus practically impunctate. Elytra half as long again as the thorax, finely and sparingly punctured, more closely towards the sides, coriaceous (in the form *kempi* the puncturation is rather less fine on the disc). Abdomen elongate, the sides obliquely striate, punctured, coriaceous.

Rotung, Abor Expedition, altitude 1400 feet, 24. xii. 1911. Also in Perak, Java, and Celebes.

36. Lispinus lævipennis.

Lispinus lævipennis Kr.*, Arch. Naturg. xxv, 1859, i, p. 185.

Narrow, elongate, black, shining, finely coriaceous. Thorax slightly broader than long, the sides retracted, but scarcely sinuate for the posterior fourth, lightly longitudinally impressed laterally, the disc without impressions. Abdomen obsoletely punctured and very obsoletely striate at the sides. Antennæ brownish red. Legs reddish-testaceous. Length 5 mm.

Head lightly bi-impressed in front, very finely and not closely punctured. Antennæ reaching the posterior angles of the thorax, the 3rd joint longer than 2nd, 4th and 5th as long as broad, 6th slightly, 7th to 10th more strongly transverse. Thorax slightly transverse ($4\frac{1}{2} : 4$), widest at the middle, in front slightly rounded, the sides nearly parallel, with a light longitudinal impression extending from the posterior angles nearly to the middle, middle of disc with a very fine impressed line, otherwise not impressed, less finely and less sparingly punctured than the head. Scutellum with a few fine punctures. Elytra longer (6 : 4) and very slightly wider than the thorax,

longer than broad (6 : 4½), finely and sparingly punctured, the punctures more or less aciculate, each with two larger punctures towards the sides, one about the first, the other about the third, fourth. Abdomen elongate, with a few fine superficial punctures, the sides of the segments (more especially the posterior) with traces of oblique striæ.

Ceylon : Galle.

37. **Lispinus strigiventris.**

Lispinus strigiventris Kr.*, Arch. Naturg. xxv, 1859, i, p. 186.

Narrow, elongate, black, shining. Thorax subquadrate, slightly retracted before the rectangular posterior angles and with a deep longitudinal punctured impression externally extending nearly to the middle and without median impressions. Abdomen finely, obliquely, irregularly striate at the sides. Antennæ ferruginous. Legs reddish-testaceous. Length 5 mm.

Very similar to *L. lævipennis* Kr., but a little narrower, the thoracic impressions deeper and more punctured, the thorax and elytra less finely and more closely punctured, the abdomen more distinctly striate. Head bi-impressed in front, finely and moderately closely punctured. Antennæ with the 3rd joint a little longer than the 2nd, 4th and 5th as long as broad, 6th to 10th transverse. Thorax transverse (5 : 4⅓), the sides gently retracted but scarcely sinuate for about the posterior half, very slightly rounded, almost parallel in front, more closely and less finely punctured than the head, with fine longitudinal ground-sculpture. Elytra longer (6⅓ : 4⅓) and a little broader than the thorax, longer than broad (6⅓ : 5⅓), finely and sparingly punctured on the disc, less finely and more closely towards the sides, the punctures more or less elongate, the ground-sculpture finely longitudinally strigose. Abdomen finely, obliquely, irregularly striate at the sides, finely and moderately closely punctured, finely coriaceous.

"Ind. or."

38. **Lispinus quadricollis.** (Plate I, fig. 5.)

Lispinus quadricollis Cam., Tr. Ent. Soc. Lond. 1924, p. 160.

Elongate, black, shining, finely coriaceous. Thorax slightly broader than long, the sides retracted, but scarcely sinuate behind, lightly longitudinally impressed laterally, disc without impressions. Abdomen distinctly and moderately closely punctured, the sides obsoletely obliquely striate. Antennæ brownish red. Legs reddish-testaceous. Length 5·5 mm.

Very near *L. lævipennis* Kr., but a little more robust, the thorax and elytra much less finely and less sparingly punctured,

the abdomen much more closely and much more coarsely and less superficially punctured. Head bi-impressed in front, finely and moderately closely punctured. Antennæ with the 3rd joint longer than 2nd, 4th to 6th as long as broad, 7th to 10th transverse. Thorax scarcely broader than long, the sides gently retracted, but scarcely sinuate for the posterior fourth, from thence very slightly rounded, almost parallel in front, widest about the middle; lateral impression shallow, punctured, reaching nearly to the middle; middle of disc with fine impressed line, puncturation less fine and distinctly closer than that of the head. Scutellum with a few fine punctures. Elytra longer (7 : 5) and slightly broader than the thorax, longer than broad (7 : 6), more finely and less closely punctured than the thorax on the disc, towards the sides with rather larger punctures. Abdomen elongate, rather closely and rather deeply punctured, on the sides with traces of oblique striæ, more distinct on the 4th and 5th segments where the puncturation is less evident.

Almora: Kanari, China, Zodh, Dwarakat, 4000 to 5000 feet above the sea. Assam: Patkai Mountains (*Doherty*); Sadiya. Burma: Insein.

39. **Lispinus andrewesi**, sp. n. (Fauvel, *in litt.*).

Elongate, black, shining, without ground-sculpture. Thorax without median impressions, the sides retracted before the base. Abdomen finely and rather closely punctured, not coriaceous. Antennæ and legs reddish. Length 5·5 mm.

A large, robust, and but slightly depressed species; near *L. birmanus* Fauv., but larger, the antennæ longer and more slender, the penultimate joints as long as broad, thorax less transverse, rather less strongly retracted before the posterior angles, the lateral impressions less deep, elytra longer and more distinctly punctured, abdomen less finely punctured and devoid of ground-sculpture. Head feebly bi-impressed in front, finely and moderately closely punctured. Antennæ with the 4th to 7th joints a little longer than broad, the 8th to 10th as long as broad. Thorax transverse, the sides very slightly rounded for the anterior three-fourths, posteriorly narrowed and sinuate, the posterior angles rectangular, with small adjacent impression, in the middle with a fine impressed line, puncturation fine and moderately close, finer towards the sides and anterior angles. Elytra a third longer than broad, finely (but less finely than the thorax) and moderately closely punctured. Abdomen finely and moderately closely punctured, more finely and sparingly behind, not coriaceous.

Nilgiri Hills (*H. L. Andrewes*).

40. Lispinus tenuicornis.

Lispinus tenuicornis Kr.*, Arch. Naturg. xxv, 1859, i, p. 187.

Narrow, elongate, shining, moderately coriaceous, the head black, thorax and elytra pitchy black or dark reddish brown, abdomen pitchy black, the posterior margins of the segments rufescent. Thorax with rounded, rather superficial impression near the posterior angles, median basal impressions wanting. Antennæ ferruginous. Legs reddish-testaceous. Length 3·6 mm.

Head black or pitchy black, bi-impressed in front, finely and moderately closely punctured on the disc, impunctate in front. Antennæ reaching a little beyond the posterior angles of the thorax, the 2nd joint scarcely shorter than the 3rd, this and the 4th to 6th elongate, gradually decreasing in length, 7th as long as broad, 8th to 10th slightly transverse, 11th conical, about as long as the two preceding together. Thorax transverse (4 : 3), the sides retracted but scarcely sinuate for rather more than the posterior third, gently rounded in front, widest at the middle ; posterior angles with a rounded, somewhat superficial impression adjacent, the disc flattened behind, but without impressions, less finely and rather more closely punctured than the head, less closely towards the sides. Elytra longer (5 : 3) and slightly broader than the thorax, a little longer than broad, more finely, obsoletely, and sparingly punctured than the thorax and with a larger setiferous puncture before the middle of the disc. Abdomen scarcely punctured.

Ceylon.

41. Lispinus brevicornis.

Lispinus brevicornis Kr.*, Arch. Naturg. xxv, 1859, i, p. 187.

Narrow, elongate, shining black or pitchy, the elytra often reddish brown. Thorax scarcely perceptibly impressed at the posterior angles, the disc flattened posteriorly but without impressions. Antennæ ferruginous. Legs reddish testaceous. Length 3 mm.

A feebly coriaceous species, in build very similar to *L. tenuicornis* Kr., but the antennæ are distinctly shorter, the thorax obsoletely impressed and rather more strongly punctured, the sides in front less rounded. Head finely and moderately closely punctured. Antennæ with the 2nd joint scarcely longer than broad, 3rd a little longer than 2nd, 4th and 5th as long as broad, 6th to 10th transverse, gradually increasing in breadth. Thorax slightly transverse (3·75 : 3), narrowed but scarcely sinuate for the posterior fourth, gently

widened and rounded in front, puncturation less fine than on the head, moderately close. Scutellum with 3 or 4 punctures. Elytra longer (5 : 3) and a little broader than the thorax, a little longer than broad, more finely and less closely punctured than the thorax, still less punctured at the sides and without larger setigerous puncture on the disc. Abdomen with a few superficial irregular punctures.

Nilgiri Hills (*H. L. Andrewes*).

42. **Lispinus birmanus.**

Lispinus birmanus Fauv.*, Rev. d'Ent. xiv, 1895, p. 184.

Entirely black, moderately shining, distinctly coriaceous; thorax without median impressions. Antennæ pitchy, the first three joints ferruginous. Legs ferruginous. Length 5 mm.

Near *L. coarcticollis* Kr., but larger, blacker, less shining, more coriaceous, the fore-parts more finely punctured, the abdomen less finely punctured, thorax broader and shorter, more strongly contracted before the base, the lateral impression deeper and broader. Head bi-impressed in front, very finely and rather closely punctured. Antennæ with the 6th to 10th joints transverse. Thorax transverse, the sides strongly contracted a little in front of the posterior angles with broad and deep impression adjacent; middle of the disc with very narrow impunctate line, otherwise finely, rather closely and regularly punctured. Elytra as broad as, but a little longer than, the thorax, a little longer than broad, more finely punctured. Abdomen distinctly punctured like the thorax.

Burma: Carin Cheba, Carin Asciuii Ghécu; Tenasserim, Mt. Mooleyit (*L. Fea*). Assam: Naga Hills (*S. N. Chatterjee*).

43. **Lispinus coarcticollis.**

Lispinus coarcticollis Kr.*, Arch. Naturg. xxv, 1859, i, p. 186, pl. 3, fig. 5.

Black or pitchy black, shining, feebly coriaceous. Thorax with the sides strongly retracted for the posterior third, but scarcely sinuate, with narrow impression adjacent, bounded internally by a fine incurved line, the sides in front very slightly rounded, disc flattened and without median impressions. Antennæ ferruginous. Legs reddish-testaceous. Length 4 mm.

Head broad, narrower than the thorax, bi-impressed in front, finely, rather sparingly punctured. Antennæ reaching the posterior angles of the thorax, the 2nd joint scarcely longer than broad, the 3rd about twice as long, 4th and 5th as long as broad, 6th to 10th transverse, gradually increasing in breadth. Thorax transverse (5 : 4), widest at the middle, less finely and

more closely punctured than the head, less closely towards the sides. Scutellum with a few fine punctures. Elytra longer (5 : 4) and as broad as the thorax, scarcely longer than broad, very similarly punctured to the thorax, but less closely and without larger setiferous punctures on the disc. Abdomen rather sparingly, obsoletely punctured, the bases of the segments rather strongly coriaceous.

"Ind. or." Also Singapore and Malay Peninsula, Borneo.

44. Lispinus intermedius.

Lispinus intermedius Cam., E. M. M. lxi; 1925, p. 239.

Black, moderately shining, distinctly coriaceous. Thorax transverse, the lateral impression rather deep and extending a little beyond the middle, in front with two punctures, median impressions shallow, not extending to the middle, the disc with four quadrately-placed punctures. Abdomen without punctures other than the usual setiferous ones. Antennæ ferruginous. Legs reddish-testaceous. Length 3·5 to 4 mm.

Near *L. coriaceus* Fauv., but much less depressed, more shining, blacker, less strongly coriaceous, less strongly sinuate sides of the thorax, deeper and longer lateral impressions, with four quadrately-placed punctures on the disc, more sparingly punctured elytra, stouter antennæ, and the abdomen with traces of lateral striæ. Head impressed within the antennal tubercles on each side, the impression with a rather large setiferous puncture, otherwise very finely and sparingly punctured. Antennæ with the 2nd and 3rd joints subequal, 4th and 5th as long as broad, 6th to 10th transverse. Thorax transverse (4·3 : 3·3), the sides sinuate and retracted for the posterior third, widest at the middle, rounded in front, the impressions etc. as above described, finely and moderately closely punctured. Elytra longer (4·5 : 3·3) and a little wider than the thorax, as long as broad, very similarly sculptured. Abdomen with the usual setiferous punctures and obsoletely striate at the sides.

Burma. Also in Java, Sumatra, and Perak.

45. Lispinus madurensis.

Lispinus madurensis Bernh.*, Ent. Blätt. 1915, Heft. 10–12, p. 251.

Pitchy black, coriaceous, greasy lustrous. Thorax transverse, the sides retracted, but scarcely sinuate for the posterior third, widest about the middle, gently rounded to the anterior angles, deeply longitudinally sulcate from the posterior angles to beyond the middle, on either side of the middle before the base lightly longitudinally impressed as far as the middle, the disc with four quadrately-placed punctures. Antennæ and legs reddish-testaceous. Length 3 to 3·5 mm.

Head slightly bi-impressed in front, finely and sparingly punctured. Antennæ short, the 3rd joint a little longer than 2nd, 4th and 5th scarcely longer than broad, 6th to 10th transverse. Thorax transverse ($3\frac{1}{2} : 3$) with impressions as above indicated, less finely and a little more closely punctured than the head. Elytra longer ($4\frac{1}{2} : 3$) and a little wider than the thorax, very slightly longer than broad, with punctuation very similar to that of the thorax. Abdomen with a few obsolete punctures.

Nilgiri Hills (*H. L. Andrewes*). Anaimalai Hills (*J. B. Fletcher*). N. Kanara; Chambaganoor. Madura.

46. Lispinus impressicollis.

Lispinus impressicollis, Motsch., Bull. Mosc. 1857, iv, p. 495; Kraatz, Arch. Naturg. xxv, 1859, i, p. 186; Fauvel, Rev. d'Ent. xxii, 1903, p. 150.
Lispinus filiformis Walk., Ann. Mag. Nat. Hist. (3) ii, 1858, p. 205.
Lispinus quadratus Blackb., Tr. Roy. Dub. Soc. (2) iii, 1885, p. 125.
Lispinus longulus Shp., Tr. Ent. Soc. Lond. 1874, p. 101.

Shining, pitchy black or pitchy brown, very finely coriaceous; thorax with impression before the posterior angle and on either side of the middle before the base. Antennæ ferruginous. Legs reddish-testaceous. Length 3·3 mm.

Head bi-impressed in front, finely, very sparingly punctured. Antennæ with the 2nd joint a little longer than broad, the 3rd half as long again, 4th and 5th slightly longer than broad, 6th as long as broad, 7th to 10th transverse. Thorax transverse (4 : 3), the sides retracted and a little sinuate for the posterior third, gently rounded and widened in front, widest about the middle, from the posterior angles to beyond the middle with a rather superficial impression furnished with two larger punctures, on either side of the middle line before the base lightly longitudinally impressed nearly as far as the middle, very finely and rather sparingly punctured, the sides setiferous. Elytra longer (4 : 3) and a little broader than the thorax, a little longer than broad, finely and sparingly punctured, yet more sparingly towards the sides, these setiferous. Abdomen, except for the usual setiferous punctures, practically impunctate.

Ceylon: Kandy. Anaimalai Hills. Also throughout the Oriental Region as far as Japan. South-West Africa. Madeira.

47. Lispinus sublucens.

Lispinus sublucens Fauv.*, Rev. d'Ent. xiv, 1895, p. 184.

Narrow, reddish brown, head and abdomen darker, the posterior margins of the segments reddish, a little shining, and

coriaceous. Thorax with the median impressions very indistinct, the disc without quadrately-placed punctures ; lateral impressions not deep, extending nearly to the level of the middle and limited by a large puncture in front. Antennæ and legs testaceous. Length 3·5 mm.

A little smaller and narrower than *L. impressicollis* Motsch., less shining, the median impressions of the thorax much less marked, the lateral less deep, the base less contracted, puncturation finer, antennæ more slender, ground-sculpture much more distinct. Head reddish brown, the vertex darker, the front bi-impressed, very finely, sparingly punctured. Antennæ slender, the 2nd joint a little shorter than the 3rd, 4th short, oval, 5th as long as broad, 6th to 9th a little transverse, 10th scarcely broader than long. Thorax transverse, slightly contracted at the base, the sides in front gently rounded and narrowed, median impressions very indistinct and without a large puncture in front, the lateral as described above ; disc without median sulcus ; puncturation less fine than that of the head, moderately close. Elytra longer and broader than the thorax, a little longer than broad, more finely and rather less closely punctured. Abdomen with sparing punctures.

Burma : Tenasserim ; Kawkareet (*Fea*, 1887). Type.

48. Lispinus beesoni.

Lispinus beesoni Cam., Tr. Ent. Soc. Lond. 1924, p. 161.

Shining, brown, indistinctly coriaceous, the head and abdomen darker, the posterior margins of the abdominal segments ferruginous. Thorax transverse, the sides retracted but scarcely sinuate for the posterior fourth, rounded in front, laterally with moderately deep longitudinal punctured impression extending to about the middle, the disc scarcely impressed on either side. Antennæ ferruginous, legs reddish-testaceous. Length 3 mm.

Near *L. specularis* Bernh. (*Sharpi* Cam.), but much less finely and more closely punctured. Head shining, blackish, bi-impressed in front, finely and moderately closely punctured. Antennæ with 3rd joint a little longer than 2nd, 4th a little longer than broad, 5th and 6th as long as broad, 7th to 10th transverse (less so in ♂ than in ♀). Thorax transverse (4 : 3), with narrow, median, impunctate line, puncturation moderately fine, less fine and closer than that of the head. Elytra a little longer (4 : 3), and slightly broader than the thorax, about as long as broad, similarly punctured to the thorax and with three larger setiferous punctures on the disc. Abdomen distinctly coriaceous, less shining than the fore-parts, with a few fine punctures.

Siwaliks : Dehra Dun (*Cameron*).

49. Lispinus coriaceus.

Lispinus coriaceus Fauv.*, Rev. d'Ent. xiv, 1895, p. 185.

Subdepressed, subopaque, strongly coriaceous; head and abdomen black, thorax and elytra pitchy; sides of thorax retracted and sinuate for the posterior third, with broad longitudinal impression adjacent and extending to the middle, disc flattened, on either side before the base broadly longitudinally impressed to beyond the middle. Antennæ ferruginous. Legs reddish-testaceous. Length 3·2 mm.

Differs from *L. impressicollis* Motsch. in the more depressed build, less shining, much more strongly-marked ground-sculpture, stronger puncturation, broader head and more prominent eyes, broader, flatter thorax with the sides more strongly retracted before the base and the impressions stronger, the elytra longer and the antennæ longer and more slender. Head rather finely, sparingly punctured. Antennæ with 2nd joint a little longer than broad, 3rd longer than 2nd, 4th and 5th a little longer than broad, 6th about as long as broad, 7th to 10th transverse, not increasing much in width. Thorax transverse (4 : 3), the posterior third of the sides rather strongly sinuate and retracted to the rectangular posterior angles, widest at the middle and rounded in front, with impressions as above, the lateral with two large punctures anteriorly, the rest of the surface moderately finely and moderately closely punctured. Scutellum with a few fine punctures. Elytra longer (5 : 3) and slightly broader than the thorax, longer than broad, rather more finely punctured than the thorax and without larger setiferous punctures on the disc. Abdomen practically impunctate except for the usual setiferous punctures.

Burma: Carin Asciuii Cheba; Carin Asciuii Ghécu; Bhamo; Tenasserim. Also Java and Borneo.

50. Lispinus subopacus.

Lispinus subopacus Kr.*, Arch. Naturg. xxv, 1859, i, p. 187; Fauv., Ann. Mus. Civ. Gen. 1878, p. 206.

Coriaceous, a little shining, the head and abdomen pitchy black, the posterior margins of the abdominal segments reddish. Thorax reddish-brown, very finely and sparingly punctured, against the sides with a longitudinal impression extending beyond the middle and furnished with two large setiferous punctures, median impressions extending to the middle. Head and thorax more or less iridescent. Elytra brownish-red, along the suture with 3, on the disc with 2 larger setiferous punctures, otherwise scarcely perceptibly punctured. Abdomen practically impunctate. Antennæ and legs reddish-testaceous. Length 2·3 mm.

Very similar to *L. fulvus* Motsch., but smaller, less brightly coloured, less shining, more sparingly punctured and with thinner antennæ. Head impressed on either side of the front, very finely and very sparingly punctured. Antennæ with 2nd and 3rd joints subequal, 4th and 5th a little shorter, slightly longer than broad, 6th to 10th transverse, gradually increasing in breadth. Thorax transverse (2·3 : 2), the sides sinuate and retracted for the posterior third, gently rounded in front, widest at the middle, posterior angles rectangular ; disc with narrow smooth median line, the impressions as above indicated, very finely and sparingly punctured. Elytra longer (3 : 2) and a little broader than the thorax, scarcely broader than long and with sculpture as above described.

Ceylon. Also New Guinea, Sumatra, etc.

51. **Lispinus iyeri.**

Lispinus iyeri Bernh.*, W. Z. B. lxiv, 1914, p. 82.

Subdepressed, coriaceous, moderately shining ; head and abdomen black or blackish, the posterior margins of the segments reddish. Thorax and elytra lighter or darker chestnut-brown, the former with median and lateral impressions extending beyond the middle, extremely finely and very sparingly punctured. Antennæ and legs testaceous. Length 2·2 mm.

Very near *L. subopacus* Kr., the thoracic impressions and ground-sculpture very similar, but rather more depressed, the head and thorax not iridescent, the thorax and elytra less reddish, the antennæ distinctly shorter and the elytra longer. Head very finely and sparingly punctured, the front bi-impressed. Antennæ with 2nd and 3rd joints subequal, 4th and 5th as long as broad, 6th to 10th transverse, gradually increasing in breadth. Thorax transverse (3 : 2), with impressions and sculpture as above indicated. Elytra longer ($3\frac{1}{2}$: 2) and a little broader than the thorax, longer than broad, exceedingly finely and sparingly punctured. Abdomen extremely finely and very sparingly punctured.

Siwaliks : Dehra Dun.

52. **Lispinus fulvus.**

Lispinus fulvus Motsch., Bull. Mosc. xxx, 1857, iv, p. 495.

Shining, finely coriaceous, reddish, the elytra yellowish-red, abdomen reddish-brown ; thorax impressed before the posterior angles and on either side of the disc behind. Antennæ ferruginous. Legs reddish-testaceous. Length 3 mm.

A little smaller than *L. impressicollis* Motsch. and much more brightly coloured, with longer and deeper median thoracic impressions and less strongly retracted sides, finer puncturation, more slender antennæ, and rather more depressed build,

differing from *L. coriaceus* Fauv. by its brighter colour, much weaker ground-sculpture, and less depressed form. Head bi-impressed in front, finely and very sparingly punctured. Antennæ with 2nd joint only slightly longer than broad, 3rd a little longer, 4th and 5th as long as broad, 6th to 10th transverse, gradually increasing in width. Thorax transverse ($3\frac{3}{4} : 2\frac{3}{4}$), widest at the middle, the sides retracted for the posterior third, rounded in front, before the posterior angles with a longitudinal impression reaching the middle and furnished with two larger punctures, the disc on either side of the middle line with distinct longitudinal impression reaching beyond the middle, very finely and sparingly punctured. Elytra longer (4 : 3) but scarcely wider than the thorax, a little longer than broad, very finely and sparingly punctured. Abdomen, except for the usual setiferous punctures, practically impunctate.

"Ind. or." Also Singapore and the Philippines.

53. Lispinus amherstanus.

Lispinus amherstanus Bernh.*, W. E. Z. xliii, 1926, p. 20.

Moderately shining, coriaceous, ferruginous red, the head scarcely infuscate, the abdomen pitchy brown, the posterior margins of the segments reddish; median thoracic impressions feeble. Antennæ reddish. Legs testaceous. Length 2·5 to 3 mm.

In size, colour, and build very similar to *L. fulvus* Motsch., but rather less shining, with more feeble thoracic impressions and more strongly sinuate sides; puncturation of the thorax and elytra less fine, the ground-sculpture rather coarser. From *L. rubidus* Cam. it is distinguished by the broader build, longer, stouter antennæ, the penultimate joints less transverse, more distinct thoracic impressions, more strongly sinuate sides, and finer and more sparing puncturation of the thorax. Head finely and sparingly punctured, the penultimate joints of the antennæ moderately transverse. Thorax transverse, sinuate before the posterior angles, the lateral impression extending to the level of the middle and with a large puncture in front; median impressions feeble; finely and sparingly punctured, in the middle behind with a very fine impressed line. Elytra longer than the thorax, similarly punctured.

Lower Burma: Kawkareik (Amherst District), 19, 20. xi. 1911. Type in Indian Museum.

54. Lispinus testaceus.

Lispinus testaceus Kr.*, Arch. Naturg. xxv, 1859, i, p. 188.

Entirely reddish-testaceous, shining, finely coriaceous, very finely and very sparingly punctured. Thorax with lateral

impressions extending to the middle, and each furnished with two large punctures, the median shorter, more superficial, and with a large puncture anteriorly. Antennæ and legs reddish-testaceous. Length 2·5 mm.

Differs from *L. fulvus* Motsch. by its smaller size, lighter colour, much finer puncturation, and more superficial thoracic impressions. Head bi-impressed in front, very finely and very sparingly punctured. Antennæ short, with the 2nd and 3rd joints subequal, 4th as long as broad, 5th slightly, 6th to 10th more strongly transverse. Thorax transverse (3 : 2¼), the sides retracted and slightly sinuate for the posterior third, impressions as above described, very finely and very sparingly punctured. Elytra longer (3·3 : 2·25) and a little wider than the thorax, slightly longer than broad, with a few very fine punctures. Abdomen more coriaceous than the fore-parts, with the usual setiferous punctures.

Ceylon.

Genus **PSEUDOLISPINODES** Bernh.

Pseudolispinodes Bernh., Philipp. Journ. Sci. xxi, 1926, p. 258.

Small subconvex species, somewhat narrowed behind and easily recognized by the elytra furnished with a subhumeral stria. Neck broad, scarcely narrowed behind, inserted in the thorax. Eyes not prominent. Labrum very short, strongly transverse, the sides straight, the anterior border broadly emarginate, anterior angles with a ciliated membranous process and long stiff setæ, anterior border ciliate and with about 10 longer setæ. Mandibles short, pointed, the right with blunt subapical tooth, the left without tooth, both ciliate internally. Maxillary palpi rather stout, 4-jointed, 1st joint very small, 2nd obconical, about as broad as long, 3rd transverse, 4th elongate, narrowed towards the apex, longer than the two preceding together. Outer lobe of the maxilla densely ciliate at the apex, internally furnished with numerous fine curved hooks; inner lobe narrow, with blunt hooked apex and large subapical tooth, posteriorly with numerous fine hooked teeth. Mentum transverse, narrowed in front, sides broadly emarginate, the anterior margin rounded. Tongue very broad, membranous, feebly emarginate in front, the sides and anterior angles rounded, in the middle supported by a chitinous rod, the anterior margin with a pair of chitinous appendages in the middle. Labial palpi very short, 3-jointed, the 1st and 2nd joints transverse, the 3rd oval oblong, longer than the two preceding together. Gular sutures very fine, fused in front and diverging behind. Prosternum large, the anterior margin broadly and slightly emarginate on either side, obtusely

angulate in the middle, prosternal process well developed, extending completely between the coxæ and slightly widened behind them, the apex rounded, the sides very finely margined; epimera triangular, fused with the broad epipleura of the pronotum; coxal cavities open behind. Mesosternum simple, its process extending about two-thirds the length of the coxæ, narrowed and bluntly pointed, the coxæ rather narrowly separated; metasternal process truncate in front and meeting the preceding. Abdomen keeled at the base. Tibiæ finely setose. Tarsi 4-jointed†, the first three joints very short, the 4th longer than the preceding together. Epipleura of the elytra with two fine keels, dorsal surface with a subhumeral stria and sutural stria.

55. **Pseudolispinodes bistriatus.** (Plate 1, fig. 6.)

Lispinodes bistriatus Fauv., Rev. d'Ent. xiv, 1895, p. 185.
Holosus madurensis Bernh., W.Z. B. lxiv, 1914, p. 83.
Pseudolispinodes madurensis Bernh., Philipp. Journ. Sci. xxi, 1926, p. 260.

Black, moderately shining, coriaceous, the elytra pitchy, the posterior margins of the abdominal segments narrowly rufescent. Antennæ and legs reddish-testaceous. Length 2 to 2·5 mm.

Head narrower than the thorax, the eyes rather large but not prominent, in front bi-impressed, moderately finely and rather closely punctured. Antennæ rather short, the 3rd joint a little longer than the 2nd, 4th to 6th slightly, 7th to 10th more strongly transverse, the penultimate about twice as broad as long. Thorax transverse, the sides a little rounded and widened in front, narrowed and almost straight for the posterior third, with an adjacent large deep fossa; middle of the disc occasionally with a very fine impressed line, moderately finely and moderately closely punctured and with a fine wavy ground-sculpture. Elytra a little broader and longer than the thorax, slightly longer than broad, each with two striæ, a sutural and humeral which reaches almost to the posterior margin, punctuation rather fine and more sparing than on the thorax. Abdomen a little narrowed behind, the sides of the segments obliquely striate, scarcely punctured, finely coriaceous. Found under the bark of decaying trees.

Burma: Bhamo (*L. Fea*). Sikkim: Darjeeling (*Christie*). Nilgiri Hills (*Andrewes*). Bihar: Pusa. United Provinces: Dehra Dun (*Cameron*). Andamans. Also in Sumatra, Indo-China, and Philippines.

† 4- or 5-jointed, according to Bernhauer.

Genus **BOTHRYS** Fauv.

Bothrys Fauv., Rev. d'Ent. xiv, 1895, p. 185.

Small, linear, winged. Base of the head scarcely constricted, eyes large, prominent, occupying the lower surface of the sides. Labrum transverse, porrect, the apex abruptly truncate. Mandibles a little prominent. Mentum large, in front arcuately rounded. Maxillary palpi with the 3rd joint globose, the 4th conical, strongly pointed. Antennæ thickened. Thorax with the apex rather produced below in the middle. Elytra somewhat truncate. Abdomen not margined, the 7th segment produced, conspicuous. Intermediate coxæ contiguous. Anterior and intermediate tibiæ densely ciliate. Tarsi 3 jointed, the first two joints short. Amongst the PIESTINI with 3-jointed tarsi this genus is distinguished very sharply from *Calocerus* Fauv. (*Glyptoma* Shp.) by the head not having a definite neck, the structure of the palpi, legs, etc.; from *Thoracophorus* Motsch. by similar characters, the contiguous intermediate coxæ, the mentum not conical, etc., from *Lispinodes* Shp. by the shape of the intermediate trochanters, the tibiæ, etc.; from all by the produced 7th segment of the abdomen (ex *Fauvel*).

56. **Bothrys personatus.**

Bothrys personatus Fauv., Rev. d'Ent. xiv, 1895, p. 186.

Convex, shining, abdomen a little shining, castaneous, palpi and tarsi reddish-testaceous. Antennæ with the 1st joint broad, 3rd a little longer than the 2nd, 4th to 10th a little broader and more transverse, 11th short, obconical; front margin curved, the antennal tubercles strongly raised, longitudinally, deeply impressed within, with two or three punctures at the base of the sulci, some more internal to the eyes, yet some other large ones forming a nearly unbroken transverse line. Thorax narrower than the head and eyes, scarcely transverse, parallel from the apex to the middle, thence sinuate and a little narrowed to the acute and rather produced posterior angles, on each side at the base broadly bifoveate, in front somewhat obsoletely bifoveate, the foveæ sparingly and indistinctly punctured, yet another and larger irregular fossa occupies the whole breadth, the fundus with two or three punctures; in front with a few scattered punctures; scutellum subtriangular, the apex obtuse. Elytra one-fourth longer and broader than the thorax, the disc biseriately punctured, sides behind sparingly and strongly punctured; suture deeply impressed. Abdomen sparingly and strongly punctured, with a smooth longitudinal line, the punctures furnished with very

short yellow setæ, the apex of the 6th segment with two keels in the middle. Length 3 to 3·8 mm.

Burma: Bhamo, Katha, vi (*L. Fea*). Also in Sumatra (ex *Fauvel*).

Genus **TETRAPLEURUS** Bernh.

Tetrapleurus Bernh., W.Z.B. lxiv, 1914, p. 84; Col. Rundsch. 1916, p. 19.

A genus readily recognized by the sculpture of the elytra, which are carinate, the sutural and the subhumeral keels united in an arch behind the discal keel. Some of the species were included by Fauvel in the genus *Lispinodes* Shp., but this genus is not known to occur in our Fauna. The head is distinctly constricted behind the eyes, the neck thick and inserted into the thorax. Labrum short, strongly transverse, deeply and broadly emarginate in front, with numerous long setæ, the anterior angles with a ciliated membrane. Mentum transverse, narrowed towards the front, the sides and apical margin rounded. Tongue very broad, membranous, scarcely emarginate in front, supported in the middle by a pair of chitinous rods; paraglossæ well developed, extending to the apex of the 2nd joint of the labial palpi, these short and stout, 3-jointed, the 1st joint a little longer than broad, 2nd narrower than the 1st, about as long as broad, 3rd a little narrower at the base than the 2nd, oval, about as long as the two preceding together. Inner lobe of maxilla narrow, hooked at apex and with two or three short, strong teeth, ciliate posteriorly. Outer lobe broader and densely ciliate. Maxillary palpi 4-jointed, the 1st joint very small, 2nd stout, dilated, much wider than the rest, 3rd small, transverse, narrower than the preceding, 4th elongate, pointed, longer than the three preceding together. Mandibles short and stout, the right bifid at apex. Thorax uneven, the sides denticulate. Prosternum well developed, its process stout, extending completely between the coxæ, its apex rounded, the sides bordered; epimera broad, fused externally with the pronotal epipleura, the apex rounded. Mesosternum with acute triangular process extending halfway between the coxæ (these moderately separated) and meeting the bluntly-pointed metasternal process. Scutellum visible. Elytra each with four keels, the epipleura limited by another finer and sharper keel. Abdomen strongly keeled at the base below, the sides not bordered above. Coxæ not prominent. Tibiæ finely ciliate. Tarsi 4-jointed, the first three joints very short, equal, the 4th longer than the three preceding together; claws lightly curved. The genus appears to be of subcortical habit and is only known from the Oriental Region.

Key to the Species.

1.	Abdomen at the sides obliquely striate; very shining red species with the elytra infuscate	*seriatus* Fauv., p. 69.
	Abdomen not obliquely striate	2.
2.	Elytra much longer than broad	*indicus* Bernh., p. 69.
	Elytra not or but little longer than broad.	3.
3.	Head and thorax with a large irregular impunctate space on each disc	*sculptus* Kr., p. 70.
	Head and thorax without such space	4.
4.	Vertex of head with a rather broad longitudinal sulcus, the fundus with a fine longitudinal keel; more shining species.	*rugosus* Fauv., p. 72.
	Vertex of head not sulcate, rather closely and coarsely punctured like the rest of the surface; less shining species	*himalayicus* Cam., p. 71.

57. Tetrapleurus seriatus.

Lispinodes seriatus Fauv., Rev. d'Ent. xxi, 1902, p. 31.

Red, very shining, the antennæ and elytra infuscate. Antennæ short, stout, the 7th to 10th joints larger, very strongly transverse, the 11th very short, pear-shaped. Head short, broadly deeply transversely sulcate between the antennal tubercles, the impression continued backwards on each side; vertex with three rows of punctures, the middle straight, the other two oblique, and with a few more punctures behind the tubercles; eyes small. Thorax transverse, rounded in front, behind narrowed and somewhat sinuate, on each side broadly and deeply foveate, the anterior narrowed in front, the posterior oblique and scarcely deeper behind, placed before the rectangular posterior angles, disc uneven, rather strongly seriately punctured. Elytra rather longer than the thorax, scarcely transverse, with four obtuse keels, the first two straight reaching the apex, the 3rd finer, oblique, intra-humeral, the 4th (humeral) obsolete, in the middle obliterated, the intervals strongly, the sides more finely, seriately punctured. Abdomen with fine oblique sparing keels, in the middle before the apex of the segments smooth. Length $2\frac{1}{3}$ to $2\frac{1}{2}$ mm.

Burma. Also in Sumatra and Borneo (ex *Fauvel*).

58. Tetrapleurus indicus.

Tetrapleurus indicus Bernh., W. Z. B. lxiv, 1914, p. 85.

Ferruginous red, the head, the abdomen (except the reddish-yellow posterior margins of the segments), the sides and posterior margin of the elytra darker; antennæ, palpi, and legs reddish-yellow; the whole insect exceedingly thickly shagreened, dull. Head much smaller than the thorax, the eyes prominent,

occupying the whole side, constricted behind, in front of the insertion of the antennæ with a small fovea, evenly convex, rather strongly, thickly, and rugosely punctured, less so in front. Antennæ stout, the 2nd to 6th joints more or less similarly formed, gradually decreasing in length, the following forming a feebly-developed club, the penultimate joints slightly transverse. Thorax much narrower than the elytra, about a fourth broader than long, the sides rounded in front, finely toothed, behind narrowed in a straight line, with well-marked posterior angles, in front of the base with a deep curved transverse impression, concave in front, which ends externally in the deep oblique impression against the posterior angles; these large impressions are very distinct when seen from the front; moreover, apart from the lateral impressions, there are in the transverse impression itself three large flat foveæ, the median one before the scutellum placed more posteriorly than the others. In the middle near the anterior margin is a rather long, fine, but deep longitudinal groove; the surface finely rugulose as well as shagreened. Elytra almost twice as long as the thorax, much longer than broad, parallel, with prominent shoulders, except for the shining humeral callus dull, closely shagreened and rugulose, with four longitudinal keels, one sutural, two on the disc, and the fourth towards the side behind the humeral callus, the sutural keel united in an arch with the outer discal keel. Abdomen dull, shagreened, scarcely punctured, more shining along the middle. Length $2\frac{1}{4}$ mm.

Madura, Chambaganoor (ex *Bernhauer*).

59. Tetrapleurus sculptus.

Lispinus sculptus Kr.*, Arch. Naturg. xxv, 1859, i, p. 188.

Moderately shining, extremely finely coriaceous, the head black, the thorax pitchy black, the elytra pitchy brown, darker along the posterior border. Abdomen pitchy black, more distinctly coriaceous, the posterior margins of the segments reddish-yellow. Antennæ and legs reddish-testaceous. Length 3 mm.

Head a little narrower than the thorax, the eyes large and prominent, the space between them and the constriction of the neck very short; vertex with a round fovea and an irregular impunctate space on either side, impressed internal to the antennal tubercles, these and the middle of the front impunctate, the rest of the surface rather finely, very closely punctured, near the eyes yet more closely and rugosely; ground-sculpture scarcely visible. Antennæ with the 2nd joint a little longer than broad, 3rd longer than 2nd, 4th and 5th moniliform, 6th slightly, 7th to 10th more strongly transverse, 11th conical,

as long as the two preceding together. Thorax transverse (3·3 : 2·3), the sides finely denticulate, obliquely retracted for the posterior third to the obtuse posterior angles, widest at the middle, before the base with a deep transverse impression connected on either side with a large deep impression before the posterior angles, and separated from the posterior border by an impunctate, shining transverse ridge, in front in the middle with a longitudinal median sulcus, its fundus with a fine keel, towards the sides with a broad oblique sulcus extending backwards as far as the lateral impression, the whole of the middle of the disc between the oblique impressions occupied by an irregular, nearly impunctate, shining area ; all the impressions very closely finely and rugosely punctured and subopaque. Scutellum finely coriaceous. Elytra longer (4 : 2·3) and broader than the thorax, as long as broad, each with four well-developed longitudinal keels, the 4th (humeral) narrower and more acute, reaching the posterior border, the 1st (sutural) and 3rd united in an arch at the posterior border and including the 2nd between them, all the keels shining and impunctate, the interspaces less shining and very closely, finely, and rugosely punctured. Abdomen finely coriaceous except at the base of the segments and with a few setiferous punctures.

Ceylon.

60. Tetrapleurus himalayicus.

Tetrapleurus himalayicus Cam., Tr. Ent. Soc. Lond. 1924, p. 161.

Ferruginous red, slightly shining, coriaceous ; posterior margins of the abdominal segments reddish-yellow. Elytra as long as broad. Antennæ ferruginous. Legs reddish-testaceous. Length 2 mm.

Head narrower than the thorax, the eyes prominent, occupying the whole side of the head up to the constriction of the neck, impressed on either side internal to the antennal tubercles, these and the extreme front smooth and more shining, the rest of the surface coriaceous, closely, moderately coarsely, rugosely punctured. Antennæ with the 3rd joint distinctly longer than the 2nd, 4th to 7th slightly longer than broad, gradually decreasing in length, 8th to 10th distinctly transverse, 11th stout, conical. Thorax transverse ($2\frac{1}{2}$: 2), the sides finely denticulate, widest at the middle, feebly rounded in front, obliquely retracted (but not sinuate) for the posterior third, the posterior angles obtuse, before the base with a deep crescentic impression connected on either side with a large deep impression before the posterior angles, behind the anterior border in the middle with a short, rather

wide sulcus, separated from the posterior impression by a feeble keel; on either side in front with an impression, limited externally by a fine raised line which joins the lateral margin at the posterior third; the sculpture is rugose and more or less confluent. Elytra longer (3 : 2) and broader than the thorax, as long as broad, each with four longitudinal keels, the 4th (humeral) more obsolete, the 1st (sutural) united to the 3rd near the posterior margin, forming an arch with it, the 2nd between the 1st and 3rd extending nearly to the arch; the keels impunctate, the rest of the surface very similarly sculptured to the thorax. Abdomen scarcely punctured.

Mussoorie District: Kaligad (*Cameron*). Under bark.

61. **Tetrapleurus rugosus.**

Lispinodes rugosus Fauv., Rev. d'Ent. xxi, 1902, p. 31.

Entirely red, moderately shining. Antennæ red. Legs testaceous. Length 2·3 mm.

Colour of *T. himalayicus*, but a little larger, more shining, less roughly sculptured, the antennæ a little longer and stouter, the elytra a little longer.

Nilgiri Hills (*Andrewes*). Also in Sumatra and Java.

Genus **THORACOPHORUS** Motsch.

Thoracophorus Motsch., Bull. Mosc. v, 1837, p. 98 (*Thoraxophorus*); id., xiii, 1840, p. 197; Et. Ent. viii, 1859, p. 66; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 14; Sharp, B. C.-A. i, 2, 1882–87 (1887), p. 725; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 687.

Glyptoma Er., Gen. Spec. Staph. (1839–40) 1840 p. 908 (pars); Lac., Gen. Col. ii, 1854, p. 148; Kraatz, Naturg. Ins. Deutsch. ii, 1856–58, p. 1047; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 62; Fauv., Bull. Soc. Linn. Norm. ix, 1863–64 (1865), p. 62; (2) i, 1868, p. 59; Muls. et Rey, Hist. Nat. Col. Fr., Brévip. 1879, p. 392 (nec *Glyptoma* Motsch., Sharp).

Somewhat convex small species, at once recognized by the costate head, thorax, and elytra, and cylindrical finely-margined abdomen. Head strongly constricted behind, with supra-orbital crest continuous in front with the strongly-raised clypeal margin. Clypeus not separated from the front, the eyes not visible from above. Antennæ stout, the 1st joint dilated towards the apex. Gular sutures fused. Labrum transverse, broadly emarginate in front and furnished with long setæ and cilia. Mentum trapezoidal, the sides converging in front, the anterior margin truncate. Tongue broad, produced in the middle of the anterior margin into a little point. Paraglossæ extending a little beyond the anterior margin. Labial palpi 3-jointed, stout, the 1st joint about as long as

broad, 2nd very short, strongly transverse, the 3rd about as long as the 1st, the apex truncate. Inner lobe of the maxilla narrow, hooked at the apex and with several slightly-curved spines. Outer lobe short and broad, the apex with numerous curved spines. Maxillary palpi with 1st joint very short, 2nd short and thickened towards the apex, its outer border rounded, 3rd very short and strongly transverse, the 4th much narrower than the 3rd, gradually narrowed to the apex, as long as the two preceding together. Mandibles stout, the outer margin a little behind the apex with a little notch, the inner margin feebly bisinuate, edentate, and with a fine ciliate membrane behind. Prosternum with very short pointed process. Epimera fused with the pronotal epipleura and prosternum forming a broad plate emarginate internally for the coxæ. Mesosternal process narrow and pointed, reaching the middle of the coxæ, these narrowly separated. Metasternum scarcely emarginate behind for the posterior coxæ, its process pointed and meeting that of the mesosternum. Scutellum visible. Abdomen cylindrical, the first four segments very finely margined at the sides. Legs short, the tibiæ very obsoletely denticulate. Tarsi 3-jointed, the 1st joint short, 2nd very short, 3rd elongate, three times as long as the two preceding together; claws lightly curved. The genus is subcortical in habit and is distributed throughout the world. Only one species has so far been recorded from our Fauna, and that with some doubt by the founder of the genus.

62. Thoracophorus (?) subnitidus.

Thoracophorus (?) *subnitidus* Motsch., Et. Ent. viii, 1859, p. 66.

Brown, shining, elongate, parallel, depressed, the mouth, base of the antennæ, margin of the abdominal segments, and the legs reddish-testaceous. Antennæ clavate, the club infuscate, the last joint ovate, twice as long as the preceding. Head triangular, in front broadly trifoveate, eyes somewhat prominent. Thorax scarcely broader than the head, almost quadrate, slightly narrowed behind, uneven, more or less sulcate in the middle, on either side obliquely foveate, the base reflexed, transversely arcuately impressed. Scutellum triangular. Elytra a little broader than the thorax, quadrate, trisulcate, the median sulci abbreviated behind, the interstriæ impunctate, the suture and sides keeled, shoulders distinct, rounded. Abdomen shining, impunctate, the last segment much narrower than the penultimate, the apex narrowed, obtuse. Length 1 lin. Breadth ¼ lin.

Build and coloration of *T. corticinus*, but more elongate, parallel, depressed, and shining; thorax more square, the

posterior angles rectangular, the sides not denticulate. I doubt if it really belongs to this genus, but, only having one example, I place it here.

"Ind. or." (ex *Motschoulsky*).

Tribe 2. ELEUSIINI.

In our Fauna only one genus of this tribe is known.

Genus **ELEUSIS** Cast.

Eleusis Cast., Etud. Ent. i, 1835, p. 131; Er., Gen. Staph. 1840, p. 836, nota; Lacord., Gen. Col. ii, 1855, p. 127; Fauv., Bull. Soc. Linn. Norm. ix, 1865, p. 35; id., l. c. (3) ii, 1877–1878, p. 180; id., Abeille, v, 1868–1869, p. 494; id., Ann. Mus. Gen. xii, 1878, p. 206; id., Not. Ent. vii, 1878, p. 17; id., Rev. d'Ent. xxii, 1903, p. 256; Horn, Tr. Amer. Ent. Soc. 1871, p. 297; Sharp, Biol. Cent.-Amer. i, 2, 1887, p. 728.

Chasolium Cast., l. c. p. 132.

Isomalus Er., l. c. p. 838; Fauv., Bull. Soc. Linn. Norm. ix, 1865, p. 35; id., Not. Ent. ii, 1864, p. 31.

Labrum short, transverse, membranous in front and densely ciliated, the anterior angles with a membranous ciliated process, the posterior corneous part strongly spinose. Mandibles pointed, sometimes toothed, the left occasionally acutely angulate. Maxillary palpi with 1st joint very small, 2nd short, about as long as broad, widened from base to apex, 3rd cylindrical, about three times as long as broad, 4th cylindrical, narrower, but about as long as the preceding; inner lobe of the maxilla narrow, with a blunt hook at apex, the inner margin finely spinose, the spines decreasing in length posteriorly; outer lobe densely finely spinose. Mentum short, narrowed in front, the anterior margin truncate, with spines. Tongue membranous, broad, trisinuate, the lateral lobes divergent, the median and narrower emargination with two strong approximate spines, the lateral emarginations each with a tuft of cilia. Paraglossæ well developed, extending to the apex of the lateral lobes. Labial palpi short, 1st joint about twice as long as broad, cylindrical, 2nd a little shorter and narrower than 1st, 3rd oval, narrower, and slightly longer than 2nd. Neck broad, slightly constricted at the junction with the head. Gular sutures fused, except behind. Prosternum large, rounded in front, in the middle broadly slightly emarginate on either side, posterior margin broadly rounded in the middle, scarcely produced between the anterior coxæ †, with a narrow tongue-shaped piece (trochantin) separated

† The prosternal process is very narrow and sunk deeply between the anterior coxæ, which are contiguous and conceal it.

from the epipleura of the prothorax externally by a distinct suture and limiting the coxæ in front. Epimera triangular, fused with the epipleura of the prothorax. Mesosternum simple, its process very narrow and pointed, extending for about two-thirds the length of the coxæ, these narrowly separated. Metasternal process very narrow and pointed, meeting the preceding. Metasternum large, middle and posterior coxæ widely separated, posterior coxæ contiguous at base. Abdomen keeled at base ventrally, finely margined dorsally. Anterior coxæ narrow, elongate, not prominent, intermediate more or less globular, posterior transverse, the inner lobe truncate conical, the outer triangular. Femora grooved posteriorly. Tibiæ finely closely spinose externally. Tarsi 5-jointed, short, the first four joints very short and subequal, the 5th longer than the preceding together; claws simple. Elytra truncate, sutural stria wanting, epipleura finely carinate. Abdomen with a pair of setigerous punctures on either side of the dorsal segments. Depressed, parallel, shining, glabrous, usually obscurely coloured species, with large (especially in the males) and porrect heads.

The genus presents considerable difficulty in the determination of the species, partly on account of differences of colour due to immaturity rendering the darker forms when immature liable to confusion with the reddish-testaceous species, and partly on account of the different shape of head in the sexes of some of the species. The species are of subcortical habitat and are distributed throughout the tropics.

Key to the Species.

1.	Thorax on either side with two small teeth	*nilgiriensis*, sp. n., p. 77.
	Thorax on either side with or without a single tooth.....	2.
2.	Species in great part reddish or reddish-testaceous	3.
	Species dark, the disc of the elytra often reddish or reddish-testaceous..	6.
3.	Minute species. Length 1·5 mm.....	*fusciceps* Kr., p. 88.
	Larger species. Length 3–7 mm.....	4.
4.	Large species, length 7 mm. Head large, quadrate	*fœæ* Fauv., p. 78.
	Small species, length 3–4 mm.	5.
5.	Head in both sexes transversely orbicular; sides of thorax with a distinct tooth.....	*kraatzi* Fauv., p. 85.
	Head scarcely broader than long, subquadrate in ♂, suborbicular in ♀; sides of thorax without tooth	*longiceps* Fauv., p. 88.
6.	Elytra black, with subtransverse vermicular ground-sculpture. Large species, length 6·5–7·5 mm.	*vermicularis* Fauv., p. 77.

Elytra black or pitchy, the disc or base more or less yellow or reddish-testaceous, ground-sculpture normal. 7.

7. Sides of the thorax with a distinct tooth ..... 8.
Sides of the thorax without or with very obsolete tooth ..... 10.

8. Head with interrupted vermicular ground-sculpture; disc of thorax without ground-sculpture; elytra yellow, the base triangularly, the suture and posterior margin narrowly, black.... *andrewesi*, sp. n., p. 79.
Head and thorax with normal ground-sculpture; elytra black with large well-defined yellow mark on each, the reflexed sides black ..... 9.

9. Larger, 6 mm. Head subquadrate; thorax distinctly broader than long . *denticollis*, sp. n., p. 80.
Smaller, 4½ mm. Head orbicular; thorax scarcely broader than long .. *rotundiceps* Fauv., p. 86.

10. Elytra black, with large, sharply defined, yellow marking on each disc. *plagiata* Fauv., p. 81.
Elytra otherwise coloured..... 11.

11. Elytra yellow, the posterior margin rather narrowly and rather sharply black ..... *humilis* Er., p. 83.
Elytra otherwise coloured ..... 12.

12. Elytra yellow, the posterior margin rather narrowly and indeterminately blackish ..... 13.
Elytra yellowish-brown or reddish, the base, sides, suture, and posterior margin more or less extensively infuscate..... 16.

13. Larger, 3½–4½ mm..... 14.
Smaller, 2⅔–2¾ mm. ..... 15.

14. Head quadrate, moderately finely and moderately closely punctured ..... *beesoni*, sp. n., p. 81.
Head transversely orbicular, scarcely perceptibly punctured .... *laticeps* Fauv., p. 84.

15. Head broader than the thorax, more punctured; penultimate joints of antennæ slightly transverse; ground-sculpture finer ..... *pusilla* Fauv., p. 87.
Head as broad as the thorax, less punctured; penultimate joints of antennæ distinctly transverse; ground-sculpture coarser ..... *secreta*, sp. n., p. 87.

16. ♂: head quadrate, the eyes half as long as the post-ocular region.
♀: head suborbicular, eyes less prominent, scarcely as long as the post-ocular region..... *quadriceps* Cam., p. 78.
♂: head subquadrate, the eyes as long as the post-ocular region.
♀: head suborbicular, eyes more prominent, as long as the post-ocular region ..... *viridans* Fauv., p. 82.

63. **Eleusis nilgiriensis**, sp. n.

Head and thorax black; elytra bright reddish testaceous, the apex more or less broadly infuscate; abdomen pitchy, the posterior margins of the segments reddish. Antennæ ferruginous, the first three joints reddish-testaceous. Leg reddish-testaceous. Length 4·1 mm.

Resembling *E. quadridens* Fauv. in the presence of two distinct teeth on either side of the thorax, but differing in the following respects:— the head is shorter, the temples more dilated, the eyes larger and more prominent, the intra-ocular sulcus shorter and wider, the thorax is more transverse, shorter, more cupuliform, the elytra more brightly coloured, the ground-sculpture absent on the disc of the thorax, elsewhere finer. Head scarcely longer than broad, subquadrate, the temples feebly dilated, about half as long again as the diameter of the eyes, these rather large and a little prominent, finely, distinctly, but not closely punctured. Antennæ with the penultimate joints as long as broad. Thorax transverse, a little broader than the head, somewhat cupuliform, in the middle with a short impressed line, at the sides obliquely, scarcely perceptibly impressed, finely, very sparingly punctured, the ground-sculpture obsolete on the disc. Elytra broader and about a third longer than the thorax, almost impunctate and with normal ground-sculpture. Abdomen coriaceous at the sides, almost without sculpture along the middle.

Nilgiri Hills (*H. L. Andrewes*).

64. **Eleusis vermicularis.**

Eleusis vermicularis Fauv.*, Rev. d'Ent. xiv, 1895, p. 189.

Entirely black, shining. Antennæ, palpi, and legs reddish. Length 6·5 to 7·5 mm.

Head large, as long as broad, flat, as broad as the thorax, the eyes small and flat, the post-ocular region long, practically parallel; front truncate in the middle, oblique at the sides; antennal tubercles finely striate, internally with a small fovea, behind the anterior border with some fine, transverse, vermicular striæ, between the eyes with longitudinal, interrupted, vermicular striæ and rather closely, moderately finely punctured; the middle of the disc behind with a large space devoid of sculpture, external to this with fine, longitudinal, vermicular striæ and a few punctures; intra-ocular sulcus deep, extending to the base. Antennæ slender, the 3rd to 5th joints subequal, clavate, 6th shorter, 7th to 10th subequal, compressed, triangular, 11th oval. Mandibles strongly toothed. Thorax a little broader than long, cupuliform, uneven, on each side in front with an oblique impression, in the middle before the base longitudinally impressed, the sides scarcely dentate; at the sides and before the base with fine vermicular ground-

sculpture, in the middle and in front without ground-sculpture and very finely and sparingly punctured. Elytra distinctly broader than the thorax, a little longer than broad, on the middle of the disc with a small fovea, with fine, more or less transverse, vermicular striæ and with a few scarcely perceptible punctures. Abdomen almost impunctate, transversely striate.

Burma : Carin Cheba, altitude 900 to 1100 metres, v.–xii. 88 (*L. Fea*).

65. **Eleusis feæ.**

Eleusis feæ Fauv.*, Rev. d'Ent. xiv, 1895, p. 188.

Shining, red, the head obscurely infuscate on the vertex ; elytra yellowish-red, the posterior third of the apex and the posterior half of the sides pitchy black ; abdomen more or less reddish-brown along the middle. Antennæ reddish-brown, the 1st joint reddish-testaceous. Legs reddish-testaceous. Length 7 mm.

Head subquadrate, a little broader than long, as wide as the thorax, the post-ocular space feebly dilated, about twice as long as the diameter of the eye, frontal margin not produced, truncate ; intra-ocular sulcus distinct, not reaching the base ; middle of base with a shallow impression, sulcus of vertex very short and obsolete, finely and moderately closely punctured and with the usual strigose ground-sculpture. Antennæ rather short and slender, the 3rd joint a little longer than the 2nd, 4th and 5th oval, short, 6th and 7th about as long as broad, 8th to 10th slightly transverse, 11th conical, as long as the two preceding together. Thorax transverse, cupuliform, the anterior border on either side impressed and bipunctate, lateral tooth at posterior third obsolete, practically impunctate, ground-sculpture as on the head. Elytra broader and about a third longer than the thorax, longer than broad, each with a puncture behind the middle, otherwise practically impunctate, finely longitudinally strigose. Abdomen with a pair of setigerous punctures at the sides of each segment, very finely transversely strigose.

Burma : Carin Cheba, altitude 900 to 1100 metres, v.–xii. 88 (*L. Fea*). Also in Java ?

The above description is from the unique type, which is apparently a ♂. From Java I have a specimen 5 mm. long of exactly similar colour, but the head is smaller, more rounded, the eyes larger, the front produced and truncate in the middle ; this may possibly represent the ♀.

66. **Eleusis quadriceps.**

Eleusis quadriceps Cam., E. M. M. lxi, 1925, p. 231.

Shining, extremely finely and very sparingly punctured,

finely strigose, the head black, the thorax black or pitchy, elytra dark, the disc of each in the middle more or less brownish-yellow or reddish, abdomen pitchy, the apex reddish-testaceous. Antennæ ferruginous, sometimes infuscate. Legs reddish-testaceous, the femora occasionally infuscate. Length 5 mm.

Very near *E. viridans*, but without the greenish reflex usually found in that species, in the ♂ with the head yet more parallel-sided, quite flat, the eyes smaller, the antennæ a little shorter, the left mandible in some specimens acutely bent inwards behind the apex. Antennæ a little shorter, the thorax longer; in the ♀ the head is smaller than in *viridans* ♀, more orbicular, the eyes smaller, the antennæ a little shorter, and the thorax a little narrower and longer. ♂: Head large, quadrate, as long as broad, as broad as the thorax, the front truncate, the post-ocular space scarcely dilated, about twice as long as the eye, juxta-ocular sulcus narrow and deep, not reaching the base; left mandible sometimes acutely angulate, both dentate. Antennæ slender, the 3rd to 7th joints longer than broad, gradually decreasing in length, 8th to 10th about as long as broad. Thorax transverse (6 : 5), the sides feebly rounded, almost parallel for the anterior half, strongly contracted and feebly rounded posteriorly without a tooth, middle of disc very finely sulcate, the anterior border on either side with a bipunctate impression. Elytra longer (7 : 5) and a little broader than the thorax, slightly longer than broad.

Burma: Ruby Mines. Also in Perak (type).

67. **Eleusis andrewesi**, sp. n. (Fig. 13.)

Black, shining, the elytra with well-defined large yellow mark. Head subquadrate, sides of thorax with distinct tooth. Antennæ and legs reddish. Length 5 mm.

Easily recognized by the interrupted vermicular ground-sculpture of the head and the entire absence of ground-sculpture on the disc of the thorax. Head quadrate, as broad as long, as broad as the thorax, the temples scarcely perceptibly dilated, juxta-ocular sulcus narrow and deep, reaching the base, middle of base with obsolete fovea, finely sparingly punctured, more closely at the base, ground-sculpture rather coarse, more or less interrupted, forming longitudinal vermicular striæ. Antennæ with 4th to 9th joints longer than broad, gradually decreasing in length, the 10th as long as broad. Thorax slightly transverse (5 : 4), the sides evenly rounded and with a distinct denticle, disc depressed, with exceedingly fine impressed median line, anterior margin on either side with a bipunctate impression, puncturation fine and sparing, ground-sculpture only present at the sides and base, interrupted and vermicular. Elytra a little longer than the thorax, slightly longer than

broad, yellow, the scutellary region, suture, lateral and posterior margins, all narrowly and sharply black, finely and sparingly punctured and with a larger setiferous puncture on the middle

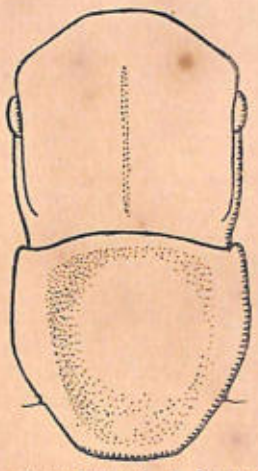


Fig. 13.—*Eleusis andrewesi*, ♂, head and thorax.

of the disc, ground-sculpture fine, longitudinal, to some extent interrupted and vermicular. Abdomen coriaceous.

Nilgiri Hills (*H. L. Andrewes*).

68. **Eleusis denticollis**, sp. n. (Fauvel, *in litt.*). (Fig. 14.)

Deep black, shining, the elytra each with a large well-defined testaceous mark; sides of thorax with a distinct tooth. Antennæ and legs reddish brown, the femora darker. Length 6 mm.

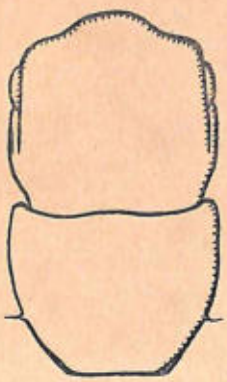


Fig. 14.—*Eleusis denticollis*, head and thorax.

Head subquadrate, as broad as the thorax, as long as broad, the juxta-ocular sulcus rather broad, temples a little dilated, in the middle before the base with a fovea, finely and rather

closely punctured, ground-sculpture strigose. Antennæ with the 3rd joint longer than the 2nd, 4th to 7th a little longer than broad, gradually decreasing in length, 8th to 10th about as long as broad. Thorax a little broader than long, cupuliform, the sides behind with a distinct tooth, anterior border on either side with a bipunctate impression, median line extremely finely impressed for nearly the whole length, sculpture as on the head. Elytra a little longer and broader than the thorax, a little longer than broad, with similar sculpture to the fore-parts. Abdomen with the usual sculpture and setiferous punctures.

Nilgiri Hills (*H. L. Andrewes*).

69. Eleusis plagiata.

Eleusis plagiata Fauv., Rev. d'Ent. xxiii, 1904, p. 83.

♂: Broader than *E. discalis* Fauv., from Sumatra, similarly coloured, except that the yellow elytral spot is more defined, the suture and scutellary region more broadly and intensely black; head shorter and broader, subquadrate, more closely punctured, behind the less flattened eyes a little dilated, the juxta-ocular groove much deeper and broader, the longitudinal groove broad, rather deep, frontal margin more obtusely produced; thorax a little shorter, scarcely narrower at the base, median groove deeper; elytra scarcely shorter, more strongly punctured. ♀ unknown. Length 6–7 mm.

Sikkim: Darjeeling (ex *Fauvel*).

70. Eleusis beesoni, sp. n.

Black, shining, elytra reddish-yellow, infuscate about the scutellum, the apical margin narrowly blackish. Head large, as long as broad, quadrate. Antennæ ferruginous. Legs reddish-testaceous. Length 4 mm.

Colour and build of *E. humilis* Er., but larger, the head more quadrate, much more distinctly punctured, the sides more parallel, the antennæ stouter but similarly constructed, the sides of the thorax without a tooth. Head large, quadrate, fully as wide as the thorax, as long as broad, the eyes small and flat, the post-ocular space nearly three times as long as the eye, very slightly rounded and dilated, intra-ocular sulcus deep, not extending to the base, anterior margin broadly truncate, antennal tubercles not foveate internally, the disc on either side of the middle with an impression on the level of the eyes, moderately finely, moderately closely punctured, ground-sculpture longitudinally strigose. Antennæ with the 3rd joint a little longer than the 2nd, 4th to 6th a little longer than broad, gradually decreasing in length, 7th about as long

as broad, 8th to 10th a little transverse. Thorax nearly semicircular, the sides without tooth, the anterior border on either side with bipunctate impression, the disc in the middle with extremely fine groove for nearly the whole length, puncturation fine and sparing, the ground-sculpture as on the head. Elytra longer and wider than the thorax, about a quarter longer than broad, on the middle with a fine setiferous puncture; very finely and rather sparingly punctured, ground-sculpture as on the fore-parts. Abdomen with the usual setiferous punctures and ground-sculpture.

Mussoorie District: Kaligad.

71. **Eleusis viridans.** (Figs. 15, 16.)

Eleusis viridans Fauv.*, Rev. d'Ent. xiv, 1895, p. 189.
Eleusis nova Bernh.*, W. E. Z. xliii, 1926, p. 19.

Black, shining, the elytra pitchy, the middle of the disc indeterminately and more or less extensively brownish-testaceous; in certain lights with silky æneous reflex. Antennæ pitchy brown. Legs reddish, the femora pitchy. Length 3·5 to 5·5 mm. (Type 5 mm.)

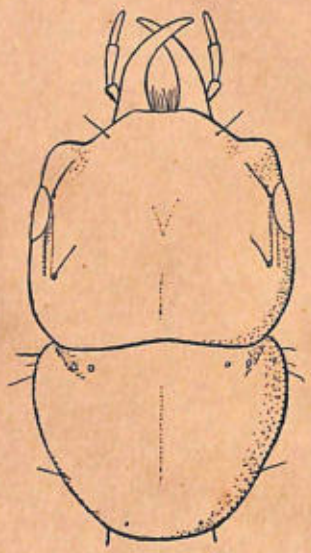


Fig. 15.—*Eleusis viridans*, ♂, head and thorax.

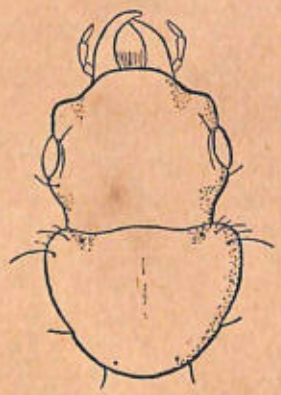


Fig. 16.—*Eleusis viridans*, ♀, head and thorax.

In colour and build of the head very similar to *E. humilis* Er., but larger and broader, the antennæ longer and darker, and the sides of the thorax without distinct tooth. Head subquadrate-orbicular, slightly transverse ($5\frac{3}{4} : 5$), as broad as the thorax, slightly sinuate between the antennal tubercles and the truncate anterior margin, the temples slightly rounded and

a little prominent, in the ♂ about twice as long as the eye, juxta-ocular sulcus rather deep and narrow, not reaching the base, antennal tubercles very obsoletely impressed internally, extremely finely and very sparingly punctured, with distinct and for the most part longitudinal ground-sculpture; mandibles not angulate: in the ♀ the head is smaller and less quadrate than in the ♂, the space between the eye and the constriction of the neck is as long as the diameter of the eye, which accordingly appears larger. Antennæ rather slender, the 3rd joint a little longer than 2nd, 4th to 7th longer than broad, gradually decreasing in length, 8th to 10th about as long as broad. Thorax transverse ($5\frac{3}{4}$: 5), conical, widest in front, the sides fully rounded for the anterior half, strongly contracted and scarcely rounded to the base, scarcely dentate, the disc flattened, in the middle with a very fine longitudinal sulcus, anterior margin on either side with bipunctate impression, sculpture as on the head. Elytra longer (7 : 5) and broader than the thorax, longer than broad (7 : $6\frac{1}{4}$), with a setiferous puncture in the middle of the disc and sculpture as on the fore-parts. Abdomen with the usual setiferous punctures and transverse strigose ground-sculpture. According to Fauvel the size varies from $3\frac{1}{2}$ to $5\frac{1}{2}$ mm. and the colour in immature forms is pitchy with brighter elytra; this variation in colour appears to be usual, however, in these circumstances throughout the genus.

Burma: Carin Asciuii Cheba (*Fea*) (type); Carin Cheba; Tenasserim; Thagata. Assam: Kobo (*Kemp*, 8. xii. 1911). Also in Java and Lombok.

72. **Eleusis humilis.** (Fig. 17.)

Eleusis humilis Er., Gen. Spec. Staph. 1840, p. 839; Fauv., Rev. d'Ent. xxiii, 1904, p. 44,
Eleusis fasciata Lec., New Spec. Col. i, 1863, p. 59.
Eleusis indica Kr., Arch. Naturg. xxv, 1859, i, p. 183.
Eleusis pallidipennis Fauv., Bull. Soc. Linn. Norm. ix, 1865, p. 40.
Eleusis subtilis Shp., Ann. Mag. Nat. Hist. (6) iii, 1889, p. 467.
Eleusis tenuis Fauv., Bull. Soc. Linn. Norm. ix, 1865, p. 41.
Eleusis tenuis Walk., Ann. Mag. Nat. Hist. (3) iii, 1859, p. 52.

Black, shining, the head subquadrate-orbiculate, exceedingly finely and very sparingly punctured; elytra testaceous infuscate about the scutellum and base, the apical fourth black. Antennæ reddish-testaceous. Legs reddish-testaceous, the femora often pitchy. Length 2·5 to 3 mm.

Head as broad as long, scarcely wider than the thorax, the front broadly truncate, eyes not prominent, post-ocular space gently rounded and contracted to the base, about twice as long as the diameter of the eye, intra-ocular groove distinct, not extending quite to the base of head, disc not sulcate,

extremely finely and very sparingly punctured and with fine strigose ground-sculpture. Antennæ rather slender, 2nd and 3rd joints subequal, 4th and 5th short, oval, 6th and 7th about as long as broad, narrowed at the base, 8th to 10th slightly transverse. Thorax transverse, narrowed at the base, the sides evenly and gently rounded towards the front, at the posterior third with an obsolete tooth, middle of disc exceedingly finely sulcate for the posterior two-thirds, anterior margin with a bipunctate impression on either side, puncturation and ground-sculpture as on the head. Elytra wider and about one-third longer than the thorax, a little longer than broad, each with the usual setiferous puncture on disc, very finely, obsoletely,

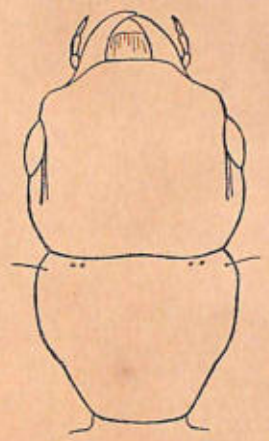


Fig. 17.—*Eleusis humilis*, head and thorax.

and moderately closely punctured, ground-sculpture as on the fore-parts. Abdomen with the usual setiferous punctures, transversely strigose.

Ceylon. Andamans. Nilgiri Hills. Burma. United Provinces: Lachiwala, Chakrata district. Also Japan, and generally distributed throughout the tropics.

73. Eleusis laticeps. (Figs. 18, 19.)

Eleusis laticeps Fauv., Rev. d'Ent. xiv, 1895, p. 190.

Shining black or pitchy black, the elytra dirty yellow, more or less infuscate about the scutellum and the apical border. Head transversely orbicular. Antennæ and legs reddish-testaceous. Length 3·5 to 4·5 mm.

Coloration more or less similar to *E. humilis* Er., but usually that of the elytra less clear and the apical margin less determinately darker, the shape of the head entirely different, the thorax much shorter and the antennæ longer. ♂: Head very

broad, transversely orbicular, considerably wider than the thorax, the post-ocular space gently rounded and strongly contracted to the base, about 1½ times as long as the eye; eyes not prominent, intra-ocular groove rather wide, nearly reaching the base, disc broadly and feebly impressed, scarcely perceptibly punctured, ground-sculpture strigose; thorax broader (5 : 3½). ♀: Head narrower, eyes much larger, more prominent, longer than the post-ocular space; thorax narrower (4 : 3). Antennæ with 2nd and 3rd joints subequal, 4th to 6th oval, 7th to 10th about as long as broad.

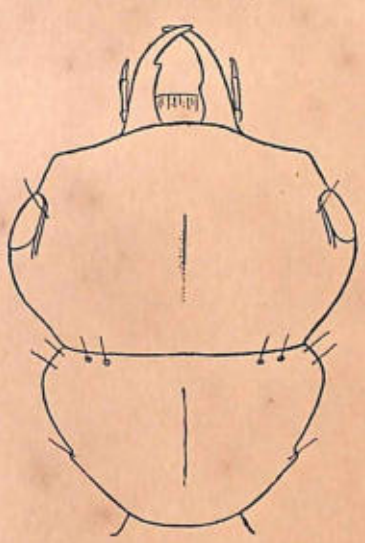


Fig. 18.—*Eleusis laticeps*, ♂, head and thorax.

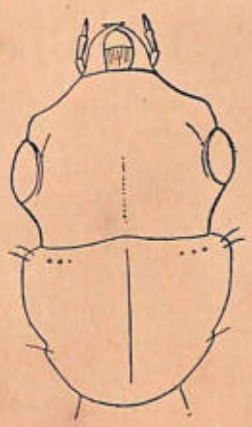


Fig. 19.—*Eleusis laticeps*, ♀, head and thorax.

Thorax broadly and feebly impressed on the disc, with very fine median smooth line, sides with a minute tooth at the posterior third, exceedingly finely and very sparingly punctured and with similar ground-sculpture to that of the head. Elytra longer (5½ : 3½) and broader than the thorax, longer than broad, with the usual setiferous puncture on disc, ground-sculpture as on the fore-parts, scarcely perceptibly punctured. Abdomen transversely strigose, with the usual setiferous punctures.

Burma: Carin Cheba. Sumatra and Island of Nias.

74. Eleusis kraatzi. (Figs. 20, 21.)

Isomalus apicipennis Kr., Arch. Naturg. xxv, 1859, i, p. 183 (præoc.).
Eleusis kraatzi Fauv., Ann. Mus. Civ. Gen. xii, 1878, p. 207.

Shining reddish-testaceous, the elytra narrowly infuscate at the apex. 7th abdominal segment often infuscate at the base. Antennæ and legs testaceous. Length 3·4 mm.

♂: Head large, transversely suborbicular, wider than the thorax; eyes rather large, post-ocular space gently rounded to the base, longer than the eye, intra-ocular sulcus not reaching the base, anterior margin truncate, mandibles prominent, exserted; in the ♀ as wide as the thorax, subhexagonal, the post-ocular space excavate to the base. Vertex very finely grooved, exceedingly finely and very sparingly punctured and with the usual strigose ground-sculpture. Antennæ slender, the 2nd and 3rd joints of equal length, 4th a little longer than broad, 5th to 10th transverse, gradually increasing in breadth, 11th conical, about as long as the two preceding together. Thorax transverse, strongly narrowed before the base, the sides here straighter and with a small tooth, anteriorly gently

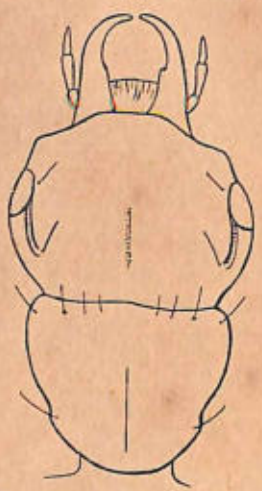


Fig. 20.—*Eleusis kraatzi*, ♂, head and thorax.

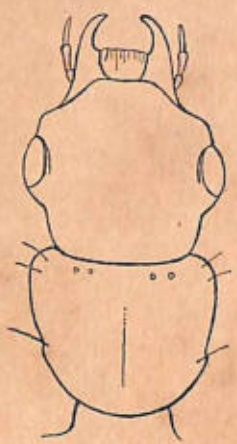


Fig. 21.—*Eleusis kraatzi*, ♀, head and thorax.

rounded, anterior margin on either side with a bipunctate impression, in the middle with an exceedingly fine raised line, scarcely perceptibly punctured, the ground-sculpture as on the head. Elytra broader and about one-half longer than the thorax, longer than broad, each with a small setiferous puncture about the middle, and with some superficial obsolete punctures sparingly distributed and usual ground-sculpture. Abdomen transversely strigose, with the usual setigerous punctures.

Ceylon. Malay Peninsula. Singapore. Java.

75. Eleusis rotundiceps.

Eleusis rotundiceps Fauv., Rev. d'Ent. xxiii, 1904, p. 83.

♂: Of the colour of *E. plagiata* Fauv., but a third smaller and half as broad, the antennæ slender, a little shorter than the head and thorax, red, the 1st joint except the apex pitchy,

7th to 10th joints rather transverse; head orbicular, finely, rather closely punctured, the juxta-ocular groove broad and deep, eyes moderate, the frontal margin less produced, broadly truncate; thorax small, narrower than the head, scarcely broader than long, triangular, the disc scarcely sulcate, broadly obliquely impressed on either side, more finely punctured than the head, sides moderately denticulate; elytra finely and sparingly punctured; abdomen rather alutaceous. Easily distinguished from *plagiata*. ♀ unknown. Length 4⅓ mm.

Sikkim: Darjeeling (ex *Fauvel*).

76. Eleusis pusilla.

Eleusis pusilla Fauv., Rev. d'Ent. xiv, 1895, p. 190.

Pitchy black, shining, the elytra dirty yellow, infuscate about the scutellum and the apical margin. Head suborbicular, rather closely and distinctly punctured. Antennæ and legs reddish-testaceous. Length 2·3 mm.

Much smaller than *E. humilis* Er., the colour of the elytra less clear, the head suborbicular, with coarser ground-sculpture and more closely punctured, the antennæ shorter and the eyes more prominent, the thorax more conical. Head suborbicular, a little wider than the thorax, the post-ocular space a little longer than the eyes, feebly rounded and strongly retracted to the base, the vertex distinctly punctured, ground-sculpture strigose and well marked. Thorax a little broader than long, narrow at the base, the sides with a small tooth at the posterior third, from thence gently rounded to the anterior angles, disc broadly impressed, in the middle with an exceedingly fine sulcus, sculpture as on the head. Elytra wider and fully half as long again as the thorax, longer than broad, with sculpture as on the fore-parts.

Burma: Bhamo. Dutch East Indies: Island of Nias.

77. Eleusis secreta, sp. n.

Shining; head and thorax black, elytra dirty testaceous, narrowly and indistinctly infuscate at the base and apex. Abdomen pitchy. Antennæ and legs reddish testaceous. Length 2·75 mm.

Closely allied to *E. pusilla* Fauv., but a little longer and less shining, the head smaller and much less distinctly punctured, the antennæ stouter, but similarly constructed, the penultimate joints slightly transverse, the ground-sculpture on the fore-parts distinctly less fine; in other respects similar to *pusilla*.

Siwaliks: Timli (*Cameron*).

78. **Eleusis longiceps.**

Eleusis longiceps Fauv. *, Ann. Mus. Civ. Gen. xii, 1878, p. 208.

Shining reddish-testaceous, extremely finely and exceedingly sparingly punctured, finely strigose, the elytra posteriorly a little infuscate. Head subquadrate in ♂, suborbicular in ♀, thorax without lateral tooth. Antennæ and legs testaceous. Length 3·3 mm.

Colour of *E. kraatzi* Fauv., but distinct by the differently shaped head and broader thorax without lateral tooth. Head in ♂ scarcely broader than long, subquadrate, in ♀ suborbicular, in both as broad as the thorax, temples scarcely dilated, juxta-ocular sulcus narrow and deep, base not foveate, exceedingly finely and extremely sparingly punctured. Antennæ with the 3rd joint a little longer than 2nd, 4th and 5th slightly longer than broad, 6th about as long as broad, 7th to 10th transverse. Thorax transverse, strongly narrowed behind, the sides evenly rounded, disc depressed with extremely fine impressed median line, anterior margin on either side with a bipunctate impression. Elytra a little longer than the thorax, scarcely longer than broad, with large setiferous puncture on the middle of the disc. Abdomen with the usual setigerous punctures, very finely transversely strigose.

? Ceylon. Type from New Guinea.

79. **Eleusis fusciceps.**

Eleusis fusciceps Kr. *, Arch. Naturg. xxv, 1859, i, p. 184.

Reddish-testaceous, shining, the head and middle of the lateral margins of the elytra more or less infuscate. Antennæ with the first three joints testaceous, the rest infuscate. Legs testaceous. Length 1·5 mm.

Head suborbicular, a little broader than the thorax, the eyes rather large and moderately prominent, the post-ocular area short and feebly rounded, anterior margin truncate, intra-ocular sulcus obsolete; practically impunctate, very finely more or less longitudinally strigose. Antennæ extending to the posterior margin of the thorax, the 3rd joint a little shorter than the 2nd, 4th moniliform, 5th to 10th transverse, gradually increasing in breadth. Thorax scarcely broader than long, much narrower behind than in front, the sides gently rounded from base to apex, not denticulate; anterior border on either side with two small punctures, disc more or less broadly and feebly impressed, practically impunctate with ground-sculpture as on the head. Elytra wider and about one-half longer than the thorax, a little longer than broad, against the suture with a few fine punctures, ground-sculpture as on the fore-parts. Abdomen practically impunctate, transversely strigose.

Ceylon: Colombo. Andamans: Port Blair. Siwaliks: Timli. Also in Singapore and Sumatra.

Tribe 3. LEPTOCHIRINI.

This tribe is distinguished by the anterior coxal cavities being entirely closed behind, the epimera meeting the apex of the prosternal process. For the most part they are smooth shining species, *Stigmatochirus* and *Thoracochirus* being exceptional. The head in most of the species is furnished with horns. It is widely distributed throughout the tropics and its members are found beneath the bark of decaying trees, on the fibrous material of which they appear to feed.

Key to the Genera.

1. Anterior coxæ separated; the prosternal process dilated behind at its apex	[p. 89. LEPTOCHIRUS Germ.,
Anterior coxæ contiguous; the prosternal process concealed and not expanded behind.	2.
2. Outer surface of the mandibles convex, sharply margined below, the front of the head usually toothed or lobed	3.
Outer surface of the mandibles impressed longitudinally, margined above and below; strongly sculptured species, the front of the head rarely toothed	[Bernh., p. 118. THORACOCHIRUS
3. Mandibles much elongated, projecting considerably beyond the level of the apices of the frontal horns; longer than the head. Inner lobe of maxilla densely ciliate	[p. 92. BOROLINUS Bernh.,
Mandibles normal, not produced much beyond the level of the apices of the frontal armature, shorter than the head. Inner lobe of the maxilla furnished with spines	[p. 95. PRIOCHIRUS Shp.,

Genus **LEPTOCHIRUS** Germ.

Leptochirus Germ., Ins. Spec. Nov. 1823, p. 35; Er., Gen. Spec. Staph. 1840, p. 824; Lacord., Gen. Col. ii, 1854, p. 125; Fauv., Bull. Soc. Linn. Norm. ix, 1865, p. 12; Sharp, Trans. Ent. Soc. Lond. 1874, p. 420; id., Biol. Cent.-Amer. 1887, i, 2, p. 733; Fauv., Rev. d'Ent. xiv, 1895, p. 180; Heller, Abh. Mus. Dresd. vii, no. 3, p. 6; Bernh., D. E. Z. 1903, p. 113.

BIOLOGY.—Kraatz, Arch. Naturg. xxv, 1859, i, p. 190; Candèze, Mem. Soc. Sc. Liège, 1861, p. 333, t. 1, f. 4, p. 334.

Of the four subgenera into which this genus has been divided, only one (*Strongylochirus*) is found in our Fauna; it is characterised by the absence of a median frontal furrow and by the prosternal process being dilated behind the coxæ into a rounded plate.

Head large, more or less quadrate, constricted behind, the neck thick, eyes prominent; gular sutures fine, approximate about the middle, slightly diverging in front and behind; temples not bordered below. Labrum short, strongly transverse, corneous, broadly crescentically emarginate, antero-externally

on either side produced in a membranous diverging and pointed lobe, the inner margins of the lobes united along the anterior margin, densely ciliate. Mandibles stout, pointed, strongly toothed, the outer border margined. Maxillary palpi 4-jointed, the 1st joint small, 2nd club-shaped, curved, 3rd about half as long as 2nd, 4th narrower than the preceding and about as long as the 2nd. Outer lobe of maxilla with the base corneous, the apical part membranous and much widened, very densely ciliate; inner lobe membranous, narrower than the outer, its inner margin and apex densely ciliate. Mentum corneous, transverse, broadly and feebly emarginate in front, the antero-external angles rounded. Tongue broad, membranous, with a central corneous rod and divided into two large diverging lobes with rounded antero-external angles by a deep rectangular excision, densely ciliate. Paraglossæ adherent to the tongue and not extending beyond it, finely ciliate. Labial palpi 3-jointed, short, the 1st joint about twice as long as broad, 2nd shorter, about as long as broad, narrower at the base, 3rd narrower, about as long as the 1st. Thorax quadrate, the sides bordered, longitudinally sulcate in the middle. Prosternum well developed, bisinuate in front, prosternal process narrowed between the coxæ and widened behind, forming a rounded plate which touches the epimera, completely closing the coxal cavities behind; epipleura broad and fused with the prosternum and epimera. Anterior coxæ elongate. Mesosternum well developed before the coxæ, convex, produced behind into a narrow pointed process extending more than half the length of the coxæ, and margined laterally so that it appears more or less obtusely carinate. Intersternal piece short, receiving the apex of the mesosternum and separated from the broadly-rounded metasternum by a raised border. Posterior coxæ contiguous at their bases. Abdomen elongate, keeled at the base below, immarginate above, the segments more or less constricted at their bases. Scutellum small. Epipleura of elytra well developed. Anterior tibiæ more or less strongly serrate, the middle and posterior ciliate and finely spinose. Tarsi short, 5-jointed, the 1st four joints very short, equal, the 5th longer than all the preceding together.

The species are subcortical in habit, and apparently, from their powerful teeth, feed on the woody fibre. The species are found only in the tropics.

Key to the Species of Leptochirus, *Subgen.* Strongylochirus.

1. Clypeus continuous with the front on the same plane and not separated from it by a transverse impressed line, its sides not bounded by an impressed line. Thorax red..... *quadridens* Motsch., [p. 91.

Clypeus depressed, not on the same plane as the front and separated from it by a transverse impressed line, the sides bounded by an arcuate impressed line. Entirely black species ..... 2.

2. 6th joint of antennæ about as long as broad. Size smaller, 13 to 17 mm. ..... *lævis* Cast., p. 91.

6th joint of antennæ distinctly longer than broad. Size larger, 20 to 25 mm. ..... *atkinsoni* Fauv., p. 92.

80. Leptochirus (Strongylochirus) quadridens.

Leptochirus quadridens Motsch., Bull. Mosc. xxx, 1857, iv, p. 501.

Depressed, black, shining, the thorax and usually the head deep red; anterior margin of the front feebly trisinuate, with four small crenulations, of which the lateral are usually a little larger. Antennæ pitchy, yellow pubescent. Legs reddish. Length 10 to 16 mm.

Head narrower than the thorax and without median sulcus, frontal margin quadricrenulate. Antennal tubercles foveolate internally, impunctate and without ground-sculpture. Right mandible with a large triangular apical, a larger triangular subapical, and an obsolete flat basal molar tooth on the inner border, the upper border with a small tooth before the base and two much larger ones before the apex; left mandible similarly toothed, but without the small basal tooth on the upper surface. Antennæ with the 1st joint slightly emarginate at apex, 2nd small and short, 3rd longer, oval, 4th to 10th short, oval, not transverse, 11th a little longer than 10th. Thorax slightly transverse, the sides straight and parallel, with about 10 moderately large punctures, base not bordered at the sides, in the middle with a sharply impressed longitudinal line and without sculpture. Elytra a little longer and broader behind than the thorax, a little longer than broad, extremely finely and moderately closely punctured. Abdomen impunctate along the middle, at the sides of the bases of the segments rather closely and distinctly punctured, the last segment with a few punctures.

Assam: Naga and Khasi Hills. Burma: Carin Ghécu. Also in Siam, Sumatra, Java, and Borneo.

81. Leptochirus (Strongylochirus) lævis.

Leptochirus lævis Cast., Hist. Nat. i, 1840, p. 186.
Leptochirus laticeps Er., Gen. Spec. Staph. 1840, p. 826.
Leptochirus idæ Kr., Arch. Naturg. xxv, 1859, i, p. 19 (note).

Depressed, black, shining. Clypeus separated from the front by a transverse line, the anterior border not crenulate, the sides bounded by a curved impressed line. Antennæ black. Legs black, tarsi ferruginous. Length 13 to 17 mm.

Head a little narrower than the thorax, vertex not sulcate,

antennal tubercles foveate internally. Right mandible without a molar tooth and with only a small tubercle before the base, post-apical tooth broad, triangular, separated by a large obtuse notch from the apical, the upper border with a smaller basal and two large post-apical teeth; left mandible internally with similar dentition, the upper border with only one post-apical tooth. Antennæ with the 1st joint slightly emarginate at apex, 2nd small, 3rd to 5th a little longer than broad, oval, gradually decreasing in length, 6th to 10th about as long as broad or slightly transverse. Thorax distinctly transverse, the sides parallel and rather closely punctured, except at the anterior angles, disc longitudinally sulcate in the middle, without sculpture, base not bordered at the sides. Elytra a little longer, but scarcely as wide as the thorax, about as long as broad, the reflexed sides closely and moderately finely punctured, the rest of the surface without sculpture. Abdomen smooth along the middle, the base of the segments and the sides more or less closely and strongly punctured.

Assam: Khasi and Naga Hills. Also in Siam, Singapore, Sumatra, Java, Lombok, and Borneo.

82. **Leptochirus (Strongylochirus) atkinsoni.**

Leptochirus atkinsoni Fauv., Rev. d'Ent. xiv, 1895, p. 182.

Build of the preceding, but much larger and more robust, the antennæ much longer and more densely pubescent, the 3rd to 10th joints all distinctly longer than broad, oval, gradually decreasing in length; dentition very similar; abdomen scarcely as closely punctured. Length 20 to 25 mm.

Assam: Khasi Hills. Burma: Carin Cheba; Tenasserim; Tavoy. Also in Siam.

Genus **BOROLINUS** Bernh.

Borolinus Bernh., D. E. Z. 1903, p. 133.

This genus is readily distinguished from all the other LEPTOCHIRINI by the long frontal horns and the very long exserted mandibles, which are twice as long as the head (excluding the horns) and actually project beyond the level of the apices of these structures and are destitute of teeth on the basal half; the structure of the other parts of the mouth scarcely differs from that obtaining in *Strongylochirus*. The structure of the prosternum is, however, different; the prosternal process is sunk between the coxæ, which are contiguous, and its apex, although dilated behind these, is not transversely patellate. In other respects the structure is similar to that of *Strongylochirus*. From the next genus *Priochirus* Shp. it is distinguished by the longer maxillary palpi, long mandibles, and the densely ciliate inner lobe of the maxilla, which in *Priochirus* is furnished with teeth. It is found only in the Eastern Hemisphere.

Key to the Species.

1. Frontal horns divergent, without a tooth on the outer side near the base. Species red, the head and abdomen black.....	*semirufus* Fauv., p. 93.
Frontal horns parallel or slightly convergent, with a small tooth on the outer side near the base	2.
2. Right mandible behind the apex with a strong simple tooth.....	3.
Right mandible behind the apex with a biscupid tooth. Species black	*minutus* Cast., p. 94.
3. Thorax slightly transverse; the tooth behind the apex of the right mandible triangular, pointed; thorax and elytra dark red, head and abdomen pitchy	*antilope* Fauv., p. 93.
Thorax strongly transverse; the tooth behind the apex of the right mandible not pointed, flat apically. Species entirely black	*sikkimensis* Bernh., [p. 94.

83. Borolinus semirufus.

Leptochirus semirufus Fauv., Rev. d'Ent. xiv, 1895, p. 181.

Shining, head and abdomen black, thorax and elytra red or reddish-yellow, without sculpture. Head in front with two long diverging horns without an external denticle; frontal impression deep, as long as broad; vertex not sulcate, foveate before the middle of the base; mandibles long and prominent, the right with a bicuspid tooth behind the apex, the cusps pointed, the left with two pointed teeth behind the apex. Antennæ pitchy, the 1st joint elongate, emarginate at the apex, 2nd joint small, 3rd much longer, 4th to 6th moniliform, 7th to 10th transverse. Thorax distinctly transverse, wider than the head, sides parallel with three or four large punctures, sulcate medially and with a small fovea on either side, base completely margined. Elytra a little narrower and longer than the thorax, as long as broad. Abdomen with the segments punctured at the bases and each with a transverse row of fine punctures before the posterior margin, medially almost smooth, last segment irregularly punctured, pubescence yellow, sparing. Legs reddish-yellow. Length 13 to 16 mm.

Burma: Carin Cheba, Asciuii Cheba, v. and xii. 88 (*L. Fea*).

84. Borolinus antilope.

Leptochirus antilope Fauv., Rev. d'Ent. xiv, 1895, p. 181.

Shining. Head and abdomen black, thorax and elytra dark ferruginous red. Head in front with two long parallel horns, each with a distinct tooth externally at the base, frontal impression deep, as long as broad, vertex not sulcate, base not foveate, mandibles long and prominent, the right with a strong

pointed tooth behind the apex, the left with broad tooth rounded apically. Antennæ pitchy, the 1st joint elongate, emarginate at apex, 4th to 6th joints a little longer than broad, gradually decreasing in length, 7th to 10th slightly transverse, 11th conical. Thorax transverse, wider than the head, the sides parallel, with a row of fine punctures against the margin and 6 or 7 larger ones in a row above, in the middle sulcate. Elytra a little narrower than the thorax, as long as broad. Abdomen finely and transversely punctured at the bases and apices of the segments, the last finely, sparingly, irregularly punctured. Femora and tarsi red, tibiæ pitchy. Length 13 to 14 mm.

Burma : Carin Ghécu, Senmigian (*L. Fea*). Also in Siam.

85. Borolinus sikkimensis.

Borolinus sikkimensis Bernh. *, D. E. Z. 1919, p. 359.

Entirely black, shining. Head in front with two long slightly converging horns, the base of each externally with a small tooth, frontal impression deep, as long as broad. Vertex not sulcate, the base with a small fovea. Mandibles long and prominent, each with a large simple tooth behind the apex. Antennæ black, the 3rd joint much longer than 2nd, 4th to 6th short, oval, 7th to 10th slightly transverse. Thorax strongly transverse, much wider than the head, the sides parallel, moderately closely punctured, medially sulcate, finely irregularly striolate, the base completely margined. Elytra a little narrower than the thorax, as long as broad, distinctly coriaceous. Abdomen transversely punctured at the bases and apices of the segments. Legs black, tarsi ferruginous. Length 12 to 15 mm.

Differs from *B. minutus* Cast. in the larger size, simple postapical teeth of the mandibles, slightly convergent frontal horns, less punctured sides of the thorax, and stronger coriaceous ground-sculpture of the elytra.

Sikkim (type). Burma : Ruby Mines (*Doherty*). British Museum.

86. Borolinus minutus.

Leptochirus minutus Cast., Hist. Nat. i, 1840, p. 186.
Leptochirus bispinus Er., Gen. Spec. Staph. 1840, p. 827.

Entirely black, shining. Head in front with two long parallel horns, the base of each externally with a small tooth, frontal impression deep, as long as broad, vertex not sulcate, at the middle of the base with a minute fovea. Mandibles long and prominent, each with a large bicuspid tooth behind the apex. Antennæ black, the 1st joint emarginate at apex, 2nd short,

3rd much longer, 4th a little longer than broad, 5th moniliform, 6th to 10th transverse, 11th conical. Thorax slightly transverse, wider than the head, the sides parallel, moderately closely punctured (the punctures more numerous than in *B. sikkimensis*), disc finely, medially sulcate, finely, irregularly striolate, base completely margined. Elytra as long as, but a little narrower than, the thorax, as long as broad, much more finely coriaceous than in *B. sikkimensis*. Abdomen transversely punctured at the bases and apices of the segments. Legs pitchy brown, tarsi ferruginous. Length 9 to 10 mm.

Assam: Naga Hills. Sikkim: Gopaldhara Valley; Rungbong Valley (*Stevens*). Burma: Bhamo (*L. Fea*); Tharawaddy. Also in Siam, Sumatra, Java, Lombok, and Borneo.

Genus **PRIOCHIRUS** Sharp.

Priochirus Sharp, Biol. Cent.-Amer., Col. i, 2, 1887, p. 740; Heller, Abh. Mus. Dresd. vii, 1896–1899, p. 9; Bernh., D. E. Z. 1903, pp. 114, 135.

Biology.—Kr., Arch. Naturg. xxv, 1859, i, p. 190, t. 3, f. 3 *a*.

Of similar general facies to *Leptochirus*, but differing in the armature of the head, the prosternal process not dilated behind into a plate, but only slightly enlarged and more or less spear-shaped, the transverse 3rd joint of the maxilllary palpi, and the toothed inner margin of the inner lobe of the maxilla; from *Borolinus* by the short mandibles, short 3rd joint of the maxillary palpi, and the toothed inner margin of the inner lobe of the maxilla. As in the preceding genera, the elytra are impunctate except on the reflexed sides, and the dentition is an important character in the determination of the species. Labrum transverse, the sides converging in front and furnished with a long pointed membranous ciliated lobe which is not connected with its fellow along the anterior border, which is rather deeply crescentically emarginate. Maxillary palpi with the 1st joint very short, small, 2nd short, clavate, lightly curved, 3rd transverse, 4th elongate, narrowed towards apex and about as long as the 2nd and 3rd together. Outer lobe of the maxilla much narrower than in the preceding genera, spinose and ciliate; inner lobe shorter and narrower than the outer, hooked at the apex, the inner margin spinose. Tongue broad and membranous, broadly emarginate in front, in the middle with a chitinous rod which is dilated in front into a crescentic plate. Paraglossæ distinct, ciliate. Labial palpi short, 1st and 2nd joints subequal, longer than broad, the 2nd curved, 3rd longer than the 2nd and narrower apically. Mentum not sulcate in the middle. Mesosternal process simple or

keeled. Anterior tibiæ serrate, the middle and posterior spinose. Winged. Tarsi as in the preceding.

Key to the Subgenera.

1. Front margin of the head with a more or less distinct tooth in the middle	[Bernh., p. 96. TRIACANTHOCHIRUS
Front margin of the head without tooth in middle	2.
2. Head in front divided by a deep, narrow, median impression into two large lobes, often themselves dentate	[Bernh., p. 100. CEPHALOMERUS
Head with a frontal impression which is at least as broad as long	3.
3. Each mandible above with an upright curved process which is longer than the mandible itself	[Bernh., p. 108. PSEUCODONTUS
Each mandible at most with a short depressed process	4.
4. Front of head unarmed, not produced on either side of the impression into a lobe or horns	[Bernh., p. 109. LEPTARTHRUS
Front of head armed	5.
5. Clypeus, frontal impression, sides, and anterior and posterior margins of the thorax up to the disc coarsely and rather closely punctured	[Bernh., p. 109. STIGMATOCHIRUS
Clypeus and thorax impunctate	6.
6. The long axis of the large frontal horn lies nearer to the side-margin of the head than to the middle line	[p. 111. PLASTUS Bernh.,
The long axis of the large frontal horn lies nearer to the middle line than to the side-margin	[p. 116. PRIOCHIRUS, s. str.,

Subgen. TRIACANTHOCHIRUS Bernh., W. E. Z. xl, 1923, p. 63.

Triacanthus Bernh., D. E. Z. 1903, p. 136.

The species of this subgenus are distinguished by the presence of three more or less distinct teeth on the front margin of the head.

Key to the Species.

1. Size larger, 12 to 15 mm.	2.
Size smaller, 7 to 8 mm	4.
2. Median frontal tooth prominent, its apex extending beyond the level of the apices of the lateral teeth	3.
Median frontal tooth small, its apex behind the level of the apices of the lateral teeth.	[p. 98. *pentagonalis* Bernh.,
3. Broader species, the median tooth cylindrical with rounded apex	*apicalis* Epp., p. 97.
Narrower species, the median tooth narrowed before the apex, which is pointed	[p. 97. *bipunctatus* Fauv.,

4. Median frontal tooth prominent, its apex extending beyond the level of the apices of the lateral teeth ..... *tridens* Motsch., p. 99.
Median tooth minute ..... *ceylanensis* Fauv., p. 99.

87. **Priochirus (Triacanthochirus) apicalis.**

Leptochirus apicalis Epp. *, W. E. Z. xiv, 1895, p. 68.

Dark red, shining, head blackish. Median frontal horn long, stout, cylindrical, the apex rounded and projecting a little beyond the level of the apices of the lateral teeth, these as stout as the median, everted, vertex sulcate. Antennæ black, the 1st joint emarginate at the apex, the penultimate joints transverse. Thorax strongly transverse, medially sulcate, on either side with a large puncture, sides straight, almost parallel, and somewhat coarsely and rather closely punctured, more sparingly against the margin, the base bordered, ground-sculpture wanting. Elytra a little longer and a little narrower than the thorax, about as long as broad, without ground-sculpture. Abdomen rather closely punctured at the bases of the segments. Legs red. Length 12 to 15 mm.

Sikkim.

88. **Priochirus (Triacanthochirus) bipunctatus.** (Fig. 22.)

Leptochirus bipunctatus Fauv., Rev. d'Ent. xiv, 1895, p. 180.

Very closely allied to the preceding and differing only in the narrower and less robust build, the distinctly narrower

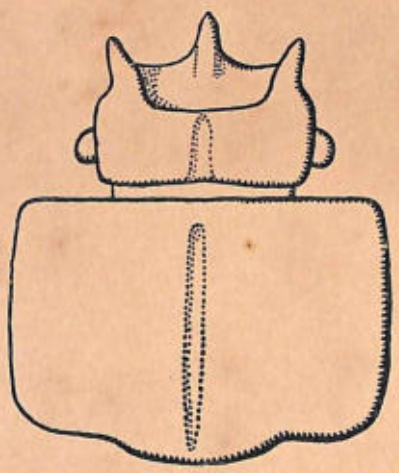


Fig. 22.—*Priochirus (Triacanthochirus) bipunctatus*, head and thorax.

thorax; the median tooth of the head is narrowed before the apex and pointed, whereas in *apicalis* it is of uniform cylindrical

form; the sides of the thorax are rather more coarsely and closely punctured. Length 12 to 15 mm.

Sikkim: Gopaldhara, Rungbong Valley. Burma: Carin Cheba; Carin Ghécu; Tenasserim; Mt. Mooleyit; Plapoo (*L. Fea*).

89. **Priochirus (Triacanthochirus) pentagonalis.** (Fig. 23.)

Priochirus (Triochirus) pentagonalis Bernh., W. Z. B. lxiv, 1914, p. 78.

Triacanthus fletcheri var. *analis* Cam., E. M. M. lvi, 1920, p. 142.

Subdepressed, black, shining, the apex of the abdomen rufescent (var. *analis*). Antennæ black. Legs pitchy, tarsi reddish. Length 12 mm.

Head narrower than the thorax, eyes small, prominent. Frontal impression about twice as broad as long, the sides



Fig. 23.—*Priochirus (Triacanthochirus) pentagonalis*, head and thorax.

converging in front, lateral teeth short and stout, median tooth short, small, its apex a little behind the level of the apices of the lateral teeth, side-margin of the head from the apex of the lateral tooth to the antennal tubercle straight, oblique; vertex sulcate. Antennæ thickly pubescent, 4th and 5th joints short, oval, 6th to 10th transverse. Thorax strongly transverse, about one-half broader than long, slightly narrowed in front, the sides feebly rounded and moderately finely and closely punctured, disc medially sulcate, on either side with usually two punctures (occasionally only one), the posterior placed externally to the anterior, base completely bordered and with a few fine punctures. Elytra much longer than the thorax, longer than broad, along the suture with 4 or 5 punctures and a row of 5 or 6 more extending from the shoulder nearly

to the posterior margin, the rest of the surface finely and very sparingly punctured. Abdomen practically smooth in the middle at the sides of the bases of the segments with a few superficial punctures.

Chambaganoor (type). Iyerpadi; Kodaikanal; Anamalais (*Fletcher*). Nilgiri Hills (*H. L. Andrewes*).

90. Priochirus (Triacanthochirus) tridens.

Leptochirus tridens Motsch., Bull. Mosc. xxx, 1857, ii, p. 502.

Shining, black, apex of the abdomen often reddish, somewhat depressed. Frontal teeth well developed, the median projecting slightly beyond the level of the apices of the lateral. Antennæ black. Legs reddish. Length 7 to 8 mm.

Head narrower than the thorax; frontal impression about twice as broad as long, the sides slightly converging in front; frontal teeth well developed, the median rather more robust than the lateral, more prominent, triangular; vertex sulcate; basal tooth of the mandibles separated from the sharp narrow subapical tooth by a narrow triangular emargination. Antennæ with the 1st joint emarginate at apex, 2nd very short, 4th to 10th transverse. Thorax distinctly transverse, medially sulcate, sides parallel and closely punctured up to the lateral margin, yellow pubescent, dorsal surface without sculpture. Elytra longer than the thorax, longer than broad, the epipleura with a few punctures, otherwise impunctate. Abdomen with variable puncturation, usually rather coarsely and closely punctured at the bases of the segments.

Burma: Carin Ghécu. Assam: Naga Hills. Also in the Malay Peninsula, Java, Sumatra, etc.

91. Priochirus (Triacanthochirus) ceylanensis.

Leptochirus ceylanensis Fauv., Rev. d'Ent. xxi, 1902, p. 12.

In size and build allied to *L. subtridens* Heller, approaching it in the structure of the head, but the antennæ reddish, more slender and shorter, 4th to 11th joints shorter; frontal depression with the horns acute, short, the interval subdepressed, middle of the anterior margin scarcely produced, truncate, the truncate part very finely bordered, the lateral horns externally before the antennal tubercles scarcely oblique, but deeply emarginate; thorax more convex, with the anterior angles less rounded, much more strongly punctured; elytra a little shorter. Length 7 to 7½ mm.

Ceylon (*E. Simon*) (ex *Fauvel*).

form ; the sides of the thorax are rather more coarsely and closely punctured. Length 12 to 15 mm.

Sikkim : Gopaldhara, Rungbong Valley. Burma : Carin Cheba ; Carin Ghécu ; Tenasserim ; Mt. Mooleyit ; Plapoo (*L. Fea*).

89. **Priochirus (Triacanthochirus) pentagonalis.** (Fig. 23.)

Priochirus (Triochirus) pentagonalis Bernh., W. Z. B. lxiv, 1914, p. 78.

Triacanthus fletcheri var. *analis* Cam., E. M. M. lvi, 1920, p. 142.

Subdepressed, black, shining, the apex of the abdomen rufescent (var. *analis*). Antennæ black. Legs pitchy, tarsi reddish. Length 12 mm.

Head narrower than the thorax, eyes small, prominent. Frontal impression about twice as broad as long, the sides

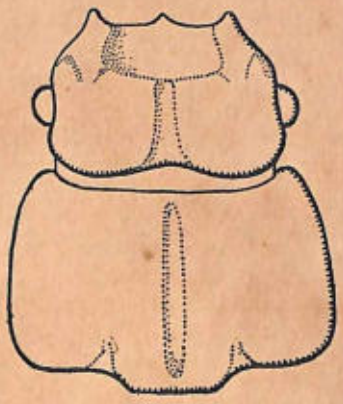


Fig. 23.—*Priochirus (Triacanthochirus) pentagonalis*, head and thorax.

converging in front, lateral teeth short and stout, median tooth short, small, its apex a little behind the level of the apices of the lateral teeth, side-margin of the head from the apex of the lateral tooth to the antennal tubercle straight, oblique ; vertex sulcate. Antennæ thickly pubescent, 4th and 5th joints short, oval, 6th to 10th transverse. Thorax strongly transverse, about one-half broader than long, slightly narrowed in front, the sides feebly rounded and moderately finely and closely punctured, disc medially sulcate, on either side with usually two punctures (occasionally only one), the posterior placed externally to the anterior, base completely bordered and with a few fine punctures. Elytra much longer than the thorax, longer than broad, along the suture with 4 or 5 punctures and a row of 5 or 6 more extending from the shoulder nearly

to the posterior margin, the rest of the surface finely and very sparingly punctured. Abdomen practically smooth in the middle at the sides of the bases of the segments with a few superficial punctures.

Chambaganoor (type). Iyerpadi; Kodaikanal; Anamalais (*Fletcher*). Nilgiri Hills (*H. L. Andrewes*).

90. Priochirus (Triacanthochirus) tridens.

Leptochirus tridens Motsch., Bull. Mosc. xxx, 1857, ii, p. 502.

Shining, black, apex of the abdomen often reddish, somewhat depressed. Frontal teeth well developed, the median projecting slightly beyond the level of the apices of the lateral. Antennæ black. Legs reddish. Length 7 to 8 mm.

Head narrower than the thorax; frontal impression about twice as broad as long, the sides slightly converging in front; frontal teeth well developed, the median rather more robust than the lateral, more prominent, triangular; vertex sulcate; basal tooth of the mandibles separated from the sharp narrow subapical tooth by a narrow triangular emargination. Antennæ with the 1st joint emarginate at apex, 2nd very short, 4th to 10th transverse. Thorax distinctly transverse, medially sulcate, sides parallel and closely punctured up to the lateral margin, yellow pubescent, dorsal surface without sculpture. Elytra longer than the thorax, longer than broad, the epipleura with a few punctures, otherwise impunctate. Abdomen with variable puncturation, usually rather coarsely and closely punctured at the bases of the segments.

Burma: Carin Ghécu. Assam: Naga Hills. Also in the Malay Peninsula, Java, Sumatra, etc.

91. Priochirus (Triacanthochirus) ceylanensis.

Leptochirus ceylanensis Fauv., Rev. d'Ent. xxi, 1902, p. 12.

In size and build allied to *L. subtridens* Heller, approaching it in the structure of the head, but the antennæ reddish, more slender and shorter, 4th to 11th joints shorter; frontal depression with the horns acute, short, the interval subdepressed, middle of the anterior margin scarcely produced, truncate, the truncate part very finely bordered, the lateral horns externally before the antennal tubercles scarcely oblique, but deeply emarginate; thorax more convex, with the anterior angles less rounded, much more strongly punctured; elytra a little shorter. Length 7 to 7½ mm.

Ceylon (*E. Simon*) (ex *Fauvel*).

Subgenus CEPHALOMERUS Bernh., D. E. Z. 1903, p. 139.

This subgenus is distinguished by the frontal impression being longer than broad, the head appearing more or less bilobed.

1.	Large species 16 to 23 mm.	2.
	Smaller species 6 to 10·5 mm.	3.
2.	Penultimate joints of antennæ longer than broad	*bifoveatus* Epp., p. 102.
	Penultimate joints of antennæ transverse	*colossalis* Bernh., [p. 100.
3.	1st joint of antennæ impressed at the apex, which is emarginate	4.
	1st joint of antennæ longitudinally sulcate throughout	7.
4.	Penultimate joints of antennæ fully as long as broad; entirely red species	[p. 103. *combustus* Fauv.,
	Penultimate joints of antennæ transverse	5.
5.	Front of head on each side with two distinct pointed teeth	*hoplites* Fauv., p. 107.
	Front of head without distinct teeth	6.
6.	Antero-internal angle of the frontal lobe in front of the level of the antero-external angle	*pygmæus* Kr., p. 106.
	Antero-internal angle of the frontal lobe behind the level of the antero-external angle	*andrewesi*, sp. n., p. 107.
7.	Entirely black species; frontal impression very narrow	*exaratus* Epp., p. 101.
	Species entirely or in great part red or ferruginous; frontal impression wider	8.
8.	Penultimate joints of the antennæ not transverse	*indicus* Bernh., p. 105.
	Penultimate joints of the antennæ transverse	9.
9.	Species in great part bright red	10.
	Species dark ferruginous red, the elytra black with the base narrowly reddish	[p. 105. *rubiginosus*, sp. n.,
10.	Larger (10 mm.); the distance between the apices of the median teeth less than that between the apices of the median and lateral	*rufus* Cam., p. 104.
	Smaller (7–9 mm.); the distance between the apices of the teeth equal	[p. 103. *sanguinosus* Motsch.,

92. Priochirus (Cephalomerus) colossalis.

Priochirus (*Cephalomerus*) *colossalis* Bernh., Ark. Zool. xix, A, 1927, p. 3.

Very distinct by the structure of the head. Of the facies and colour of *mandibularis* Kr. Head well developed, divided into two lobes (which are considerably raised above the level of the front of the head) by a complete median longitudinal sulcus; each lobe in front with two well-marked processes, of which the outer forming the antennal tubercle is rounded and produced obliquely outwards, the inner is broad, not very

long, diverging from the outer, the apex not acute; between these processes the surface is impressed, and behind the inner is a deeper and broader transverse impression, and behind the outer a smaller one. Viewed laterally from the front the posterior angles are distinctly produced outwards as an elevated tooth; near this on the margined posterior border are some setiferous punctures. The apex of the mandibles is moderately prominent and obliquely elevated inwards and upwards, the upper margin is furnished with a small tooth. Antennæ moderate, the penultimate joints moderately transverse. Thorax twice as broad as long, umbonate, deeply sulcate in the middle, the sides slightly rounded, the posterior border sharply margined, irregularly, coarsely and sparingly punctured on the reflexed sides. Elytra much longer than the thorax, along the sides deeply and broadly impressed, at the base coarsely and more thickly punctured, the rest of the surface finely, irregularly, and sparingly. Abdomen at the base of the segments coarsely, at the side more thickly punctured. Length 23 mm.

Northern India (*Staudinger*). Unique (ex *Bernhauer*).

93. **Priochirus (Cephalomerus) exaratus.** (Fig. 24.)

Leptochirus exaratus Epp. *, D. E. Z. 1895, p. 406.

Somewhat depressed, shining, black, the apex of the abdomen reddish. Antennæ reddish-brown. Legs ferruginous. Length 10·5 mm.

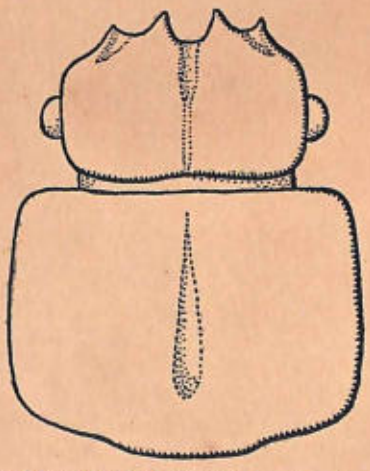


Fig. 24.—*Priochirus* (*Cephalomerus*) *exaratus*, head and thorax.

Frontal impression narrow, about twice as broad as, but of equal length to, the sulcus of the vertex; inner tooth very short and broad, the outer much smaller and sharper, the

level of its apex behind that of the inner tooth and separated from it by a rounded emargination. Antennæ with the 1st joint longitudinally sulcate throughout, the penultimate joints transverse. Thorax rather strongly transverse, medially sulcate, the sides parallel and with two rows of punctures, the upper consisting of about seven uniformly placed, the lower of about nine rather smaller ones placed close to the margin itself: the base not completely bordered, with a fine coriaceous ground-sculpture which is absent in places. Elytra a little longer and a little narrower than the thorax, about as long as broad, the ground-sculpture as on the thorax. Abdomen with a row of fine punctures at the bases and apices of the segments.

Burma: Ruby Mines (*Doherty*).

94. **Priochirus (Cephalomerus) bifoveatus.** (Fig. 25.)

Leptochirus bifoveatus Epp., W. E. Z. xiv, 1895, p. 69.
Priochirus (Cephalomerus) major Cam., E. M. M. lvi, 1920, p. 142.

Black, shining, apex of the abdomen reddish. Antennæ black, thickly yellow pubescent. Legs black, tarsi reddish-testaceous. Length 16 mm.

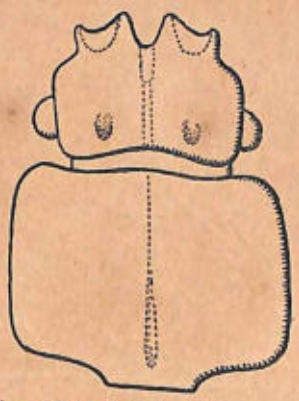


Fig. 25.—*Priochirus (Cephalomerus) bifoveatus*, head and thorax.

Head much narrower than the thorax, divided by a deep triangular excision in the middle of the front into two lobes; frontal impression very narrow, passing insensibly behind into the deep and narrow sulcus of the vertex; each lobe with a stout inner and a smaller outer tooth, separated by an emargination and a deep depression, the apex of the outer tooth a little behind the level of the apex of the inner; between the sulcus of the vertex and the lateral margin with two foveæ on each side; exceedingly finely and sparingly punctured. Mandibles prominent. Antennæ thickly yellow-pubescent, reaching the middle of the elytra, all the joints longer than broad, the 1st not sulcate. Thorax strongly transverse, in the middle with a fine longitudinal groove, the reflexed sides with 5 or 6 moderate punctures,

and against the margin itself with a more numerous row, exceedingly finely and sparingly punctured and with a very fine coriaceous ground-sculpture. Elytra narrower but a little longer than the thorax, about as long as broad, more distinctly coriaceous than the thorax. Abdomen with a transverse row of basal and apical punctures on each segment. Coriaceous.

Sikkim. S. India : Palni Hills (*L. V. Newton*).

95. **Priochirus (Cephalomerus) sanguinosus.** (Fig. 26.)

Leptochirus sanguinosus Motsch., Bull. Mosc. xxx, 1857, iv, p. 501.

Shining, bright ferruginous red, the elytra behind and the penultimate abdominal segment blackish. Antennæ pitchy, the 1st joint red, sulcate throughout. Legs reddish-testaceous. Length 7 to 9 mm.

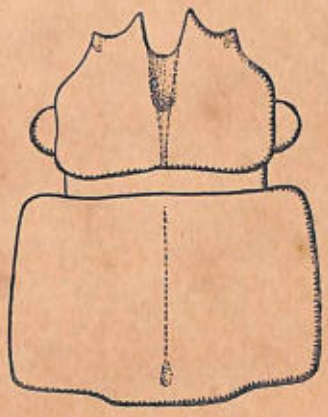


Fig. 26.—*Priochirus* (*Cephalomerus*) *sanguinosus*, head and thorax.

Sulcus and frontal impression club-shaped, the latter not much longer than broad ; inner frontal teeth short and stout, pointed, each externally with a denticle as far from the apex as the two inner teeth are from each other. Antennæ with the penultimate joints distinctly transverse. Thorax distinctly transverse, the sides straight, a little more retracted in front than behind and with a row of four large punctures ; middle finely sulcate. Elytra a little longer than the thorax. Abdomen extremely finely and sparingly punctured.

Burma : Carin Cheba ; Tenasserim.

96. **Priochirus (Cephalomerus) combustus.**

Leptochirus combustus Fauv., Rev. d'Ent. xxi, 1902, p. 10.

Size and build of *L. sanguinosus* Motsch., but otherwise different ; entirely reddish-testaceous, very shining, the head

and antennæ slightly infuscate; mandibles more prominent; the eyes a third smaller. Antennæ longer and stouter, the 1st joint scarcely longitudinally sulcate above, near the apical emargination with four or five setigerous punctures; 3rd joint elongate; 4th to 10th all longer than broad, especially the 4th to 7th, 10th scarcely quadrate, 11th almost twice as long, pear-shaped. Head massive, the front broad, the lobes a half shorter than in *sanguinosus*, scarcely produced, the apex of each a little emarginate, the emargination somewhat toothed externally, internally bounded by a longer, although short, tooth; the vertex more narrowly and less deeply impressed, with two large punctures on each side rather distant from the sulcus. Thorax as in *sanguinosus*, but more convex, the anterior margin more deeply bisinuate, the reflexed side-margins with one or two punctures. Elytra more convex, less short, a little longer than broad, with the postero-external angle scarcely dentate. Abdomen much broader, thicker, the base of the segments scarcely depressed, much less constricted, with the series of punctures less deep, but stronger. Anterior tibiæ with five teeth stronger than the others. Length 9 mm.

Sikkim: Darjeeling. Unique (ex *Fauvel*).

97. **Priochirus (Cephalomerus) rufus.** (Fig. 27.)

Priochirus (*Cephalomerus*) *rufus* Cam., E. M. M. lvi, 1920, p. 142.

Shining red. Antennæ pitchy, the first joint red, longitudinally sulcate throughout. Legs reddish-testaceous. Length 9 to 10·5 mm.

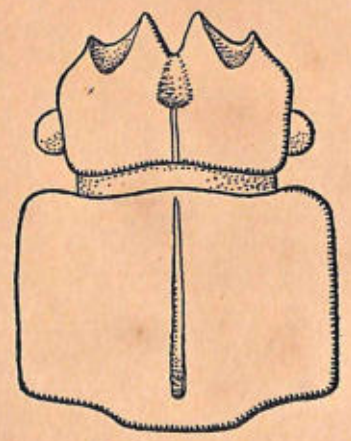


Fig. 27.—*Priochirus* (*Cephalomerus*) *rufus*, head and thorax.

Near *P. sanguinosus*, but entirely red and larger than the average examples of that species, the antennæ longer, the penultimate joints less transverse; inner teeth more produced,

the frontal impression longer, the distance between the apices of the inner teeth less than that between the apices of the inner and outer teeth. From *P. combustus* Fauv. it would appear to differ in the sulcate 1st antennal joint and the shorter 4th to 9th joints, the 4th to 6th being but little longer than broad. The thorax in the type has four foveæ on the disc, but in other examples there are only two or none at all. The abdomen is almost impunctate.

N. Coorg : Santikoppa. Nilgiri Hills.

98. **Priochirus (Cephalomerus) indicus.**

Priochirus (*Cephalomerus*) *indicus* Bernh., Tijdsch. v. Ent. lviii, 1915, p. 214.

Half the size of *P. sanguinosus* Motsch., similar in build and colour, but the head with different structure. The middle teeth are shorter, the lateral longer, so that, compared with one another, they are less unequal, the frontal impression is much broader, not longer than broad, the large teeth are wider apart than in *sanguinosus*, the vertex convex, not flat as in *sanguinosus*. The antennæ are much longer, the penultimate joints not transverse. The thorax and elytra are distinctly coriaceous, less shining, the latter are longer. The abdomen is more punctured. Length 6·5 mm.

N.E. Burma. Unique (ex *Bernhauer*).

99. **Priochirus (Cephalomerus) rubiginosus**, sp. n. (Fig. 28.)

Shining, dark red, the elytra black, the base more or less broadly reddish ; penultimate abdominal segment blackish.

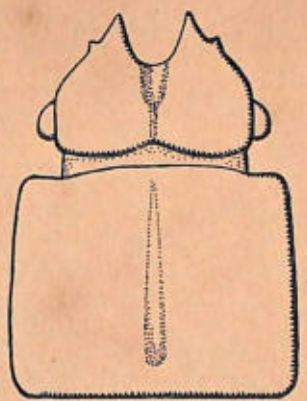


Fig. 28.—*Priochirus* (*Cephalomerus*) *rubiginosus*, head and thorax.

Frontal margin semi-elliptically excised, the frontal impression moderately broad, passing insensibly into the sulcus of the

vertex; frontal horns stout, the inner margin as long as the frontal impression, lateral tooth small, nearer the apex than the eye. Antennæ blackish. Legs reddish-testaceous. Length 8 mm.

Very near *P. sanguinosus* Motsch., but usually of darker red colour, with the elytra more broadly blackish; the frontal impression is narrower and passes insensibly into the sulcus of the vertex, the frontal horns are longer; the thorax a little more transverse. The antennæ are a little longer, the penultimate joints a little less transverse, the 1st joint is sulcate throughout as in *sanguinosus*. The sculpture is similar.

Sikkim: Gopaldhara, Rungbong Valley (*Stevens*). Assam: Naga Hills (*Chatterjee*).

100. **Priochirus (Cephalomerus) pygmæus.** (Fig. 29.)

Leptochirus pygmæus Kr.*, Arch. Naturg. xxv, 1859, i, p. 191.

Shining, black, apex of abdomen ferruginous. Antennæ brown. Legs ferruginous. Length 6·2 mm.



Fig. 29.— *Priochirus (Cephalomerus) pygmæus*, head and thorax.

Head divided into two lobes by an oblong excision; the lobes very feebly toothed, the external with its apex posterior to that of the inner and separated from it by a shallow emargination; frontal impression a little longer than broad, widest in front; median teeth rather more widely separated from each other than from the lateral; sulcus of vertex short. Antennæ with the 1st joint not sulcate throughout, the penultimate joints transverse. Thorax slightly transverse, the sides parallel, with 5 or 6 punctures, base bordered, medially sulcate. Elytra slightly longer than the thorax, as long as broad. Abdomen at the sides finely and moderately closely punctured.

" Ind. or "

101. **Priochirus (Cephalomerus) andrewesi**, sp. n. (Fauvel, *in litt.*). (Fig. 30.)

Near *P. pygmæus* Kr., but differs in the shorter frontal lobes, the interval between them semicircular, the lobes scarcely toothed, but simply angulate, the inner angle on a level posterior to the outer; the thorax is distinctly more transverse, the

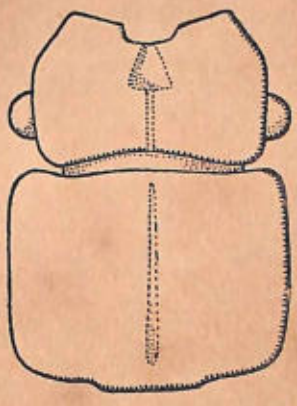


Fig. 30.—*Priochirus (Cephalomerus) andrewesi*, head and thorax.

sides similarly punctured. The first joint of the antennæ is not longitudinally sulcate throughout. The abdomen has the segments transversely punctured at the base and apex. Legs ferruginous. Length 6 mm.

Nilgiri Hills (*H. L. Andrewes*).

102. **Priochirus (Cephalomerus) hoplites.** (Fig. 31.)

Leptochirus hoplites Fauv., Rev. d'Ent. xiv, 1895, p. 182.

Black, shining, apex of the abdomen reddish. Antennæ reddish brown. Legs reddish. Length 6·5 to 9 mm.

Head divided in front by a narrow oblong excision into two lobes; frontal impression narrow, scarcely separated from the sulcus of the vertex; median tooth stouter and more advanced than the lateral and separated from it by a crescentic emargination, the space between the apices of the inner teeth less than that between the apices of the inner and outer ones; exceedingly finely and sparingly punctured. First joint of antennæ not sulcate throughout, the penultimate joints transverse. Thorax slightly transverse, the sides parallel, narrowly sulcate in the middle, the reflexed sides with four or five moderate punctures and a row of smaller ones against the margin itself; the disc scarcely punctured, but here and there with a fine wavy ground-sculpture. Elytra a little longer but

scarcely as broad as the thorax, slightly longer than broad, without ground-sculpture, but with some exceedingly fine punctures. Abdomen with moderately close puncturation at the bases of the segments, the 7th segment more uniformly

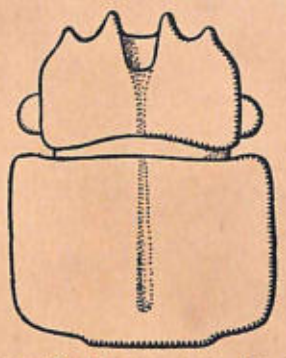


Fig. 31.—*Priochirus* (*Cephalomerus*) *hoplites*, head and thorax.

punctured; coriaceous. Differs from *pygmæus* Kr. in the much more developed frontal teeth, the more narrowly separated frontal lobes, and the narrower frontal impression.

Burma: Carin Cheba; Carin Ghécu. Also in the Malay Peninsula, Singapore, Sumatra, and Java.

Subgenus PSEUCODONTUS Bernh., D. E. Z. 1903, p. 140.

This subgenus is characterised by the long, curved, pointed process, sulcate internally, which arises from the upper surface of each mandible (than which it is longer) and is directed upwards, forwards, and inwards. Only one representative is at present known.

103. Priochirus (Pseucodontus) mandibularis.

Leptochirus mandibularis Kr., Arch. Naturg. xxv, 1859, i, p. 189, t. 3, f. 3 *a–b*.

Head large, narrower than the thorax, the vertex deeply, broadly sulcate, the frontal impression indistinctly separated from the declivous clypeus by a feeble curved ridge, at the sides with some rather coarse punctures, in the middle broadly, feebly impressed; sides of the head much thickened and elevated, the antero-external angle rectangular, on either side of the sulcus with a puncture and 2 or 3 more on either side before the base. Antennæ rather short, pilose, the 1st joint emarginate and impressed at the apex, the penultimate joints distinctly transverse. Thorax strongly transverse, convex, a little narrower behind, all the margins finely bordered, the reflexed sides with some large punctures, throughout the middle broadly and deeply sulcate, occasionally with a puncture on

either side. Elytra a little narrower and distinctly longer than the thorax, a little longer than broad, sutural stria deep, before the postero-external angles longitudinally impressed. Abdomen finely transversely punctured at the bases and apices of the segments. The whole insect black and shining, the antennæ dark, the legs black with reddish tarsi. Length 16·5 mm.

Ceylon.

Subgenus STIGMATOCHIRUS Bernh., D. E. Z. 1903, p. 141.

This subgenus is characterised by the coarsely punctured frontal impression and circumference of the thorax, only the disc itself being impunctate, the punctures are furnished with long yellow hairs. Only one species is found in our Fauna.

104. **Priochirus (Stigmatochirus) abori.**

Priochirus (*Stigmatochirus*) *abori* Bernh. *, W. E. Z. xliii, 1926, p. 19.

Similar in build, size, and colour to *Priochirus dohrni* Fauv., but the antennal tubercles are more elevated, the tooth at the antero-internal aspect longer and sharper, the head more finely punctured in front and much more closely behind, the temples distinctly angulate, the thorax more closely punctured. Black, shining, covered with long, coarse, yellow pubescence. Head narrower than the thorax, the temples short, angulate. Vertex sulcate; frontal impression broad, rounded in front, closely punctured; antennal tubercles large, impunctate, elevated, the antero-internal angle with a short, sharp, slightly diverging tooth; vertex coarsely and closely punctured.

Antennæ black, pubescent, extending a little beyond the shoulders, the 1st joint emarginate at the apex, the 3rd a little longer than the 2nd, 4th to 10th transverse. Thorax twice as broad as long, the sides evenly rounded, a little more retracted in front than behind, the posterior angles obtuse and prominent, in the middle deeply sulcate, coarsely and closely punctured, only the middle of the disc impunctate. Elytra about twice as long as the thorax, scarcely broader, the sides rather closely and distinctly punctured, the disc obsoletely and much more sparingly. Abdomen finely and rather sparingly punctured in front, more closely behind. Legs reddish, tarsi yellow. Length 12 mm.

Abor Expedition: Kobo, alt. 400 feet; Upper Renging, 2150 feet. December 1912 (*Kemp*).

Subgenus LEPTARTHRUS Bernh., D. E. Z. 1903, p. 144.

This subgenus is characterised by the practically unarmed head and the slender antennæ.

Key to the Species.

Species with distinct coriaceous ground-sculpture, less shining. Antennæ longer. Length 10·5–11 mm.	*longicornis* Fauv., [p. 110.
Species without ground-sculpture, more shining. Antennæ shorter. Length 9 mm.	*microgmathus* Fauv., [p. 111.

105. **Priochirus (Leptarthrus) longicornis.** (Fig. 32.)

Leptochirus longicornis Fauv., Bull. Soc. Norm. ix, 1865, p. 14.
Priochirus (*Cephalomerus*) *opacinus* Bernh., W. Z. B. lxiv, 1914, p. 79.

Black, moderately shining, distinctly coriaceous, the apex (7th and 8th segments) of the abdomen red. Head unarmed. Antennæ brown. Legs ferruginous, femora pitchy. Length 10·5 to 11 mm.

Readily distinguished by the unarmed head and the distinct coriaceous ground-sculpture of the whole insect. Head

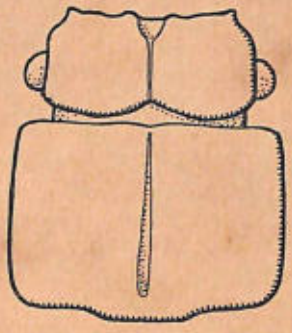


Fig. 32.—*Priochirus* (*Leptarthrus*) *longicornis*, head and thorax.

transverse, narrower than the thorax, the vertex narrowly sulcate, the frontal impression deep, a little broader than long and about one-fourth the width of the anterior margin, the declivous clypeus with a large setiferous puncture in the middle line, the frontal margin on either side of the impression forming a flat S-shaped well-defined edge, ending externally in a small obtuse point, its level in advance of the inner extremity, within the antennal tubercles deeply and rather broadly, more posteriorly obliquely impressed. Antennæ long and slender, the 1st joint not sulcate, the 3rd to 11th joints much longer than broad. Thorax distinctly transverse, the sides parallel, with one or two large punctures, middle of the disc narrowly sulcate. Elytra longer than the thorax, longer than broad. Abdomen very finely, superficially, and closely punctured at the bases of the segments.

Chambaganoor.

106. **Priochirus (Leptarthrus) micrognathus.**

Leptochirus micrognathus Fauv., Rev. d'Ent. xxi, 1902, p. 13.

Near *L. longicornis* Fauv. and *japonicus* Shp. (*davidis* Fairm.), the front of the head being scarcely horned or really dentate, in other respects quite different. Small, black, very shining, rather convex. Mandibles short, the two upper teeth very sharp, widely separated. Head short, strongly transverse, the frontal margin on both sides bounded by a small sinuate keel and in the middle with a small deep impression about one-third of the width of the front, the fovea bounded on either side by a minute angle, scarcely forming a tooth, the antennal tubercles broad, bounded internally by a sulcus not prolonged backwards ; vertex on either side of the middle with a well-marked puncture, the median sulcus deep. Antennæ with the joints scarcely transverse, the 1st joint scarcely sulcate. Thorax rather transverse, with deep longitudinal sulcus, the disc on each side with a puncture, the sides from base to apex a little narrowed and furnished with a single puncture, all the angles rounded. Elytra a little longer than the thorax, the sides strongly rounded, with a row of fine punctures. Segments of the abdomen on both sides at the base and apex with a row of fine punctures, the penultimate segment with some additional ones. Anterior tibiæ crenulate, the 2nd apical tooth the larger. Length 9 mm.

Darjeeling or Siam (ex *Fauvel*).

The locality of this species appears uncertain, but Fauvel considers it more probably as coming from Darjeeling.

I do not know this species, but it would be at once distinguished from the preceding by the absence of ground-sculpture, less elongate joints of the antennæ, and apparently by the wider frontal impression.

Subgenus Plastus Bernh., D. E. Z. 1903, p. 142.

This subgenus is distinguished by the wide frontal impression the anterior border of which is separated (at least at the sides) by a ridge from the declivous clypeus ; occasionally the ridge is wanting in the middle, so that the frontal impression there becomes continuous with the clypeus in an uninterrupted surface ; in some species two small teeth or tubercles are present on this margin.

Key to the Species.

1. Anterior margin of the frontal impression with two small teeth or tubercles ..... 2.
   Anterior margin of the frontal impression without teeth ..... 5.
2. Free inner edge of the large frontal tooth much shorter than the distance between the apices of these teeth ..... 3.

Free inner edge of the large frontal tooth nearly as long as the distance between the apices of these teeth ..... *eucerus*, sp. n., p. 114.

3. Interval between the apices of the two inner teeth equal to that between the apices of the inner and outer teeth ..... [p. 112. *excavatus* Motsch.,

Interval between the apices of the two inner teeth distinctly less than that between the apices of the inner and outer teeth ..... 4.

4. Emargination between the inner teeth almost semicircular. Antennæ longer; sides of thorax parallel. Less depressed species ..... [p. 113. *kuluensis* Bernh.,

Emargination between the inner teeth shallower, crescentic. Antennæ shorter; sides of thorax slightly convergent in front. More convex species ..... [p. 113. *crassicornis*, sp. n.,

5. Head deeply excavated in front, the frontal horns large and prominent, the frontal margin concave ..... 6.

Head scarcely excavated in front, the frontal horns small, the frontal margin truncate .. [p. 116. *taprobanus*, sp. n.,

6. The free inner edge of the frontal horn as long as the side of the frontal impression †; interval between the horns wider and less deep. Antennæ shorter, the penultimate joints distinctly transverse; sides of thorax rather coarsely punctured ..... *brachycerus* Kr., p. 114.

The free inner edge of the frontal horn much shorter than the side of the frontal impression. Interval between the horns narrower and deeper. Antennæ longer, the penultimate joints less transverse; sides of thorax more finely punctured ..... *ascendens* Fauv., p. 115.

107. Priochirus (Plastus) excavatus.

Leptochirus excavatus Motsch., Bull. Mosc. xxx, 1857, p. 502.

Of the build of the preceding [*tridens*], but black, the mouth-parts, antennæ, and legs brownish. Margins of the abdominal segments, anus and tarsi reddish-testaceous. Head sulcate and excavated in the middle, strongly emarginate in front, the front lobes a little produced, obliquely moulded, and truncate, forming four not very prominent teeth, the internal of which are less advanced than the lateral. In *sanguinosus*, on the contrary, the internal teeth are much more advanced than the lateral, whilst in *quadridens* they are practically on the same level (ex *Motschoulsky*).

Priochirus (*Triacanthochirus*) *tridens* has a length of 6·5 to 8 mm.

"Ind. or." Also in Sumatra and Borneo.

† This measurement of the frontal horn is taken from the point where the line bounding the side of the impression meets the frontal margin.

108. **Priochirus (Plastus) kuluensis.**

Priochirus (Plastus) kuluensis Bernh., W. Z. B. lxiv, 1914, p. 78.

Black, shining, subconvex, the apex of the abdomen pitchy; femora dark, tibiæ reddish, tarsi reddish-testaceous. Antennæ black, the 1st joint reddish. Length 7·5 to 9 mm.

Frontal impression more than twice as broad as long, distinctly grooved in the middle, its front border semicircularly emarginate in the middle and with a small tooth on either side, their apices less distant from one another than from those of the lateral horns, these short, parallel, more advanced than the inner teeth, the free inner margin much shorter than the side-margin of the frontal impression, very much shorter than the space between their apices, subcornual denticle distinct, but not visible from above; vertex sulcate, on either side with two or three punctures. Antennæ with the 4th to 10th joints transverse. Thorax distinctly transverse, medially sulcate, the reflexed sides with several moderately large punctures and at the base with a few more. Elytra much longer than the thorax, longer than broad, without impression near the postero-external angle, lightly longitudinally impressed on the disc. Abdomen rather finely, superficially punctured at the bases of the segments.

Kulu (*Rost*). W. Almora, Kumaon (*H. G. Champion*).

109. **Priochirus (Plastus) crassicornis,** sp. n. (Fig. 33.)

Very near *P. kuluensis* Bernh., but differing in the following respects: more depressed, the emargination between the



Fig. 33.—*Priochirus (Plastus) crassicornis*, head and thorax.

inner teeth less deep, the antennæ shorter, the penultimate joints more transverse, sides of the thorax slightly converging in front and more closely punctured. Length 8·5 mm.

India (without further indication). Unique. British Museum.

110. **Priochirus (Plastus) eucerus**, sp. n. (Fig. 34.)

Shining black, the antennæ brown, the legs black, the tarsi reddish. Length 11 mm.

Size of *P. brachycerus* Kr., entirely black, subconvex, the parallel frontal horns less widely separated, the anterior margin of the frontal impression with two little teeth, the infra-cornual denticle longer, penultimate joints of the antennæ less transverse, thorax broader, abdomen more coarsely punctured. Frontal impression deep, about as broad as long, its front margin with two little teeth, their apices much nearer to each other than to those of the frontal horns, the free inner edge of the frontal horn not much shorter than the distance

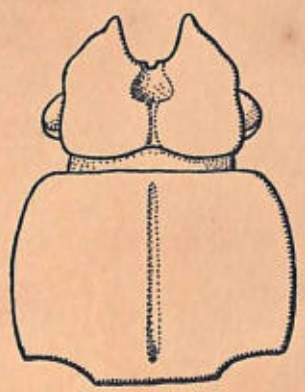


Fig. 34.—*Priochirus* (*Plastus*) *eucerus*, head and thorax.

between their apices, externally at the base rather deeply and broadly impressed, vertex sulcate, with a large fovea on either side. Antennæ with the 6th to 10th joints transverse. Thorax strongly transverse, the sides very slightly converging in front and with several large punctures, in the middle sulcate. Elytra narrower and a good deal longer than the thorax, longer than broad, impressed near the postero-external angle. Abdomen at the bases of the segments with close superficial puncturation.

Sikkim: Gopaldhara, Rungbong Valley (*Stevens*).

111. **Priochirus (Plastus) brachycerus.** (Fig. 35.)

Leptochirus brachycerus Kr., Arch. Naturg. xxv, 1859, i. p. 191.

Subconvex, black, shining, the apex of the abdomen red. Femora dark, tibiæ reddish, tarsi reddish-testaceous. Antennæ brown. Length 11 mm.

Frontal impression nearly twice as broad as long, concave, its front margin forming a semicircle with the inner margins of the frontal horns, these short, stout, slightly diverging, the

infra-cornual denticle small and not visible from above; vertex sulcate. Antennæ with the 6th to 10th joints transverse. Thorax strongly transverse, a little narrowed in front, the sides

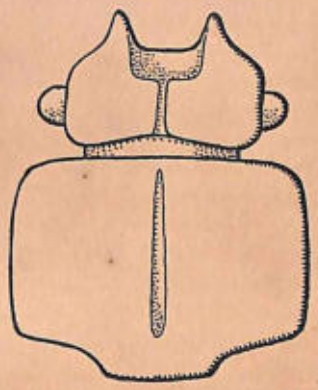


Fig. 35.—*Priochirus* (*Plastus*) *brachycerus*, head and thorax.

with numerous rather large punctures, before the base on each side with five or six more. Elytra a little longer than broad, scarcely impressed behind. Abdomen superficially but rather closely punctured at the bases of the segments.

Ceylon: Dikoya (*Lewis*).

112. **Priochirus (Plastus) ascendens.** (Fig. 36.)

Leptochirus (*Priochirus*) *ascendens* Fauv., Rev. d'Ent. xxii, 1903, p. 171.

Near *L. brachycerus* Kr., of the same size and colour, but with more slender and longer antennæ, the 2nd joint small,

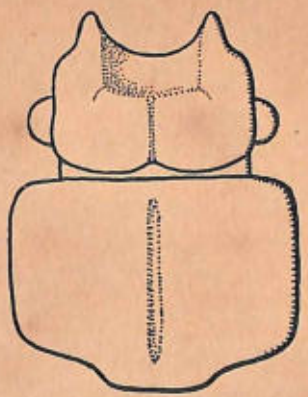


Fig. 36.—*Priochirus* (*Plastus*) *ascendens*, head and thorax.

the 3rd much narrower, the 4th and 5th a little longer than broad, 6th and 7th orbicular, 8th to 10th a little transverse,

the 11th much longer, ovate, the frontal horn sulcate internally, the infra-cornual denticle longer, the space between the horns narrower, deeply obliquely emarginate; the thorax shorter, all the angles more rounded; elytra deeply broadly longitudinally impressed from the middle to the apex; abdomen nearly half more sparingly punctured than in *brachycerus*; the anterior tibiæ with the three apical teeth one-half smaller. Length 8·5 to 9·5 mm.

Burma. Siam (or Sikkim) (ex *Fauvel*).

In the figure the horns are rather too widely separated.

113. **Priochirus (Plastus) taprobanus**, sp. n. (Fig. 37.)

Subconvex, black, shining. Antennæ ferruginous. Legs brown, tarsi reddish-testaceous. Length 8·5 mm.

Frontal impression twice as broad as long, the front margin quite straight and quite separated from the declivous clypeus, frontal horns very short, divergent, infra-cornual denticle

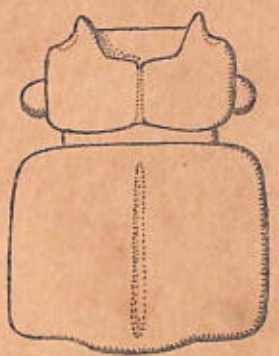


Fig. 37.—*Priochirus (Plastus) taprobanus*, head and thorax.

small, not visible from above; vertex sulcate, on either side with a fovea. Antennæ with the 5th to 10th joints transverse. Thorax strongly transverse, a little narrowed in front, the sides with a few large punctures, the base with a few others, in the middle broadly and deeply sulcate and with a large fovea on either side. Elytra much longer than the thorax, longer than broad. Abdomen superficially but rather closely punctured at the bases of the segments.

Ceylon (*Lewis*).

Subgenus PRIOCHIRUS, s. str.

This division contains species with rather broad frontal impression and well-marked horns, the long axes of which are nearer to the middle line than to the lateral margin of the head.

Key to the Species.

Larger (11–12 mm.); the long axis of the frontal horns converging in front	*brevicornis* Er., p. 117.
Smaller (7 mm.); the long axis of the frontal horns slightly diverging in front	*birmanus*, sp. n., p. 117.

114. **Priochirus** (s. str.) **brevicornis.**

Leptochirus brevicornis Er., Gen. Spec. Staph. 1839–40 (1840), p. 827.

Head with broad frontal impression, the margin straight in front; lateral horns short and thick, pointed; vertex sulcate. Antennæ with the 5th to 10th joints strongly transverse. Thorax nearly twice as broad as long, convex, a little narrower in front, the sides very slightly rounded, moderately closely punctured, deeply sulcate in the middle. Elytra a little longer than, but as broad as, the thorax. Abdomen at the bases and apical margins of the segments with a transverse row of fine punctures. Antennæ and legs pitchy black, tarsi testaceous. Length 11 to 12 mm.

"Ind. or." Also in Java.

115. **Priochirus** (s. str.) **birmanus**, sp. n. (Fig. 38.)

Shining, black. Frontal impression a little longer than broad, suddenly contracted behind at its union with the sulcus of

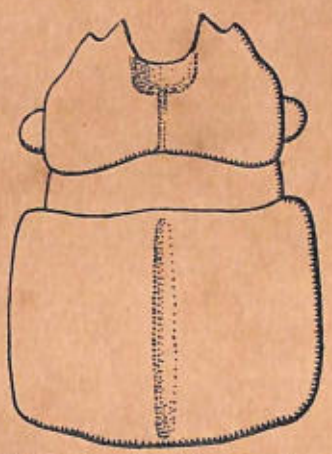


Fig. 38.—*Priochirus* (s. str.) *birmanus*, head and thorax.

the vertex; front rather broadly, deeply semi-elliptically emarginate, median teeth stout, the free inner margin longer than the side of the frontal impression; lateral tooth small, its apex posterior to that of the median and separated from it by a small crescentic emargination. Antennæ brown, with the first joint not sulcate throughout, the penultimate transverse. Legs ferruginous, the femora darker. Abdomen

with the bases of the segments moderately finely and closely punctured. Length 7 mm.

Somewhat similar to *P. sanguinosus* Motsch., but entirely black, the 1st joint of the antennæ not sulcate throughout, the frontal impression broader, the inner horns longer, the space between broader and deeper, thorax a little more transverse, the elytra longer and the abdomen more punctured. The thorax has a fine wavy ground-sculpture.

Burma: Ruby Mines (*Doherty*). Type in the British Museum.

Genus **THORACOCHIRUS** Bernh.

Thoracochirus Bernh., D. E. Z. 1903, pp. 116, 155.

This genus is readily distinguished from the preceding genera by the coarse sculpture of the fore-parts; the front of the head is unarmed except in *T. verrucifer* Fauv., in which a small denticle is present on either side of the front, the external surface of the mandibles is sulcate throughout, the 3rd joint of the maxillary palpi is transverse, the 4th about four times as long. Neck very broad, inserted into the thorax; gular sutures fused. Labrum transverse, broadly, slightly emarginate in front, densely spinose, the sides with a membranous process densely ciliated internally. Maxillary palpi 4-jointed, the 1st joint very small, 2nd short, obconical, 3rd very short, transverse, 4th elongate, longer than the three preceding together, slightly narrowed towards the apex. Outer lobe of the maxilla densely ciliate externally and apically. Inner lobe with stout incurved apex and three or four stout teeth subapically, more posteriorly with several longer yet rather stout teeth. Labial palpi 3-jointed, stout, the 1st joint twice as long as broad, the 2nd shorter, broader than long, 3rd oval, narrower at apex, longer than the preceding. Mentum broad, narrowed in front, anterior margin truncate, the sides broadly emarginate. Tongue very broad, bi-emarginate in front, supported in the middle by a chitinous rod. Paraglossæ well developed. Mandibles small, deeply sulcate externally, the groove bordered above and below, bifid at the apex, the superior division shorter than the inferior, both pointed, each mandible with a small, pointed tooth behind and more posteriorly with a bicuspid tooth, the cusps pointed. Prosternal process narrow, pointed, the anterior coxal cavities completely closed behind. Mesosternal process narrow, sunk between the coxæ, these very narrowly separated. Abdomen cylindrical, not margined and without ventral keel at the base. Anterior tibiæ with 3 or 4 teeth before the apex externally, the posterior and intermediate ciliate. Tarsi short, 5-jointed, the first 4 joints short and subequal, the 5th longer than all the preceding together; claws long, lightly curved.

The genus is so far only known from the Oriental Region.

Key to the Species.

1. Large species (11 mm.), the front of head on either side with a small tooth ..... *verrucifer* Fauv., [p. 119.
   Small species (4 to 6 mm.), the front of the head unarmed ..... 2.
2. Penultimate joints of the antennæ distinctly transverse; pitchy-red species ..... *simoni* Fauv., p. 120.
   Penultimate joints of the antennæ longer than broad; black species ..... 3.
3. Rather shining; sides of thorax more or less denticulate; segments of the abdomen with transverse row of fine punctures at the base and apex ..... *variolosus* Fauv., [p. 119.
   Rather dull; sides of thorax very distinctly dentate; segments of the abdomen very finely and closely punctured at the base .. *assamensis*, sp. n., p. 120.

116. Thoracochirus verrucifer.

Leptochirus verrucifer Fauv., Rev. d'Ent. xiv, 1895, p. 182.

Very remarkable by the sculpture. Black, very sparingly pubescent, head and thorax dull, elytra a little, the abdomen more shining; head and abdomen pitchy, the base of the antennæ, 1st, 6th, and 7th abdominal segments and the legs red, palpi and tarsi reddish testaceous, the 6th segment infuscate at the base; antennæ stout, densely setose, the 3rd joint twice as long as the 2nd, 6th and 7th subquadrate, 8th to 10th scarcely transverse; head over the base of the antennæ broadly tuberculate, the tubercle auriculate, the apex foveate and ending in a little tooth; front deeply excavate, coriaceous, on either side with a little tooth; vertex medially sulcate, with strong umbilicate punctures; eyes small, prominent; thorax convex, twice as broad as long, rugulose, with large umbilicate punctures, the sides sparingly, the anterior border more densely crenulate, the sides from the rounded anterior to the acute posterior angles rather dilated, the base obliquely bisinuate; scutellum very finely, transversely striate; elytra a little narrower than the thorax, quadrate, convex, with large setigerous verrucose punctures not very closely placed; 2nd to 4th segments of the abdomen with the bases a little coriaceous, the 5th with a transverse row of fine punctures, 6th and 7th with scattered punctures, especially at the base and apex; legs rather slender. Length 11 mm.

Tenasserim: in the mountains. Unique (ex *Fauvel*).

117. Thoracochirus variolosus.

Leptochirus variolosus Fauv. *, Rev. d'Ent. xiv, 1895, p. 183.

Black, rather shining. Head transverse, narrower than the thorax, eyes prominent, front broadly impressed, very finely irregularly wrinkled, the front margin gently rounded, vertex

sulcate, on either side with a few umbilicate punctures ; antennal tubercles large, globose, impunctate. Antennæ slender, reddish, 3rd to 10th joints longer than broad, decreasing in length. Thorax strongly transverse, the sides parallel, finely denticulate, middle of the disc with deep impunctate groove, before the base transversely sulcate, towards the sides obscurely impressed, rather closely covered with coarse umbilicate punctures. Elytra longer and a little broader than the thorax, slightly transverse, rugulose, the sides finely denticulate. Abdomen with a row of very fine punctures at the bases and apices of the segments, the 7th with a few more scattered punctures. Legs reddish. Length 5 to 6 mm.

Burma : Carin Cheba ; Carin Asciuii Cheba ; Carin Ghécu ; Tenasserim.

118. **Thoracochirus assamensis**, sp. n.

Very similar to the preceding, but less shining, the thorax more closely (but very similarly) sculptured, sides of thorax with more numerous and longer denticles, elytra much more rugose, the sides with more numerous and larger denticles. Abdomen with the bases of the segments finely and densely punctured. Antennæ pitchy, the apex lighter. Legs reddish testaceous, the femora pitchy. Length 5·5 mm.

Assam : Naga Hills, alt. 9000 feet.

119. **Thoracochirus simoni.**

Leptochirus simoni Fauv., Rev. d'Ent. xxi, 1902, p. 21.

Very different from the preceding species in the colour, less coarsely sculptured fore-parts, and the distinctly transverse penultimate joints of the antennæ. Pitchy red, shining, the abdomen brown, the 7th segment except the base and the whole of the 8th testaceous. Antennæ reddish-testaceous. Legs testaceous. Head transversely depressed in front, the depression scarcely coriaceous, shining, the anterior margin almost straight and with four small granules. Antennal tubercles prominent, globose, impunctate, vertex narrowly sulcate, on either side with a few fine punctures. Antennæ with the 6th to 10th joints transverse, gradually increasing in width, 11th conical. Thorax strongly transverse, a little wider in front than behind, the sides not denticulate, middle of the disc narrowly sulcate, at the base with transverse fovea, on either side of the middle with rather close, rather fine, scarcely umbilicate punctures, elsewhere with much more sparing asperate punctures. Elytra much narrower but longer than the thorax, as long as broad, rugulose. Abdomen scarcely punctured. Anterior tibiæ rather thickened towards apex and sinuate internally. Length 4 mm.

Ceylon : Kandy.

Tribe 4. PSEUDOPSINI.

Pseudopsini Ganglb., Käf. Mitt. Eur. ii, 1895, p. 690.
Pseudopsinæ Reitt., Fn. Germ. ii, 1909, p. 16.

This tribe is only represented by a single genus.

Genus **PSEUDOPSIS** Newm.

Pseudopsis Newman, Ent. Mag. ii, 1834, p. 313; Lacord., Gen. Col. ii, 1854, p. 149; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 81; Kraatz, Berl. Ent. Zeit. i, 1857, p. 50; Fauvel, Fn. Gallo-Rhén. iii, 1872, p. 22; Muls. et Rey, Ann. Soc. Linn. Lyon, xxv, 1878, p. 206; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 691.

Readily recognized by the costate head, thorax, and elytra, and the bordered abdomen. The only other genus in our Fauna with these characters is *Eupiestus* Kr., but in this the thoracic costæ are interrupted and not parallel as in the present genus.

Depressed, the abdomen pointed. Head small, narrowed behind, scarcely constricted. Temples bordered above and below; gular sutures separated. Antennæ 11-jointed. Labrum strongly transverse, widened in front, scarcely emarginate, the anterior angles strongly rounded. Mandibles strongly curved and pointed, each with two stout triangular teeth, posteriorly with a finely ciliated membrane. Inner lobe of the maxilla narrow, sharply pointed and curved at the apex, the inner margin with numerous fine spines; outer lobe broader than the inner, the apex with fine curved spines. Maxillary palpi with the 1st joint small, 2nd short, narrowed at the base, considerably thickened apically, 3rd longer and thicker than the preceding, oval, 4th longer and much more slender than the 3rd, subulate. Mentum short and broad, trapeziform. Tongue divided to the base into two broad, divergent, apically rounded lobes. Paraglossæ strongly developed, spinose, not quite reaching the apex of the tongue. Labial palpi rather long, the 1st joint long, cylindrical, the 2nd a little narrower and half as long, the 3rd narrower, but about as long as the 2nd. Prosternum short and broad, slightly angulate between the coxæ, epipleura separated from the triangular epimera by a suture, coxal cavities open behind. Mesosternal process short, sharp, scarcely extending a third of the inner edge of the coxæ, these contiguous. Intersternal piece triangular, separated from the metasternum by a suture continuous with the outer margin of the coxal cavities. Abdomen without keel at base on the ventral surface. Scutellum shield-shaped, with five fossæ. Tibiæ finely shortly spinose. Tarsi short, 5-jointed,

the first four joints short and equal, the 5th about as long as the four preceding together.

The genus is distributed in Europe, Northern India, North America, and Chile.

120. **Pseudopsis sulcata.** (Plate I. fig. 8.)

Pseudopsis sulcata Newm., Ent. Mag. ii, 1834, p. 314; Jacq. du Val, Gen. Col. d'Eur. iii, t. 28, f. 138; Kraatz, Berl. Ent. Zeit. i, 1857, p. 50; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 23; Muls. et Rey, Ann. Soc. Linn. Lyon, xxv, 1878, p. 208; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 692.

Pseudopsis columbica Fauv., Bull. Soc. Linn. Norm. x, 1866, p. 11.

Subdepressed, dull, the abdomen more shining. Head black, thorax brown, the side-margins broadly, the anterior and posterior margins narrowly reddish brown, elytra and abdomen brown or reddish brown. Antennæ and legs reddish brown. Length 3·5 to 4·5 mm.

Head subpentagonal, eyes rather large and somewhat prominent, temples shorter, slightly convergent and slightly constricted behind, neck broad, the disc broadly longitudinally impressed throughout, in the middle a little elevated, above the eyes with a fine keel from the antennal tubercles to the constriction of the neck, front margin gently rounded, the whole surface except a smooth triangular shining space in front, rugose, glabrous, with three club-shaped setæ on either side, one supra-ocular, one temporal, and one on the anterior margin. Antennæ rather short, the 1st joint thick, clavate, the 2nd globular, smaller than the 1st, 3rd narrower than 2nd, clavate, 4th about as long as broad, 5th to 10th transverse, gradually increasing in breadth, the 10th longer than 9th, 11th short, oval. Thorax twice as broad as the head, strongly transverse, widest at the posterior third, the sides rounded, more narrowed in front than behind, the anterior angles rounded, the posterior obtuse; disc with four strong, parallel, equidistant keels throughout, in the middle line with a much finer and shorter keel, closely, finely, asperately punctured, glabrous. Scutellum shield-shaped, with five opaque fossæ separated by shining keels. Elytra a little longer and wider than the thorax, each with four keels, a sutural, lateral, and two discal, the latter abbreviated behind, the interspaces superficially but roughly sculptured, glabrous. Abdomen pointed behind, more shining than the fore-parts, the segments arcuately impressed, finely, moderately closely punctured and with a fine short yellow pubescence, the posterior margins with four, the lateral with one, somewhat club-shaped setæ.

West Almora. Simla Hills. Chakrata district: Binal Gad, 7000 to 8000 feet above the sea. I have only found this species in loose sandy soil beneath the dejecta of cattle.

Tribe 5. PROTEININI.

Proteinini Er., Käf. Mark. Brand. i, 1837–1839, p. 641 (excl. *Micropeplus*); Er., Gen. Spec. Staph. 1840, p. 901 (excl. *Glyptoma*, *Micropeplus*); Kr., Naturg. Ins. Deutsch. ii, 1856–1858, p. 1019: Rye, E. M. M. iv, p. 205; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 756; Reitt., W. E. Z. xxiv, 1905, p. 226.
Proteinides Lac., Gen. Col. ii, 1854, p. 145.
Proteinites Jacq. du Val, Gen. Col. d'Eur. ii, 1857–1859, p. 78 (excl. *Pseudopsis*, *Micropeplus*).
Omaliina, Subtrib. *Proteinides* Th., Skand. Col. iii, 1861, p. 217.
Protinini Fauv., Fn. Gallo-Rhén. iii, 1872, p. 24; Leconte & Horn, Class. Col. N. Amer. 1883, p. 105.
Protéiniens+*Phléobiens* Muls. et Rey, Ann. Soc. Agr. Lyon, (5)viii, 1875, p. 209; id., Ann. Soc. Linn. Lyon, xxv, 1878, pp. 217, 253.
Proteinina Sharp, B. C.-A. i, 2, 1887, p. 743.
Proteininæ Reitt., Fn. Germ. ii, 1909, p. 16.

This tribe is distinguished by the absence of a pair of ocelli on the vertex (in *Phlœobium* a single median ocellus is present, but this genus has not so far been recorded in our Fauna), the large posterior trochanters, the abdomen keeled at the base ventrally, and the scarcely prominent anterior coxæ. Two genera occur in our Fauna.

Key to the Genera.

Thorax not sulcate in the middle line; the sides not explanate, the penultimate joints of the antennæ forming a club ..... PROTEINUS Latr., [p. 123.

Thorax sulcate in the middle line; the sides explanate, penultimate joints of antennæ scarcely forming a club ..... MEGARTHRUS Steph., [p. 125.

Genus **PROTEINUS** Latr.

Proteinus Latr., Près. Car. Ins. 1796, p. 9; Er., Käf. Mark. Brand. i, 1837–1839, p. 642; id., Gen. Spec. Staph. 1840, p. 902; Lac., Gen. Col. ii, 1854, p. 146; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 78; Kr., Naturg. Ins. Deutsch. ii, 1858, p. 1022; Th., Skand. Col. iii, 1861, p. 217; Pandellé, Mat. Cat. Gren. ii, 1867, p. 168; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 29 (*Protinus*); Muls. et Rey, Ann. Soc. Linn. Lyon, xxv, 1878, p. 218; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 757; Dodero, Boll. Soc. Ent. Ital. lv, 1923, pp. 43–47.

BIOLOGY.—Chapuis et Candèze, Mem. Soc. Sc. Liège, viii, 1853, p. 402; Rupertsberger, Biol. Lit. Käf. Eur. 1894, p. 126.

The genus comprises small black or obscurely coloured oval species, generally distributed throughout the world except in the Australian region.

Head transverse, narrower than the thorax, strongly constricted behind the eyes, neck broad, gular sutures ill-defined, widely separated. Antennæ with first two joints stout. Labrum strongly transverse, corneous, truncate in front, the sides and anterior angles rounded, finely setiferous, the anterior

margin furnished with a broadly emarginate membrane. Mandibles stout, pointed, edentate, the inner border with a ciliated membrane. Outer lobe of the maxilla a little widened at the apex, densely and finely ciliate, inner lobe narrow, corneous externally, the apex furnished with a rather strong curved tooth and with three or four fine spines immediately behind and posteriorly with a membranous ciliated lobe. Maxillary palpi 4-jointed, the 1st joint very small, the 2nd much dilated from the base to apex, scarcely longer than broad, the outer margin rounded, apex truncate, 3rd joint much narrower, broader than long, 4th elongate, narrower than the 3rd, about as long as the two preceding together, a little narrowed at the apex. Mentum transverse, trapezoidal, the sides converging in front, anterior margin truncate, narrower than the posterior. Tongue broad and membranous, deeply triangularly emarginate in front, paraglossæ not prominent, very finely ciliate. Labial palpi very short and stout, 1st joint much broader than long, 2nd narrower than 1st, broader than long, 3rd narrower than 2nd and scarcely longer, the apex obliquely truncate and with a somewhat reniform more corneous thickening of the margin. Prosternum broad and short, its apex sharply pointed; epimera narrow triangular, fused with the epipleura. Mesosternal process narrow, pointed, extending nearly to the posterior border of the coxæ, its sides elevated; intermediate coxæ narrowly separated. Metasternal process very short, receiving the apex of the mesosternal process. Episterna narrow, pointed behind. Abdomen with 1st ventral segment feebly carinate. Posterior trochanters elongate. Tibiæ pubescent. Tarsi 5-jointed, the 1st joint about as long as the two following together, these short, together shorter than the 5th joint. Elytra ample, winged.

The genus is found in decaying fungi, small carcases, and vegetable débris.

Key to the Species.

Species black; thorax reddish ..... *ruficollis* Cam., p. 124.
Species fusco-testaceous; head and abdomen black..... *fuscotestaceus* Cam., [p. 125.

121. **Proteinus ruficollis.**

Proteinus ruficollis Cam., Tr. Ent. Soc. Lond. 1924, p. 162.

Oval, moderately shining, black, thorax red. Antennæ testaceous, the last four joints black. Legs testaceous. Length 1·2 to 1·7 mm.

Of the build of *P. atomarius* Er., but readily distinguished by the red thorax, the more shining appearance, the longer antennæ, which are also less stout, and the less close elytral sculpture.

Head subtriangular, transverse, narrower than the thorax, eyes prominent, vertex foveate on either side, impunctate, finely coriaceous. Antennæ with the first two joints stout, subequal, 3rd shorter and more slender, 4th and 5th slender, scarcely longer than broad, 6th and 7th as long as broad, 8th to 10th transverse, 9th and 10th much more strongly, 11th stout, conical. Thorax strongly transverse, widest about the middle, the sides slightly rounded in front, almost straight and more strongly narrowed behind, posterior angles rectangular, the base lightly impressed near the angles, extremely finely and extremely sparingly punctured, very finely coriaceous, very finely and sparingly yellow pubescent. Elytra broader and more than twice as long as the thorax, finely and moderately closely punctured, finely pubescent. Abdomen narrowed behind, extremely finely and sparingly punctured, extremely finely coriaceous, practically glabrous.

Simla Hills: Theog, 7600 feet; Fagu, 8000 feet; Narkanda, 9000 feet above sea-level; in rotten fungus. Mussoorie, 7000 feet above sea.

122. **Proteinus fuscotestaceus.** (Plate I. fig. 9.)

Proteinus fuscotestaceus Cam., Tr. Ent. Soc. Lond. 1924, p. 162.

Oval, moderately shining, fusco-testaceous, the head and abdomen black. Antennæ testaceous or fusco-testaceous, the last four joints black. Legs testaceous. Length 1·2 to 1·7 mm.

Build of the preceding, differs in the colour, the distinctly though finely and not very closely punctured thorax, with a fine median line and without basal impressions near the posterior angles, coarser elytral sculpture, and less fine abdominal puncturation; the thorax also is much less finely pubescent.

Dehra Dun; in a small carcase.

Genus **MEGARTHRUS** Steph.

Megarthrus Steph., Ill. Brit. Ent. v, 1832, p. 320.; Er., Käf. Mark. Brand. 1839, p. 643; id., Gen., Spec. Staph. 1840, p. 904; Lac., Gen. Col. ii, 1854, p. 147; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 79; Kr., Naturg. Ins. Deutsch. ii, 1858, p. 1026; Th., Skand. Col. iii, 1861, p. 218; Fauv., Fn. Gallo-Rhn. iii, 1872, p. 25; Muls. et Rey, Ann. Soc. Linn. Lyon, xxv, 1878, p. 232; Sharp, B. C.-A. i, 2, 1887, p. 743; Ganglb., Käf. Mitt. Eur. ii. 1895, p. 760.

Biology.—Rey, Ann. Soc. Linn. Lyon, xxxiii, 1886, p. 156; Rupertsberger, Biol. Lit. Käf. Eur. 1894, p. 126; Xambeu, Mœurs Ins. vi, p. 109.

More or less depressed oval or oval-oblong insects, of obscure

coloration, the sides of the thorax before the posterior angles with one or more emarginations. Head subtriangular, strongly constricted behind the eyes, neck thick. Antennæ slender, 11-jointed, the first two joints stouter than the following. Gular sutures widely separated, nearer in the middle, from there diverging in front and behind. Labrum transverse, furnished in front with a membrane with emarginate anterior border, finely ciliate. Mandibles stout, pointed, edentate. Outer lobe of the maxilla rather broad, narrower towards the apex, which is furnished with long fine cilia. Inner lobe narrow, corneous, the apex with a hook, behind this with a few fine cilia along the inner edge. Maxillary palpi 4-jointed, the 1st joint very small, 2nd strongly dilated from base to apex, a little longer than broad, 3rd narrower, cylindrical, a little longer than broad, 4th elongate, cylindrical, narrower than preceding, about as long as 2nd and 3rd together. Mentum transverse, trapezoidal, anterior margin truncate, the sides feebly broadly emarginate. Tongue broad, membranous, broadly triangularly emarginate in front. Labial palpi 3-jointed, the 1st joint a little longer than broad, 2nd narrower, scarcely as long as broad, 3rd narrower, cylindrical, about twice as long as broad. Prosternum short, broad, its process narrow and pointed. Epimera triangular, sutured with the epipleura, coxal cavities open behind. Mesosternum finely keeled, its process narrow and pointed, extending nearly to the end of the coxæ, these narrowly separated. Metasternal process short and broad, meeting the mesosternal process; episterna triangular, narrowed behind. Abdomen keeled at the base below. Tibiæ finely ciliated. Tarsi 5-jointed, the 1st joint scarcely as long as the two following together, these short, subequal, 4th short, the 5th about as long as the three preceding together. Winged.

The genus is distributed throughout the world with the exception of the Australian region, and is found amongst vegetable débris etc.

Key to the Species.

1. Elytra black, with seven testaceous spots posteriorly, one of them sutural	[Champ., p. 132. *septempunctatus*	
Elytra without such markings	2.	
2. Puncturation of the elytra simple	3.	
Puncturation of the elytra asperate	6.	
3. Sides of thorax not or scarcely angulate at or near middle	4.	
Sides of thorax distinctly angulate at or near middle	5.	
4. Colour uniform pitchy brown; sides of thorax distinctly emarginate before the posterior angles	*chatterjeei* Cam., p. 130.	

Colour fusco-testaceous; elytra testaceous, each with a brown apical spot; sides of thorax very slightly emarginate before the posterior angles	[p. 128.	*bimaculatus* Fauv.,
5. Sides of thorax between the angulation and the posterior angles bi-emarginate; colour reddish brown, elytra very coarsely punctured; thorax very short	[p. 127.	*umbonatus* Fauv.,
Sides of thorax between the angulation and the posterior angles tri-emarginate; colour pitchy brown, elytra less coarsely punctured; thorax longer	[p. 130.	*trisinuatus* Cam.,
6. Sides of thorax not or scarcely angulate at or near middle, the sides gently rounded from the emargination in front of the posterior angles to the anterior angles; species pitchy red		*birmanus* Fauv., p. 128.
Sides of thorax distinctly angulate at or near the middle		7.
7. First two joints of antennæ clear reddish yellow		8.
First two joints of antennæ pitchy black	[p. 131.	*flavolimbatus* Cam.,
8. Elytra distinctly emarginate behind the antero-external angles, humeral callus prominent, thorax deeply 4-fossulate; species subdepressed, oblong	[p. 129.	*basicornis* Fauv.,
Elytra not emarginate behind the antero-external angles and without humeral callus, thorax obsoletely 4-fossulate	9.	[p. 129.
9. Species oval, convex, elytra reddish brown.		*rufomarginatus* Cam.,
Species oval-oblong, subdepressed; elytra pitchy black		*alticola* Cam., p. 131.

123. **Megarthrus umbonatus.**

Megarthrus umbonatus Fauv., Rev. d'Ent. xiv, 1895, p. 194.

Small, strongly convex, pale pitchy, the mouth, 2nd to 6th joints of the antennæ, anterior part of the front, explanate side-margins of the thorax, anus, and legs dirty reddish-testaceous; antennæ slender, the 3rd to 5th joints elongate, equal; head depressed, in the middle of the front scarcely raised, the oblique sulci obsolete; thorax peculiar, very short, the disc subopaque, strongly elevated, very closely asperately punctured like the head, densely pubescent, longitudinally sulcate, the sides broadly explanate, somewhat shining, strongly narrowed in front, sinuate behind the middle, the posterior angles dentate, behind the tooth emarginate, the base rounded; scutellum small; elytra a little shining, twice as long as the thorax, coarsely rather closely punctured, pubescence short; abdomen short, conical, densely and finely punctured, the punctures squamulose. Length 2¼ mm. Occasionally with the antennæ and the margins of the elytra reddish-testaceous.

Burma: Carin Asciuii Ghécu, 1400 to 1500 m., iv., v. (*L. Fea*). Sikkim: Darjeeling (*Christie*) (ex *Fauvel*). Simla Hills: Theog (*Cameron*).

124. **Megarthrus bimaculatus.** (Plate I. fig. 10.)

Megarthrus bimaculatus Fauv., Rev. d'Ent. xxiii, 1904, p. 87.

A striking species. Short ovate, convex, dirty testaceous, the disc of the thorax a little infuscate, the palpi, 7th to 10th joints of the antennæ, and 3rd to 5th abdominal segments pitchy black; the elytra with a large black ante-apical spot not reaching the apex, the suture, or the sides, and obliquely truncate in front. Antennæ slender, the 3rd to 5th joints elongate, equal, 7th to 11th forming a club, 11th pitchy red. Head dull, rugosely punctulate, the front scarcely elevated in the middle, very finely margined, the apical border broadly truncate. Thorax not so dull, small, narrow, twice as broad as long, the sides shining, strongly rounded, slightly explanate, scarcely sinuate, in front of the posterior angles scarcely visibly emarginate, with an obsolete fossa on either side before the middle, disc hardly sulcate, but obsoletely keeled from the middle to the base, strongly, rugosely punctured. Elytra convex, at the base as wide as the thorax and a third longer, from the base to the apex strongly dilated, rather shining, with large regular punctures rather closely placed. Abdomen nearly dull, very finely closely asperately punctured, the punctures with short scales. Length $2\frac{1}{3}$ mm.

Ceylon; very distinct from all by its colour, punctuation, and its thorax without lateral emarginations (ex *Fauvel*). Nilgiri Hills (*Andrewes*).

125. **Megarthrus birmanus.**

Megarthrus birmanus Fauv., Rev. d'Ent. xiv, 1895, p. 194; Cameron, Trans. Ent. Soc. Lond. 1924, p. 163.

Somewhat approaching *M. hemipterus* Ill., but shorter, entirely dirty testaceous, with the two basal segments except the apices scarcely pitchy; antennæ a little longer, the 1st joint scarcely dilated, the 2nd longer, subparallel; the eyes more prominent; the frontal margin obtusely rounded; thorax a little narrower, the sides more rounded, the disc more finely sulcate, in the middle on either side near the sulcus foveolate; elytra a little more strongly punctured, the postero-external angle more rounded.

Burma: Carin Asciuii Ghécu, 1400–1500 m., iii., iv. (*L. Fea*) (ex *Fauvel*).

If I am correct in the determination of this species, the ♂ has the following characters: middle tibiæ curved, posterior tibiæ with a black spur at inner apical angle. To the above locality must be added Mussoorie District, 6000 feet above the sea.

126. Megarthrus rufomarginatus.

Megarthrus rufomarginatus Cam., Trans. Ent. Soc. Lond. 1914, p. 525.

Broad, convex, pitchy brown or pitchy black, sides of thorax reddish-testaceous, obtusely angled at the middle. Antennæ with first five or six joints reddish-testaceous, the following infuscate, the last pale testaceous. Legs and palpi reddish-testaceous. Length 2·3 mm.

Of the size and short ovate convex build of *M. bimaculatus* Fauv., but differs entirely in the colour and the shape of the thorax.

Head subtriangular, with a narrow oblique impression on either side posteriorly, finely but roughly sculptured. Antennæ with first two joints stout, 2nd shorter than 1st, 3rd to 8th long and slender, 3rd to 5th of equal length, 6th to 8th gradually decreasing in length, 9th and 10th transverse, 11th suborbicular; the last three joints forming a club. Thorax twice as broad as long, the sides narrowly explanate, increasing in width from the anterior angles to the middle, obtusely angled, slightly narrowed and slightly emarginate before the posterior angles; disc with median impressed line from base to apex; sculpture rugose and rather coarse. Elytra convex, ample, rather more shining than the fore-parts, dilated behind, widest at the posterior third, coarsely and somewhat asperately punctured. Abdomen strongly narrowed behind, closely, finely and asperately punctured.

Nilgiri Hills (*H. L. Andrewes*). Also in Sumatra.

127. Megarthrus basicornis.

Megarthrus basicornis Fauv., Rev. d'Ent. xxiii, 1904, p. 87; Cameron, Trans. Ent. Soc. Lond. 1924, p. 164.

Rather near *M. affinis* Miller. Differs from all in the colour of the antennæ, the umbonate thorax, the sides of which have three emarginations, the disc with four strong impressions, and the shoulders elevated and produced. Black, head and thorax dull, elytra rather, abdomen scarcely shining. Antennæ brownish, the first four joints, the palpi, sides of the thorax, apex of the 6th and 7th abdominal segments reddish testaceous. Antennæ very slender, shorter, the 11th joint reddish brown. Head as in *affinis*, the front scarcely less sparingly punctured. Thorax shorter, twice as broad as long, more closely rugose, the sides strongly rounded, equally explanate in front and behind, tri-angulate, the first of them a little behind the anterior angle, the second near the middle, the third between the second and the acute posterior angle, the disc umbonate, deeply longitudinally sulcate, on each side in front with a deep fossa, at the base on each side with another curved one. Elytra

rather more asperate than in *affinis*, the humeral callus elevated and produced backwards as a long keel, the sides behind the callus shortly, deeply sinuate, and with an oblique impression extending from the obtuse postero-external angle towards the disc. Abdomen a little more finely and densely asperate and squamulose. Length 2·5 mm.

Sikkim : Darjeeling (*Christie*) (ex *Fauvel*).

If my determination of this species is correct, the ♂ has the following characters : middle tibiæ with a shallow emargination of the apical third of the inner margin ; posterior femora with a tooth in the middle of the posterior border, posterior tibiæ emarginate internally before the apex. It also occurs in the following localities :—Simla Hills : Gahan ; Kotgarh ; Narkanda ; 7000 to 9200 feet above the sea.

128. **Megarthrus chatterjeei.**

Megarthrus chatterjeei Cam., Trans. Ent. Soc. Lond. 1924, p. 162.

Oval, convex, pitchy black, opaque ; elytra shining ; sides of thorax explanate, scarcely angulate at the middle, fusco-testaceous, flatly emarginate before the posterior angles ; antennæ slender, the first two joints testaceous, the 3rd to the 5th testaceous at the bases ; legs brownish-testaceous. Length 2·5 mm.

Size and build of *M. bimaculatus* Fauv., but the colour quite different, the head semicircularly impressed, the emargination before the posterior angles much more defined. Head opaque pitchy black, rugosely punctured, scarcely elevated in front, with an oblique impression behind the antennæ on either side united behind on the vertex ; antennæ slender, the first two joints dilated, the 3rd to 8th longer than broad, gradually decreasing in length, 9th and 10th about as long as broad, 11th oval, much longer than the 10th. Thorax twice as broad as long, medially sulcate, flatly emarginate before the posterior angles, the sides narrowed and feebly sinuate behind the anterior angles, scarcely angulate at the middle, brownish testaceous ; puncturation of the disc rather fine and rugose, on the sides coarse. Elytra shining, convex, ample, 2½ times longer than the thorax, dilated from base to apex, closely, coarsely, and simply punctured. Abdomen strongly conical, nearly opaque, very finely and rather closely punctured.

Chakrata district, 5000 to 6500 feet above the sea.

129. **Megarthrus trisinuatus.**

Megarthrus trisinuatus Cam., Trans. Ent. Soc. Lond. 1924, p. 163.

Oval, convex, pitchy black, opaque, elytra shining, sides of thorax reddish, angulate at the middle, from thence narrowed

in a straight line to the anterior angles, 3-sinuate posteriorly; antennæ fusco-testaceous, the last 5 joints darker; legs brownish-testaceous. Length 2·75 mm.

Head rather finely, closely, and rugosely punctured, the vertex with an oblique impression on either side; antennæ slender as in the preceding species. Thorax twice as broad as long, the sides explanate, more shining and much more coarsely punctured than the rest of the surface, angulate at the middle, from thence narrowed in a nearly straight line to the rounded anterior angles; posteriorly distinctly tri-emarginate before the posterior angles; disc narrowly sulcate, closely, rather finely and rugosely punctured. Elytra ample, coarsely, closely, and simply punctured, 2¼ times longer than the thorax and a little dilated behind. Abdomen conical, very finely and rather closely punctured.

Chakrata district: Manjgaon, 6500 feet above the sea.

130. Megarthrus flavolimbatus.

Megarthrus flavolimbatus Cam., Trans. Ent. Soc. Lond. 1924, p. 164.

Oblong, subdepressed, pitchy black, moderately shining, the sides of the thorax rather broadly, the base very narrowly testaceous; antennæ slender, black; legs testaceous. Length 3 mm.

Head black, opaque, shagreened, finely, closely, rugosely punctured, front a little elevated, slightly shining, vertex with a small fovea on either side; antennæ with the 9th and 10th joints about as long as broad, all the rest longer than broad. Thorax 2¼ times broader than long, slightly shining, the sides feebly angulate at the middle, almost straight from thence to the rounded anterior angles, posterior angles acute, with a small emargination externally, between this and the median angulation scarcely emarginate; disc medially sulcate, punctuation fine, close, and asperate. Elytra as wide at the base as the base of the thorax, twice as long, widened behind, more shining than the fore-parts, closely, moderately coarsely, and asperately punctured. Abdomen slightly shining, very finely and closely punctured.

♂. Middle tibiæ curved; posterior tibiæ thickened and with a strong tooth just before the middle of the inner margin.

Simla Hills: Matiana; Narkanda; Kotgarh; 7000 to 9200 feet above the sea.

131. Megarthrus alticola.

Megarthrus alticola Cam., Trans. Ent. Soc. Lond. 1924, p. 165.

Oval-oblong, subdepressed, a little shining; head black, thorax reddish brown, the margins lighter; lateral borders

3-emarginate; elytra asperately punctured; antennæ with the first four joints and the legs testaceous. Length 3 mm.

Resembling *M. basicornis* Fauv. in the shape of the thorax, but the lateral impressions are obsolete, the basal foveate, the elytra are a little longer and not sinuate at the shoulders, the puncturation less close and less asperate, and the whole insect rather more shining. Head black, nearly opaque, the front slightly elevated in the middle, obliquely impressed on either side between the eyes, closely, moderately finely, rugosely punctured; antennæ slender, all the joints longer than broad. Thorax fully twice as broad as long, reddish brown, the margins lighter, slightly shining, the sides angulate at the middle, with three slight emarginations, one behind the anterior angles, the second behind the median angle, the third (very flat) in front of the posterior angles; disc deeply sulcate, on either side with large obsolete impression and with an obsolete fovea before the base on either side of the middle line; puncturation moderately fine, close and rugose. Elytra at base as wide as the base of the thorax, more than twice its length, slightly widened behind, subdepressed, closely and more strongly punctured than the thorax, asperate. Abdomen very finely and closely punctured.

Simla Hills: Narkanda, 9200 feet above the sea.

132. **Megarthrus septempunctatus.**

Megarthrus septempunctatus, Champ.*, E. M. M. lxi, 1925, p. 102.

Rather convex, pitchy black, moderately shining, the explanate margins of the thorax, a common oblong spot on the suture behind the middle, a round spot near the suture about the level of the middle, another near the postero-internal angle and a third a little in front and external to it, the lateral margins of the elytra and the posterior margins of the 5th and 6th abdominal segments, testaceous. Antennæ with the first two joints clear reddish-testaceous, the following more or less obscure. Legs testaceous. Length 2 mm.

Head obtusely produced in front, closely, moderately finely, rugosely punctured, the front and an elevated plaque on each side of the vertex smooth and more shining. Antennæ slender, the 3rd to 9th joints longer than broad, gradually decreasing in length, 10th about as long as broad. Thorax strongly transverse, convex, the sides rounded, with a scarcely perceptible angle about the middle, the posterior angles acute, with a flat emargination in front, disc sulcate in the middle, closely, rugosely, rather less finely punctured than the head. Elytra twice as long as the thorax, convex, closely, moderately coarsely, simply punctured. Abdomen conical, moderately closely and finely punctured, scarcely coriaceous.

♂. Intermediate tibiæ slightly curved, finely denticulate within from about the middle to the apex, inner apical angle with a tooth.

Kumaon: W. Almora (*H. G. Champion*).

Tribe 6. OMALIINI.

Omaliini Ganglbauer, Käf. Mitt. Eur. ii, 1895, p. 697.
Omalini Erichson, Käf. Mark. Brand. i, 1837–1839, p. 613; id., Gen. Spec. Staph. 1839–1840, p. 846; Kraatz, Naturg. Ins. Deutsch. ii, 1856–1858, p. 904.
Omalides Lacordaire, Gen. Col. ii, 1854, p. 132.
Omalites Jacquelin du Val, Gen. Col. d'Eur. ii, 1857–1859, p. 66.
Omaliina Thomson, Skand. Col. iii, 1861, p. 177 (ex *Proteinides*).
Homalini Leconte & Horn, Class. Col. N. Amer. 1883, p. 103.
Omaliinæ Sharp, Biol. Cent.-Amer. i (2) 1882–1887 (1887), p. 744.
Omalinæ Reitter, Faun. Germ. ii, 1909, p. 16.

A tribe readily recognized by the presence of two ocelli on the posterior part of the head; occasionally these are rudimentary, but very rarely entirely absent (in some examples of *Hygrogeus*). In the female sex of some species of the genus *Anthobium* the elytra are as long or even longer than the abdomen and are exceptional as regards this family. The anterior coxæ are conical and rather prominent, the posterior transverse. Tarsi all 5-jointed except in *Tetradelus*, where they are 4-jointed. The first ventral segment of the abdomen is keeled in the middle.

Key to the Genera.

1. All the tarsi 5-jointed ..... 2.
   All the tarsi 4-jointed ..... Tetradelus Fauv., [p. 167.
2. Last joint of the posterior tarsi much shorter than the first four joints together . 3.
   Last joint of the posterior tarsi almost as long as or longer than the first four joints together ..... 10.
3. Mandibles internally with two or three strong, pointed teeth ..... 4.
   Mandibles at most with a small tooth, usually without teeth ..... 5.
4. Last joint of the maxillary palpi shorter than the preceding. Ocelli well developed ..... Geodromicus Redt., [p. 160.
   Last joint of the maxillary palpi longer than the preceding. Ocelli rudimentary or wanting ..... Hygrogeus Rey, [p. 165.
5. Last joint of the maxillary palpi four times longer than the preceding. Mesosternum keeled ..... Lesteva Latr., p. 158.
   Last joint of the maxillary palpi at most three times longer than the preceding.. 6.
6. First joint of the posterior tarsi as long as the three following together ..... 9.

	First joint of the posterior tarsi scarcely as long as the two following together ..	7.
7.	Ocelli distinct; 4th joint of antennæ scarcely shorter and not narrower than the 5th ..	8.
	Ocelli obsolete; 4th joint of antennæ much shorter and narrower than the 5th.....	[p. 149. MANNERHEIMIA Mäkl.,
8.	Temples with post-ocular tooth; thorax with explanate sides, the margins raised.	[p. 151. LATHRIMÆUM Er.,
	Temples without post-ocular tooth; thorax without explanate sides, the margins not raised	ARPEDIUM Er., p. 155.
9.	Front with two deep longitudinal sulci more or less converging in front. Temples strongly keeled below	[p. 156. AMPHICHROUM Kr.,
	Front flat. Temples not keeled below ..	PHILORHINUM Kr.,
10.	All the tarsi dilated and clothed with long hairs at the sides	[p. 148. ANTHOBIUM Steph.,
	All the tarsi simple without long hairs at the sides.....	[p. 134.
11.	Last joint of the posterior tarsi much longer than the four preceding together. Mesosternum not keeled	[p. 141. PHLŒONOMUS Heer,
	Last joint of the posterior tarsi only as long as or shorter than the four preceding together.....	12.
12.	Posterior tarsi longer than half the tibia; thorax at most with two obsolete dorsal impressions	[p. 136. PHYLLODREPA Thoms.,
	Posterior tarsi shorter than half the tibia; thorax with two deep longitudinal impressions	OMALIUM Gr., p. 138.

Genus **ANTHOBIUM** Steph.

Anthobium Steph., Ill. Brit. Ent. v, 1832, p. 335; Er., Käf. Mark. Brand. i, 1837-39, p. 637; id., Gen. et Spec. Staph. 1839-40, p. 890; Lacord., Gen. Col. ii, 1854, p. 145; Jacq. du Val, Gen. Col. d'Eur. ii, 1858. p. 77; Kraatz, Naturg. Ins. Deutsch. ii, 1856-58, p. 1005; Thomson, Skand. Col. iii, 1861, p. 202; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 34; Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 290; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 745.

Small, more or less depressed, oblong-ovate, obscurely coloured species compose this genus. By far the larger portion are found in the cooler parts of the Northern Hemisphere frequenting various species of flowers. Only two species are as yet recorded from this country, and both from the higher altitudes.

Head more or less triangular, constricted behind the eyes, the neck thick. Gular sutures fused. Ocelli distinct. Labrum transverse, lightly emarginate in front, the sides and anterior angles rounded, finely ciliate. Mandibles stout, curved, pointed, the right occasionally with a very small tooth. Inner lobe of the maxilla narrow, pointed, its inner margin

with numerous spines; outer lobe a little broader, its apex and external border rather coarsely ciliate. Maxillary palpi with the 1st joint very small, 2nd narrow at the base and gradually widened towards the apex, 3rd very short, widened from base to apex, 4th stout, conical, at least twice as long as the preceding, its base as broad as the apex of the 3rd joint. Mentum transverse, trapezoidal, narrowed in front, the sides and anterior margin straight. Tongue broad, obtusely emarginate in front, forming two lobes, finely ciliate. Labial palpi short, 3-jointed, 1st joint about as broad as long, 2nd about half as long as the 1st, the 3rd cylindrical, narrower than the preceding, almost as long as the 1st and 2nd together. Prosternum well developed, its process very short, pointed. Epimera triangular, fused with the epipleura, coxal cavities open behind. Mesosternum simple, its process narrow and pointed, nearly reaching the whole length of the coxæ, these narrowly separated. Metasternum broad, its process short and acute, meeting the mesosternal process. Episterna broad in front and gradually narrowed behind. Elytra extending considerably beyond them. Tibiæ externally often with a few spines. Tarsi short, the first four joints equal or gradually decreasing in length, dilated, the 5th as long or almost as long as the four preceding together. Claws simple.

Key to the Subgenera.

Elytra in both sexes shorter than the abdomen	EUSPHALERUM Kr.
Elytra in the ♀ as long or longer than the abdomen	ANTHOBIUM, s. str.

Both the species of our Fauna belong to *Eusphalerum*.

Key to the Species.

Smaller (2 mm.). Angles of the thorax all rounded	*sikkimi* Fauv., p. 135.
Larger (2⅔–3 mm.). Angles of the thorax obtuse	*indicum* Champ., [p. 136.

133. Anthobium (Eusphalerum) sikkimi.

Anthobium sikkimi Fauv., Rev. d'Ent. xxiii, 1904, p. 88.

♂. Narrow, shining, testaceous, the elytra pale. Near *A. marshami* Fauv., but the base of the antennæ more slender, the 4th to 6th joints a little longer; head and thorax smaller, more shining, more closely and evenly punctured, more convex; eyes smaller; thorax shorter and narrower, transversely oval, all the angles rounded, before the scutellum with a scarcely visible fovea; elytra flattened on the disc, scarcely more rugosely and finely punctured, the apex straightly truncate; abdomen more sparingly punctured. Length 2 mm.

Sikkim: Darjeeling (*Christie*). Unique (ex *Fauvel*).

134. **Anthobium (Eusphalerum) indicum.**

Anthobium indicum Champ.*, E. M. M. lvi, 1920, p. 243.

Reddish-testaceous, the elytra more yellow, the abdomen in the ♂ black, the posterior margin of the 5th and whole of the 6th segment testaceous; in the ♀ concolorous. Antennæ reddish-testaceous, the last two or three joints a little infuscate. Legs testaceous. Length $2\frac{2}{3}$ to 3 mm.

Rather smaller but of similar build to *A. abdominale* Gr., but the thorax immaculate and without impressions, the whole insect more closely and finely punctured, antennæ shorter, the penultimate joints more transverse. Head finely and densely punctured, finely coriaceous; ocelli small. Antennæ rather stout, reaching a little beyond the base of the elytra, the 4th to 6th joints moniliform, 7th to 10th transverse. Thorax strongly transverse, convex, a little narrowed in front, the angles obtuse, not impressed on the disc, the sculpture as on the head. Elytra about two and a half times as long as, and broader than, the thorax, a little dilated behind, less closely and less finely punctured than the fore-parts. Abdomen rather closely and finely punctured on the four exposed segments. In the ♂ the elytra are obliquely truncate, in the ♀ the postero-internal angle is a little produced and thickened.

Kurram Valley: Parachinar (*F. W. Champion*).

Genus **PHYLLODREPA** Thoms.

Phyllodrepa Thomson, Skand. Col. i, 1860, p. 52; iii, 1861, p. 214; Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 228; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 738; Luze, W. Z. B. lvi, 1906, p. 547.

Biology.—Perris, Ann. Soc. Ent. Fr. (3) i, 1853, p. 576, t. 17, ff. 49–55; id., Hist. Ins. Pin. marit. p. 54 (according to Ganglbauer, l. c. p. 738, the larva here described is not a *Phyllodrepa*); Rupertsberger, Biol. lit. Käf. Eur. 1894, p. 126.

A genus of somewhat variable facies which has been divided into five subgenera, only one of which is so far known in our Fauna (*Dropephylla* Rey). The gular sutures are fused in front and diverge behind. The mouth-parts are very similar to those of *Anthobium*, but the right mandible is sometimes devoid of a tooth. The mesosternum is stated by most authors to be without a keel; this is the case in *P. floralis* Payk. and probably in its allies, but in *P.* (*Dropephylla*) *ioptera* Steph. it is distinctly keeled, as it is also in our *almorense*, which was described as an *Omalium* by Champion, and less distinctly in *monticola*. The tibiæ are finely or scarcely spinose, the tarsi with the first four joints rather short and subequal, the 5th as long as the four preceding together, the posterior as long as or longer than half the tibia. The subgenus *Dropephylla* Rey, with which we are only concerned, is characterised by

the head being distinctly impressed on either side in front, the absence of a fovea or sulcus before the ocelli, the simply rounded sides of the thorax, the finely keeled mesosternum, and the scarcely spinose tibiæ.

Key to the Species.

1.	Antennæ black. Species finely punctured. .	*almorensis* Champ., [p. 137.
	Antennæ with the first four or five joints reddish-testaceous. Species rather coarsely punctured.....	2.
2.	Elytra dark	*monticola*, sp. n., p. 137.
	Elytra clear reddish yellow, the scutellary region and posterior margin narrowly infuscate	*flavipennis*, sp. n., [p. 138.

135. **Phyllodrepa (Dropephylla) monticola**, sp. n.

Narrow, elongate, parallel, subconvex, a little shining, black, the side-margins of the thorax narrowly rufescent. Antennæ with the first four or five joints reddish-testaceous. Legs testaceous. Length 3 mm.

More elongate than *P. ioptera* Steph., differently coloured with longer thorax and elytra, less shining, with rather coarser and closer puncturation of the fore-parts and distinctly coarser puncturation of the abdomen. Head closely, moderately coarsely punctured. Antennæ with the 5th to 10th joints transverse, the 7th and following much more strongly than the 5th and 6th. Thorax rather strongly transverse, with sculpture as on the head. Elytra broader than, and half as long again as, the thorax, longer than broad, similarly punctured. Abdomen slightly coriaceous, finely and moderately closely punctured.

Chakrata district: Bodyar, alt. 8300 feet (*Cameron*).

136. **Phyllodrepa (Dropephylla) almorensis.**

Omalium almorense Champ.*, lvi, 1920, p. 241.

Narrow elongate, slightly widened behind, entirely black, moderately shining, finely pubescent. Antennæ black. Legs reddish-testaceous. Length 2·6 mm.

In build similar to *P. linearis* Zett., but entirely black and much more finely punctured. Head small, impressed on each side within the antennal tubercles, closely, moderately finely punctured. Antennæ short, 3rd to 5th joints small, 6th to 10th strongly transverse. Thorax transverse, the sides lightly rounded in front and narrowed behind, obliquely impressed near the obtuse posterior angles, closely, moderately finely punctured. Elytra broader and nearly twice as long as the thorax, closely and rather more coarsely punctured. Abdomen

coriaceous, very finely, sparingly punctured. Mesosternum carinate.

Kumaon : W. Almora (*H. G. Champion*). Found on flowers.

137. **Phyllodrepa (Dropephylla) flavipennis**, sp. n.

Shining. Head, thorax, and abdomen black, the thorax with the lateral margins and posterior angles reddish. Elytra clear reddish yellow, the scutellary region and the posterior margin narrowly infuscate. Antennæ with the first four joints reddish-yellow, the rest black. Legs testaceous. Length 3 mm.

Very similar in build to *P. monticola* Cam., but more depressed and differently coloured, the sculpture of the fore-parts finer and less close, in other respects very similar.

Dehra Dun, 6. iii. 25 (ex *Pinus longifolia*) (*C. F. C. Beeson*).

Genus **OMALIUM** Grav.

Omalium Grav., Col. Micr. 1802, p. 111; Er., Gen. Spec. Staph. 1840, p. 874; Lacord., Gen. Col. ii, 1854, p. 143; Kraatz, Naturg. Ins. Deutsch. ii, 1858, p. 974; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 76; Thomson, Skand. Col. iii, 1861, p. 211; Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 189; Sharp, Biol. Cent.-Amer. i (2) 1887, p. 744; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 733; Luze, W. Z. B. lvi, 1906, p. 501.

Anthobium, Mannerh., Mém. Acad. Pétersb. 1830, p. 53.

Homalium, Gemm. et Har., Cat. Col. ii, p. 665; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 57 (ex parte).

Octhexenus Motsch., Bull. Mosc. xxiii, 1860, ii, p. 546; Fauv., Abeille, v, 1869, p. 493.

Biology.—Ruperstsb., Biol. lit. Käf. Eur. 1894, p. 126; Xambeu, Mœurs, i, p. 94; id., Natural. 1903, p. 55; Peyerimh., Bull. Soc. Ent. Fr. 1898, p. 164; Mjöberg, Zeitsch. Wiss. Ins. Biol. ii, 1906, p. 140, f. 8.

More or less oblong, subdepressed, obscurely coloured species. Head strongly contracted behind the eyes, the neck thick; front longitudinally impressed on either side, before the ocelli with a fovea or short sulcus. Labrum strongly transverse, emarginate in front, ciliate. Mandibles stout, pointed, the right with a small tooth. Inner lobe of the maxilla narrow, its apex pointed, incurved, the inner margin toothed and ciliate; outer lobe densely ciliate at the apex. Maxillary palpi with the 1st joint very small, 2nd lightly curved, widened from base to apex, the outer margin longer than the inner, 3rd joint short, scarcely as long as broad, 4th stout, two or three times longer than the 3rd, gradually narrowed before the apex. Mentum transverse, trapeziform, narrowed in front, the sides straight. Tongue broad, membranous, deeply emarginate. Labial palpi thick, the 2nd joint shorter than the 1st, both broader than long, 3rd a little narrower than the 2nd, longer than broad. Prosternum short, prosternal process narrow and

pointed ; epimera triangular. Mesosternum finely carinate, its process narrow and pointed, the coxæ narrowly separated. Metasternal process with rounded apex meeting the mesosternal process. Tibiæ externally with a few short stout spines. Tarsi 5-jointed, the first four joints very short, the 5th as long as or a little longer than the four preceding together.

Key to the Species.

1.	Elytra brownish testaceous	*cariosum* Cam., p. 140.
	Elytra in greater part black or pitchy	2.
2.	Antennæ with the first five joints red or reddish-testaceous	3.
	Antennæ entirely dark.....	*altivagans* Bernh., p. 140.
3.	Elytra with the shoulders and posterior margin distinctly reddish-testaceous. Larger (3·75 mm.)	*humerale* Cam., p. 139.
	Elytra uniformly coloured, at most obscurely lighter at the shoulders and posterior margin. Smaller (3 to 3·5 mm.).....	4.
4.	Larger (3·5 mm.), sides and posterior margin of the thorax obscurely lighter	*beesoni* Cam., p. 139.
	Smaller (3 mm.), sides and posterior margin of the thorax distinctly testaceous	*secretum* Cam., p. 140.

138. Omalium humerale.

Omalium humerale Cam., Trans. Ent. Soc. Lond. 1924, p. 167.

Pitchy black, shining, the head and thorax closely and moderately coarsely punctured ; humeral angles and posterior margin reddish-testaceous ; thorax rather deeply impressed on either side of the middle line posteriorly ; first four joints of the antennæ and the legs reddish-testaceous. Length 3·75 mm.

Near *O. rivulare* Payk., but differing as follows : the build is narrower, the temples longer, more rounded and less oblique, the puncturation of the head and thorax much closer, that of the elytra finer, the antennæ distinctly shorter, the terminal joints much more transverse.

Chakrata district : Korawa Khud, 9100 feet above the sea.

139. Omalium beesoni.

Omalium beesoni Cam., Trans. Ent. Soc. Lond. 1924, p. 166.

Pitchy black, moderately shining, the head and thorax very closely rugosely punctured, the latter with a deep longitudinal impression on either side before the base ; first four joints of the antennæ and legs reddish-testaceous. Length 3·5 mm.

Very near *O. cæsum* Gr., and only differing in the following respects : the testaceous basal joints of the antennæ, the coarser puncturation of the head and thorax, the sides of the latter less rounded in front and so more parallel, the elytra

more uneven, rather less shining, less coarsely but quite as closely punctured.

Chakrata district, 6500 to 8000 feet above the sea.

140. **Omalium cariosum.**

Omalium cariosum Cam., Trans. Ent. Soc. Lond. 1924, p. 167.

Narrow, parallel, black, shining, the sides and posterior margin of the thorax narrowly reddish-testaceous, the longitudinal discal impressions feeble; elytra fusco-testaceous, the base and sides lighter; first six joints of the antennæ and legs testaceous. Length 3 mm.

Near *O. oxyacanthæ* Gr., but larger, the antennæ more thickened apically and with testaceous base, thorax shorter, elytra rather more finely punctured and of different colour. Head black, shining, moderately finely and closely punctured, the front smooth, impressed on either side, vertex with a fovea before the ocelli, post-ocular region of the head obliquely cut to the neck, temples not indicated. Antennæ with the 3rd joint scarcely longer than the 2nd, the 4th to 6th moniliform, 7th to 10th transverse gradually increasing in width. Thorax transverse, shining, the sides moderately rounded in front, the longitudinal discal impressions feeble, those at the posterior angles well marked, puncturation close, less fine than that of the head. Elytra twice as long as the thorax, parallel, shining, the puncturation as on the thorax. Abdomen greasy lustrous, alutaceous, exceedingly finely and sparingly punctured.

Dehra Dun. Mussoorie, 6500 feet above the sea.

141. **Omalium secretum.**

Omalium secretum Cam., Trans. Ent. Soc. Lond. 1924, p. 167.

Black, shining, posterior angles and lateral and posterior borders of the thorax narrowly testaceous, disc with two deep longitudinal impressions and deep round fossa on either side before the middle; head very closely and rugosely punctured; first five joints of antennæ and the legs testaceous. Length 3 mm.

Differs only from *O. cæsum* Gr. as follows: the shining appearance, much shorter antennæ with more strongly transverse penultimate and testaceous basal joints, and the colour of the thorax.

Chakrata district: Deoban, 9300 feet above the sea.

142. **Omalium altivagans.**

Omalium altivagans Bernh., Col. Rundsch. 1915, p. 49.

Near *O. brevicolle* Thoms., of the same size and build, similarly coloured, but with darker elytra and legs, and differing as follows. The head is much more strongly and more

sparingly punctured, more shining, the temples much longer, not much shorter than the diameter of the eye as seen from above, more flatly curved and narrowed. The antennæ are longer, the penultimate joints less transverse. The thorax and elytra are more strongly and much more sparingly punctured, very shining, especially the thorax. Abdomen less dull. Length $2\frac{3}{4}$ mm.

Kashmir: Sintan (*Rost*, 1895). Unique (ex *Bernhauer*).

Genus **PHLŒONOMUS** Heer.

Phlœonomus Heer, Faun. Helv. i, 1838–1842, p. 184; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 731; Luze, W. Z. B. lvi, 1906, p. 589.
Distemmus Lec., Class. Col. N. Amer. i, 1861, p. 69.
Phlœostiba + *Xylodromus* + *Phlœonomus* Thomson, Skand. Col. iii, 1861, pp. 208–210.
Phlœostiba + *Phlœonomus* Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, pp. 171, 179.
Biology.—Perris, Ann. Soc. Ent. Fr. (3) i, 1853, p. 578, t. 17, ff. 56–59; id., Hist. Ins. Pin. marit. p. 56; Rupertsberger, Biol. lit. Käf. Eur. 1894, p. 126.

Differs from *Phyllodrepa* in the longer and more slender 4th joint of the maxillary palpi, which is fully three times as long as the preceding. The posterior tarsi are shorter, not longer than half the tibia, the first four tarsal joints are very short, shorter than *Phyllodrepa*, the 5th joint is longer than the four preceding together. In other respects the two genera are very similar. They are narrow, subdepressed, parallel species found under the bark of trees.

Key to the Subgenera.

1.	Head and thorax distinctly punctured	2.
	Head and thorax not or indistinctly punctured, very distinctly coriaceous and dull.	[p. 141. Phlœonomus, s. str.,
2.	Sixth antennal joint as broad or nearly as broad as the 7th. Head somewhat produced, the front border rounded.....	[p. 146. Xylostiba Ganglb.,
	Sixth antennal joint distinctly smaller than the following; head not produced, the front margin feebly rounded.....	[p. 147. Phlœostiba Thoms.,

Key to the Species of Phlœonomus, *s. str.*

(This key does not include *angulatus* Motsch., which is unknown to me.)

1.	Elytra closely and asperately punctured ..	2.
	Elytra simply punctured	3.
2.	Femora testaceous, abdomen densely punctured throughout	*obscurus* Kr., p. 142.
	Femora blackish, abdomen scarcely punctured in front	[Motsch., p. 143. *quadrifossulatus*

3. Thorax on either side of the middle deeply longitudinally impressed ..... 4.
Thorax on either side of the middle scarcely or not at all impressed ..... 6.
4. Opaque, black species, the abdomen only shining ..... *opacus* Cam., p. 144.
Moderately shining, elytra more or less brown on the disc ..... 5.
5. Thorax impunctate, strongly coriaceous .. *nigritulus*, sp. n., p. 143.
Thorax distinctly and moderately closely punctured, less coriaceous ..... *discalis* Cam., p. 142.
6. Entirely black species ..... 7.
Pitchy or ferruginous species; elytra more or less brown or brownish-testaceous on the disc ..... 8.
7. Abdomen closely punctured; first five joints of antennæ reddish ..... *morosus* Cam., p. 145.
Abdomen sparingly punctured; first five joints of antennæ testaceous ..... *subopacus* Cam., p. 144.
8. Head impunctate, thorax flatter, median impressions more distinct ..... [p. 145. *assamensis*, sp. n.,
Head sparingly punctured, thorax more convex, median impressions less distinct . *singulare* Kr., p. 145.

143. **Phlœonomus** (s. str.) **obscurus.**

Omalium obscurum Kr., Arch. Naturg. xxv, 1859, i, p. 181.

Narrow, depressed. Head and thorax black, dull, elytra and abdomen greasy lustrous, the former pitchy. Thorax with four deep longitudinal fossæ. Antennæ with the first four or five joints testaceous, the rest black. Legs testaceous. Length 1·75 mm.

Smaller and more opaque than *P. pusillus* Gr. and with asperately punctured elytra. Head strongly coriaceous, impunctate. Antennæ with the 6th to 10th joints transverse, gradually increasing in width. Thorax transverse, the sides obtusely angulate at the middle and with four large and deep fossæ which extend from the base to beyond the middle; sculpture as on the head. Elytra twice as long as the thorax, finely, closely, asperately punctured. Abdomen closely and asperately but more finely punctured.

Ceylon; and widely distributed throughout the Orient.

144. **Phlœonomus** (s. str.) **discalis.**

Phlœonomus (s. str.) *discalis* Cam., Trans. Ent. Soc. Lond. 1913, p. 525.

Black, a little shining, elytra dirty testaceous, all the margins infuscate. Antennæ black, the first two joints pitchy. Legs testaceous. Length 1·8 mm.

Of the size and build of *P. obscurus* Kr., distinct by the more

shining appearance, yellowish and much more finely and sparingly punctured elytra.

Head subtriangular, narrowly impressed on either side of the vertex before the ocelli; finely but distinctly coriaceous, impunctate. Antennæ with 1st and 2nd joints stout, 3rd and 4th globose, 5th slightly, 6th to 10th more strongly transverse, gradually increasing in breadth, 11th short, oval. Thorax strongly transverse, widest at the middle, regularly rounded from the anterior angles to the base, scarcely perceptibly sinuate before the posterior angles, which are obtuse and slightly explanate; disc longitudinally impressed on either side of the middle line posteriorly, finely but distinctly coriaceous, superficially and sparingly punctured. Elytra broader than, and a third as long again as the thorax, coriaceous, very finely and sparingly punctured. Abdomen coriaceous, finely and sparingly punctured.

S. India: Nilgiri Hills (*H. L. Andrewes*).

145. **Phlœonomus nigritulus, sp. n.**

Narrow, parallel, elongate, subdepressed, moderately shining, pitchy black, the sides of the thorax behind and the elytra except the apex reddish-brown. Head and thorax impunctate, the latter distinctly longitudinally impressed on either side of the middle line. Antennæ with the first five joints testaceous, the rest black. Legs testaceous. Length 2 mm.

Near *P. discalis* Cam. Very similar in colour and lustre, but narrower and more elongate, more strongly coriaceous, the head and thorax impunctate, the elytra much longer, twice the length of the thorax, distinctly longer than broad and more finely punctured.

Assam: Naga Hills, alt. 4000 feet.

146. **Phlœonomus (s. str.) quadrifossulatus.**

Phlœonomus quadrifossulatus Motsch., Et. Ent. 1859, p. 68.

Elongate, subovate, depressed, dull, black, tibiæ and tarsi testaceous, base of the antennæ, femora, and anus infuscate; head triangular, transversely impressed behind, ocelli shining, eyes rather prominent, antennæ clavate, the club 6-jointed; thorax rather wider than the head, subtransverse, rounded behind, with four deep impressions, the median elongate; the sides rounded in front, subangulate behind, the posterior angles almost rectangular, scarcely prominent; scutellum triangular; elytra rather broader than the thorax and nearly twice as long, a little widened behind, rugose, asperate, or granulate, with very short pubescence; abdomen subovate, narrowed behind, scarcely punctured in front, closely behind,

the last segment nearly smooth. Length $\frac{2}{3}$ lin. Breadth $\frac{1}{4}$ lin. Near *P. pusillus* but less parallel, the thorax smaller, the elytra rounded at the sides; dull black, the club of the antennæ and femora blackish.

Ceylon: Nuwara Eliya, in the mountains (ex *Motschoulsky*).

147. **Phlœonomus** (s. str.) **opacus.**

Phlœonomus (s. str.) *opacus* Cam., Trans. Ent. Soc. Lond. 1924, p. 168.

Black, opaque, abdomen greasy lustrous, subdepressed; thorax 4-fossulate; elytra longer than broad, extremely finely punctured; first five joints of antennæ and legs reddish-testaceous. Length 2 to 2·3 mm.

Very near *P. pusillus* Gr., but differing in the following respects: the antennæ are longer and less stout, the thorax a little more transverse, the median impressions much deeper and larger, the lateral ones also large and deep, the punctuation of the elytra more distinct.

Chakrata district. Simla Hills, 7000 to 8000 feet above the sea.

148. **Phlœonomus** (s. str.) **subopacus.**

Phlœonomus (s. str.) *subopacus* Cam., Trans. Ent. Soc. Lond. 1924, p. 168.

Black, subdepressed, elongate, subopaque; thorax without distinct impressions; elytra scarcely longer than broad, exceedingly finely and sparingly punctured; first six joints of the antennæ and legs reddish-testaceous. Length 2·75 mm.

Near *P. pusillus* Gr., but more elongate, much less opaque, the antennæ a little longer and less thick; thorax more transverse, the longitudinal and lateral impressions scarcely visible; the elytra much shorter. Head subtriangular, temples reduced to the orbital margin, eyes rather prominent, vertex with a small fovea on either side before the ocelli, finely and densely coriaceous, very sparingly, scarcely perceptibly punctured; antennæ with the 3rd to 5th joints small, 6th to 10th transverse, gradually increasing in width. Thorax widest at the middle, fully twice as broad as long, gradually narrowed and rounded in front, a little more narrowed posteriorly, discal impressions scarcely visible, only perceptible in certain positions, obliquely and indistinctly impressed before the posterior angles, densely and finely coriaceous, exceedingly finely and sparingly punctured. Elytra parallel, $1\frac{1}{2}$ times longer than the thorax, about as long as broad, coriaceous, exceedingly finely and very sparingly punctured. Abdomen densely coriaceous, exceedingly finely and sparingly punctured.

Simla Hills: Gahan, 7000 feet above the sea.

149. **Phlœonomus** (s. str.) **morosus.**

Phlœonomus (s. str.) *morosus* Cam., Trans. Ent. Soc. Lond. 1924, p. 169.

Black, subdepressed, elongate, subopaque; thorax without distinct impressions; elytra a little longer than broad, very finely, closely, and distinctly punctured; first six joints of the antennæ and legs reddish-testaceous. Length 2·75 to 3 mm.

Except for the longer elytra this insect scarcely differs in build from *P. subopacus*; it is, however, readily distinguished by the following differences: the antennæ are shorter and thicker and identical in structure with *P. pusillus* Gr., the puncturation is much less sparing and more distinct, especially on the elytra, that of the abdomen also is much closer and more definite.

Chakrata district: Sainj Khud, 6500 feet above the sea. In *Polyporus*.

150. **Phlœonomus** (s. str.) **singulare.**

Omalium singulare Kr., Arch. Naturg. xxv, 1859, i, p. 181.

Subdepressed, oblong-ovate, moderately shining, ferruginous or pitchy brown, the head, apex of the elytra, and abdomen except the base and apex blackish. Thorax lightly impressed on either side of the median line. Antennæ with the first five joints testaceous, the rest black. Legs testaceous. Length 2 mm.

Head coriaceous, with a few small punctures. Antennæ with the 6th to 10th joints transverse, gradually increasing in width, the penultimate about twice as broad as long. Thorax twice as broad as long, the sides evenly rounded except before the posterior angles, where they are straighter and more narrowed, disc on either side of the middle lightly, longitudinally impressed, more deeply and broadly at the sides, finely and rather sparingly punctured, coriaceous. Elytra broader and twice as long as the thorax, as closely but less finely punctured, coriaceous. Abdomen coriaceous, extremely finely and sparingly punctured.

Ceylon. Nilgiri Hills.

151. **Phlœonomus** (s. str.) **assamensis,** sp. n.

Subdepressed, oblong-ovate, greasy lustrous, pitchy black, the sides of the thorax posteriorly, the elytra except the sides and apex, and the apex of the abdomen ferruginous. Thorax lightly, longitudinally impressed on either side of the middle. Antennæ with the first five joints testaceous, the rest black. Legs testaceous. Length 2·3 mm.

Differs from *P. singulare* Kr. in the darker colour, thinner antennæ, less convex thorax, the sides of which are indistinctly angulate in the middle, the head devoid of punctures and more strongly coriaceous, the whole insect more strongly coriaceous and less shining, the thoracic impressions a little stronger, the puncturation of the thorax and elytra scarcely differing.

Assam: Naga Hills, alt. 4000 feet (*S. N. Chatterjee*).

152. Phlœonomus angulatus.

Phlœonomus angulatus Motsch., Bull. Mosc. xxxiv, 1861, i, p. 142.

Shining, elongate, depressed, pitchy black, sparingly punctured; abdomen black, very shining, mouth, base of the antennæ, and legs reddish-testaceous, posterior angles of the thorax and base of the elytra brownish-testaceous; thorax transverse, bordered, finely and sparingly punctured, the sides straight, the anterior angles rounded, the posterior rectangular, elevated; elytra scarcely wider than the thorax, quadrate, sparingly punctured; abdomen almost as broad as the elytra, smooth, rounded and narrowed behind, the sides reflexed, anus pitchy. Length $\frac{2}{3}$ lin.; breadth $\frac{1}{4}$ lin.

Colombo (ex *Motschoulsky*).

153. Phlœonomus (Xylostiba) himalayicus.

Phyllodrepa himalayica Cam., Trans. Ent. Soc. Lond. 1924, p. 166.

A somewhat anomalous species; of the facies of *Phyllodrepa*, yet in the structure of the posterior tarsi and the 4th joint of the maxillary palpi agreeing with *Phlœonomus*.

Elongate, subparallel, shining, black, moderately finely, closely punctured; first five joints of antennæ and legs reddish-testaceous; last joint of maxillary palpi black. Length 3·5 to 4·3 mm.

A rather convex, narrow subparallel species almost free from pubescence; much narrower and much more finely punctured than *Phyllodrepa floralis* Payk., and with more slender antennæ. Head subtriangular, eyes large and prominent, their diameter greater than the length of the rounded post-ocular space, vertex with a small fossa before the ocelli on either side, the front anteriorly impunctate, the rest of the surface moderately finely, closely punctured, the neck more finely and closely punctured; antennæ with the 3rd to 5th joints slender and a little longer than broad, gradually decreasing in length, the 6th to 10th transverse, not increasing in width after the 7th joint, the 10th a little longer than the 9th. Thorax rather convex, $1\frac{1}{2}$ times broader than long, widest at the middle, the sides gently rounded and narrowed to the rounded anterior angles, less strongly narrowed in a nearly straight line to the

obtuse posterior angles ; disc without impressions, moderately finely and closely punctured. Elytra broader than and nearly twice as long as the thorax, parallel, closely and rather less finely punctured than the thorax, more or less longitudinally strigose. Abdomen elongate, parallel, greasy lustrous, exceedingly finely and rather closely punctured, finely coriaceous.

Chakrata district, 6500 to 8000 feet. Simla Hills, 9000 feet above the sea.

Key to the Species of the Subgenus Phlœostiba.

1. Temples scarcely visible; thorax strongly transverse ..... *pinicola* Champ., [p. 147.
Temples well developed, half as long as the diameter of the eye; thorax slightly transverse ..... *temporalis*, sp. n., [p. 148.

154. Phlœonomus (Phlœostiba) pinicola.

Phlœonomus (*Phlœostiba*) *pinicola* Champ.*, E. M. M. lvi, 1920, p. 242.

Narrow, parallel, depressed, shining pitchy black, elytra testaceous, slightly infuscate at the base and towards the apical margin, abdomen less shining than the fore-parts. Antennæ black, the first five joints reddish. Legs testaceous. Length 2 to 2·6 mm.

Intermediate in build between *P. planus* Payk. and *P. lapponicus* Zett., narrower than the former, broader than the latter ; it has the lustre of the former and the sculpture is very similar. Head subtriangular, eyes large, temples very short, lightly impressed on either side within the antennal tubercles, before the ocelli with a short narrow impression, finely, moderately closely punctured and with a fine ground-sculpture of lines radiating from the punctures. Antennæ with the 1st joint rather stout, the 3rd a little longer than the 2nd, 4th moniliform, 5th slightly, 6th to 10th more strongly transverse. Thorax transverse, the sides rounded in front, narrower and slightly sinuate behind, the posterior angles obtuse, in the middle line with a small impression before the scutellum and another at the anterior margin and with a trace of an impressed line, before the base and on the apical margin on either side with a small fovea, the puncturation similar to that of head, but a little closer, the ground-sculpture similar. Elytra about half as long again as the thorax and with very similar sculpture. Abdomen less shining than the fore-parts, coriaceous, exceedingly finely, sparingly punctured.

Kumaon : W. Almora, Tanakpur, Ranikhet (*H. G. Champion*). Mussoorie district : Arni Gad. Chakrata district : Chulli Khud, alt. 6000 to 8000 feet (*Cameron*).

155. **Phlœonomus (Phlœostiba) temporalis**, sp. n.

Elongate, narrow, depressed, moderately shining, the head and abdomen black, thorax pitchy, elytra testaceous. Antennæ with the first five joints testaceous, the rest black. Legs testaceous. Length 3 mm.

A somewhat abnormal species in the comparatively long temples and only slightly transverse thorax. Very similar in colour to *P. pinicola* Champ., but much narrower, more depressed, less shining, the antennæ thinner, the temples well developed, the thorax much less transverse, the whole insect more finely punctured. Head a little broader than the thorax, subtriangular, the temples about half as long as the diameter of the eye; vertex flat, before each ocellus with a long, narrow sulcus, finely, sparingly punctured and with a more or less retiform ground-sculpture. Antennæ short, the penultimate joints fully twice as broad as long. Thorax slightly transverse, the sides in front almost straight and converging backwards to a little behind the middle, from thence slightly arcuate to the briefly rounded posterior angles; anterior border on each side with a small fovea, in the middle with a very fine raised line, finely and moderately closely punctured and with a fine, more or less longitudinal ground-sculpture. Elytra a little broader and a fourth longer than the thorax, less finely and more closely punctured. Abdomen coriaceous, nearly impunctate.

Manipur: Shugnu, alt. 3000 feet, 30. iii. 24 (*S. N. Chatterjee*).

Genus **PHILORHINUM** Kraatz.

Philorhinum Kraatz, Nat. Ins. Deutsch. ii, 1858, p. 965; Fauvel, Faun. Gallo-Rhén. iii, 1872, p. 83; Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 153; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 727.

Small, narrow, and depressed species. Head gradually narrowed behind the eyes, these large and prominent. Gular sutures widely separated, diverging behind. Labrum deeply emarginate, the anterior angles acute and directed inwards. Mandibles rather slender, pointed, edentate, the outer margin more or less sinuate. Inner lobe of the maxilla narrow, its apex pointed and bent inwards, the inner margin with a few long hairs; outer lobe widened apically, truncate, with long setæ directed inwards. Maxillary palpi short and stout, the 1st joint very small, 2nd and 3rd short, obconical, 4th a little longer than the 3rd, conical. Mentum short, transverse, trapezoidal, the sides straight, anterior border scarcely emarginate. Tongue broad, membranous, broadly, triangularly emarginate. Labial palpi short, stout, the 1st joint twice as long as broad, 2nd broader than long, 3rd narrower and a little longer than the 1st. Prosternum short, its process long and

pointed, the coxæ contiguous. Mesosternum simple, its process short, extending about half the length of the coxæ, these narrowly separated. Metasternal process pointed, meeting the preceding. Tibiæ finely spinose. Anterior tarsi with the first four joints short, 1st a little longer than 2nd, 3rd short, transverse, 4th crescentic, 5th as long as the four preceding together. Middle with the 1st and 2nd joints of equal length, each equal to the 3rd and 4th together, these short, the 4th crescentic, 5th about as long as 1st and 2nd together. Posterior fully as long as half the tibia, the 1st joint moderately long, 2nd shorter, 3rd yet shorter, 4th crescentic, 5th scarcely longer than the 1st.

The species are found on flowers. The genus is represented in this Fauna by a single species.

156. **Philorhinum florivagum.**

Philorhinum floricola Champ.*, E. M. M. lvi, 1920, p. 242 (præoc.).
Philorhinum florivagum Champ.*, E. M. M. lix, 1923, p. 80.

Narrow, elongate, slightly widened behind, rather shining, the head and thorax reddish-, the elytra yellow-testaceous, abdomen reddish, more or less extensively infuscate or pitchy black. Antennæ reddish-testaceous. Legs testaceous. Length 2 to 3 mm.

More elongate and parallel than *P. sordidum* Steph., the fore-parts less coarsely punctured, the eyes larger, the thorax less transverse. Head a little narrower than the thorax, even, ocelli scarcely visible, closely, moderately finely punctured. Antennæ gradually and slightly thickened from base to apex, the penultimate joints scarcely transverse. Thorax distinctly transverse, narrower behind, the sides evenly rounded, the angles rounded, the sculpture as on the head. Elytra twice as long as the thorax, parallel, more coarsely punctured than the thorax. Abdomen elongate, a little widened behind, extremely finely, rather closely punctured and coriaceous.

Kumaon: W. Almora, iii. 1918, 1919; Sinni Gad, Garhwal, vi. 1920, alt. 4000 feet (H. G. Champion on flowers of *Machilus*). Chakrata district: Bodyar, Jadi Gad, alt. 7000 to 8300 feet (*Cameron*).

Genus **MANNERHEIMIA** Mäkl.

Mannerheimia Mäklin, Öfv. Finsk. Vet. Soc. Forhand. xxii, 1879–80, p. 80; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 725; Luze, W. Z. B. lv, 1905, p. 251.

Oval-oblong, more or less convex species with scarcely visible ocelli and without a "tooth" † at the posterior

† This tooth is the appearance when seen from above of the prominent orbital margin.

margin of the eye. Gular sutures separated, diverging behind. The mouth-parts, according to Luze (*l. c.* p. 252), have the following structure : The labrum is reniform, three times broader than long, the sides crescentically rounded, coriaceous, the anterior part membranous and slightly, rather broadly emarginate, on each side the emargination with long inwardly directed hairs, on the upper side with a transverse row of longer hairs, at the junction of the membranous and coriaceous portions with shorter setæ. Mandibles broad, with pointed apex, the right with a small tooth behind the middle, the left simple. Outer lobe of the maxilla narrow, coriaceous, its apex with a pencil-shaped tuft of hairs, at the outer border with a few curved hairs. Inner lobe longer than the outer, in great part coriaceous, at the apex with a rather strong, curved, pointed tooth, behind it with some shorter teeth and setæ. Maxillary palpi 4-jointed, the 1st joint short, 2nd thickened towards the apex, obviously shorter than the 4th, the 3rd obconical, one-fourth longer than broad, the 4th broadest at the middle, in the last fourth rather strongly narrowed, more than twice as long as the preceding. Tongue membranous, in front broadly, feebly triangularly emarginate, on the front margin on each side with some slightly curved hairs, the finely ciliate paraglossæ extending as far as its outer angles. Labial palpi 3-jointed, the joints gradually decreasing in thickness, the 1st scarcely as long as broad, shorter than the last, 2nd distinctly transverse, the 3rd oval. Mentum rather transverse, trapeziform, coriaceous, with rounded anterior margin. Prosternal process narrow, the anterior coxæ contiguous. Mesosternum simple, its process narrow and pointed, free, extending two-thirds the length of the coxæ, these narrowly separated. Metasternal process short, its apex rounded and separated from the mesosternum by an intercoxal plate. Tibiæ finely, sparingly spinose. Anterior and middle tarsi with the first four joints short, triangular, the posterior with the first four joints rather short, subequal, the 5th shorter than the four preceding together.

One species is so far known in our Fauna.

157. Mannerheimia goriensis.

Mannerheimia goriensis Champ.*, E. M. M. lxi, 1925, p. 103.

Shining ; head black, the rest more pitchy with feeble metallic reflex, the sides of the thorax obscurely, shoulders and apical margin of the elytra more distinctly fusco-testaceous. Antennæ black, the first five joints testaceous. Legs testaceous. Length 2·5 mm.

Much smaller than *M. arctica* Er., the antennæ shorter and more slender, the thorax smaller and narrower, the punctuation less coarse. Head subtriangular, convex, bi-impressed

in front, moderately finely and moderately closely punctured. Antennæ with the 7th to 10th joints moderately transverse. Thorax transverse, convex, the sides lightly rounded and a little narrower in front, impressed at the obtusely rounded posterior angles, before the scutellum with a longitudinal impunctate space, less finely punctured than the head. Elytra fully twice as long as the thorax, widened behind, rather more coarsely punctured. Abdomen very finely coriaceous, scarcely perceptibly punctured. A single ♀ example.

E. Kumaon: Gori Valley, alt. 7000 feet (*H. G. Champion*).

Genus **LATHRIMÆUM** Er.

Lathrimæum Er., Käf. Mark. Brand. i, 1837–39, p. 624; id., Gen. Spec. Staph. 1840, p. 868; Lacord., Gen. Col. ii, 1854, p. 141; Kraatz, Naturg. Ins. Deutsch. ii, 1858, p. 943; Jacq. du Val, Gen. Col. d'Eur. ii, 1859, p. 75; Thoms., Skand. Col. iii, 1861, p. 195; Fauvel, Fn. Gallo-Rhén. iii, 1872, p. 92; Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 119; Casey Ann. N. York Ac. vii, 1892–94, p. 41; Ganglbauer, Käf. Mitt. Eur. ii, 1895, p. 721; Luze, W. Z. B. lv, 1905, p. 53.

Eudeliphrum Champ.*, E. M. M. lvi, 1920, p. 244.

More or less oval-oblong convex species with large eyes occupying nearly the whole side of the head, the orbital margin is prominent, and viewed from above gives the appearance of a small tooth immediately behind the eye; temples oblique, converging backwards to the stout neck; front with a deep impression on each side behind the antennal tubercles and with a slighter one before each ocellus. Antennæ slender. Gular sutures separated and diverging behind. Labrum transverse, emarginate in front. Mandibles stout, pointed, edentate. Maxillary palpi with 1st joint very small, 2nd moderately long, slightly thickened towards the apex, 3rd about half as long as the 2nd, 4th about as long as the 2nd and 3rd together, narrowed towards the apex. Inner lobe of the maxilla narrow, its apex pointed and incurved, the inner margin spinose; outer lobe wider, ciliate at the apex. Mentum transverse, trapezoidal, all the margins straight. Tongue broad, membranous, slightly, broadly emarginate, in the middle with a chitinous rod. Labial palpi short, the 1st joint scarcely as long as broad, the 2nd narrower, transverse, the 3rd narrower and about as long as the first two together. Prosternal process pointed, the coxæ contiguous; epimera triangular. Mesosternal process pointed, its sides elevated and extending about two-thirds of the length of the coxæ, these moderately separated. Metasternal process short, its apex rectangular and meeting the mesosternal process. Tibiæ moderately spinose externally. Anterior and middle tarsi short, the first four joints cordiform. Posterior tarsi with the first two

joints rather short, subequal, the 3rd and 4th shorter, subequal, the 5th longer than the two preceding together, about half as long as the tibia. The species are found in damp leaves and debris, and none are known south of the Equator.

Key to the Species.

1.	Entirely black or pitchy-black species, at most with the margins of the thorax and elytra reddish	2.
	Species entirely or in great part brown	4.
2.	Deep black, the margins of the thorax concolorous; the first two joints of the antennæ pitchy	*gracilipalpe* Champ., [p. 153.
	Margins of the thorax reddish	3.
3.	Larger (4·5 mm.), more shining, metallic black, the first two joints of the antennæ clear testaceous	*nigrum* Cam., p. 152.
	Smaller (2·75 mm.), less shining, the posterior margins and postero-external angles of the elytra reddish; 1st joint of antennæ reddish testaceous	*cavicrus* Champ., [p. 153.
4.	Larger (4·5 mm.) and more robust; head and abdomen black; middle of thorax sulcate	*monticola* Cam., p. 154.
	Smaller (2·5 mm.); head reddish, only the base black, abdomen brownish; middle of thorax not sulcate	*rugosum* Champ., [p. 154.

158. **Lathrimæum nigrum.** (Plate I, fig. 11.)

Lathrimæum nigrum Cam., Trans. Ent. Soc. Lond. 1924, p. 170.

Elongate-oval, subconvex, metallic black, shining, first two joints of antennæ and legs reddish-testaceous. Length 4·5 mm.

Size and build of *L. monticola* Cam., but entirely black and shining, the puncturation of the head and thorax coarser and much less close, the penultimate joints of the antennæ distinctly longer than broad. Head with the front elevated in the middle and nearly impunctate, in front of the ocelli with a short oblique impressed line, moderately finely and closely punctured, scarcely rugose; all the joints of the antennæ distinctly longer than broad. Thorax less transverse than in *monticola*, otherwise similarly built and with similar impressions, puncturation very similar to that of the head except in the impressions, where it is coarser and closer and somewhat rugose. Elytra about $2\frac{1}{2}$ times longer than the thorax, punctured as in the thoracic impressions, abdomen rather shining, impunctate.

Simla Hills: Gahan, 7000 feet above the sea.

159. **Lathrimæum gracilipalpe.**

Eudeliphrum gracilipalpe Champ.*, E. M. M. lvi, 1920, p. 244.

Moderately elongate, broad, shining, sparsely, very finely pubescent; black, the basal joints of the antennæ and the tibiæ and tarsi obscurely rufescent, femora and palpi piceous; head and thorax uneven, coarsely, closely punctured, the head almost smooth in front, the elytra coarsely, confusedly punctate, with indications of smooth raised lines on the disc, the abdomen alutaceous and minutely punctulate. Head rather small, short, narrowly, subangularly extended on each side behind the eyes (so that the temples are dentiform), deeply excavate in front of them and between the ocelli, the eyes rather large; antennæ long, slender, joints 2 to 10 conical, the 3rd nearly twice as long as the 2nd, 6th to 10th gradually shorter and stouter, 11th acuminate-ovate. Thorax strongly transverse, much wider than the head, arcuately dilated anteriorly and sinuously narrowed behind the middle, the posterior angles rectangular, the margins rather broadly explanate and finely crenulate; the disc interruptedly sulcate, deeply obliquely bifoveate before the base and broadly excavate laterally about the middle. Elytra wider and more than twice as long as the thorax. Abdomen conical. Anterior tibiæ of the ♂ sharply, triangularly dilated at about the middle beneath. Length 4 to $4\frac{3}{4}$ mm.; breadth $1\frac{2}{3}$ to 2 mm.

Larger, more oblong, less convex and less shining, and without the metallic reflex of *L. nigrum* Cam.; the head is more closely and rugosely punctured, the antennæ a little more slender, with the 1st joint only reddish; the thorax is more transverse, obtusely angulate about the middle, the lateral impressions larger, more closely and rugosely punctured; elytra more coarsely punctured.

Kumaon: W. Almora (*H. G. Champion*).

160. **Lathrimæum cavicrus.**

Lathrimæum cavicrus Champ.*, E. M. M. lxi, 1925, p. 102.

Greasy lustrous, black or pitchy, the sides of the thorax rather broadly, the posterior margin narrowly reddish; elytra with the lateral and apical margins reddish. Antennæ pitchy, the 1st joint testaceous. Legs testaceous. Length 2·5 to 2·75 mm.

About the size and build of *L. fusculus* Kr., but less shining, the head rather more finely and closely punctured, thorax in the middle finely sulcate, more closely and rugosely punctured, elytra a little more finely punctured. Head densely and finely punctured, except in front, bifoveate. Thorax strongly transverse, the sides rounded and explanate, before the base with

an arcuate impression, on either side about the middle with a deep transverse groove, densely and finely punctured. Elytra broader and much longer than the thorax, more strongly punctured.

♂: Anterior tibiæ emarginate before the apex internally and angulate at the middle.

Kumaon: W. Almora, Siahidevi, alt. 6000 feet, x. 1918 (*H. G. Champion*).

161. **Lathrimæum monticola.**

Lathrimæum monticola Cam., Trans. Ent. Soc. Lond. 1924, p. 169.

Elongate-oval, subconvex, rather shining, head and abdomen black, thorax and elytra brown, the sides of the former broadly, of the latter, narrowly reddish-testaceous; first two joints of the antennæ and legs reddish-testaceous. Length 4·5 mm.

Colour of *L. melanocephalum* Ill., but without metallic reflex, shorter, broader, less parallel, less shining and with longer and more slender antennæ. Head black, the front in the middle raised, shining and simply punctured, the rest of the surface closely, moderately finely and rugosely punctured and opaque, before the ocelli on either side with a short, oblique, shining impunctate keel; eyes rather large, post-ocular region oblique; antennæ slender, the 3rd to 8th joints longer than broad, gradually decreasing in length, the 9th and 10th about as long as broad. Thorax transverse, more shining than the head, the anterior border bisinuate, widest at the middle, the sides from thence evenly rounded in front and behind, the anterior and posterior angles obtuse; before the base with a deep crescentic impression, in the middle line in front with a slight longitudinal impression not reaching the anterior border, on either side with a deep impression connected with the basal one, puncturation moderately fine, close and rugose. Elytra a little wider at the base than the base of the thorax, $2\frac{1}{2}$ times as long, slightly widened behind, subconvex, closely and more coarsely punctured than the thorax with traces of raised lines. Abdomen entirely black, greasy lustrous, exceedingly finely and sparingly punctured, alutaceous.

Chakrata and Simla districts, 7000 to 9000 feet above the sea.

162. **Lathrimæum rugosum.**

Lathrimæum rugosum Champ.*, E. M. M. lxi, 1925, p. 103.

In build approaching *L. atrocephalum* Gyll., but much smaller, the colour paler, the antennæ shorter, the head more closely and rugosely punctured. Head ferruginous, the base blackish,

thorax reddish-testaceous, elytra pale brown, the apex and lateral margins testaceous. Antennæ pitchy, the first four joints testaceous. Legs testaceous. Length 2·5 mm.

Head depressed on each side in front and with a transverse tumid space on the vertex before the ocelli, closely, rugosely punctured. Antennæ rather long, slender, the 7th to 11th joints gradually becoming stouter. Thorax strongly transverse, narrowed in front and behind, the disc with an angulate impression extending outwards to near the lateral margins, these explanate, closely, rugosely punctured. Elytra broader and nearly three times longer than the thorax, more coarsely, subseriately punctured.

W. Almora, Upper Gumti Valley, alt. 6000 feet, iv. 1919 (*H. G. Champion*).

Genus **ARPEDIUM** Er.

Arpedium Er., Käf. Mark. Brand. i, 1837–39, p. 618; id., Gen. Spec. Staph. 1840, p. 858; Lacord., Gen. Col. ii, 1854, p. 139; Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 957; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 72; Thoms., Skand. Col. iii, 1861, p. 188; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 85; Rey, Ann. Soc. Linn. Lyon., xxvii, 1880, p. 144; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 717.

More or less elongate, subdepressed insects with the elytra usually more or less widened behind. Antennæ slender. Temples distinct, rounded, constricted behind at the thick neck. Gular sutures fused in the middle, diverging behind. Labrum transverse, membranous and broadly emarginate in front, the anterior angles rounded. Inner lobe of the maxilla narrow, the apex uncinate, the inner margin strongly toothed; outer lobe shorter and broader, densely ciliate at the apical margin. Maxillary palpi with 1st joint very small, 2nd moderate, widened apically, 3rd as long as the 2nd and similarly widened, 4th distinctly longer than the 3rd, narrowed from base to apex. Mentum short, trapezoidal, the margins straight. Tongue broad, broadly and slightly emarginate. Labial palpi very short, the first two joints broader than long, the 2nd narrower than the 1st, the 3rd narrower, about as long as the two preceding together. Prosternal process very short, scarcely produced between the anterior coxæ, which are contiguous; epimera narrowed and rounded internally. Mesosternal process very short, scarcely produced between the coxæ, these contiguous. Metasternal process short, not produced between the coxæ. Tibiæ with a few spines. Tarsi all clothed with long fine hairs, the anterior pair short, the first four joints subequal; middle with the 1st joint moderate, 2nd to 4th short and subequal; posterior longer than half of the tibia, 1st joint a little longer than the 2nd, moderately long, 3rd and 4th shorter, 5th longer than the 1st.

The species live in moss and under stones. Only one is recorded from India, and there is some doubt as to whether it belongs to this genus.

163. **Arpedium pallens.**

Arpedium pallens Motsch., Bull. Mosc. xxx, 1857, iv, p. 493.

Half the size of *A. quadrum*, more depressed, and of an almost uniform clear testaceous, the head and middle of the abdomen slightly infuscate. Eyes black. Thorax transverse, finely punctured, and with a light horseshoe-shaped impression on the disc. Elytra twice as long as the thorax, much more strongly punctured, on either side of the suture with a feebly-raised fine keel.

Bombay (ex *Motschoulsky*).

Genus **AMPHICHROUM** Kr.

Amphichroum Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 947; Berl. Ent. Zeit. xii, 1868, p. 345; Fauvel, Fn. Gallo-Rhén. iii, 1872, p. 90; Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 93; Casey, Bull. Calif. Acad. Sci. ii, 1886, p. 240; id., Ann. N. York Ac. vii, 1892–94, p. 412; Schwarz, Proc. Ent. Soc. Wash. ii, 1892, p. 396; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 715.
Stachygraphis Horn, Trans. Am. Ent. Soc. x, 1882–83, p. 285.

More or less subconvex oval-oblong species. Head subtriangular, constricted behind, temples small; deeply foveate or sulcate before the ocelli. Antennæ slender, the joints longer than broad. Labrum transverse, truncate or slightly emarginate in front. Mandibles short, stout, pointed, edentate†. Inner lobe of maxilla narrow, deeply emarginate before the pointed apex, sparingly furnished with rather short spines; outer lobe rather sparingly ciliate. Maxillary palpi with small 1st joint, the 2nd and 3rd short and stout, the latter a little shorter than the former, 4th stout, bluntly pointed, about twice as long as the 3rd. Tongue broad, in the middle with deep, narrow triangular excision. Labial palpi short and thick, the first two joints broader than long, the 2nd narrower than the 1st, the 3rd narrower and a little longer than the 2nd. Prosternal process narrow, acute, the coxæ contiguous; epimera narrow, triangular. Mesosternal process very narrow and pointed, extending for about two-thirds the length of the coxæ and meeting the acute metasternal process; coxæ very narrowly separated. Tibiæ externally with a few short spines. Tarsi clothed with long fine hairs; the anterior and middle pairs with the 1st joint a little longer than the 2nd, 2nd to 4th short, subequal, 5th as long as the four preceding together; posterior longer than half the tibia, the first four joints gradually

† In *Amphichroum cribriceps* Fauv. from Australia the right mandible has a distinct forwardly directed tooth.

decreasing in length, the first of them but little longer than the 2nd, this about as long as the two following together, the 5th nearly as long as the four preceding together. In the males the anterior tibiæ are more or less modified and the tarsus more dilated.

The genus is found on flowers and is widely distributed.

Key to the Species.

1. Antennæ testaceous, more or less infuscate towards the apex ..... *pindarense* Champ., [p. 157.
   Antennæ black, the first three joints testaceous ..... 2.
2. Palpi pitchy; head blackish or at least infuscate on the disc ..... *anthobioides* Champ., [p. 158.
   Palpi testaceous; head entirely reddish-testaceous ..... *monticola* Cam., p. 157.

164. Amphichroum pindarense.

Amphichroum pindarense Champ.*, E. M. M. lvi, 1920, p. 243.

♂ reddish-testaceous, moderately shining, elytra paler; abdomen black or pitchy, the side-margins narrowly and obscurely lighter. ♀ unicolorous reddish-testaceous. Antennæ testaceous, more or less blackish towards the apex. Legs testaceous. Length 2·8 to 3·8 mm.

Smaller than *A. hirtellum* Heer, differently coloured, less pubescent, the thorax shorter, more narrowed behind, punctuation finer and closer, the antennæ shorter. Head sulcate on either side between the eyes, closely punctured. Antennæ rather long, all the joints longer than broad, the 11th much longer than 10th. Thorax transverse, broader in the ♂, convex, the sides rounded, a little explanate, a little narrower in front, the angles obtuse, before the scutellum with a small fovea, in the middle more or less sulcate, closely and very finely punctured. Elytra as broad as (♂) or a little broader than (♀) and about twice as long as the thorax, closely and moderately coarsely punctured. Abdomen finely coriaceous, extremely finely and very sparingly punctured.

♂: First joint of the anterior tarsi dilated; anterior and middle femora thickened; anterior tibiæ thickened apically, the intermediate stout, curved, and strongly sinuate internally.

Sunderdhunga and Pindar Valley, altitude 8000 to 12,000 feet, vi. 1919, vii. 1920 (*H. G. Champion*). On the flowers of *Symplocos cratægoides*.

165. Amphichroum monticola.

Amphichroum monticola Cam., Ann. Mag. Nat. Hist. (10) ii, 1928, p. 558.

Very closely allied to *A. pindarense* Champ., and only

differing in the following respects : a little smaller, the head more finely and more closely punctured, the antennæ distinctly shorter, with only the first three joints testaceous, the penultimate joints and especially the last much shorter (although distinctly longer than broad), the thorax a little shorter and more transverse, a little more finely and more closely punctured. Length 3 mm.

♂: Middle tibiæ curved and strongly sinuate internally.

Tibet : Tropde, alt. 11,000 feet, 23. vi. 1924.

166. Amphichroum anthobioides.

Amphichroum anthobioides Champ.*, E. M. M. lxi, 1925, p. 104.

♂: Head reddish-testaceous, infuscate on the vertex ; thorax pitchy, all the margins narrowly testaceous ; elytra testaceous ; abdomen black. Antennæ black, the first three joints testaceous. Legs testaceous. Intermediate tibiæ curved, sinuate within. ♀: Head black, thorax darker, size larger. Length 1·75 to 2·5 mm.

Much resembling an *Anthobium* in facies. Rather thickly pubescent and moderately shining. Head small, before the ocelli † with a narrow sulcus, the vertex with a few fine punctures, the front more or less coriaceous. Antennæ extending beyond the humeral angles, all the joints longer than broad. Thorax transverse, convex, the sides evenly rounded and narrowly explanate, finely, moderately closely punctured. Elytra fully twice as long as the thorax, widened behind, more coarsely and closely punctured. Abdomen conical, finely, sparingly punctured and without ground-sculpture.

E. Kumaon : Gori River, Burphu, alt. 11,000 feet (*H. G. Champion*). In thistles.

Genus LESTEVA Latr.

Lesteva Latr., Préc. caract. Ins. 1796, p. 75 ; Er., Käf. Mark. Brand. i, 1837–39, p. 616 ; id., Gen. Spec. Staph. 1840, p. 855 ; Lac., Gen. Col. ii, 1854, p. 137 ; Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 930 ; Jac. du Val, Gen. Col. d'Eur. ii, 1858, p. 71 ; Thoms., Skand. Col. iii, 1861, p. 182 ; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 101 ; Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 63 ; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 712 ; Luze, W. Z. B. liii, 1903, p. 179.

Elongate, more or less depressed and distinctly pubescent species. Head constricted behind the temples, the neck thick. Gular sutures fused in the middle, diverging behind. Labrum transverse, coriaceous behind, membranous in front and slightly emarginate in the middle. Mandibles pointed, each with a sharp tooth about the middle. Inner lobe of the

† Champion states that the ocelli are wanting, but this is certainly an error

maxilla narrow and pointed, its inner margin densely and finely spinose ; outer lobe narrow, its apex pointed and finely and shortly ciliate. Maxillary palpi with the 1st joint very small, 2nd elongate, curved and thickened towards the apex, 3rd very short, not much longer than broad, narrower than the preceding, 4th elongate, narrower and four or five times longer than the 3rd. Mentum transverse, trapezoidal. Tongue membranous, split to the base into two moderately broad lobes. Paraglossæ finely ciliate. Labial palpi with the 1st joint stout, about twice as long as broad, 2nd scarcely longer than broad, 3rd elongate, narrower, about as long as the two preceding together. Thorax more or less cordiform. Prosternal process sharply pointed, extending about half the length of the coxæ, these contiguous. Mesosternum keeled, its process acutely pointed, extending but little between the contiguous coxæ. Metasternal process obtuse, not extending between the coxæ. Tibiæ ciliate. Anterior tarsi with the first four joints short, subequal, 5th shorter than the four preceding together. Middle tarsi with the 1st and 2nd joints subequal, longer than the 3rd, 3rd and 4th subequal, 5th about as long as the three preceding together. Posterior tarsi with the 1st joint elongate, as long or nearly as long as the two following together, 2nd to 4th gradually decreasing in length, 5th about as long as the two preceding together.

The genus is found in the Palæarctic Region and Japan in the vicinity of water or damp moss.

Key to the Species.

1. Larger (5 mm.), brown species, only the head black ..... *torrentum* Cam., p. 159.
   Smaller (4 mm.) species, entirely black .... *fluviata* Champ., p. 160.

167. **Lesteva torrentum.** (Plate I, fig. 12.)

Lesteva torrentum Cam., Trans. Ent. Soc. Lond. 1924, p. 171.

Pitchy black or brown, shining, sides of thorax completely margined, moderately coarsely, closely punctured ; elytra fully twice as long as the thorax, coarsely and closely punctured ; first two joints of the antennæ and legs brownish red. Length 4·5 to 5 mm.

In general appearance very similar to *L. longelytrata* Goeze, but differing in the following respects : the antennæ are longer and more slender, the puncturation of the head less close, the thorax a little wider in front and more coarsely punctured, the elytra much more coarsely punctured ; from *L. fluviata* Champ. it differs in the larger size, longer antennæ, wider thorax, and coarser puncturation. Head black, shining, before the ocelli with an oval impression on either side, clypeus impunctate, the rest of the surface moderately coarsely, closely

punctured ; eyes large and prominent, their diameter greater than the rounded post-ocular space. Antennæ slender, all the joints much longer than broad. Thorax cordiform, enlarged and rounded in front, strongly contracted behind, with an obsolete longitudinal impression on either side of the middle line, similarly punctured to the head. Elytra fully twice as long as the thorax, slightly widened behind, closely and rather more strongly punctured than the thorax. Abdomen closely and very finely punctured and alutaceous.

Mussoorie district, 6500 to 7000 feet above the sea.

168. **Lesteva fluviata.**

Lesteva fluviata Champ.*, E. M. M. lvi, 1920, p. 246.

Black, shining, finely pubescent. Antennæ pitchy, the first two joints often more or less reddish. Femora (except the apex) and tarsi testaceous, tibiæ infuscate. Length 3 to 4 mm.

In build very similar to *L. fontinalis* Ksw., but a little smaller, the elytra longer and more parallel, the puncturation coarser, and the antennæ shorter. Head deeply, longitudinally sulcate on each side, diameter of the eyes greater than the length of the post-ocular space, closely and moderately finely punctured. Antennæ slender, extending nearly to the middle of the elytra. Thorax broader than the head, cordate, the sides margined, the posterior angles rectangular, the disc often bi-impressed behind the middle, before the base transversely impressed, puncturation similar, but rather less close than that of the head. Elytra about two and a half times longer than the thorax, slightly widened behind, the postero-external angle broadly rounded, the sculpture like that of the thorax. Abdomen finely and closely punctured.

Var. Elytra with a large indeterminate patch on the basal half of the disc, and the legs entirely testaceous or obscure testaceous.

W. Almora (x., xi. 1917), and Kosi River, Ranikhet, alt. 3000 to 6500 feet (*H. G. Champion*).

Genus **GEODROMICUS** Redt.

Geodromicus Redt., Fn. Aust. ed. ii, 1858, p. 224; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 70; Thoms., Skand. Col. iii, 1861, p. 180; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 107; Rey, Ann. Soc. Linn. Lyon. xxvii, 1880, p. 53; Casey, Ann. N. York Acad. vii, 1893, p. 406; Ganglbauer, Käf. Mitt. Eur. ii, 1895, p. 710; Luze, W. Z. B. liii, 1903, p. 103.

Geobius Heer, Fn. Helv. i, 1838–42, p. 193.

Geodromus Heer, Fn. Helv. i, 1838–42, p. 572.

Moderately convex or subdepressed, oblong or oblong-ovate in form. Head with ocelli, transversely arcuately impressed

in front, constricted behind, the temples rounded, the neck thick. Gular sutures parallel in front, diverging behind. Labrum transverse, lightly emarginate in front, the emargination filled in by a membrane, the angles broadly rounded. Mandibles sharply pointed, each with two sharp teeth and a smaller obtuse one nearer the base or with three sharp teeth. Inner lobe of the maxilla with pointed incurved apex, the inner margin furnished with rather long, slightly curved, pointed spines and hairs; outer lobe pointed with short cilia. Maxillary palpi with the 1st joint very short, the 2nd elongate, slightly curved and thickened apically, the 3rd a little longer, slightly thickened apically, 4th narrower and shorter than the 3rd. Mentum transverse, trapezoidal. Tongue divided to the base into two diverging lobes. Paraglossæ finely ciliate. Labial palpi 3-jointed, the 1st joint longer than broad, the 2nd as long as the 1st, slightly thickened apically, 3rd a little narrower, as long as or a little longer than 2nd. Prosternal process short, pointed. Mesosternum simple, its process acuminate, short. Metasternal process short, obtuse, not extending between the coxæ, these contiguous. Tibiæ ciliate. Tarsi rather short, the 1st joint a little longer than the 2nd, 2nd to 4th subequal, short, the 4th with a lamellar appendage below, 5th shorter than the four preceding together; claws simple. Anterior tarsi more or less dilated in the ♂.

The species are found in the Palæarctic and Nearctic Regions near the banks of streams or in stream moss on boulders.

Key to the Species.

1.	Thorax strongly coriaceous	2.
	Thorax not or but slightly coriaceous	4.
2.	First two joints of antennæ testaceous	*brevitarsis* Champ., [p. 162.
	First two joints of antennæ dark	3.
3.	Larger (5-6 mm.). Elytra short, about as long as broad, distinctly dilated behind ..	*coriaceus* Cam., p. 162.
	Smaller (4·75 mm.). Elytra distinctly longer than broad, scarcely dilated behind.	*recticollis* Cam., p. 163.
4.	Thorax with median sulcus; narrower, more parallel species	*curvipes* Cam., p. 164.
	Thorax without median sulcus, but often with impression before the base; broader, less parallel species	5.
5.	Thorax cordiform, the sides strongly rounded and dilated in front and contracted behind.	*championi* Cam., p. 163.
	Thorax trapezoidal, the sides much less strongly contracted behind	6.
6.	Anterior angles of the thorax obtusely rounded, prominent, and upturned	*crassipalpis* Champ., [p. 164.
	Anterior angles of the thorax broadly rounded, not prominent, depressed	*amnicola* Champ., p. 163.

169. Geodromicus brevitarsis.

Geodromicus brevitarsis Champ.*, E. M. M. lxi, 1925, p. 104.

Black, head and thorax greasy lustrous, strongly coriaceous, elytra more shining. Antennæ black, the first two joints testaceous. Femora pitchy, tibiæ and tarsi testaceous. Length 3 mm.

Head small, in front with a transverse groove, on each side between the eyes with a rounded elevation; closely and finely punctured, strongly coriaceous; ocelli very small. Antennæ long and slender, nearly reaching the posterior margin of the elytra. Thorax transverse, subcordate, with a feeble transverse groove before the base, slightly longitudinally sulcate in front and obliquely impressed at the sides behind, moderately finely and rather sparingly punctured, strongly coriaceous. Elytra broader and twice as long as the thorax, slightly dilated behind, moderately finely and closely punctured.

N. Kumaon: Shelshel, alt. 15,750 feet, vii. 1924 (*H. G. Champion*).

170. Geodromicus coriaceus.

Geodromicus coriaceus Cam., Trans. Ent. Soc. Lond. 1924, p. 172.

Black, moderately shining, depressed, dilated posteriorly; head broadly excavate between the eyes, with impressed semicircular line on vertex, ocelli wanting; clypeus elevated in the middle and shining, the rest of the surface closely punctured and coriaceous. Thorax subcordate, closely punctured and coriaceous. Elytra widened behind, scarcely twice as long as the thorax. Antennæ and legs dark, tarsi ferruginous. Length 5 to 6 mm.

Narrower than *G. amnicola* Champ., the head much smaller, the thorax narrower, more coarsely punctured and coriaceous, the antennæ more slender. Head small, the rounded post-ocular space longer than the diameter of the prominent eye, closely rather superficially and finely punctured with coriaceous ground-sculpture; ocelli wanting; antennæ reaching the posterior border of the elytra, the 2nd joint the shortest, all the joints much longer than broad, the 11th longer than the 10th. Thorax slightly transverse, moderately rounded and widened in front, narrowed behind to the rectangular posterior angles, anterior angles rounded; disc with median impunctate line sometimes abbreviated in front, moderately finely and superficially punctured like the head and distinctly coriaceous. Elytra closely and much more coarsely punctured than the thorax, somewhat rugulose, but without ground-sculpture. Abdomen extremely finely and closely punctured and coriaceous.

Chakrata district: Chulli Khud and Binal Gad, 7000 to 8000 feet above the sea.

171. Geodromicus recticollis.

Geodromicus recticollis Cam., Trans. Ent. Soc. Lond. 1924, p. 172.

Black, moderately shining, subdepressed, subparallel, thorax transverse, not cordiform. Elytra 2½ times longer than the thorax. Antennæ with the first two joints and the tarsi pitchy testaceous. Length 4·75 mm.

Eyes rather large and prominent, their diameter greater than that of the rounded post-ocular area, ocelli present with a fovea in front of each ; puncturation fine and close, coriaceous. Antennæ long and slender. Thorax transverse, very slightly dilated anteriorly, moderately contracted posteriorly in a nearly straight line to the rectangular posterior angles ; anterior angles rounded ; disc with a smooth median line abbreviated in front and behind, puncturation rather fine, close, finely coriaceous. Elytra slightly widened behind, closely, moderately finely and rugosely punctured. Abdomen very finely punctured and finely alutaceous.

Chakrata district : Sainj Khud, 6500 feet above the sea.

172. Geodromicus amnicola.

Geodromicus amnicola Champ.*, E. M. M. lvi, 1920, p. 246.

Moderately broad, depressed, widened behind, shining. Head black, thorax dark brown, elytra lighter. Antennæ black. Legs pitchy, the tarsi testaceous. Length 4·5 to 6 mm. ; breadth 2 to 2·5 mm.

In build very similar to *G. coriaceus* Cam., but more shining, the thorax broader and with slightly longer elytra. Head deeply transversely impressed between the eyes, temples obtusely angulate, finely and closely punctured ; ocelli wanting. Antennæ reaching beyond the posterior margin of the elytra. Thorax transverse, subcordate, the sides sinuate behind, the posterior angles rectangular, in the middle before the base with a small impression and a more or less abbreviated narrow smooth space along the middle, and lightly longitudinally impressed on either side, the puncturation as on the head. Elytra dilated behind, more coarsely and less closely punctured.

Kumaon : Sunderhunga (*H. G. Champion*).

173. Geodromicus championi.

Geodromicus championi Cam., Trans. Ent. Soc. Lond. 1924, p. 171.

Black, shining, subdepressed, subparallel ; eyes large and prominent ; thorax subcordate ; antennæ, legs and palpi black, tarsi ferruginous. Length 7·5 mm.

Less depressed, more parallel, more shining, more coarsely punctured, and with more strongly contracted thorax and

more prominent eyes than *G. amnicola* Champ. Head rather broadly and deeply impressed on the vertex, ocelli visible, in front of each with an oblique impressed line, middle of front elevated, smooth, and shining, post-ocular region short, rounded; eyes large, prominent, puncturation moderately fine, close; antennæ long and slender, all the joints much longer than broad. Thorax distinctly transverse, strongly rounded and dilated in front and strongly contracted behind, anterior angles rounded, the posterior rectangular, disc with a smooth median line posteriorly, more or less obsolete in front, punctuation close, similar to that of the head. Elytra a little widened behind, about twice as long as the thorax, closely and more strongly punctured than the thorax. Abdomen with five segments exposed, very finely and closely punctured, coriaceous.

Chakrata district: Sainj Khud and Binal Gad, 6500 to 8000 feet above the sea.

174. Geodromicus crassipalpis.

Geodromicus crassipalpis Champ.*, E. M. M. lvi, 1920, p. 245.

Broad, flat, moderately shining, black. Antennæ black. Legs black, tarsi reddish-testaceous. Length 5 to 7 mm. Breadth $2\frac{3}{5}$ to $3\frac{1}{5}$ mm.

Head deeply transversely impressed between the eyes before the ocelli, temples obtusely angulate, moderately finely and moderately closely punctured, distinctly coriaceous. Antennæ reaching the posterior border of the elytra. Thorax transverse, trapezoidal, the sides in front feebly rounded and dilated, more narrowed and almost straight behind, towards the obtusely-rounded anterior angles a little explanate, posterior angles rectangular, in the middle before the base with a short longitudinal sulcus, towards either side with a rather large, superficial impression, moderately finely and rather closely punctured, feebly coriaceous. Elytra dilated behind, more than twice as long as the thorax, more coarsely and more closely punctured. Abdomen conical, coriaceous, closely punctured.

Kumaon: Sunderhunga, alt. 12,000 feet (*H. G. Champion*).

175. Geodromicus curvipes. (Pl. II. fig. 1.)

Geodromicus curvipes Cam., Trans. Ent. Soc. Lond. 1924, p. 173.

Black, shining, subparallel, thorax convex, scarcely broader than long, shortly sinuate before the posterior angles. Elytra $1\frac{1}{2}$ times as long as the thorax, slightly widened behind. Antennæ, palpi, and legs black, tarsi ferruginous; anterior tibiæ strongly curved. Length 5·3 mm.

Differs from all the preceding species in its narrower build, convex thorax, deep black and shining colour, and the strongly-curved anterior tibiæ (♂). Head rather large, the rounded post-ocular region shorter than the diameter of the prominent eye; ocelli present, in front of each with a large deep fovea; puncturation moderately fine, close. Antennæ long and slender, the 11th joint longer than the 10th. Thorax scarcely transverse, widest just before the middle, the sides rounded, equally narrowed in front and behind, sinuate before the slightly obtuse posterior angles; disc with a fine median furrow and an impression before the scutellum, closely, moderately finely punctured. Elytra closely and more coarsely punctured than the thorax. Abdomen extremely finely punctured and coriaceous. It somewhat resembles in build the European *globulicollis* Mannh.

Simla Hills: Gahan, 7000 feet above the sea.

Genus **HYGROGEUS** Rey.

Hygrogeus Rey, Ann. Soc. Linn. Lyon, xxvii, 1880, p. 56; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 710; Luze, W. Z. B. lii, 1902, p. 529.

This genus is very closely allied to *Geodromicus*, and only differs from it in the much longer 4th joint of the maxillary palpi, which is about twice as long as the preceding. Similarly, the 3rd joint of the labial palpi is also about double the length of the preceding. In *H. cyanipennis* the right mandible has three and the left two sharp teeth. The ocelli are very small or absent in some individuals. The tarsi are constructed as in *Geodromicus*, the anterior in the ♂ more or less dilated.

The species are found under boulders in running water and are so far only known from the Palæarctic Region.

Key to the Species.

1. Species in part blue-black, the posterior angles of the thorax sharp and prominent. *cyanipennis* Cam., [p. 165.
   Species entirely black, the posterior angles of the thorax obtuse ..... *kumaonensis* Champ., [p. 166.

176. Hygrogeus cyanipennis.

Hygrogeus cyanipennis Cam., Trans. Ent. Soc. Lond. 1924, p. 174.
Hygrogeus cyanipennis var. *atrocæruleus* Champ., E. M. M. lxi, 1925, p. 105.

Broad, depressed, enlarged posteriorly; head black, sub-opaque, vertex deeply excavate, transversely depressed behind the anterior border; ocelli distinct; thorax castaneous, cordiform; elytra depressed, dark blue or blue-black; abdomen pitchy-brown or black; antennæ very long and

slender, the first two joints and the legs reddish-brown. Length 9·75 mm., breadth 3 mm.

Eyes prominent, their diameter less than the somewhat prominent and rounded post-ocular area, finely, somewhat obsoletely and moderately closely punctured, distinctly coriaceous, finely and sparingly pubescent. Thorax slightly transverse, widest a little before the middle, the sides from thence rounded and narrowed to the rounded anterior angles, posteriorly more strongly narrowed and sinuate before the rectangular posterior angles which are foveate, disc medially narrowly sulcate except at the base, moderately finely and closely punctured, coriaceous, moderately shining. Elytra wider at the base than the base of the thorax, 1½ times longer, gradually widened behind, depressed, rather shining, puncturation closer and stronger than that of the thorax, rugulose and without ground-sculpture, finely pubescent. Abdomen narrowed behind, extremely finely and rather closely punctured, finely pubescent and with scarcely perceptible ground-sculpture.

Appears to be a very local species. I have only met with it over a small area in a stream at Chulli Khud (8000 feet) in the Chakrata district in May 1922.

The var. *atrocæruleus* Champ.* only differs from the type in the entirely blue-black colour and dark antennæ and legs.

N.E. Kumaon: Burphu, Gori Valley, alt. 11,500 feet; Laptel, alt. 15,000 feet, vii., viii. 1924 (*H. G. Champion*).

177. Hygrogeus kumaonensis.

Hygrogeus kumaonensis Champ.*, E. M. M. lxi, 1925, p. 105.
Hygrogeus kumaonensis var. *brevisulcus* Champ.*, id., ibid. p. 106.

Black, elongate, greasy lustrous, slightly dilated behind. Antennæ black. Femora pitchy, tibiæ and tarsi reddish. Length 5 to 7 mm. Breadth 1·75 to 2 mm.

♂: Head almost as broad as the thorax, narrowed in front, transversely sulcate behind the anterior border, the vertex deeply, somewhat quadrately excavated, ocelli very small, temples rounded and dilated, posteriorly rather closely and moderately finely punctured, feebly coriaceous, in front more shining and less closely punctured. Antennæ elongate, reaching beyond the middle of the elytra. Thorax a little broader than long, trapezoidal, the sides slightly rounded in front, more narrowed and slightly sinuate before the obtuse posterior angles, in the middle sulcate, the fundus of the sulcus finely carinate, in front near the middle line on each side lightly impressed, before the base more or less transversely impressed, the sculpture very similar to that of the head. Elytra broader than and nearly twice as long as the thorax, a little dilated

behind, moderately finely and rather closely punctured. Abdomen finely and closely punctured.

♀: Head smaller and less dilated behind the eyes, the thorax a little narrower, with more rounded sides. In facies and size this insect much resembles *Geodromicus plagiatus* F., but the puncturation is less deep and the thorax is broader.

N. Kumaon: Shelshel, alt. 15,750 feet, vii. 1924 (*H. G. Champion*).

The var. *brevisulcus* differs in the sulcus of the thorax being effaced behind and not carinate, the sides more rounded and dilated in front, and so more transverse.

N. Kumaon: Sangcha, Laptel, alt. 14,500 to 15,000 feet (*H. G. Champion*).

Genus **TETRADELUS** Fauv.

Tetradelus Fauv., Rev. d'Ent. xxiii, 1904, p. 90.

A genus which by the structure of the tarsi forms a special section of the OMALIINI (TETRADELI). Body broad, oblong, depressed, winged. Head denticulate behind the eyes, the base strongly constricted. Ocelli minute, widely separated. Eyes scarcely prominent. Labrum transverse, rounded, scarcely emarginate. Legs stout; tarsi 4-jointed, the first three joints short, the 1st shorter than the 2nd, the 4th longer than the three preceding together, claws stout, long, curved, with the base denticulate. In other respects similar to *Omalium*.

By the presence of ocelli this genus can only be placed in the OMALIINI, but it is very aberrant in view of the 4-jointed tarsi (instead of 5-jointed) and the denticles at the base of the claws. We therefore place it in a special section (TETRADELI), distinguished by this remarkable structure of the tarsi, and place it at the end of the OMALIINI. The only species it contains has the build and depressed form of a *Trigonurus*, although otherwise quite different (ex *Fauvel*).

178. **Tetradelus trigonuroides.**

Tetradelus trigonuroides Fauv., Rev. d'Ent. xxiii, 1904, p. 91.

Very black, shining, the palpi, the first four joints of the antennæ, and the legs testaceous, the knees and apices of the tibiæ somewhat infuscate. Antennæ as long as the head and thorax, the base slender, from the 8th joint strongly clavate, 3rd joint one-third longer than the 2nd, 4th quadrate, 5th to 7th a little longer than broad, 8th conical, 9th and 10th dilated, the 9th a little, the 10th more strongly transverse, 11th

pyriform, a little shorter than the two preceding together. Head transverse, very closely and very finely punctured, broadly and deeply sinuately impressed on each side, the front in the middle umbonate, almost smooth, shining, the anterior margin obtusely produced, antennal tubercles very small; eyes rather large, scarcely prominent. Thorax large, almost twice as broad as the head, one-third broader than long, strongly rounded in front, scarcely narrowed from the middle to the base, the anterior angles rounded, the posterior rectangular, scarcely visibly margined, nearly flat, slightly uneven, with an arcuate impression in front behind the head, the sides from the middle to the base slightly and triangularly explanate, very finely and closely punctured. Scutellum triangular, similarly punctured. Elytra quadrate, flat, very closely and finely, scarcely rugulosely punctured, from the shoulders to the apex obtusely elevated, on the disc with a rather distinct little keel abbreviated behind, and another shorter one between this and the suture, sutural stria absent; the apical margin straight, truncate. Abdomen broad, subdepressed, conical, somewhat opaque, rather densely covered with brownish pubescence, densely and finely punctured. Length 5 mm.

Sikkim: Darjeeling (*Christie*) (ex *Fauvel*).

Tribe 7. OXYTELINI.

Oxytelini Er., Käf. Mark. Brand. i, 1837–39 (1839), p. 576; Kr., Naturg. Ins. Deutsch. ii, 1856–58, p. 798 (excl. *Oxyporus*, *Osorius*, *Holotrochus*); Ganglb., Käf. Mitt. Eur. ii, 1895, p. 609.
Oxytelini, Subtrib. iii. *Genuini*, & Subtrib. iv. *Coprophilini* Er., Gen. Spec. Staph. 1839–40, p. 814.
Oxytélides, Sous-trib. iii. *Oxytélides*+Sous-trib. iv. *Coprophilides* Lac. Gen. Col. ii, 1854, p. 132.
Oxytélites Jacq. du Val, Gen. Col. d'Eur. 1857–59, p. 54.
Oxytelina Thoms., Skand. Col. iii, 1861, p. 117.
Oxytelini, Sect. i. *Oxyteli* Fauv., Fn. Gallo-Rhén. iii, 1872, p. 124.
Oxytéliens Muls. et Rey, Ann. Soc. d'Agric. Lyon, (5) viii, 1875, p. 209; id., Hist. Nat. Col. Fr., Brévip., Oxyp., Oxytél. 1879, p. 11 (excl. *Prognatha* (*Siagonium*), *Glyptoma* (*Thoracophorus*)).
Oxytelini, Group iv. Oxyteli Lec. & Horn, Class. Col. N. Amer. 1883, p. 102.
Oxytelinæ, Group *Oxytelina* Shp., B. C.-A. i, 2, 1882–87 (1887), p. 685+Group *Thinobiina* Shp., id. p. 705.
Oxytelinæ Reitt., Faun. Germ. ii, 1909, p. 163.

This tribe is distinguished by the absence of a ventral keel at the base of the abdomen (except in *Apocellagria*), the prominent anterior coxæ, the small posterior trochanters, and the elytra scarcely extending beyond the posterior margin of the metasternum. The tarsi are variable.

Key to the Genera.

1.	Tarsi 2-jointed. Prothorax without epimera. Elytra dehiscent	[p. 285. THINOBIUS Ksw.,
	Tarsi 3- or 5-jointed	2.
2.	Tarsi 3-jointed	3.
	Tarsi 5-jointed	12.
3.	Anterior and middle tibiæ strongly spinose externally	4.
	Anterior and middle tibiæ ciliate, at most with two small spines before the apex	7. [p. 270. BLEDIUS Mannerh.,
4.	Cylindrical species with geniculate antennæ.	5.
	Species not cylindrical, antennæ normal	6. [du Val, p. 173. PLANEUSTOMUS Jacq.
5.	Middle coxæ separated	[Mannerh., p. 264. PLATYSTETHUS
	Middle coxæ contiguous	OXYTELUS Gr., p. 211.
6.	Elytra dehiscent behind, the sutural angle broadly rounded; epimera of prothorax absent	8.
	Elytra not dehiscent, the sutural angle not broadly rounded; epimera of the prothorax well developed	10.
7.	Fourth joint of maxillary palpi minute	[p. 201. APOCELLAGRIA Cam.,
	Fourth joint of maxillary palpi normal	9.
8.	Abdomen slightly constricted at the base, the first two or three dorsal segments with a little keel in the middle of the base. Scutellum triangular, distinctly visible; facies of *Falagria*; 1st ventral segment with fine median keel	[p. 200. XEROPHYGUS Kr.,
	Abdomen not constricted at base and without keels (except in *T. pubicollis*); 1st ventral segment not keeled	[Mannerh., p. 178. TROGOPHLŒUS
9.	Mandibles prominent, the apex deeply bifid	11. [p. 176. ANCYROPHORUS Kr.,
	Mandibles not prominent, the apex slightly or moderately bifid	OXYTELOPSIS Fauv., [p. 203.
10.	Tibiæ sulcate; rugose species	DELOPSIS Fauv., [p. 208.
	Tibiæ not sulcate; species not rugose	COPROPHILUS Latr., [p. 171.
11.	Antennæ short, clavate	PARALEASTER, gen. n., [p. 169.
	Antennæ elongate, not clavate	
12.	Anterior and middle tibiæ spinose	
	Anterior and middle tibiæ not spinose	

PARALEASTER, gen. n.

In facies resembling a large *Trogophlœus*, but more nearly related to *Deleaster* Er., from which genus it differs in the narrower and more convex build, the much longer, more slender and prominent mandibles, longer and more slender maxillary palpi, more finely bordered thorax, the more slender

legs, and the longer 1st joint of the posterior tarsi, which is nearly as long as the three following together.

The mandibles are long and slender, prominent and pointed. Maxillary palpi with the 2nd joint elongate, curved and slightly thickened towards the apex, 3rd joint about half as long as the 2nd, 4th twice as long as the preceding. Scutellum large, pyriform. Tibiæ not spinose. Tarsi 5-jointed, the anterior short, the 1st joint a little longer than the 2nd, 2nd to 4th about as broad as long, subequal, cordate, the 5th about as long as the 3rd and 4th together; middle pair similar, but a little longer; posterior pair with the 1st joint elongate, as long as the three following together, these subequal, a little longer than broad, 5th as long as the two preceding together. Abdomen strongly margined.

Having only a single specimen of this insect, I am unable to give a fuller account of its structure.

Its habits appear to be the same as *Trogophlœus*.

179. **Paraleaster longipennis**, sp. n. (Pl. II. fig. 2.)

Black, moderately shining. Antennæ black, the first two joints reddish, the 11th pitchy. Palpi testaceous. Legs black, the tarsi reddish. Length 5·1 mm.

Head rounded, a little narrower than the thorax, the eyes large, but not prominent, their length greater than that of the rounded temples, on either side within the eyes with a superficial rounded impression, the whole surface closely and rather finely punctured and finely pubescent. Antennæ long and slender, extending to the posterior border of the elytra, all the joints much longer than broad, the 2nd shorter than the 3rd. Thorax a little broader than long (7 : 6), the sides rather strongly rounded and widened in front, just behind the middle rather suddenly narrowed and almost parallel to the rectangular posterior angles, with a small fovea before the scutellum and two larger superficial impressions, one behind the other in the middle line, the puncturation and pubescence very similar to that of the head. Scutellum with a few punctures. Elytra broad and twice the length of the thorax, parallel, much longer than broad, behind the base with a callus, towards the apex with two longitudinal impressions, the puncturation coarser and less close than that of the thorax. Abdomen slightly narrowed from base to apex, the bases of the first four segments transversely impressed, the 8th deeply and broadly emarginate and furnished with four long black setæ, the whole surface finely and densely punctured and pubescent.

Assam: Naga Hills, Laimatak.

Genus **COPROPHILUS** Latr.

Coprophilus Latr. in Cuvier, Règne Anim. iv, 1829, p. 439; Er., Käf. Mark. Brand. i, 1839, p. 609; id., Gen. Spec. Staph. 1840, p. 815; Lac., Gen. Col. ii, 1854, p. 139; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 77; Kraatz, Naturg. Ins. Deutsch. ii, 1856-58, p. 893; id., Berl. Ent. Zeitschr. iii, 1859, p. 6; Thoms., Skand. Col. iii, 1861, p. 143; Solsky, Hor. Ross. iv, 1866-67, p. 85; Fauv., Bull. Soc. Linn. Norm. (2) i, 1868, p. 44; id., Fn. Gallo-Rhén. iii, 1872, p. 129; id., Rev. d'Ent. xvi, 1897, p. 226; Muls. et Rey, Hist. Nat. Col. Fr., Brévip. 1879, p. 240; Reitter, W. E. Z. xiii, 1894, pp. 177, 291; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 676; Bernh., Münch. Kol. Zeitsch. iii, 1908, p. 827.

Elonium Sam., Ent. Comp. i, 1819, p. 175.

Homalotrichus Sol., Hist. Chile, iv, 1849, p. 472.

Subgen. *Coprophilus* s. str., Ganglb., Käf. Mitt. Eur. ii, 1895, p. 677.

Subgen. *Zonoptilus* Motsch., Bull. Mosc. xviii, 1845, i, p. 39; xxx, 1857, iv, p. 502.

More or less elongate parallel species. Head exserted, but little constricted behind. Labrum transverse, chitinous behind, membranous in front, slightly and broadly emarginate, ciliate. Mandibles stout, slightly curved, the apex pointed, occasionally bifid, the inner margin with a small tooth. Inner lobe of the maxilla narrow, pointed, the inner margin with several slightly curved teeth and ciliate; outer lobe broader, its apex with similar teeth and cilia. Maxillary palpi with the 1st joint very small, the 2nd elongate, slightly curved and dilated towards the apex, the 3rd much shorter, 4th about as long as the 2nd and 3rd together, broad at its base and narrowed apically. Mentum transverse, scarcely narrowed in front, the anterior margin truncate or feebly emarginate. Tongue broad, obtusely emarginate in front, in the middle with a chitinous supporting rod. Paraglossæ well marked, ciliate. Labial palpi 3-jointed, the 1st joint stout, broader than long, 2nd narrower than 1st, scarcely as long as broad, 3rd stout, oval, and little longer than the two preceding together. Prosternum well developed, its process narrow and acute, extending a good way between the coxæ; epimera large, triangular, fused with the epipleura. Mesosternum simple, its process narrow and acute, extending about two-thirds the length of the coxæ, these narrowly separated. Metasternal process acute and meeting the preceding, the coxæ narrowly separated. Anterior tibiæ with four or five spines externally, the posterior ciliate. Tarsi with the first four joints short, the 5th longer than the preceding together. Claws lightly curved, simple. Elytra with well-developed parallel epipleura.

The genus is widely distributed throughout the globe.

Key to the Subgenera.

1. Sides of thorax crenulate .... COPROPHILUS, s. str., Ganglb., p. 172.
Sides of thorax even ..... ZONOPTILUS Motsch., p. 172.

180. **Coprophilus** (s. str.) **alticola.**

Coprophilus alticola Fauv., Rev. d'Ent. xxiii, 1904, p. 93.

Larger than *C. striatulus* F., longer and much more shining, with slight metallic reflex; antennæ blackish, the 2nd joint longer; head more convex, the front much less impressed; thorax quite different, oblong, convex, more finely punctured, less sinuate behind, the posterior angles slightly obtuse, the sides a little uneven, scarcely bordered in front, scarcely sculptured on the disc, with two moderate foveæ in the middle some distance from the base; elytra shorter, more irregularly striate, the striæ more sparingly and strongly punctured, the apical third smooth, with a few punctures; abdomen with a few fine punctures, the 6th segment at the base rather closely punctured. Length 6 to 7·5 mm.

Simla. In July (ex *Fauvel*).

Key to the Species of Zonoptilus.

Entirely black. Legs pitchy ..... *burphuensis* Champ., [p. 172.
Elytra reddish with black markings; anterior margin and sides of thorax very narrowly reddish. Legs reddish-testaceous ..... *subplagiatus*, sp. n., [p. 173.

181. **Coprophilus (Zonoptilus) burphuensis.**

Coprophilus burphuensis Champ.*, E. M. M. lxi, 1925, p. 106.

Narrow, elongate, black, shining. Legs pitchy, the tarsi reddish. Antennæ black. Length 5·25 mm.

Narrower and less depressed than *C. striatulus* F., with shorter and more slender antennæ. Head narrower than the thorax, temples shorter than the eyes, impressed on either side in front, rather closely and rather finely punctured, more sparingly in front, the neck more closely. Antennæ with the 3rd joint scarcely shorter than the 2nd, 4th to 6th about as broad as long, 7th to 10th moderately transverse. Thorax scarcely broader than long, the sides gently rounded, more narrowed behind, finely margined, feebly longitudinally impressed on either side of the middle, the sculpture very similar to that of the head. Elytra a little longer and broader than the thorax, longer than broad, striate-punctate, the striæ not extending to the apex, which is finely and irregularly punctured. Abdomen finely and rather closely punctured.

E. Kumaon: Burphu, Gori Valley, alt. 11,500 feet, vi. 1924 (*H. G. Champion*).

182. **Coprophilus (Zonoptilus) subplagiatus.**

Coprophilus (*Zonoptilus*) *subplagiatus* Cam., Ann. Mag. Nat. Hist. (10) ii, 1928, p. 558.

Elongate, black, shining, the anterior and lateral margins of the thorax very narrowly reddish, the elytra reddish, the base and suture black, a large indeterminate lateral spot blackish. Antennæ black. Legs reddish-testaceous. Length 5·2 mm.

Near *C. burphuensis* Champ., but broader and more robust; antennæ a little stouter, the sides of the thorax a little more rounded in front, the anterior and lateral margins very narrowly reddish, the disc without a median sulcus, more finely punctured; elytra differently coloured and more obsoletely punctured.

Tibet: Jelap La, alt. 13,000 feet, 1. iv. 1924 (*Hingston*).

Genus **PLANEUSTOMUS** Jacq. du Val.

Planeustomus Jacq. du Val, Gen. Col. d'Eur. ii (1857–59), 1859, p. 58; Thoms., Skand. Col. iii, 1861, p. 142; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 127; Muls. et Rey, Hist. Nat. Col. Fr., Brévip., Oxyp., Oxytél. 1879, p. 227; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 671.

Compsochilus Kr., Nat. Ins. Deutsch. ii (1856–58), p. 895.

Elongate, subconvex species, the head scarcely constricted behind, but with a transverse groove between the neck and the vertex; clypeus separated from the front by transverse line. Labrum transverse, broadly emarginate in front, setose, at the sides with a long membranous ciliated process. Mentum transverse, quadrate. Tongue broad, broadly emarginate in front. Paraglossa fine and indistinct. Labial palpi with rather short 1st joint, the 2nd about twice as long, slightly thickened and curved, the 3rd much narrower and about half as long as the 2nd. Inner lobe of the maxilla narrow, pointed, finely and closely ciliate; outer lobe broader, densely ciliate at the apex. Maxillary palpi rather long, the 1st joint small, the 2nd curved and dilated towards the apex, 3rd shorter than 2nd and less dilated apically, the 4th much longer than the 3rd, subulate. Mandibles elongate and slender, scarcely curved at the apex, the right edentate, the left with a small tooth, each with a ciliate basal membrane. Prosternum short, its process pointed; epimera fused with the epipleura and separated from the prosternum by a suture. Mesosternal process short, sharply pointed, very slightly produced between the coxæ. Metasternum long, its process short, rounded, not produced between the coxæ, these contiguous. Scutellum small. Elytra more or less seriately punctured. Legs rather

short, the tibiæ furnished with spines. Tarsi short, 3-jointed, the 1st joint a little longer than the 2nd, the 3rd joint of the anterior tarsi about as long as the two preceding together, that of the middle and posterior longer.

They appear to live in damp places in galleries and are frequently attracted to light. Several species are found in southern Europe.

Key to the Species.

1. Large species (3⅔ to 5 mm.), the head and thorax without ground-sculpture	2.
Small species (2½ mm.), the head and thorax coriaceous	*subcarinatus* Champ., [p. 175.
2. Thorax transverse; 6th joint of antennæ smaller than 7th.....	*bengalensis* Champ., [p. 174.
Thorax not transverse	3.
3. Head as long as broad; eyes flat, as long as the temples	*longiceps* Champ., [p. 175.
Head transverse; eyes rather prominent ..	*indicus* Fauv., p. 174.

183. **Planeustomus indicus.**

Planeustomus indicus Fauv., Rev. d'Ent. xxiii, 1904, p. 91.

Near *P. miles* Scriba; entirely testaceous, shining, the antennæ shorter, 4th and 5th joints somewhat, 6th strongly transverse, 7th to 11th forming a club, 7th, 9th, and 10th scarcely, 8th strongly transverse; head more rounded, more finely and more sparingly serially punctured, the eyes a third smaller; thorax a little shorter, more finely and a little more sparingly punctured, the disc scarcely sulcate; elytra more finely punctured; abdomen at the sides with a few extremely fine punctures. Length 4 to 5 mm.

Burma (ex *Fauvel*).

184. **Planeustomus bengalensis.**

Planeustomus bengalensis Champ.*, E. M. M. lv, 1919, p. 155.

Rufo-testaceous, shining, the apex of the elytra and sides of the abdomen scarcely infuscate. Antennæ reddish-testaceous, infuscate towards the apex. Legs testaceous. Length 3·6 mm.

Head transverse, a little broader than the thorax; eyes rather large, somewhat prominent, temples feebly convergent, shorter than the eyes; with a few moderately large, scattered punctures. Antennæ with 4th to 6th joints small, transverse, 7th to 11th much thicker, 7th, 9th, and 10th moderately, 8th strongly transverse, the 8th smaller and shorter than the

7th and 9th. Thorax slightly transverse, the sides straight, converging behind, on either side of the smooth median space with a curved, closely and coarsely punctured sulcus, along the anterior border with a row of moderate punctures, the sides with several scattered punctures. Elytra broader and a third longer than the thorax, with rows of rather coarse punctures. Abdomen coriaceous. Very finely and sparingly punctured.

Bengal: Sarda (*F. W. Champion*).

185. **Planeustomus longiceps.** (Pl. II. fig. 3.)

Planeustomus longiceps Champ.*, E. M. M. lv, 1919, p. 154.
Planeustomus pusæ Cam., E. M. M. lvi. 1920, p. 143.

Colour of *P. bengalensis* Champ., but much narrower, the head as long as broad, eyes flatter, temples as long as the eyes, gently rounded, with several moderately coarse, scattered punctures behind, nearly smooth in front. Antennæ with the 3rd joint shorter and smaller than the 2nd, 4th to 6th small, transverse, 7th to 10th larger, transverse, the 8th shorter than the 7th and 9th. Thorax a little narrower than the head, as long as broad, the sides straight and converging behind, along the middle broadly impunctate, on either side with a curved, closely-punctured sulcus, externally with an irregular row of larger punctures. Elytra broader and one-third longer than the thorax, with rows of moderately large and close punctures. Abdomen coriaceous, very finely and very sparingly punctured. Length 3·5 to 4·2 mm.

Bengal: Sarda (*F. W. Champion*). Bihar: Pusa (*T. B. Fletcher*).

186. **Planeustomus subcarinatus.**

Planeustomus subcarinatus Champ.*, E. M. M. lv, 1919, p. 156.

Narrow, elongate, reddish-testaceous, moderately shining, the head and thorax coriaceous; sides of the abdomen at the apex blackish. Antennæ and legs testaceous. Length 2·5 mm.

The smallest of the Indian species and readily distinguished by the ground-sculpture of the head and thorax. Head transverse, the eyes prominent, temples scarcely visible, moderately coarsely, sparingly punctured. Antennæ with the 4th to 6th joints small, transverse, 7th to 10th larger and broader, the 7th and 8th strongly, 9th and 10th moderately transverse, the 8th rather shorter than the 7th, 9th and 10th broader than the 7th and 8th, 11th short, oval. Thorax as long as broad, the sides straight and converging behind, a

little narrower than the head, in the middle smooth, elevated behind, on either side with a punctured sulcus, the sides rather closely punctured. Elytra broader and about one-third longer than the thorax, closely, serially punctured. Abdomen very finely and sparingly punctured, finely coriaceous.

Bengal: Sarda (*F. W. Champion*).

Genus **ANCYROPHORUS** Kr.

Ancyrophorus Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 886; Thoms., Skand. Col. iii, 1861, p. 139; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 139; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 666.

Octhephilus Muls. et Rey, Ann. Soc. Linn. Lyon, iii, 1856, p. 1; id., Opusc. Entom. vii, 1856, p. 1; id., Hist. Nat. Col. Fr., Brévip. 1879, p. 352.

Biology.—Rupertsberger, Biol. Lit. Käf. Eur. 1894, p. 125.

More or less parallel, subdepressed species, closely related to *Trogophlœus*, but differing in the stout conical 4th joint of the maxillary palpi, etc. Head constricted behind; gular sutures fused in front, diverging behind. Labrum transverse coriaceous, feebly and broadly emarginate in front, the anterior angles rounded, furnished on each side with a triangular membranous process, and with numerous longer and shorter fine cilia. Mandibles stout, shortly bifid at the apex and with a small tooth behind. Inner lobe of the maxilla narrow, acutely pointed at the apex and furnished with slender slightly curved spines and cilia: outer lobe broader, its apex with a few stout, curved spines and cilia. Maxillary palpi with the 1st joint very small, 2nd gradually widened from base to apex, 3rd scarcely longer than broad, 4th almost as broad at the base as the preceding, and then rather suddenly narrowed to the pointed apex and distinctly longer. Mentum transversely quadrate, the anterior angles slightly prominent. Labial palpi short, the 1st joint scarcely as long as broad, the 2nd a little narrower and longer than the 1st, the 3rd narrower and shorter than the 2nd, cylindrical. Tongue broad, membranous in front, broadly and feebly emarginate, ciliate, on either side of the middle in front with a stronger bristle. Paraglossæ feeble. Prosternum well developed, its process short and acute, the epimera large and triangular. Mesosternum simple, its process short and acute, the coxæ contiguous. Metasternal process scarcely indicated. Legs moderately long, the tibiæ ciliate, the anterior with two small spines before the apex. Tarsi 3-jointed, the first two joints very short, indistinctly separated, the 3rd joint more than twice as long as the two preceding together; claws long and slender.

The species are found in the vicinity of water, and so far are only known from the Palæarctic Region.

Key to the Subgenera.

1. Suture dehiscent behind, the sutural angle of the elytra broadly rounded ..... MISANCYRUS Gozis, [p. 177.
2. Suture not dehiscent, the sutural angle of the elytra not or scarcely rounded ..... ANCYROPHORUS, s. str., [p. 177.

187. Ancyrophorus (Misancyrus) championi.

Ancyrophorus (*Misancyrus*) *championi* Bernh., W. E. Z. xliii, 1926, p. 21.

Differs from the European *emarginatus* Fauv. in the much smaller size, uniformly deep black colour, more shining surface, more distinct, stronger, and more sparing puncturation, smaller eyes and longer temples, shorter antennæ with the penultimate joints only little longer than broad; thorax in comparison with the elytra narrower and smaller, with more polished middle line and more distinct impressions on either side, also the transverse basal impressions are rather strong. The elytra are much longer, more than twice as long as the thorax, much longer than broad. Length 4·3 mm. (abdomen extended).

Kumaon: Ranikhet (ex *Bernhauer*).

Key to the Species of Ancyrophorus, *s. str.*

Larger (4·5 mm.), the penultimate joints of the antennæ as long as broad. Legs testaceous, the tibiæ a little infuscate ..... *monticola* Cam., p. 177.
Smaller (3·2 mm.), the penultimate joints of the antennæ transverse. Legs pitchy ..... *nitidus* Cam., p. 178.

188. Ancyrophorus (s. str.) monticola.

Ancyrophorus monticola Cam., Trans. Ent. Soc. Lond. 1924, p. 174.

Black, elongate, parallel, moderately shining, the elytra 1½ times as long as the thorax; antennæ black, the penultimate joints as long as broad; femora testaceous, tibiæ pitchy. Length 4·5 mm.

Larger and more robust than *A. longipennis* Fairm., with longer antennæ, shorter elytra, and less prominent post-ocular area. Head smaller than the thorax, the front scarcely perceptibly punctured and more shining, longitudinally impressed on either side; the disc and sides very finely and closely punctured; post-ocular area rounded, shorter than the diameter of the large eye; the whole surface except the front extremely finely shagreened; antennæ with the 3rd joint longer than 2nd, 4th to 7th all a little longer than broad, gradually decreasing in length, 8th to 10th as long as broad. Thorax narrower than the elytra, moderately transverse, the sides rounded and narrowed in front, more strongly contracted

behind, the disc impressed so as to form an elevated anchor-shaped figure, the middle line smooth and shining, the rest of the surface very finely and closely punctured, extremely finely shagreened, pubescence fine and short. Elytra broader and 1½ times longer than the thorax, longer than broad, parallel, closely and much less finely punctured than the thorax, finely pubescent. Abdomen extremely finely and rather closely punctured, finely and rather sparingly pubescent.

Simla Hills : Gahan, 7000 feet above the sea.

189. **Ancyrophorus** (s. str.) **nitidus.**

Ancyrophorus nitidus Cam., Trans. Ent. Soc. Lond. 1924, p. 175.

Black, elongate, parallel, shining ; elytra nearly twice as long as the thorax ; antennæ black, the penultimate joints transverse. Legs black. Length 3·2 mm.

Smaller and much more shining than *A. longipennis* Fairm., the antennæ and elytra shorter, the puncturation of the latter less fine. Head shining, very finely and sparingly punctured, the front almost smooth, longitudinally impressed on either side, extremely finely shagreened. Antennæ with the 2nd joint shorter than the 3rd, 4th smaller than the 5th, about as long as broad, 5th as long as broad, the 6th moniliform, smaller than the 5th and 7th, the latter slightly transverse, 8th to 10th slightly transverse, gradually increasing in width. Thorax shining, narrower than the elytra, transverse, rounded in front, almost straightly narrowed behind ; disc with impressions so as to form an anchor-shaped raised figure, median line smooth, the rest of the surface very finely and moderately closely punctured and very finely shagreened. Elytra shining, parallel, moderately finely, closely punctured without ground-sculpture, shortly, finely grey pubescent. Abdomen shining, extremely finely and sparingly punctured, sparsely pubescent.

Simla Hills : Gahan, 7000 feet above the sea.

Genus **TROGOPHLŒUS** Mannh.

Trogophlœus Mannh., Brach. 1830, p. 49; Er., Käf. Mark. Brand. 1839, p. 599; id., Gen. Spec. Staph. 1840, p. 801; Lac., Gen. Col. ii, 1854, p. 118 ; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 56; Kraatz, Naturg. Ins. Deutsch. ii, 1858, p, 868; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 144; Thoms., Skand. Col. iii, 1861, p. 134; J. Leconte, Trans. Amer. Ent. Soc. vi, 1877, p. 242; Muls. et Rey, Hist. Nat. Col. Fr., Brévip. 1879. p. 255; Sharp, Biol. Cent.-Amer. i, 2, 1887, p. 697; Casey, Ann. N. York Ac. iv, 1889, p. 322; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 647; Klima, Münch. Kol. Zeitschr. ii, 1904, p. 43.

More or less elongate and parallel species, the head more or

less constricted behind, the thorax more or less cordate, abdomen usually parallel, but more or less attenuated at the apex in the subgenus *Thinodromus*. Labrum transverse, corneous, in front slightly or deeply (*Thinodromus*) emarginate and furnished with a ciliate membrane which in the latter subgenus is rather deeply emarginate. Gular sutures fused for the greater part. Mandibles stout, not prominent, the apex lightly bifid, and behind usually with two triangular teeth. Inner lobe of the maxilla narrow, pointed, the inner margin furnished with numerous lightly curved spines; outer lobe broader, at the apex with a few curved spines and numerous hairs. Maxillary palpi with the 1st joint very small, the 2nd lightly curved and widened apically, the 3rd joint a little longer and more dilated apically, the 4th very small, subulate. Mentum transversely quadrate. Tongue broad, in the middle with a corneous plate, the anterior margin slightly emarginate. Paraglossæ indistinct. Labial palpi very short, the 1st joint broader than long, 2nd about as long as broad, 3rd much narrower, but about as long as or a little shorter than the preceding. Thorax with the sides rounded in front and narrowed behind, usually with distinct impressions on the disc. Prosternum with short acute process not extending much between the coxæ. Mesosternum simple, its process sharp, extending almost to the middle of the coxæ, these very narrowly separated. Metasternal process very short, obtuse, not extending between the coxæ. Tibiæ ciliate; tarsi 3-jointed, the first two joints very short, the 3rd more than twice as long as the two preceding together, the claws long and slightly curved, at the base of each with a small tooth. Elytra not dehiscent behind, their epipleura well developed. Scutellum more or less concealed (except in *Thinodromus*).

The genus is found all over the world in the vicinity of water.

Key to the Subgenera.

1. Thorax with a deep arcuate or horseshoe-shaped impression, open in front, at the base. Antennæ with the 3rd joint about as long as the second	2.	
Thorax with two or four impressions on the disc, or without impressions	3.	
2. Abdomen narrowed behind; scutellum visible	THINODROMUS Kr.†,	[p. 180.
Abdomen parallel; scutellum concealed	CARPALIMUS Steph.†,	[p. 182.

† The characters separating *Thinodromus* from *Carpalimus* are of doubtful value so far as the tropical forms are concerned, the form of the abdomen showing every gradation from attenuated to parallel; the visibility of the scutellum likewise varies.

3. Head distinctly constricted behind the temples ..... Trogophlœus, s. str., [p. 184.
Head scarcely constricted behind the temples ..... Troginus Muls. et Rey, [p. 199.

Key to the Species of the Subgenus Thinodromus.

1. Antennæ long and slender, all the joints much longer than broad ..... *assamensis*, sp. n., p. 181.
Antennæ shorter, the penultimate joints not longer than broad ..... 2.
2. Head and thorax finely, sparingly punctured. *lunatus* Motsch., p. 180.
Head and thorax closely and distinctly punctured ..... 3.
3. Eyes large, temples absent ..... *lewisi* Cam., p. 180.
Eyes moderate, temples distinct. Base of the first three abdominal segments in the middle with a little keel ..... *pubicollis*, sp. n., p. 182.

190. Trogophlœus (Thinodromus) lunatus.

Trogophlœus lunatus Motsch., Bull. Mosc. xxx, 1857, iv, p. 504; Klima, Münch. Kol. Zeitschr. ii, 1904, p. 50, note.

Shining, black, the elytra dark reddish-brown, darker towards the postero-external angles. Antennæ black, the first two joints reddish-testaceous. Legs reddish-testaceous, the tibiæ a little infuscate. Length 3 mm.

Head broad, narrower than the thorax, without impressions; eyes very large, prominent, temples very short, very finely and sparingly punctured. Antennæ with the 3rd joint longer than the 2nd, the 4th to 8th longer than broad, gradually decreasing in length, 9th and 10th as long as broad. Thorax transverse (5 : 3), the sides strongly rounded in front and strongly narrowed behind, the posterior angles obtuse, before the base with a deep crescentic impression and with a fine, rather obsolete, sparing puncturation, at the sides with numerous long hairs. Elytra a good deal broader and longer than the thorax (5 : 3), closely, rather finely and distinctly punctured, and with a long pubescence, especially at the sides. Abdomen a little narrowed behind, finely, rather closely, and obsoletely punctured, with a long greyish pubescence.

Dehra Dun. Chakrata district: Binal Gadh, alt. 3500 feet. Appears to be widely distributed in the Oriental Region.

191. Trogophlœus (Thinodromus) lewisi.

Trogophlœus (*Thinodromus*) *lewisi* Cam., E. M. M. lv, 1919, p. 224.

Black, moderately shining; palpi pitchy, first joint of the antennæ and legs reddish-testaceous, the tibiæ pitchy. Length 3 mm.

Differs from *T. lunatus* Motsch. in the longer and more slender antennæ, yet larger eyes, the temples practically absent, more closely and more distinctly-punctured head and thorax, more finely punctured elytra, and shorter and finer pubescence generally, and the colour of the elytra. Head narrower than the thorax, the eyes large, occupying nearly the whole extent of the sides, the front with shallow longitudinal impression internal to the antennal tubercles; punctuation moderately fine and very close, a little more sparing in front. Antennæ long, extending to a little behind the level of the shoulders; 2nd to the 7th joints all elongate, the first three of them subequal in length, 5th, 6th, and 7th gradually decreasing, 8th as long as broad, 9th and 10th very slightly transverse, the 11th short, oval. Thorax transverse, the sides strongly contracted behind, dilated and rounded in front, before the base with a deep crescentic impression, the disc on either side of the middle line with an obscure rounded impression; puncturation as on the head, but less close. Scutellum impunctate. Elytra broader and a little longer than the thorax, transverse, ample, moderately finely, closely punctured; pubescence fine, grey. Abdomen moderately narrowed posteriorly, rather finely, closely punctured throughout, more coarsely at the bases of the anterior segments, finely pubescent.

Ceylon: Kandy (*G. Lewis*).

192. **Trogophlœus (Thinodromus) assamensis,** sp. n. (Pl. II. fig. 4.)

Entirely black, rather shining. Antennæ, palpi, and legs black, the base of the femora and the tarsi reddish-testaceous. Length 5·5 mm.

A narrow elongate species. Head almost as wide as the thorax, the eyes about as long as the converging temples; vertex with a small fovea, broadly impressed on either side, finely and closely punctured. Antennæ long and slender, all the joints much longer than broad, the 11th a little longer than the 10th. Thorax a little broader than long, convex, the sides rounded and dilated in front and rather strongly narrowed behind, disc with a U-shaped impression which extends well beyond the middle, the limbs in front diverging; sculpture on the disc very similar to that of the head, at the sides coarser and closer, subrugose; pubescence fine and short. Elytra ample, much broader and twice as long as the thorax, with a well-marked basal callus, closely and rather finely punctured, with a fine, short pubescence. Scutellum distinct, punctured. Abdomen a little narrowed behind, finely and closely punctured and pubescent throughout.

Assam: Naga Hills, alt. 9000 feet.

193. **Trogophlœus (Thinodromus) pubicollis**, sp. n.

Black, shining, the elytra and abdomen rather more than the head and thorax. Antennæ and palpi black. Legs reddish-testaceous, the tibiæ infuscate. Length 3·5 mm.

Facies of *T. assamensis*, but much smaller, with much shorter antennæ, differently coloured legs, and stronger sculpture. Head narrower than the thorax, the length of the eyes about three times greater than that of the rounded and convergent temples, broadly, obsoletely impressed internal to the eyes, closely and moderately coarsely punctured. Antennæ with the 3rd to 9th joints all longer than broad, the 3rd to the 7th equal, 8th and 9th shorter, the 10th as long as broad, 11th conical, a little longer than the preceding. Thorax about a fourth broader than long, the sides rounded and dilated in front and strongly contracted behind, before the base with a crescentic impression, in front of this on either side of the middle line with a small fovea, in the middle line near the anterior margin with another, towards the side-margins with an obsolete reniform impression, closely and rather more coarsely punctured than the head and with long, distinct pubescence. Elytra much broader and longer (5 : 3) than the thorax, closely but more finely punctured, pubescence long. Scutellum distinct. Abdomen a little narrowed behind, the bases of the anterior segments transversely impressed in the middle of each with a small keel, finely and rather closely punctured, with a rather long and moderately close pubescence.

Assam : Naga Hills, Kampison, alt. 6000 feet. Chittagong.

Key to the Species of the Subgenus Carpalimus.

1.	Eyes very large, temples absent	*gravelyi* Bernh., p. 183.
	Eyes smaller, temples distinct	2.
2.	Fore-parts moderately finely, closely punctured.....	*distinctus* Fairm., p. 182.
	Fore-parts coarsely and closely punctured ..	*vulneratus* Bernh., [p. 183.

194. **Trogophlœus (Carpalimus) distinctus.**

Trogophlœus distinctus Fairm., Laboulb. Fn. Fr. i, 1854, p. 615; Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 870, note ; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 147 ; Muls. et Rey, Col. Fr., Brévip. 1879, p. 258 ; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 650 ; Klima, Münch. Kol. Zeitsch. ii, 1904, p. 51.

Black, rather shining, pubescent. Antennæ black, the 1st joint pitchy ; palpi pitchy. Legs reddish-testaceous, the tibiæ infuscate. Length 3·2 mm.

Head narrower than the thorax, the eyes large, temples short but distinct, constricted behind, in front on either side

rather broadly impressed, finely and closely punctured. Antennæ with the 3rd joint as long as the 2nd, the 4th to 7th longer than broad, 8th as long as broad, 9th and 10th slightly transverse. Thorax transverse (5 : 3), the sides strongly rounded in front and strongly narrowed behind, before the base with deep crescentic impression, in front close to the middle line on either side with a small rounded impression, in the middle anteriorly with a small longitudinal impression; sculpture on the disc very similar to that of the head, towards the sides coarser and somewhat rugose; pubescence rather long. Elytra much broader and almost twice as long as the thorax, the shoulders impressed, closely and moderately finely punctured, the pubescence rather long. Abdomen finely and closely punctured, with long greyish pubescence.

Mussoorie district: Mossy Falls; Ringal Gad, alt. 5000 to 6000 feet. Also in Europe.

The legs are lighter in colour than in the majority of the European examples.

195. **Trogophlœus (Carpalimus) gravelyi.**

Trogophlœus (*Carpalimus*) *gravelyi* Bernh.*, W. E. Z. xliii, 1926, p. 21.

Much smaller than *T. distinctus* Fairm., the eyes much larger, occupying the whole side of the head, which is as closely but much more finely punctured. Antennæ much shorter, the penultimate joints more transverse. Thorax with the usual deep crescentic impression before the base, but the other three impressions very feeble, the puncturation much finer and less deep. Elytra shorter, much more finely, closely, and indistinctly punctured. Abdomen more finely punctured. The pubescence throughout is much shorter. Antennæ black, the 1st joint reddish. Palpi pitchy. Legs testaceous, the tibiæ infuscate. Length 2·5 mm.

Dihong River, below Pasighat (*Kemp*, Abor Expedition). Tavoy.

196. **Trogophlœus (Carpalimus) vulneratus.**

Trogophlœus (*Carpalimus*) *vulneratus* Bernh., W. E. Z. xliii, 1926, p. 22.

Easily distinguished by the coarse, moderately thick puncturation of the fore-parts. Black, moderately shining, the tarsi obscurely yellow. Head small, the frontal impressions feeble. Eyes rather large, prominent, the temples distinct. Antennæ rather short, the penultimate joints rather strongly transverse. Thorax much smaller than the elytra, about one-third broader than long, broadest before the middle,

strongly narrowed behind almost in a straight line, in front of the base with the curved impression characteristic of the subgenus, in front of this on either side of the middle with an oblique rather deep longitudinal impression. Elytra yet more strongly and distinctly more sparingly punctured than the thorax, about one-half longer, transverse, with prominent shoulders. Abdomen very finely punctured. Length 3·5 mm.

Kumaon: W. Almora (*Champion*) (ex *Bernhauer*).

Key to the Species of the Subgenus Trogophlœus.

1.	Eyes very large and prominent, the temples not or scarcely visible (*Boopinus* Klima).	2.
	Eyes smaller, the temples distinct	9.
2.	Thorax with four impressions	3.
	Thorax without distinct impressions	6.
3.	Large species (2·75 mm.); 8th joint of the antennæ distinctly longer than broad	*indicus* Kr., p. 186.
	Small species (2 to 2·5 mm.); 8th joint of the antennæ not longer than broad	4.
4.	Thorax and elytra more or less reddish-brown	8.
	Entirely black species	5.
5.	Thorax strongly dilated and rounded in front	*nigrita* Woll., p. 186.
	Thorax less dilated in front	*siamensis* Fauv., p. 187.
6.	Larger species (2·5 to 3 mm.)	7.
	Smaller species (1·75 mm.)	*simplex* Motsch., p. 189.
7.	Abdomen extremely finely and densely punctured and pubescent	*planicollis* Bernh., [p. 188.
	Abdomen normally punctured and pubescent	*chatterjeei*, sp. n. [p. 188.
8.	6th joint of antenna distinctly longer than broad; thoracic impressions more distinct; puncturation of fore-parts less fine	*peregrinus* Cam., p. 187.
	6th joint of antenna not longer than broad; thoracic impressions feeble; puncturation of fore-parts finer	*congruus*, sp. n., p. 188.
9.	Elytra reddish or reddish-yellow	10.
	Elytra black or brown	18.
10.	Head and thorax densely and finely granular, opaque	*granulatus*, sp. n., p. 189.
	Head and thorax normally punctured	11.
11.	Head large, obviously broader than the thorax	*laticeps*, sp. n., p. 190.
	Head normal, not or scarcely broader than the thorax	12.
12.	Head and thorax distinctly coriaceous between the punctures	*coriaceus*, sp. n., p. 190.
	Head and thorax smooth between the punctures	13.

13. Curvature of the eye much longer than that of the post-ocular region	15.
Curvature of the eye as long as or shorter than that of the post-ocular region	14.
14. Larger and more robust (2 mm.); post-ocular region dilated and prominent; antennæ longer	*foveicollis* Kr., p. 191.
Smaller and narrower (1·5 mm.); post-ocular region scarcely dilated; antennæ shorter	[p. 191. *flavipennis*, sp. n., *palitans*, sp. n., p. 192.
15. Thoracic foveæ scarcely visible	16.
Thoracic foveæ distinct	
16. 5th joint of antennæ longer than broad. Larger (2·4 mm.) and more robust	17.
5th joint of antennæ not longer than broad. Smaller (2 mm.) and narrower	*pusæ*, sp. n., p. 192. *gratus*, sp. n., p. 193. *piceicollis*, sp. n., p. 193.
17. More finely punctured; antennæ thinner	19.
Less finely punctured; antennæ stouter	
18. Fore-parts coarsely and closely punctured	20.
Fore-parts normally punctured or coriaceous	*scabrosus* Kr., p. 194.
19. Black, subopaque, thorax even	[p. 194.
Head and abdomen black, thorax and elytra reddish brown, shining, thorax impressed before the base	*abnormalis*, sp. n.,
20. Antennæ entirely testaceous	21.
Antennæ at least partly black or infuscate.	22.
21. Penultimate joints of antennæ distinctly transverse	*ruficornis*, sp. n., p. 195.
Penultimate joints of antennæ as long as broad	[p. 195. *taprobanæ* Walk.,
22. Thoracic impressions distinct	23.
Thoracic impressions wanting or very indistinct	25.
23. More robust; thorax longitudinally impressed on either side of middle	[p. 196. *rivularis* Motsch.,
More slender; thorax with anchor-shaped impression	24.
24. Larger (3 mm.); 3rd joint of antenna distinctly longer than broad	*torrentum*, sp. n., p. 196.
Smaller (2 mm.); 3rd joint of antenna not longer than broad	*trivialis*, sp. n., p. 197.
25. Larger (2·4 mm.); head and thorax coriaceous, opaque, not visibly punctured	[p. 197. *nitidipennis* Cam.,
Smaller (1 to 1·5 mm.)	26.
26. Head and thorax densely coriaceous, opaque, without puncturation. Length 1 to 1·2 mm.	[p. 198. *calcuttanus* Bernh.,
Head and thorax punctured, less opaque	27.
27. Head and thorax moderately finely, distinctly punctured	*vagans*, sp. n., p. 198.
Head and thorax extremely finely, densely punctured, almost coriaceous	[p. 199. *bengalensis*, sp. n.,

197. **Trogophlœus (Boopinus) indicus.** (Pl. II. fig. 5.)

Trogophlœus indicus Kr., Arch. Naturg. xxv, 1859, i, p. 179; Fauv., Rev. d'Ent. v, 1886, p. 144; viii, 1889, p. 247.
Trogophlœus flavipes Motsch., Bull. Mosc. xxxiv, 1861, p. 43; Fauv., Rev. d'Ent. xxii, 1903, p. 150.
Trogophlœus ceylonicus Bernh., D. E. Z. 1902, p. 44.

Moderately shining, entirely black. Thorax strongly rounded and dilated in front, with four foveæ on the disc. Antennæ black, the 1st joint testaceous. Legs testaceous. Length 2·5 mm.

Closely allied to *T. memnonius* Er., but with yet more dilated thorax, shorter and more closely punctured elytra. Head large, subtriangular, narrower than the thorax, eyes very large, temples scarcely visible, in front longitudinally impressed on either side, finely and closely punctured. Antennæ long and slender, the 3rd joint shorter than the 2nd, 4th to 9th all longer than broad, gradually decreasing in length, 10th as long as broad. Thorax transverse ($4\frac{1}{2} : 3$), strongly rounded and dilated in front, strongly narrowed behind, at the base on each side with an oblique impression and on either side of the middle with a shorter impression, in the middle line elevated, forming with the impressions an anchor-shaped figure, closely and rather less finely punctured than the head, with similar fine short pubescence. Elytra a little broader and a fourth longer than the thorax, closely, moderately finely punctured, finely pubescent. Abdomen very finely, closely punctured, finely, rather closely pubescent.

Widely distributed throughout India, Ceylon, and the Malay Archipelago.

198. **Trogophlœus (Boopinus) nigrita.**

Trogophlœus nigrita Woll., Cat. Col. Mader. 1857, p. 202; Fauv Rev. d'Ent. xxi, 1902, p. 61; Klima, Münch. Kol. Zeitschr. ii, 1904, p. 57.
Trogophlœus bilineatus Woll., Cat. Can. Col. 1864, p. 599.
Trogophlœus insularis Kr., Berl. Ent. Zeitsch. ii, 1858, p. 127.
Trogophlœus oculatus Woll., Col. Atlant. 1865, App. p. 74.

Differs from *T. indicus* Kr. in the smaller size and narrower build, the thorax is much less dilated in front, the antennæ shorter, the 8th to 10th joints not longer than broad, the puncturation of the head and thorax less fine, that of the abdomen finer. Head narrower than the thorax. Antennæ with the 3rd joint as long as the 2nd, 4th to 7th longer than broad, gradually decreasing in length, the 8th to 10th about as long as broad. Thorax about one-third broader than long, with the usual discal impressions. Elytra about a third longer than the thorax. Abdomen finely and closely punctured and pubescent. Antennæ more or less reddish at the

base, the legs more or less pitchy, with the knees and tarsi testaceous. Length 2 to 2·5 mm.

Widely distributed in the Oriental Region; also in Europe, Madeira, and Canaries.

199. **Trogophlœus (Boopinus) siamensis.**

Trogophlœus siamensis Fauv., Rev. d'Ent. v, 1886, p. 144; Ann. Soc. Ent. Fr. (6) vi, 1886, p. 178.
Var. *siwalikensis* nov.

Smaller ($1\frac{2}{3}$ to $2\frac{1}{3}$ mm.) and less robust than *T. nigrita* Woll., the antennæ shorter and more slender, the first five or six joints reddish-testaceous, the 3rd joint shorter than the 2nd, 4th scarcely, 5th to 7th a little longer than broad, 8th to 10th as long as broad; head almost as broad as the thorax, closely and finely punctured. Thorax slightly broader than long, in front less dilated than in *nigrita*, rather more closely punctured, the foveæ well-marked. Elytra broader and one-third longer than the thorax, as closely but less finely punctured; abdomen very finely and very closely punctured, with fine grey pubescence, much closer than that of the fore-parts. The colour is black, occasionally (as in many of the genus) with the thorax and elytra pitchy. The legs are testaceous, the 3rd joint of the maxillary palpi blackish.

Bihar: Pusa. Widely distributed in the Oriental Region; also in Madagascar.

The variety *siwalikensis* differs from the type-form in the less distinct thoracic impressions and rather more finely punctured fore-parts. I have taken it in the Siwaliks.

200. **Trogophlœus (Boopinus) peregrinus.**

Trogophlœus (*Boopinus*) *peregrinus* Cam., E. M. M. lv, 1919, p. 225.

Moderately shining, the head black, the thorax black or pitchy, the elytra castaneous. Antennæ and legs reddish-testaceous. Length 2·5 mm.

Almost identical in build with *T. politus* Kies., except that the elytra are shorter and the thorax has four somewhat obsolete impressions on the disc; the puncturation of the thorax and elytra stronger, that of the abdomen less dense and the pubescence more sparing. Head almost as wide as the thorax. Eyes large, occupying nearly the whole side of the head, which is finely and closely punctured. Antennæ with the 3rd joint scarcely shorter than the 2nd, the 4th to the 7th longer than broad, gradually decreasing in length, 8th, 9th, and 10th about as long as broad, but stouter than the preceding, 11th rather short, oval. Thorax about one-third broader than long, the sides strongly rounded in front and

moderately strongly convergent behind; the disc with four somewhat obsolete impressions; puncturation moderately fine and close. Elytra broader and about one-third longer than the thorax, square, the puncturation very similar to that of the thorax. Abdomen finely and moderately closely punctured and pubescent throughout.

Ceylon: Kitulgalle; Colombo (*G. Lewis*).

201. **Trogophlœus (Boopinus) planicollis.**

Trogophlœus (*Boopinus*) *planicollis* Bernh., D. E. Z. 1902, p. 45.

Rather shining, pitchy, the 1st joint of the antennæ and the legs pale testaceous, the thorax narrower than the elytra, almost even, very finely and very closely punctured. Length 2·5 mm.

Differs from *T. indicus* Kr. in the narrower, scarcely impressed and more finely punctured thorax. Black, the thorax and elytra sometimes brownish, the palpi dark. Head and antennæ scarcely differing from *indicus*. Thorax in the anterior third much narrower than the elytra, scarcely a half broader than long, less strongly narrowed behind than in *indicus*, with a trace of median keel behind, on each side almost without trace of fossæ, extremely finely and very thickly punctured, moderately shining, grey pubescent. Elytra much longer than the thorax, distinctly broader than long, shining, finely and very closely punctured, grey pubescent, slightly longitudinally impressed on either side of the suture. Abdomen extremely finely and extremely thickly punctured, grey pubescent, scarcely shining.

Ceylon: Anuradhapura (ex *Bernhauer*).

202. **Trogophlœus (Boopinus) chatterjeei**, sp. n.

This species would appear to be very similar to *T. planicollis* Bernh., but the abdomen is not densely punctured and pubescent, but rather less closely than in *T. indicus* Kr. The antennæ scarcely differ from those of *indicus*, but the thorax is much less dilated in front and less retracted behind, and more finely punctured on the disc, as is also the head; the elytra scarcely differ from *indicus*. Length 2·5 to 2·75 mm.

Central Provinces: Rahatgaon, Hoshangabad, 21. ix. 26 (*S. N. Chatterjee*).

203. **Trogophlœus (Boopinus) congruus**, sp. n.

Moderately shining; head and abdomen black, thorax pitchy-brown, elytra brownish-yellow. Antennæ black, the first four joints reddish-yellow. Legs testaceous. Length 2 mm.

In build somewhat resembling *T. pusillus* Gr., but a little larger, the head larger and without post-ocular space, the thorax pitchy, more retracted behind, less distinctly impressed; the puncturation is very similar and the antennæ similarly constructed. Head a little narrower than the thorax, the eyes large and extending to the neck, broadly impressed on each side within the antennal tubercles, very finely and closely punctured. Antennæ with the penultimate joints slightly transverse. Thorax with four slight discal impressions, the basal ones more distinct, the puncturation as on the head. Elytra about half as long again as the thorax, about as long as broad, a little less finely punctured than the thorax. Abdomen extremely finely and closely punctured and coriaceous, very finely pubescent like *pusillus*.

Central Provinces: Rahatgaon, Hoshangabad.

204. **Trogophlœus (Boopinus) simplex.**

Trogophlœus simplex Motsch., Bull. Mosc. xxxi, 1857, iv, p. 31.

Moderately shining, black, the thorax pitchy, without or with scarcely perceptible fossæ. Antennæ dark, the 1st joint testaceous. Palpi pitchy. Legs testaceous. Length 1·75 mm.

Head nearly as broad as the thorax, finely and closely punctured. Antennæ rather slender, the 3rd joint shorter than the 2nd, 4th and 5th a little longer than broad, 6th to 8th as long as broad, 9th and 10th slightly transverse. Thorax one-third broader than long, narrower behind, widest at the middle, the sides evenly rounded from base to apex, the disc without or with scarcely perceptible impressions, very finely and closely punctured like the head. Elytra broader and nearly one-third longer than the thorax, closely and much less finely punctured. Abdomen very finely, moderately closely punctured, finely pubescent.

Ceylon. Widely distributed in the Oriental Region and Australia.

205. **Trogophlœus** (s. str.) **granulatus**, sp. n.

Head black, opaque, thorax pitchy, reddish posteriorly, opaque; elytra shining brownish-testaceous; abdomen shining black. Antennæ reddish-testaceous, infuscate towards the apex. Palpi with the 3rd joint pitchy. Legs testaceous. Length 2 mm.

Head nearly as wide as the thorax, convex, without impressions, the eyes small, not prominent, the length of their curve shorter than that of the temples; densely and finely granular. Antennæ rather long, the 3rd joint shorter than the 2nd, 4th and 5th slightly longer than broad, 6th as long as

broad, 7th to 10th transverse. Thorax one-third broader than long, widest before the middle, the sides rounded in front and narrowed behind in a nearly straight line; disc without trace of impressions, the sculpture as on the head. Elytra broader and one-third longer than the thorax, pale brownish-testaceous, shining, closely and rather finely punctured, finely pubescent. Abdomen a little widened behind, black, shining, very finely and closely punctured, finely pubescent.

This insect has somewhat the facies of *T. apicalis* Epp.

Dehra Dun. A single specimen taken at light.

206. **Trogophlœus** (s. str.) **laticeps**, sp. n.

Shining; head ferruginous, the clypeus testaceous, between the antennal tubercles with transverse blackish band; thorax and elytra reddish-testaceous, the former with four foveæ; abdomen brown. Antennæ, palpi, and legs testaceous. Length 2 mm.

Very distinct by the large broad head and narrow thorax. Head distinctly broader than the thorax, transverse, subquadrate, the length of the curve of the eye equal to that of the rounded temple; in front longitudinally impressed on either side, the vertex with a round impression, closely, moderately finely punctured, the punctures finely umbilicate. Antennæ with the 3rd joint a little shorter than the 2nd, the 4th to 10th transverse, gradually increasing in width. Thorax a little broader than long, widest before the middle, gently rounded in front and nearly straightly contracted behind, the disc with four moderately defined impressions, the sculpture as on the head. Elytra broader and one-third longer than the thorax, finely and rather closely punctured. Abdomen a little widened behind, very finely and rather closely punctured, finely and moderately closely pubescent like the rest of the insect.

Mussoorie district: Kolhu Khet Gad. Dehra Dun: Nim Nadi.

207. **Trogophlœus** (s. str.) **coriaceus**, sp. n.

Moderately shining, the head and abdomen black, thorax pitchy, the posterior border and posterior half of the sides rufescent. Elytra testaceous. Antennæ black, the first four joints testaceous. Palpi with the 3rd joint pitchy. Legs testaceous. Length 2 mm.

Somewhat resembling *T. punctipennis* Ksw. in build, but larger and more robust. Readily recognised by the colour, the umbilicate puncturation and coriaceous ground-sculpture. Head large, convex, as broad as the thorax, in front on each

side longitudinally impressed; the length of the curve of the eye equal to that of the temple; puncturation close, rather fine and umbilicate, with coriaceous ground-sculpture. Antennæ with the 3rd joint a little shorter than the 2nd, the 4th to 10th transverse, increasing in width, the 9th and 10th a good deal wider than the preceding. Thorax about one-third broader than long, widest before the middle, rounded in front, narrowed and straight behind, with scarcely visible dorsal impressions, the sculpture similar to that of the head. Elytra broader and a little longer than the thorax, the puncturation similar but coarser than that of the thorax, the ground-sculpture similar. Abdomen a little widened behind, very finely and rather closely punctured, finely coriaceous and finely pubescent.

Dehra Dun. At light.

208. **Trogophlœus** (s. str.) **foveicollis.**

Trogophlœus (s. str.) *foveicollis* Kr.*, Arch. Naturg. xxv, 1859, i, p. 180.

Moderately shining; head and abdomen black, the apex of the latter reddish; thorax reddish-brown; elytra reddish-testaceous. Antennæ black, the first joint reddish. Legs testaceous. Length 2 mm.

Head broad, scarcely narrower than the thorax, the length of the curve of the eye greater than that of the temple; in front longitudinally impressed on each side, closely and moderately finely punctured. Antennæ with the 3rd joint shorter than the 2nd, 4th and 5th a little longer than broad, 6th to 10th transverse, the 9th and 10th wider than the preceding. Thorax transverse (3 : 2), widest in front, straightly narrowed behind, the sides before the posterior angles obscurely crenulate; discal impressions well marked, forming the usual "anchor-pattern," towards the sides rather broadly impressed, the sculpture as on the head. Elytra broader and a little longer than the thorax, more coarsely and less closely punctured. Abdomen scarcely dilated behind, very finely, moderately closely punctured and pubescent; finely coriaceous.

Ceylon. Widely distributed in the Oriental Region.

209. **Trogophlœus** (s. str.) **flavipennis, sp. n.**

Moderately shining; head and abdomen black, thorax pitchy brown, elytra testaceous. Antennæ dark, the first two joints testaceous. Length 1·5 mm.

Smaller and narrower than *T. foveicollis* Kr., with thinner antennæ, longer dirty testaceous elytra, and more finely punctured fore-parts. Head large, nearly as wide as the

thorax, the curve of the eye and temple about equal in length; closely and rather finely punctured. Antennæ with the 2nd joint shorter than the 3rd, 4th to 7th small, about as long as broad, 9th and 10th larger, transverse. Thorax broader than long ($2\frac{1}{2} : 2$), with well-marked dorsal impressions on the disc forming an "anchor-pattern"; puncturation as on the head. Elytra broader and a half longer than the thorax, similarly punctured. Abdomen a little dilated behind, very finely, moderately closely punctured, finely coriaceous and finely pubescent.

Dehra Dun.

210. **Trogophlœus palitans**, sp. n.

Moderately shining; head and abdomen black, thorax pitchy black, with very indistinct foveæ; elytra brownish-yellow. Antennæ with the first two joints testaceous, the following infuscate. Legs testaceous. Length 2 mm.

Of the build of *T. pusillus* Gr., but with lighter elytra, less fine puncturation of the fore-parts, and larger eyes; of the colour of *T. congruus*, but with smaller eyes. Head a little narrower than the thorax, the eyes large, the curve of the post-ocular space about one-third that of the eye, the surface very finely and closely punctured. Antennæ with the 5th to 7th joints a little longer than broad, 8th to 10th as long as broad, the 8th smaller than the following. Thorax with the anterior foveæ scarcely visible, the posterior feeble, the puncturation very fine and close. Elytra one-third longer than the thorax, very similarly but scarcely as closely punctured. Abdomen extremely finely and closely punctured, coriaceous, very finely closely pubescent as in *pusillus*.

United Provinces: Dehra Dun.

211. **Trogophlœus** (s. str.) **pusæ**, sp. n.

Narrow, elongate, moderately shining; the head and abdomen black, thorax reddish-brown, elytra testaceous. Antennæ with the first three or four joints testaceous, the rest dark. Maxillary palpi with the 3rd joint infuscate. Legs testaceous. Length 2 mm.

Build and size of *T. pusillus* Gr., but with the thorax rather narrower, the structure of the head scarcely differs, the antennæ are shorter. Head nearly as broad as the thorax, the eyes large, the length of their curve much greater than that of the temples, longitudinally impressed on each side in front, closely and finely punctured. Antennæ with the 5th to 10th joints transverse, the 9th and 10th distinctly broader than the preceding. Thorax a little broader than long, widest before

the middle, rounded in front, narrowed and almost straight behind, disc with four foveæ, sculpture as on the head. Elytra a little broader and a half longer than the thorax, very finely and closely punctured. Abdomen elongate, very finely and very closely punctured, rather closely, finely pubescent.

Bihar : Pusa.

212. **Trogophlœus (s. str.) gratus**, sp. n.

Moderately shining ; head black, thorax reddish-brown, elytra testaceous, abdomen brown. Antennæ blackish, the first two or three joints testaceous ; 3rd joint of maxillary palpi pitchy. Legs testaceous. Length 2·4 mm.

In build somewhat resembling *T. pusillus* Gr., but broader. From *T. foveicollis* Kr. it is distinguished by the narrower build, finer puncturation, thinner antennæ, larger eyes, etc. Head large, nearly as broad as the thorax, the eyes large and prominent, the temples short but distinct ; finely and closely punctured. Antennæ slender, the 3rd joint scarcely shorter than 2nd, 4th small, about as long as broad, 5th and 6th a trifle longer than broad, 7th and 8th about as long as broad, 9th and 10th transverse. Thorax one-third broader than long, less strongly dilated in front and less narrowed behind than *foveicollis* Kr., the sides behind obscurely crenulate ; discal impressions well marked, forming the usual "anchor pattern," the sculpture as on the head. Elytra a little broader and a half longer than the thorax, less finely punctured. Abdomen elongate, scarcely widened behind, very finely, closely punctured, finely coriaceous and finely pubescent.

Dehra Dun. At light.

213. **Trogophlœus piceicollis**, sp. n.

Moderately shining ; head and abdomen black, thorax and elytra brownish-red. Antennæ black, the first four joints testaceous. Legs testaceous. Length 2·4 mm.

Near *T. impressus* Lac., but differently coloured and of rather narrower build, the eyes larger, thorax narrower, the impressions deeper and the puncturation not quite so fine. Head a little narrower than the thorax, the post-ocular space not dilated and about a third as long as the curvature of the eye ; finely and closely punctured. Antennæ with the 4th to 7th joints about as long as broad, the 8th to 10th scarcely transverse. Thorax with a well-marked anchor-shaped impression on the disc, puncturation close, less fine than on the head. Elytra about half as long again as the thorax, very

similarly, punctured. Abdomen very finely, not very closely punctured and pubescent, finely coriaceous.

Central Provinces: Rahatgaon, Hoshangabad.

214. **Trogophlœus** (s. str.) **scabrosus.**

Trogophlœus scabrosus Kr., Arch. Naturg. xxv, 1859, i, p. 179.

Entirely black, the fore-parts nearly opaque, coarsely and closely punctured, abdomen shining. Antennæ and palpi black. Legs pitchy, the apex of the tibiæ and the tarsi testaceous. Length 2·5 mm.

An aberrant species. Head almost as wide as the thorax, the eyes moderate, the length of their curve a little less than that of the temple, coarsely, closely punctured. Antennæ with the 3rd joint a little shorter than the 2nd, the 4th and 5th about as long as broad, the 6th to 10th transverse, the 9th and 10th more strongly than the preceding. Thorax nearly a third broader than long, the sides in front gently rounded, straighter and narrower behind, disc without trace of impressions, with sculpture as on the head. Elytra a little broader and a little longer than the thorax, more coarsely, rugosely punctured. Abdomen finely, moderately closely punctured, with a long and coarse pubescence.

Ceylon: Nuwara Eliya, alt. 6000 to 8000 feet.

215. **Trogophlœus** (s. str.) **abnormalis**, sp. n.

Shining; head and abdomen black, thorax and elytra ferruginous red, the latter more or less infuscate. Antennæ reddish-testaceous, the middle joints scarcely infuscate. Legs testaceous. Length 2·5 mm.

Remarkable by the shining and strongly punctured fore-parts. Head short, narrower than the thorax, temples short, rounded, distinctly constricted behind, shorter than the curve of the eye; front lightly longitudinally impressed on either side, clypeus smooth, the rest of the surface rather closely and moderately coarsely punctured. Antennæ with the 3rd joint as long as the 2nd, the 4th about as long as broad, the 5th to 10th strongly transverse, the 9th and 10th considerably broader than the preceding. Thorax a third broader than long, the sides in front rather strongly dilated and rounded and rather strongly converging behind, the posterior angles rounded; at the base lightly transversely impressed, the impression divided by a fine shining line, a little in front with a slightly diverging impression, the whole surface yet more coarsely punctured than the head, but about as closely. Elytra a little broader and a third longer than the thorax,

convex, almost as coarsely, but less deeply punctured than the thorax. Abdomen very finely, moderately closely punctured and pubescent, without ground-sculpture.

Almora: Dhauli Ganga, alt. 6800 feet.

216. **Trogophlœus** (s. str.) **ruficornis**, sp. n.

Moderately shining; head and abdomen black, thorax pitchy, elytra reddish-brown. Thorax without impressions. Antennæ, palpi, and legs testaceous. Length 1·8 mm.

In build somewhat resembling *T. corticinus* Gr., the form of the head very similar, but the thorax more transverse and the elytra shorter. Head nearly as broad as the thorax, the eyes rather large, the length of their curve about a third greater than that of the temples; closely and finely punctured. Antennæ with the 3rd joint distinctly shorter than the 2nd, the 4th to 10th transverse, gradually increasing in width. Thorax one-half broader than long, the sides evenly rounded narrower behind; disc without impressions, finely and closely punctured. Elytra broader and nearly one-half longer than the thorax, finely and closely punctured. Abdomen very finely and rather closely punctured, finely, not closely pubescent.

Ceylon: Belligam.

217. **Trogophlœus** (s. str.) **taprobanæ**.

Trogophlœus taprobanæ Walk.*, Ann. Mag. Nat. Hist. (3) iii, 1859, p. 52.

Moderately shining; head black, thorax blackish-brown, elytra brown, abdomen black. Antennæ and legs testaceous. Length 2 mm.

Eyes moderate, temples well developed, but shorter than the eye, very finely and closely punctured. Antennæ rather long and slender, the 3rd joint a little shorter than the 2nd, 4th as long as broad, 5th to 7th a little longer than broad, gradually decreasing in length, 8th smaller than 9th, as long as broad, 9th and 10th stouter, as long as broad. Thorax strongly transverse, with very indistinct impressed line in the middle, without discal impressions, towards the sides slightly obliquely impressed, very finely and closely punctured, rather strongly widened and rounded in front and narrowed behind. Elytra about one-third longer than the thorax, closely but much less finely punctured. Abdomen extremely finely and indistinctly punctured, with sparing pubescence.

Differs from *T. simplex* Motsch. in the smaller eyes, longer temples, longer, thinner, differently coloured antennæ, wider, shorter thorax, and more coarsely punctured elytra.

Ceylon.

218. **Trogophlœus** (s. str.) **rivularis.**

Trogophlœus rivularis Motsch., Bull. Mosc. xxxiii, 1860, ii, p. 552; Hochh., l. c. xxxv, 1862, iii, p. 94; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 651; Klima, Münch. Kol. Zeitschr. ii, 1904, p. 55.
Trogophlœus bilineatus Er., Käf. Mark. Brand. 1839, p. 600; id., Gen. Spec. Staph. 1840, p. 806; Kraatz, Naturg. Ins. Deutsch. ii, 1856–58, p. 872; Thoms., Skand. Col. iii, 1861, p. 135; Muls. et Rey, Col. Fr., Brévip. 1879, p. 271.
Trogophlœus corticinus Gyll., Ins. Spec. ii, 1810, p. 645.
Trogophlœus erichsoni Shp., E. M. M. vii, p. 182; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 150.
Trogophlœus metuens Muls. et Rey, Col. Fr., Brévip. 1879, p. 274.
Trogophlœus obscurus Steph., Ill. Brit. Ent. v, 1832, p. 326.
Trogophlœus subæquus Muls. et Rey, Col. Fr., Brévip. p. 279.

Moderately shining, black, the thorax and elytra often pitchy-brown. Thorax with two impressions. Antennæ dark, the first two joints testaceous; palpi and legs testaceous. Length 2·8 to 3 mm.

Head subtriangular, nearly as broad as the thorax, the eyes rather large and prominent, the length of their curve greater than that of the temple, in front on either side longitudinally impressed, closely and finely punctured. Antennæ with the 3rd joint a little shorter than the 2nd, 4th to 7th longer than broad, 8th to 10th about as long as broad, the 9th and 10th stouter than the preceding. Thorax one-third broader than long, the sides in front rather strongly dilated and rounded, almost straight and strongly contracted behind, the disc with a lightly-curved longitudinal impression on each side of the middle line, closely and finely punctured, at the sides in front less shining and slightly rugose. Elytra a little broader and a third longer than the thorax, closely, much less finely punctured. Abdomen very finely, closely punctured, with a rather coarse pubescence similar to that of the fore-parts.

Mussoorie district: Aglar River. Also in the Palæarctic and Nearctic Regions.

219. **Trogophlœus** (s. str.) **torrentum, sp. n.**

Shining, entirely black. Thorax with impressions. Antennæ black, the first two joints testaceous. Palpi with the 3rd joint pitchy. Legs testaceous, the femora and tibiæ a little infuscate. Length 3 mm.

Blacker, more shining and more slender than *T. rivularis* Motsch. Head a little narrower than the thorax, the eyes rather large and prominent, the length of their curve equal to that of the temples; in front longitudinally impressed on each side, the puncturation as fine, but less close than in *rivularis*. Antennæ with the 3rd joint shorter than the 2nd, the 4th to 6th

slightly longer than broad, 7th to 10th transverse. Thorax about a half broader than long, moderately rounded and widened in front and narrowed behind, the disc with anchor-shaped figure, the puncturation a little less fine and a little closer than that of the head. Elytra broader and about one-half longer than the thorax, less finely and less closely punctured. Abdomen very finely and closely punctured, finely pubescent.

Mussoorie district : Arni Gad.

220. **Trogophlœus trivialis**, sp. n.

Moderately shining, black, the elytra dark brown. Antennæ black, the first two joints testaceous. Legs testaceous. Length 2 mm.

In the build of the head and thorax very similar to *T. foveolatus* Sahlb., but differs in being less robust, the antennæ longer and differently coloured, and the different sculpture. Head slightly narrower than the thorax, the curve of the eye as long as that of the somewhat dilated post-ocular region, the surface finely and closely punctured. Antennæ with the penultimate joints slightly transverse, the 4th to 7th about as long as broad. Thorax transverse, the anterior discal impressions feeble, the posterior small but distinct ; puncturation close, a little less fine than that of the head. Elytra about one-half longer than the thorax, about as long as broad, the puncturation rather coarser than on the thorax. Abdomen very finely, not very closely punctured, coriaceous ; pubescence not dense.

Central Provinces : Rahatgaon, Hoshangabad.

221. **Trogophlœus** (s. str.) **nitidipennis.**

Trogophlœus nitidipennis Cam., E. M. M. lv, 1919, p. 225.

Black ; head and thorax entirely dull, elytra and abdomen shining ; thorax without trace of impressions ; antennæ and legs reddish-testaceous, the 2nd to the 8th joints of the former a little infuscate. Length 2·4 mm.

Very distinct by the completely dull head and thorax (which is without impressions) and the shining elytra and abdomen. Head broad, a little narrower than the thorax ; eyes small, their diameter about equal to the length of the temples, which are constricted behind ; the front without impressions ; the whole surface densely coriaceous and opaque, without visible puncturation. Antennæ with the 3rd joint shorter than the 2nd, the 4th to the 6th a little longer than broad, the 7th to the 10th somewhat transverse, the 11th short, oval. Thorax transverse, widest before the middle and about one-half as

broad again as long, the sides moderately rounded in front and rather strongly convergent behind; the disc without trace of impressions and similarly sculptured to the head. Elytra broader and a little longer than the thorax, transverse, shining, often more or less brownish, moderately finely and somewhat closely punctured. Abdomen slightly widened behind, shining, very finely and moderately closely punctured and pubescent.

Ceylon: Dikoya (*Lewis*).

222. Trogophlœus (s. str.) calcuttanus.

Trogophlœus calcuttanus Bernh.*, Ent. Blätt. vii, 1911, p. 55.

Black, the abdomen shining, the rest of the body opaque. Thorax without impressions. Antennæ black, the 1st joint reddish-testaceous. Palpi with the 3rd joint infuscate. Legs testaceous, the femora and tibiæ infuscate. Length 1 to 1·2 mm.

Near *T. halophilus* Ksw., but shorter and broader, more opaque, the head and thorax more strongly sculptured, the elytra more rugose, the antennæ stouter. Head broad, nearly as wide as the thorax, the length of the curve of the eye a little more than that of the temple, in front on each side lightly impressed, densely coriaceous, without visible punctuation. Antennæ with the 3rd joint much shorter than the 2nd, the 4th to the 10th transverse, the penultimate twice as broad as long. Thorax transverse ($2\frac{1}{5} : 1\frac{3}{4}$), the sides gently rounded in front and narrowed behind, with sculpture as on the head. Elytra broader and a little longer than the thorax, closely, superficially punctured and densely coriaceous and rugose. Abdomen extremely finely and rather closely punctured, finely coriaceous, the apex more shining and almost without sculpture. Pubescence throughout fine and scanty.

Calcutta. Type in the Indian Museum.

223. Trogophlœus (s. str.) vagans, sp. n.

Head and thorax greasy lustrous; elytra and abdomen more shining; head and abdomen black; thorax and elytra pitchy. Antennæ with the 1st joint testaceous, the rest infuscate. Palpi with the 3rd joint pitchy. Legs testaceous. Length 1·5 mm.

Scarcely differing in build from *T. troglodytes* Er., but the antennæ are a little thinner, the head and thorax are distinctly punctured, the latter rather shorter and more transverse, the elytra less coarsely punctured. Head a little narrower than the thorax, the length of the curves of the eye and temple equal, longitudinally impressed on each side in front, finely and closely punctured and with distinct coriaceous ground-sculpture. Antennæ with the 3rd joint shorter than the

2nd, the 4th to 10th transverse, the 9th and 10th wider than the preceding. Thorax transverse ($2\frac{3}{4}$: 2), rather strongly narrowed behind, disc without impressions, the sculpture as on the head. Elytra broader and a little longer than the thorax, moderately finely and rather closely punctured. Abdomen very finely and rather closely punctured and pubescent.

Dehra Dun: Nun Nadi. Mussoorie: Ringal Gad. Almora: Dwarakhet, alt. 5000 to 6000 feet.

224. **Trogophlœus** (s. str.) **bengalensis**, sp. n.

Near *T. calcuttanus* Bernh., but with smaller head, less opaque fore-parts, the head and thorax being exceedingly finely and closely punctured, the elytra not rugose, more finely punctured and not coriaceous, the eyes smaller and less prominent. Very closely allied to *T. halophilus* Ksw., exactly similar in build and only differs in the stouter antennæ and less finely punctured elytra. Length 1·5 mm.

Bihar: Pusa.

225. **Trogophlœus (Troginus) exiguus.**

Trogophlœus exiguus Er., Käf. Mark. Brand. 1839, p. 604; id., Gen. Spec. Staph. 1840, p. 809; Kraatz, Naturg. Ins. Deutsch. ii, 1856–58, p. 877; J. Sahlberg, Enum. Col. Brach. Fenn. 1876, p. 180; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 157; id., Ann. Mus. Civ. Gen. xiii. 1878, p. 195; Muls. et Rey, Col. Fr., Brévip. 1879, p. 317; Klima, Münch. Kol. Zeitsch. ii, 1904, p. 65.
Trogophlœus aberrans Rosh., Thiere Andal. 1856, p. 85.
Trogophlœus atomus Sanley, Ann. Soc. Ent. Fr. (4) iv, 1864, p. 658.
Trogophlœus bledioides Woll., Cat. Col. Can. 1864, p. 601.
Trogophlœus despectus Ganglb., Käf. Mitt. Eur. ii, 1895, p. 658.
Trogophlœus discolor Bandi, Berl. Ent. Zeitsch. xiii, 1869, p. 400.
Trogophlœus glabricollis Motsch., Bull. Mosc. xxxiii, 1860, ii, p. 552.
Trogophlœus luteicornis Muls. et Rey, Col. Fr., Brévip. 1879, p. 319.
Trogophlœus minimus Kr., Arch. Naturg. xxv, 1859, i. p. 180.
Trogophlœus minusculus Motsch., Bull. Mosc. xxiv, 1851, i, p. 144.

Black, greasy lustrous, the elytra and abdomen more shining. Antennæ with the 1st joint and often the three following testaceous. Legs testaceous or pitchy, with the knees and tarsi lighter. Length 1·5 mm.

A small subcylindrical species. Head as wide as the thorax, the eyes large and prominent, the length of their curve about twice as long as the temple, which is very indistinctly separated from the neck; impressed in front within the antennal tubercles, very finely and densely punctured, the neck coriaceous. Antennæ with the 3rd joint much shorter than the 2nd, the 4th small, about as long as broad, the 5th larger, as long as broad, the 6th to 10th transverse, the 9th and 10th larger

than the preceding. Thorax slightly transverse, the sides feebly rounded in front and moderately narrowed behind, on each side of the base with or without a small impression, finely (but less finely than the head) and closely punctured. Elytra a little broader and a third longer than the thorax, closely and less finely punctured. Abdomen extremely finely, closely punctured, finely pubescent.

Widely distributed in India and Ceylon. Also in Europe, Africa, East Indies, China, and Japan.

Genus **XEROPHYGUS** Kr.

Xerophygus Kraatz, Arch. Naturg. xxv, 1859, i, p. 178, tab. iii, f. 1.

Somewhat resembling *Trogophlœus* in build, but larger and with slender, prominent mandibles which are deeply bifid at the apex. Labrum transverse, lightly sinuate in the middle, at each side with a long triangular membranous appendage, the space between with stiff setæ, at the sides with longer cilia. Mandibles prominent, the apex deeply bifid, the base with fimbriate membrane. Maxillæ very similar to *Trogophlœus*, but the palpi longer, the 4th joint minute. Mentum transverse, almost truncate at the apex, the anterior angles slightly rounded; tongue membranous, emarginate at the apex, obliquely truncate on each side, the anterior margin furnished with long cilia and bispinose in the middle, with a subquadrangular, indistinct supporting membrane; paraglossæ with long cilia, scarcely free at the apex. Labial palpi *much* longer than the tongue, with the 2nd joint a little narrower and almost twice as long as the 1st, the 3rd narrower and less than half as long as the 2nd (ex *Kraatz*).

Key to the Species.

Pitchy, greasy lustrous; palpi reddish-testaceous	*pallipes* Motsch., p. 200.
Black, shining; palpi fusco-testaceous	*flavipes* Motsch., p. 201.

226. **Xerophygus pallipes.**

Trogophlœus pallipes Motsch., Bull. Mosc. xxx, 1857, iv, p. 505; Kraatz, Arch. Naturg. xxv, 1859, i, p. 178, tab. iii, ff. 1, 1 *a*, 1 *b*.

Greasy lustrous; the abdomen more shining. Head black, the rest pitchy, the elytra rather lighter, the margins of the abdominal segments and apex rufescent. Antennæ, palpi, and legs reddish-testaceous. Length 3·5 mm.

Head transverse, depressed between the antennal tubercles, the vertex with a small smooth space, otherwise very closely,

finely, but roughly punctured and grey pubescent; temples rounded and convergent, shorter than the prominent eyes. Antennæ with the 3rd joint longer than the 2nd, 4th to 6th a little longer than broad, gradually decreasing in length, 7th to 9th about as long as broad, 10th slightly longer than broad, 11th a little longer than the 10th. Thorax as broad as the head, transverse, widest before the middle, rounded in front, contracted and sinuate behind, the posterior angles broadly rounded, subcarinate along the middle, superficially impressed on each side, the impression broader behind and becoming narrower in front; towards the sides lightly impressed, the sculpture fine, close, and granular. Elytra about a third longer and a little broader than the thorax, a little broader than long, rather finely, closely, asperately punctured, grey pubescent. Abdomen very finely, closely punctured in front, much more sparingly behind, finely coriaceous, with a fine, rather long, moderately close, grey pubescence.

"Ind. or."

227. **Xerophygus flavipes.**

Xerophygus (?) *flavipes* Motsch., Bull. Mosc. xxxiv, 1861, i, p. 143.

Depressed, elongate, parallel, very finely punctured, shining, black, with very short pubescence. Base of the antennæ and legs reddish-testaceous, the mouth and palpi fusco-testaceous. Head triangular, subconvex, closely punctured, the front in the middle with triangular smooth shining space; eyes prominent. Antennæ a little longer than the head and thorax, the 2nd joint scarcely longer than the 3rd, the following elongate and stouter towards the apex, 11th larger, long, oval. Thorax a little broader than the head, transverse, cordate, lightly bifoveolate in the middle, pubescent behind, the angles obtuse. Elytra scarcely broader than the thorax, quadrate, extremely closely and finely punctured, pubescent, the suture elevated. Abdomen pubescent, a little dilated behind, the apex pointed, the penultimate segment with whitish border. Length $1\frac{1}{4}$ lin.; breadth $\frac{1}{2}$ lin.

Colombo (ex *Motschoulsky*).

Genus **APOCELLAGRIA** Cam.

Apocellagria Cam., E. M. M. lvi, 1920, p. 143.

In facies recalling the genus *Falagria*, the thorax being narrow and cordate, the elytra ample, the abdomen slightly constricted at the base, and the legs long. Approaches closely to the subgenus *Thinodromus* as represented by *assamensis* Cam. in build, but differs in the presence of a small keel at the middle of the base of the first two (visible) dorsal

segments of the abdomen and a similar keel on the 1st ventral segment. Labrum transverse, chitinous, crescentically emarginate in front and furnished with a densely ciliated membrane, the chitinous part bearing several long setæ. Mandibles rather stout, not prominent, the apex shortly bifid and close behind with two small teeth. Maxillary palpi with very small 1st joint, the 2nd elongate, lightly curved and a little dilated towards the apex, the 3rd fully as long as the preceding, narrow at the base and considerably enlarged apically, 4th minute, subulate. Inner lobe of the maxilla triangular, the apex pointed, the inner margin with slender, closely placed teeth decreasing in length behind; outer lobe obliquely truncate at the apex, densely ciliate, and with shorter, slender, slightly curved teeth. Mentum trapezoidal, truncate in front; tongue broad, membranous, truncate in front, in the middle with a subtriangular chitinous plate, the front margin on either side of the middle line with a short chitinous rod. Labial palpi with the 1st joint broader than long, the 2nd stout, elongate, the 3rd much narrower and much shorter than the preceding. Paraglossæ distinct, ciliated. Gular sutures fused, except behind. Temples constricted behind, the neck thick. Prosternum well developed, its process small, pointed, the epimera rather small, pointed, fused with the epipleura of the pronotum. Mesosternum simple, its process short, pointed, extending but little between the coxæ, which are contiguous; metasternum truncate in front. Abdomen narrowed at the base, finely keeled in the middle below. Legs rather long, slender; tibiæ ciliate. Tarsi very short, the 3rd joint much longer than the preceding two together, claws with small tooth at base. Scutellum small, but visible.

Key to the Species.

Antennæ with the base only testaceous, the penultimate joints a little longer than broad	*indica* Cam., p. 202.
Antennæ with the base and apex testaceous, the penultimate joints much longer than broad	*tenuicornis*, sp. n., [p. 203.

228. **Apocellagria indica.** (Pl. II. fig. 6.)

Apocellagria indica Cam., E. M. M. lvi, 1920, p. 144.

Pitchy black, shining, the base of the thorax narrowly, the first and the anterior part or whole of the second (visible) dorsal segments reddish-testaceous. First three joints of the antennæ testaceous. Palpi testaceous, the 3rd joint scarcely infuscate. Legs pitchy, the base of the femora and apex of the tibiæ testaceous. Length 3·5 mm.

Head large, subpentagonal, the eyes prominent, the length of their curve about equal to that of the temples, these feebly rounded and converging; puncturation rather coarse and very close, more sparing in front. Antennæ rather long, gradually stouter towards the apex, the 1st and 3rd joints of about equal length, the 2nd a little shorter, 4th to 10th all distinctly longer than broad, but decreasing in length, the 11th as long as the 10th. Thorax scarcely wider than the head, slightly transverse, widest at the middle, the sides narrowed in the posterior fourth, rounded and dilated in front, crescentically impressed before the base; puncturation a little finer than on the head, very close in the impression and middle of the disc, almost wanting behind the anterior margin and the sides in front. Elytra ample, much broader and almost twice as long as the thorax, impressed in front on either side of the suture, finely and not very closely punctured, finely pubescent. Abdomen slightly constricted at the base, very finely and rather closely punctured, finely pubescent.

Nilgiri Hills (*H. L. Andrewes*).

229. **Apocellagria tenuicornis**, sp. n.

Head and thorax moderately shining, dark ferruginous-red, the elytra shining, pitchy, the base reddish. Abdomen shining, black, the first two (visible) segments reddish-testaceous. Antennæ with the first four and last two joints reddish-testaceous. Palpi testaceous. Legs pitchy, the base of the femora broadly, the extreme apex of the tibiæ and the tarsi testaceous. Length 3·5 mm.

Very similar to the preceding in build, but with smaller head and shorter temples, the head very similarly punctured. Antennæ longer and much more slender, the 3rd joint nearly twice as long as the 2nd, the rest all much longer than broad, gradually decreasing in length, the 11th longer than the 10th. Thorax formed as in *indica* with similar impression, but in addition with a median sulcus; puncturation as on the head, more uniform than in *indica*, only the dilated sides being impunctate. Elytra less finely punctured. Abdomen finely and more densely punctured.

Assam: Naga Hills, Kampison. In stream shingle (*S. N. Chatterjee*).

Genus OXYTELOPSIS Fauv.

Oxytelopsis Fauv., Rev. d'Ent. xiv, 1895, p. 199.

Facies of a broad and short *Oxytelus*; except for the abdomen, coarsely and rugosely punctured. Antennæ short. Eyes rather prominent, temples constricted behind, neck

thick. Labrum with transverse, scarcely emarginate, chitinous posterior part and crescentic, membranous, densely ciliate anterior part. Mandibles rather short, bifid at the apex and with a small tooth just behind. Inner lobe of maxilla pointed and furnished internally with some moderately long, slightly-curved spines. Outer lobe truncate at apex, with numerous curved spines and cilia. Maxillary palpi with 1st joint very short, 2nd short, obconical, 3rd longer than 2nd, cylindrical, 4th narrower and longer than the 3rd, gradually pointed. Mentum transverse, oblong. Tongue broad, lightly emarginate in front, with central chitinous rod. Labial palpi short, the 1st joint broader than long, the 2nd narrower and twice as long as the 1st, the 3rd as long as, but narrower than, the 2nd. Prosternum short, its process short and pointed; epimera large and fused with the pronotal epipleura. Mesosternum simple, its process short, emarginate behind, extending about half the length of the coxæ and receiving the rounded apex of the rather long metasternal process, the coxæ separated. Tibiæ sulcate externally, ciliate. Tarsi 3-jointed, the first two joints very short, the 2nd of them more or less bilobed, the 3rd elongate, longer than the 1st and 2nd together. Claws very slightly curved. Winged. The fore-parts are covered with a scaly crust of dry secretion, to which is adherent dirt, concealing the sculpture.

The species are found in débris in damp places, and are widely distributed in the Oriental Region. A species is also recorded from Madagascar.

Key to the Species.

1. Large species (5 mm.); apical margin of elytra narrowly reddish; penultimate joint of antennæ slightly transverse .... *apicipennis* Fauv., [p. 204.
   Smaller species (2·3 to 3·5 mm.); elytra uniformly coloured; penultimate joints of antennæ strongly transverse ..... 2.
2. Temples diverging behind and then obliquely truncate to the neck. Length 3·5 mm. ..... *cimicoides* Fauv., [p. 205.
   Temples not diverging, uniformly rounded . 3.
3. Head short, transverse, the post-ocular region scarcely twice as long as the eye. Length 2·3 to 2·75 mm..... *pseudopsina* Fauv., [p. 206.
   Head as long as broad, the post-ocular region fully twice as long as the eye. Length 3 mm..... *andrewesi*, sp. n., p. 207.

230. Oxytelopsis apicipennis.

Oxytelopsis apicipennis Fauv., Rev. d'Ent. xiv, 1895, p. 200.

Pitchy, a little shining, the clypeus, apical margin of the elytra and posterior margins of the abdominal segments

reddish. Antennæ reddish. Legs testaceous, the tibiæ pitchy. Length 5 mm.

Head suborbicular, narrower than the thorax, the post-ocular area evenly rounded, much longer than the small eye; antennal tubercles rather strongly elevated; clypeus shining, with a few fine punctures and surrounded by an impressed line, the anterior border truncate; base broadly emarginate; vertex elevated, obsoletely sulcate in the middle, on either side broadly, obliquely impressed, coarsely, rugosely sculptured. Antennæ with the 3rd joint shorter than the 2nd, 4th smaller than the 5th, transverse, 5th to 10th slightly transverse. Thorax transverse ($9\frac{1}{2} : 6$), the base and apical margins bisinuate, widest before the middle, the sides evenly rounded and crenulate, more narrowed behind, the anterior angles rectangular, prominent, the posterior obtuse; in the middle with a sulcus widened in front and bounded on each side by a fine keel, externally broadly impressed, the sculpture coarser than that of the head. Elytra a little longer and broader than the thorax, transverse, the suture raised, the disc and posterior angles obscurely impressed, coarsely, asperately sculptured. Abdomen elongate, oval, rather closely and moderately finely punctured in front, more finely and more closely behind.

Burma: Carin Asciuii Ghécu (*L. Fea*).

231. **Oxytelopsis cimicoides.** (Fig. 39.)

Oxytelopsis cimicoides Fauv.*, Rev. d'Ent. xiv, 1895, p. 200.

Scarcely shining, pitchy red, the elytra darker, the abdomen obscure reddish-yellow. Antennæ and legs reddish-testaceous, the tibiæ infuscate. Length 3·5 to 3·75 mm.

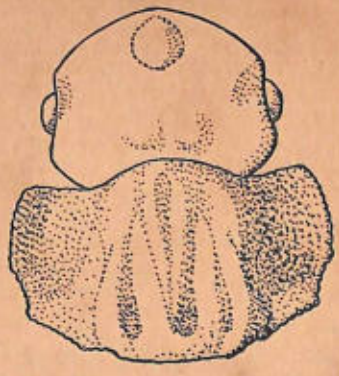


Fig. 39.—*Oxytelopsis cimicoides*, head and thorax.

Differs from *O. pseudopsina* Fauv. in the larger size and broader build, the dilated and obliquely truncate post-ocular

region, and the more transverse thorax, the sides of which are strongly elevated. Head transverse, much narrower than the thorax, the post-ocular region diverging backwards for a short space, then obliquely truncate to the neck; clypeus more shining, punctured, surrounded by a circular impressed line, the anterior margin broadly rounded; vertex elevated, on each side with a small fovea, coarsely rugosely sculptured. Antennæ scarcely differing from *pseudopsina*. Thorax twice as broad as long, the side-margins elevated, rounded, irregular, and crenulate, distinctly emarginate before the prominent posterior angles, disc in the middle feebly sulcate, externally transversely impressed, sculpture as on the head. Elytra longer (6 : 4) than the thorax, transverse, closely, coarsely, asperately punctured. Abdomen very finely, closely punctured.

Burma: Carin Asciuii Ghécu (*Fea*). Assam: Naga Hills, Laimatak (*S. N. Chatterjee*). Mussoorie district: Mossy Falls (*Cameron*).

232. **Oxytelopsis pseudopsina.** (Fig. 40.)

Oxytelopsis pseudopsina Fauv.*, Rev. d'Ent. xiv, 1895, p. 201.

Ferruginous-red, a little shining, abdomen obscure reddish-testaceous. Antennæ, mouth-parts, and legs reddish-testaceous. Length 2·3 to 2·75 mm.

Head much narrower than the thorax, transversely sub-orbicular, the post-ocular region evenly rounded to the neck,



Fig. 40.—*Oxytelopsis pseudopsina*, head and thorax.

scarcely twice as long as the rather prominent eye; margin of the front elevated and truncate, clypeus with a circular impression, the area within a little raised and coarsely punctured, vertex with obsolete sulcus, obsoletely impressed on either side, coarsely rugosely punctured. Antennæ with the 3rd joint clavate, about as long as the 2nd, the 4th small,

about as long as broad, the 5th to 10th transverse, the 9th and 10th much broader than the preceding, nearly three times as broad as long. Thorax transverse (5 : 3), bisinuate in front, the sides rounded, scarcely sinute behind, finely denticulate disc with median sulcus wider in front, on either side with a broader obsolete one, the sides scarcely impressed, sculpture as on the head. Elytra about one-third longer than the thorax, transverse, with close, rather coarse, asperate sculpture. Abdomen finely, rather closely asperately punctured.

Burma : Carin Asciuii Ghécu (*Fea*). Dehra Dun. Mussoorie. Siwaliks. Also in the Malay Peninsula, Sumatra, Java, and Borneo.

233. **Oxytelopsis andrewesi**, sp. n. (Fig. 41.)

Reddish-brown, subopaque, the anterior margin of the front testaceous ; abdomen more shining. Antennæ reddish, the first three joints testaceous. Legs reddish-testaceous. Length 2·75 mm.

Differs from *O. pseudopsina* Fauv. in the colour being less red, the larger, more quadrate head, the longer post-ocular region, the shorter, thicker antennæ, and the elevated, trisinuate sides of the thorax, which is strangulate before the base.



Fig. 41.—*Oxytelopsis andrewesi*, head and thorax.

Head subquadrate, a little broader than long, the curve of the eye about a third as long as that of the evenly-rounded post-ocular area, frontal margin elevated, truncate, clypeus with semicircular impression, the area within sculptured like the rest of the surface, vertex scarcely elevated, the whole surface coarsely, rugosely punctured. Antennæ short and clavate, the 2nd joint shorter than the 1st, clavate, the 3rd very small, moniliform, 4th to 10th transverse, quickly increasing in

breadth, the penultimate three times as broad as long. Thorax almost twice as broad as long, the front margin bisinuate, the sides elevated, obsoletely trisinuate and crenulate, a little before the base suddenly narrowed and emarginate; middle of the disc with a feeble sulcus, wider in front, abbreviated behind, on either side with a trace of a lateral sulcus, externally obsoletely, transversely impressed, the sculpture as on the head. Elytra a little wider and longer than the thorax, transverse, with a coarse granular sculpture, the sides finely crenulate. Abdomen very finely and not closely punctured.

Nilgiri Hills (*H. L. Andrewes*).

Genus **DELOPSIS** Fauv.

Delopsis Fauv., Rev. d'Ent. xiv, 1895, p. 198.

Elongate, subdepressed species with rugose sculpture of the fore-parts. Head strongly constricted behind, the neck rather broad, the gular sutures fused. Labrum transverse, broadly emarginate, the anterior angles furnished with a narrow, pointed, ciliated membrane, the emargination furnished with longer and shorter closely placed cilia and about a dozen longer setæ more posteriorly. Mandibles pointed, behind the apex with a broad tooth furnished with two pointed cusps, behind it with about five membranous processes ciliate at the apex, posteriorly with a ciliate membrane. Maxillary palpi with the 1st joint very small, the 2nd short, obconical, the 3rd longer, cylindrical, the 4th narrower and a little longer, cylindrical, with rounded apex. Inner lobe of maxilla with pointed apex, furnished internally with slightly curved spines, gradually becoming shorter behind; outer lobe obliquely truncate apically and furnished with numerous slightly curved slender spines and cilia. Mentum transverse, oblong. Tongue obtusely emarginate in front, forming two diverging rounded lobes, in the middle with a chitinous rod. Paraglossæ distinct, not extending beyond the anterior border of the tongue, ciliate. Labial palpi with the 1st joint broader than long, 2nd cylindrical, about twice as long as broad, the 3rd a little narrower than but as long as the preceding, its apex rounded. Prosternum short, scarcely produced between the coxæ. Epimera large and fused with the pronotal epipleura. Mesosternum simple, its process short, not much produced between the coxæ, these separated. Metasternal process produced between the coxæ. Tibiæ sulcate, pubescent, scarcely spinose externally at the apex. Tarsi short, 3-jointed, the 1st joint longer than the 2nd, this more or less bilobed, the 3rd longer than the two preceding together. Scutellum concealed. Winged.

The genus is found in the Oriental Region amongst damp débris etc. A single species is recorded from Africa.

Key to the Species.

1.	Species entirely black. Larger (4·5 to 5 mm.).	2.
	Thorax ferruginous-red, elytra brown. Smaller (1·75 to 2·5 mm.)	3.
2.	Antennæ long and stout, the penultimate joints much longer than broad, cylindrical.	*cornuta* Fauv., p. 209.
	Antennæ slender, the penultimate joints scarcely longer than broad, obconical	*seticornis* Fauv., p. 209.
3.	Larger (2 to 2·5 mm.). Antennæ shorter, the penultimate joints distinctly transverse	*indicus* Bernh., p. 210.
	Smaller (1·75 mm.). Antennæ longer, the penultimate joints a little longer than broad	*longicornis* Fauv., [p. 211.

234. **Delopsis cornuta.**

Delopsis cornuta Fauv., Rev. d'Ent. xiv, 1895, p. 198.

Subopaque ; head and elytra black, the thorax pitchy, the abdomen a little shining, pitchy. Antennæ black, robust and elongate. Legs reddish-testaceous. Length 4·75 to 5 mm.

Head subquadrate, narrower than the thorax, the posterior angles rather broadly rounded, the eyes small, about a fourth as long as the post-ocular space ; clypeus depressed, more shining, with a few punctures, the anterior margin truncate, behind with a fine elevated line, before the base transversely sulcate, behind the antennal tubercles longitudinally impressed, the impression continuous with the basal sulcus, sculpture more or less longitudinally coarsely reticulate. Antennæ long and stout, the 2nd joint scarcely longer than broad, the following all distinctly longer than broad, cylindrical. Thorax slightly transverse, almost semicircular, the sides with four emarginations, that before the obtuse posterior angle deepest, the anterior least evident ; in the middle with a sulcus, much wider in front, before the base on either side with a large impression, externally rather deeply transversely impressed ; sculpture reticulate, rugose. Elytra as long as, but broader than the thorax, transverse, rugose, and striate. Abdomen closely, rather finely and asperately punctured, yet more finely behind.

Burma : Carin Asciuii Cheba ; Carin Ghécu (*Fea*). Also in the Malay Peninsula.

235. **Delopsis seticornis.**

Delopsis seticornis Fauv.*, Rev. d'Ent. xiv, 1895, p. 199.
Delopsis tenuicornis Cam., Trans. Ent. Soc. Lond. 1924, p. 175.

Black, opaque, rugose ; head subtriangular, thorax with four impressions ; antennæ black, slender ; legs testaceous. Length 4·5 to 4·8 mm.

Differs from *D. cornuta* Fauv. in the shorter, more slender antennæ, more triangular head, more transverse thorax, and less reticulate, more rugose sculpture. Head widest behind, gradually narrowed anteriorly, eyes small, post-ocular area widened and rounded; front with a transverse shining plaque between the antennal tuberosities and a fine transverse impression immediately behind; vertex posteriorly with a small median and a larger lateral fovea on either side, the whole surface rugosely sculptured. Antennæ with the 2nd joint shorter than the 3rd, 4th to 8th longer than broad, gradually decreasing in length but increasing in thickness, 9th and 10th about as long as broad, 11th half as long again as 10th. Thorax nearly semicircular, transverse, anterior border bisinuate, posterior coarctate, anterior angles rectangular, disc with fine median furrow throughout, on either side with a broader curved impression, the sides with transverse obsolete impression, the whole surface rather finely, closely, and rugosely punctured. Elytra broader and a little longer than the thorax, transverse, closely striate-rugose. Abdomen rather shining, extremely finely and moderately closely punctured, very finely and rather closely pubescent, finely coriaceous.

Burma: Carin Asciuii Ghécu (*Fea*). Chakrata district: Khedar Khud, 7500 feet above the sea. Arni Gad, Mussoorie, 6500 feet above the sea (*Cameron*).

236. Delopsis indicus.

Oxytelus indicus Bernh.*, W. E. Z. xliii, 1926, p. 23.

Fore-parts opaque; abdomen a little shining; head and abdomen black, thorax ferruginous-red, the elytra brown. Antennæ black, the first four joints reddish-testaceous. Legs testaceous. Length 2 to 2·5 mm.

Very near *O. glareosus* Woll.† of the same build, opacity, sculpture, and colour and with similarly constructed antennæ, but whereas in *glareosus* the head of the ♂ is distinctly larger and more dilated behind than in the ♀, in *indicus* the head in both sexes appears similar. Head a little narrower than the thorax, the post-ocular region rounded and very slightly dilated, rather more than twice as long as the small eye; clypeus depressed, separated from the front by a transverse groove, roughly sculptured; vertex in the middle with a short sulcus, on each side with a larger fovea, the whole surface roughly, unevenly sculptured. Antennæ with the 3rd joint a little shorter than the 2nd, 4th and 5th a little longer than broad, the following slightly transverse, the 11th as long as the two preceding together. Thorax transverse ($3\frac{1}{2} : 2\frac{1}{4}$), the

† This insect is undoubtedly a *Delopsis*.

sides only slightly rounded in front, straighter and rather strongly retracted behind and obsoletely crenulate, the posterior angles rounded; sulci feeble, towards the sides impressed, the whole surface uneven, sculptured like the head. Elytra nearly a half longer than the thorax, closely longitudinally striate, the interstriæ a good deal interrupted. Abdomen very finely, moderately closely punctured.

♂: 7th ventral segment broadly and feebly emarginate.

♀: 7th ventral segment produced in the middle and rounded.

Kumaon: Haldwani. Bengal: Sarda. United Provinces: Dehra Dun; Mussoorie; Chakrata. Under damp débris near streams.

237. **Delopsis longicornis.**

Oxytelus longicornis Fauv.*, Mitt. Mus. Hamb. xxii, 1905, p. 80.

Opaque, the abdomen and clypeus more shining. Head blackish, abdomen black, thorax dark ferruginous-red, elytra yellowish-brown. Antennæ reddish. Legs reddish-testaceous. Length 1·75 mm.

Very near *Delopsis* (*Oxytelus*) *glareosus* Woll., but a little smaller and narrower, the head and thorax narrower, the latter of darker colour, antennæ longer, the sculpture finer. Head as broad as the thorax, widest behind and narrowed in front, eyes small, the post-ocular region slightly dilated and rounded to the neck, much longer than the curve of the eye; vertex with a short sulcus, very finely, roughly striate-coriaceous. Antennæ with the 3rd to 10th joints longer than broad, the 11th as long as the two preceding together. Thorax transverse, trapezoidal, the sulci distinct, finely longitudinally striate. Elytra closely asperate. Abdomen very finely, closely, roughly punctured. It would appear to differ from the type-form in the darker head.

Assam: Patkai Mountains. Also in Java.

Genus **OXYTELUS** Grav.

Oxytelus Grav., Col. Micr. Brunsv. 1802, p. 101; Mannh., Brachél. 1830, p. 47; Steph., Ill. Brit. Ent. v, 1832, p. 314; Er., Käf. Mark. Brand. 1837-39, p. 588; id., Gen. Spec. Staph. 1839-40, p. 785; Lacord., Gen. Col. ii, 1854, p. 118; Kraatz, Naturg. Ins. Deutsch. ii, 1856-58, p. 847; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 55; Thoms., Skand. Col. iii, 1861, p. 126; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 163; Muls. et Rey, Col. Fr., Brévip. 1879, p. 43; Sharp, B. C.-A. i, 2, 1882-87 (1887), p. 687; Cas., Ann. N. York Acad. vii, 1893, p. 381; Ganglb., Käf. Mitt Eur. ii, 1895, p. 633.

Subgen. *Anotylus* Thoms., Skand. Col. iii, 1861, p. 130.

" *Caccoporus* Thoms., id. p. 127.

Subgen. *Epomotylus* Thoms., id. p. 128.
" *Oxytelus*, s. str.
" *Tanycraerus* Thoms., Skand. Col. iii, 1861, p. 129.

More or less elongate, moderately depressed species. The head distinctly constricted behind. Gular sutures fused. Labrum short, broad, in front truncate or lightly emarginate, the rounded anterior angles furnished with a triangular ciliated membrane. Mandibles rather slender, pointed, immediately behind the apex with a broad bi- or tricuspid tooth and more posteriorly with some membranous ciliated processes. Maxillary palpi with the 1st joint small, the 2nd lightly curved, widened apically, the 3rd cylindrical, a little longer than the 2nd, the 4th narrower and a little longer than the 3rd, subulate. Inner lobe of the maxilla narrow and pointed, finely spinose internally; outer lobe longer and broader, its apex similarly spinose. Mentum transverse, oblong. Labial palpi with the 1st joint broader than long, 2nd cylindrical, much longer and narrower than the 1st, 3rd narrower and about as long as the preceding. Tongue broad, broadly and slightly emarginate; paraglossæ extending a little beyond its margin. Prosternum narrow, with rather short, pointed process; epimera broad, their inner margin straight. Mesosternum simple, its process very short and broad, extending but little between the coxæ. Metasternal process long and broad, extending between the coxæ to the mesosternal process. Tibiæ usually strongly spinose, the anterior externally usually more or less emarginate before the apex. Tarsi 3-jointed, the first two short and subequal, the 3rd much longer than the two preceding together. Scutellum concealed. Usually winged. The genus is universally distributed and frequents dung, carrion, rotting fungus, and fruit. Three species unknown to me (*simplex*, *incisus*, and *parasitus* Motschoulsky) are not included in the keys.

Key to the Subgenera.

1. Sides of the thorax crenulate or denticulate.	OXYTELUS, s. str.,	
Sides of the thorax even, at least in front ..	2.	[p. 212.
2. First joint of the antennæ elongate, distinctly constricted before the apex	3.	
First joint of the antennæ not constricted before the apex	ANOTYLUS, p. 237.	
3. Eyes with fine facets	TANYCRAERUS, p. 217.	
Eyes with coarse facets.....	CACCOPORUS, p. 231.	

Key to the Species of Subgenus Oxytelus, *s. str.*

1. Head and thorax bronze-green	*æneotinctus*, sp. n.,	
Head and thorax otherwise coloured	2.	[p. 215.
2. Elytra black or pitchy	3.	
Elytra yellow.....	4.	

3. Sides of thorax strongly denticulate. Length 4 mm.	*hirtulus* Epp., p. 213.
Sides of thorax finely crenulate. Length 2·75 to 3 mm.	*cribrum* Fauv., p. 214.
4. Antennæ red, the first four joints testaceous	*flavipennis* Kr., p. 215.
Antennæ black, the first or first and second joints more or less testaceous	*sordidus*, sp. n*, p. 216.

238. **Oxytelus** (s. str.) **hirtulus.** (Fig. 42.)

Oxytelus hirtulus Epp.*, W. E. Z. xiv, 1895, p. 68.

Black, moderately shining, the elytra brown, darker towards the base, the whole insect covered with long, fine, sparse pubescence. Antennæ black. Last joint of maxil ary palpi testaceous, the rest blackish. Femora brown, the tibiæ and tarsi reddish. Length 4 mm.

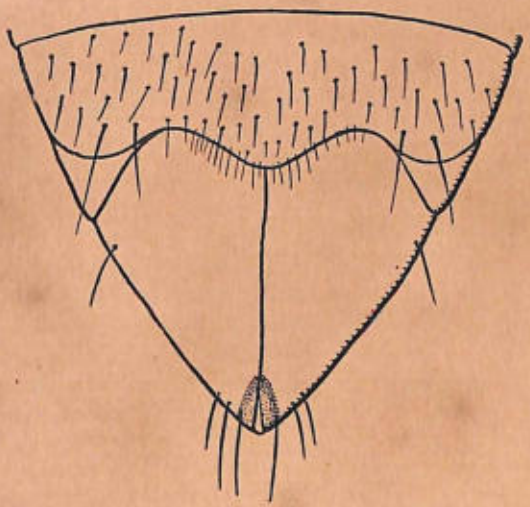


Fig. 42.—*Oxytelus hirtulus*, apex of abdomen; ventral surface of ♂.

♂: Head transverse, narrower than the thorax, the post-ocular region a little dilated and broadly rounded, the eyes small, their curve scarcely a third as long as that of the post-ocular area; clypeus a little convex, shining, impunctate, its anterior border broadly rounded, separated from the vertex by a transverse impressed line; neck closely and finely punctured; vertex without fovea, the whole surface closely and coarsely punctured. Antennæ reaching the base of the elytra, the 1st joint gradually thickened towards the apex,

not constricted, the 2nd scarcely shorter than the 3rd, the 4th scarcely longer than broad, the 5th as long as broad, the 6th to 10th transverse, gradually increasing in breadth, the penultimate about half as broad again as long, 11th short, oval. Thorax almost semicircular, the sides strongly denticulate, the disc with three not very distinct sulci, the median deeper than the lateral, these evanescent towards the front, the whole surface coarsely and closely punctured except the interval between the median and lateral sulci, which is much more sparingly punctured. Elytra as long and as broad as the thorax, coarsely but less closely punctured. Abdomen finely and sparingly punctured and without ground-sculpture. 7th ventral segment obtusely produced in the middle, the apex rounded, deeply emarginate on each side, in the middle of the base with a fovea.

♀: Head a little smaller, scarcely dilated behind, the eyes a little larger. 7th ventral segment broadly produced in the middle, the apex broadly rounded, scarcely emarginate on either side.

Eppelsheim appears to have described the ♂ as the ♀.

Simla (type): Fagu; Kotgarh, alt. 7000 to 8000 feet. Chakrata district: Jadi Gad; Kanasar, alt. 7000 feet (*Cameron*). Burma: Ruby Mines (*Doherty*).

239. Oxytelus (s. str.) cribrum.

Oxytelus cribrum Fauv., Rev. d'Ent. xxiv, 1905, p. 114.

Entirely black, very shining, the fore-parts coarsely sculptured and glabrous. Antennæ and palpi black. Femora pitchy, the tibiæ and tarsi lighter. Length 2·75 to 3 mm.

Differs from *O. hirtulus* in the smaller size, glabrous fore-parts, obsoletely crenulate sides of the thorax, etc. ♂: Head slightly transverse, narrower than the thorax, the post-ocular area rounded, the eyes small, the length of their curve about a third that of the post-ocular space; clypeus a little convex, rounded in front, impunctate, continuous with the vertex; intra-ocular keel continued to the base, internal to it with a longitudinal sulcus, coarsely punctured, here and there confluent; neck closely, moderately finely punctured. Antennæ with the 1st joint clavate, 2nd and 3rd equal in length, 4th small, moniliform, 5th to 10th transverse, the penultimate about twice as broad as long. Thorax nearly semicircular, the sides obsoletely crenulate, median sulcus narrow, distinct, the lateral scarcely visible, towards the sides obsoletely impressed, covered with coarse confluent punctures. Elytra a little longer and broader than the thorax, less coarsely striate-punctate. Abdomen very finely and sparingly punc-

tured, indistinctly coriaceous, and with a few fine short hairs. 7th ventral segment slightly obtusely produced in the middle

♀: Head smaller.

Sikkim: Darjeeling. Simla Hills, 7000 to 8000 feet alt. Chakrata district. Bengal: Kurseong. Burma: Ruby Mines.

240 **Oxytelus** (s. str.) **æneotinctus**, sp. n.

Shining; head and thorax bronze-green, elytra obscure testaceous with slight greenish reflex; abdomen black. Antennæ black, the first four joints more or less testaceous. Legs testaceous. Length 2·5 to 2·75 mm.

Readily distinguished by the colour. In build similar to *O. intricatus* Er., with sculpture of similar character but coarser.

♂: Head transverse, subquadrate, narrower than the thorax, the post-ocular region rounded, a little longer than the curve of the eye; clypeus not separated from the front, coriaceous, shining, the anterior margin truncate, the rest of the surface rather coarsely punctate-striate. Antennæ with the 4th joint moniliform, 5th to 10th transverse, the penultimate more than twice as broad as long. Thorax transverse, the sides slightly rounded in front, retracted behind, and feebly crenulate to the obtuse posterior angles; in the middle narrowly sulcate, the lateral sulci obsolete, the sides slightly impressed, the whole surface coarsely striate-punctate. Elytra a little longer and broader than the thorax, transverse, rather coarsely striate-punctate, including the reflexed sides and without lateral keel. Abdomen finely, distinctly, and rather closely punctured. 7th ventral segment slightly produced and rounded, emarginate on either side.

♀: Head smaller, less quadrate; post-ocular region as long as the curve of the eye; clypeus more strongly coriaceous.

Dehra Dun.

241. **Oxytelus** (s. str.) **flavipennis**.

Oxytelus flavipennis Kr.*, Arch. Naturg. xxv, 1859, i, p. 172.

Shining; head pitchy-brown, thorax reddish-brown, elytra yellow, abdomen brown. Antennæ with the first four joints testaceous, the rest red. Legs testaceous. Length 3 mm.

Build of *O. inustus* Gr., but much smaller and with larger eyes. Head scarcely narrower than the thorax, transverse, the vertex with deep longitudinal fovea and sulcate on either side; front depressed between the antennal tubercles; disc with a few moderately fine punctures, the lateral sulci coriaceous; post-ocular region rounded and narrowed to the neck, as long as the eyes. Antennæ with the 3rd joint longer

than the 2nd, 4th and following transverse. Thorax transverse, the sides obscurely crenulate, narrowed behind, the posterior angles completely rounded; disc tri-sulcate, the median extending the whole length, the lateral wider, very slightly curved and not reaching the anterior margin; the sides impressed, rather coarsely and closely punctured, scarcely strigose; lateral sulci with a few moderate punctures, the median sulcus and the spaces between it and the lateral practically impunctate. Elytra a little broader than the thorax, slightly transverse, moderately finely and moderately closely puncured, scarcely strigose. Abdomen coriaceous, the posterior margins of the segments each with a transverse row of fine punctures Otherwise impunctate.

♂: 7th ventral segment abruptly narrowed and produced, truncate, the apex deeply longitudinally impressed.

"Ind. or."

242. **Oxytelus** (s. str.) **sordidus**, sp. n.

Black, shining, the elytra pale testaceous, the sides (except at the humeral angle) infuscate. Antennæ black, the first or first and second joints testaceous, more or less infuscate below. Legs and palpi testaceous. Length 3 mm.

Very similar in build to *O. nitidulus* Gr., but more robust, differently coloured, the antennæ a little shorter, the puncturation of the head finer, and the elytra only striate at the sides. ♂: Head narrower than the thorax, the post-ocular region a little dilated and rounded, distinctly longer than the curve of the eye; clypeus continuous with the front and without sculpture; vertex with an obsolete sulcus, rather finely and moderately closely punctured, the punctures larger and closer towards the sides. Antennæ with the 3rd joint a little longer than the 2nd, 4th small, moniliform, 5th to 10th transverse, the penultimate joints strongly so. Thorax transverse (5 : 3), the sides obscurely crenulate, rounded in front and straighter behind, the posterior angles rounded; median sulcus entire, deeper and narrower than the lateral, these slightly curved, scarcely abbreviated in front, the sides broadly impressed, puncturation coarser than that on the vertex of the head, closer and more or less confluent in the sulci and lateral impressions, more sparing elsewhere. Elytra a little broader and a third longer than the thorax, transverse, superficially and moderately closely punctured on the disc, at the sides feebly striate-punctate. Abdomen finely and moderately closely punctured, finely coriaceous. 7th ventral segment narrowed, produced and rounded behind.

♀: Head smaller, post-ocular region not dilated, simply

rounded, its length scarcely as long as the curve of the eye; clypeus more or less coriaceous in front and with a few fine punctures.

Dehra Dun. Bihar: Pusa. Assam: Naga Hills up to 3000 feet.

Key to the Species of the Subgenus Tanycraerus.

1.	Antennal tubercles furnished in front with a longer (♂) or shorter (♀) spine. Length 5·5 to 6·3 mm.	*armiger* Fauv., p. 218.
	Antennal tubercles normal	2.
2.	Head entirely coriaceous except for a space on the middle of the neck	*nilgiriensis*, sp. n., [p. 227.
	Head at most with the clypeus (and occasionally the area immediately adjacent) coriaceous	3.
3.	Femora black or pitchy. Large species, 4·5 to 5 mm.	4.
	Femora testaceous	5.
4.	Thorax at the sides rugosely punctured; elytra coarsely striate-punctate	*robustus* Schub., p. 228.
	Thorax simply punctured; elytra scarcely striate	*hingstoni* Cam., p. 226.
5.	Thorax 5-sulcate	6.
	Thorax 3-sulcate	8.
6.	Posterior angles of the thorax prominent, obtuse; elytra testaceous, the base and sides more broadly, the suture and apex more narrowly blackish. Length 5·2 mm.	*almorensis*, sp. n., p. 221.
	Posterior angles of the thorax rounded, not prominent	7.
7.	Larger (5 to 5·5 mm.). Head larger and sparingly punctured	*lucens* Bernh., p. 220.
	Smaller (4 mm.). Head smaller and rather closely punctured	*punctipennis* Fauv., p. 223. / *discalis*, sp. n., p. 222.
8.	Clypeus not coriaceous	9.
	Clypeus distinctly coriaceous	10.
9.	Large (5·5 to 7 mm.); elytra punctate-striate	*bellicosus* Fauv., p. 218.
	Small (2·75 mm.); elytra simply punctured.	*fœtidus*, sp. n., p. 230.
10.	4th joint of the antennæ as broad as the 5th, the penultimate joints scarcely transverse	*megaceros* Fauv., p. 225.
	4th joint of the antennæ small, narrower than the 5th, the penultimate joints distinctly transverse	11.
11.	Elytra simply punctured	*pallidipennis*, sp. n., [p. 224.
	Elytra punctate-striate	12.
12.	Thorax deeply impressed at the sides, posterior angles obtuse	*dohertyi*, sp. n., p. 223.
	Thorax scarcely impressed at the sides, posterior angles rounded	*micans* Kr., p. 228.

243. **Oxytelus (Tanycraerus) armiger.**

Oxytelus armiger Fauv.*, Rev. d'Ent. xiv, 1895, p. 202.

Shining; head black, the spines of the antennal tubercles and clypeus rufescent; thorax and abdomen pitchy-black, the posterior margins of the 6th and 7th segments narrowly testaceous; elytra brown. Antennæ dark, the first four joints reddish. Legs testaceous. Length 5·5 to 6·3 mm.

♂: Head a little narrower than the thorax, transverse, the post-ocular region rounded to the neck, twice as long as the eye; clypeus declivous, impunctate, not separated from the front, on either side of the middle of the anterior border with a short pointed tooth, the border between crescentically emarginate; front excavated; antennal tubercles produced forwards into long, pointed, punctured, slightly divergent spines; vertex slightly impressed in the middle, on either side with a broader, slighter impression, the whole surface except the clypeus finely and sparingly punctured. Antennæ extending to the middle of the thorax, 3rd joint longer than 2nd, 4th a little longer than broad, 5th slightly, 6th to 10th scarcely transverse. Thorax transverse (10 : 7), with the sides rounded in front, rather strongly retracted and a little sinuate before the obtuse posterior angles; anterior angles rather prominent; sulci well marked, the median wider in front, the lateral curved, abbreviated in front; towards the sides broadly and deeply impressed, sparingly and rather finely punctured on the disc, more coarsely and more closely at the sides. Elytra a little widened behind, as long as but a little broader than the thorax, closely and rather coarsely striate and punctured, externally with a broader, uninterrupted stria. Abdomen very finely and very sparingly punctured in front, practically impunctate behind, ground-sculpture fine, coriaceous. 6th ventral segment with three slight, broad emarginations. 7th deeply and narrowly excised on each side, the central lobe so formed broad with rounded apex, the whole segment broadly impressed along the middle to the base.

♀: Head smaller, the spines a little shorter, the clypeal teeth smaller; post-ocular space about twice as long as the eye.

Burma: Carin Cheba, 900 to 1100 metres, v.–xii. 1888 (*L. Fea*).

244. **Oxytelus (Tanycraerus) bellicosus.** (Fig. 43.)

Oxytelus bellicosus Fauv.*, Rev. d'Ent. xiv, 1895, p. 202.

Shining. head and abdomen black or pitchy; thorax pitchy-brown, the elytra obscure testaceous, the sides and apex and occasionally the disc also infuscate. Antennæ black,

the first four joints testaceous. Legs testaceous. Length 5·5 to 7 mm.

♂: Head large, nearly as wide as the thorax, post-ocular region dilated and rounded, much longer than the length of the curvature of the eye, which is rather small; clypeus without sculpture, furnished with two stout decurved spines which project well beyond the anterior border, which is truncate; base with curved impressed line before the neck, vertex occasionally with a fine short sulcus, sparingly and rather finely punctured, towards the sides more or less striate-punctate; neck sparingly punctured. Antennæ with the

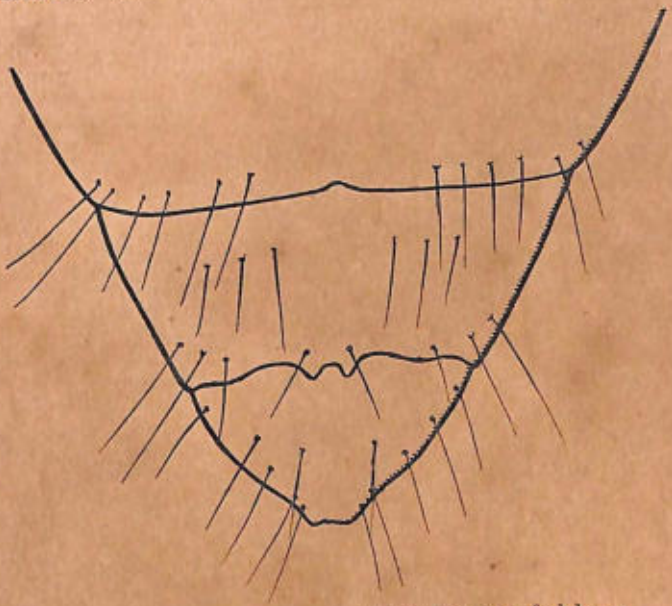


Fig. 43.—*Oxytelus* (*Tanycraerus*) *bellicosus*, apex of abdomen ventral surface of ♂.

4th joint a little longer than broad, almost as wide as the 5th, which is as long as broad, 6th to 10th slightly transverse. Thorax strongly transverse, trapezoidal, the sides in front slightly emarginate, then very obtusely angulate and straightly narrowed to the obtuse posterior angles; disc 3-sulcate, the sulci straight, parallel, the median broader in front, the lateral shorter, towards the sides broadly impressed; disc rather sparingly punctured, at the sides rather strongly punctate-striate. Abdomen extremely finely and extremely sparingly punctured, finely coriaceous. 7th ventral segment in the middle with two short triangular teeth, the space between

narrow and truncate; 6th scarcely perceptibly emarginate in the middle.

♀. Head smaller, post-ocular region not dilated, simply rounded, as long as the curvature of the eye; anterior border broadly feebly emarginate; the disc striate-punctate.

Burma: Carin Cheba (*L. Fea*).

245. **Oxytelus (Tanycraerus) lucens.** (Fig. 44.)

Oxytelus lucens Bernh., Stett. Ent. Zeit. lxiv, 1903, p. 34.

Black, shining, the thorax often pitchy, the elytra testaceous, the base and sides more or less infuscate. Antennæ black, the 1st joint testaceous, scarcely infuscate at the apex, 2nd to 4th pitchy. Legs testaceous. Length 5 to 5·5 mm.

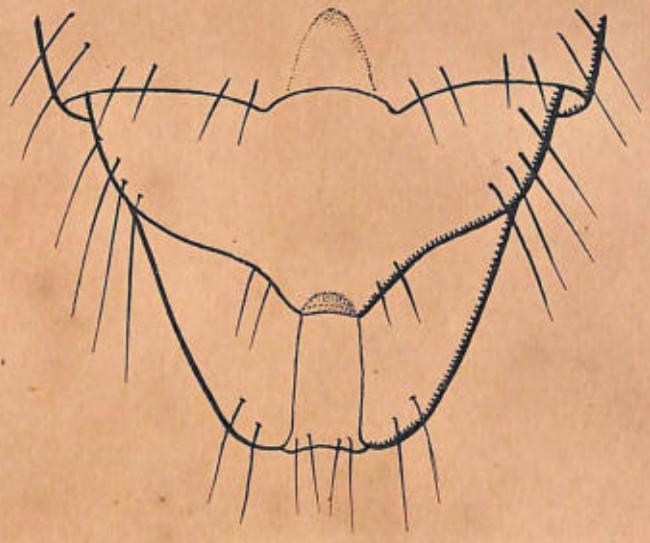


Fig. 44.—*Oxytelus* (*Tanycraerus*) *lucens*, apex of abdomen; ventral surface of ♂.

♂: Head large, nearly as broad as the thorax, widest behind at the broadly rounded post-ocular region, which is distinctly longer than the eye, narrowed in front, the anterior border emarginate in its whole breadth; clypeal region and area between the antennal tubercles depressed, very sparingly punctured, feebly coriaceous; middle of vertex with fine longitudinal groove, on either side with a much broader longitudinal impression, the whole surface very sparingly punctured. Antennæ with 5th to 10th joints transverse, gradually increasing in width. Thorax transverse, widest a little behind the anterior angles, the sides in front rounded, behind almost

straight and retracted to the rounded posterior angles, feebly crenulate behind; disc 5-sulcate, the three central sulci narrow, entire, the external in the fundus of the lateral impression, finer and shorter, the whole surface finely and very sparingly punctured. Elytra as long as but broader than the thorax, rather finely and rather closely punctured, at the sides obscurely striate. Abdomen sparingly punctured, finely coriaceous. 7th ventral segment produced in the middle and gradually narrowed, the apex truncate and crescentically impressed. 6th ventral segment in the middle with shallow, moderately broad emargination, behind which is a triangular impression.

♀: Head smaller; post-ocular space about as long as the eye; vertex in middle without sulcus.

Darjeeling District: Kurseong. Also in Malay Peninsula, Sumatra, Java, and Lombok.

246. **Oxytelus (Tanycraerus) almorensis**, sp. n. (Fig. 45.)

Black, shining, the elytra obscure testaceous, the suture and apical margins narrowly, the base and sides more broadly infuscate. Antennæ black, the first joint reddish at the base. Legs testaceous. Length 5·2 mm.

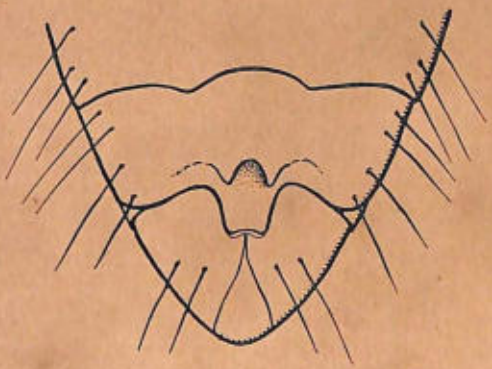


Fig. 45.—*Oxytelus (Tanycraerus) almorensis*, apex of abdomen; ventral surface of ♂.

Near *O. lucens* Bernh., but with smaller, more coarsely punctured head, the thorax with the sides angulate before the middle, the posterior angles obtuse, everted, and prominent, the disc more punctured, the elytra more closely and strongly sculptured and of a different colour. ♂: Head distinctly narrower than the thorax, the post-ocular region rounded, scarcely dilated, a little longer than the curve of the eye; clypeus lightly depressed, sparingly punctured, the anterior border feebly, broadly emarginate; base obliquely sulcate on each

side before the neck, this and the rest of the surface rather sparingly and moderately finely punctured, without striæ. Antennæ with the 4th joint small, moniliform, the 5th to 10th rather strongly transverse, 11th about as long as the two preceding together. Thorax transverse, trapezoidal, the sides in front straight and diverging backwards to a little before the middle, then obtusely angulate, narrowed and sinuate before the prominent and everted posterior angles; disc with five sulci, the median narrow and straight, the internal narrow and bisinuate, the external broader, abbreviated in front, the sculpture as on the head. Elytra a little longer and broader than the thorax, transverse, striate-punctate. Abdomen extremely finely and closely punctured on the anterior segments, posteriorly coriaceous and with a few larger punctures. 7th ventral segment produced in the middle into a reddish plate, narrowed towards the apex, which is emarginate, and with a fine transverse keel a little behind the emargination, at the base of the plate with a strongly elevated (less in the centre) semicircular crest open backwards. 6th ventral segment broadly and slightly emarginate in the middle.

♀ unknown.

Almora: Dhauli Ganga, altitude 9250 feet.

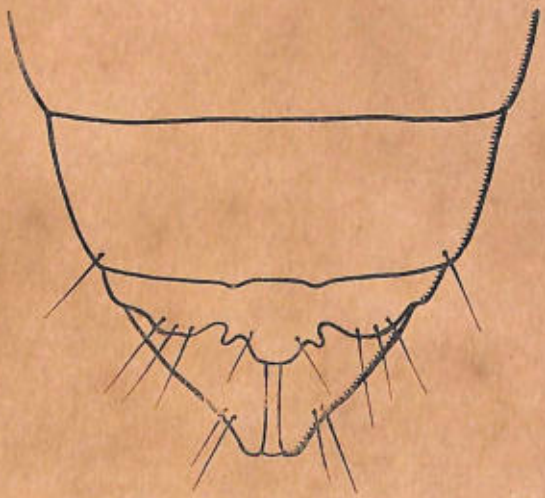


Fig. 46.—*Oxytelus* (*Tanycraerus*) *discalis*, apex of abdomen; ventral surface of ♂.

247. **Oxytelus** (**Tanycraerus**) **discalis**, sp. n. (Fig. 46.)

Somewhat similar to *O. megaceros* Fauv., of the same colour and lustre, but smaller and differing in the following respects:—

♂: Head shorter, the rounded post-ocular space as long as the eye, frontal margin less produced, more broadly truncate,

vertex on either side with a longitudinal impression, punctures much more numerous; antennæ thinner, the 4th joint small and moniliform, the following distinctly transverse; thorax with the sides more rounded, the rounded posterior angles crenulate, disc with the lateral impression sulciform and with more numerous punctures; elytra more closely punctured and with traces of striæ; abdomen less finely coriaceous. 7th ventral segment produced in the middle into a short reddish plate, the sides slightly converging, the apex truncate, on either side of the base of the plate with a small triangular reddish process directed backwards and outwards, at the base of the plate with two small tubercles; 6th broadly and very slightly produced in the middle and truncate.

♀: Head smaller, the post-ocular space shorter than the curve of the large eye. Length 4 mm.

Simla Hills: Kotgarh; Fagu. Mussoorie district: Kolhu Khet Gad, alt. 6000 to 8000 feet.

248. **Oxytelus (Tanycraerus) punctipennis.**

Oxytelus punctipennis Fauv., Rev. d'Ent. xxiv, 1905, p. 113.

This species must be closely allied to *O. discalis*, but according to the description the secondary ♂ characters are different. A ♀ specimen in the Indian Museum determined by Bernhauer as *punctipennis* appears identical with ♀ examples of *discalis*.

"♂: Near *O. laqueatus* Marsh., but smaller and narrower, the mandibles red, the palpi pitchy, with the last joint testaceous; elytra pale yellow, the extreme base and the reflexed sides scarcely infuscate; head smaller, the frontal margin narrower, more narrowly thickened, the vertex scarcely sulcate, more sparingly punctured; thorax less narrowed in front, the anterior angles nearly rectangular, the posterior more distinct; disc 5-sulcate, the external sulci broader than the internal, deep, the disc and sides with a few punctures; elytra more transverse, with rather close puncturation, which is stronger and more sparing; abdomen almost impunctate. 6th ventral segment in the middle obsoletely bidenticulate, scarcely emarginate between the teeth; 7th in middle produced into a red, slightly thickened plate.

"♀ unknown. Length 4 mm.

"Sikkim: Darjeeling (*Christie*). Unique." (Ex *Fauvel.*)

249. **Oxytelus (Tanycraerus) dohertyi**, sp. n.

Black, shining, elytra brownish-testaceous. Antennæ black, the first four joints reddish-testaceous. Legs testaceous. Length 3 mm.

In build much resembling *O. megaceros* Fauv., but smaller, the elytra uniformly brownish-testaceous, the head not dilated

behind, and the penultimate joints of the antennæ strongly transverse. ♂: Head distinctly narrower than the thorax, the post-ocular region rounded, not dilated, and about as long as the curve of the eye; clypeus depressed, truncate, finely coriaceous; vertex on each side with a short sulcus, closely and moderately coarsely punctured, the punctures more or less confluent at the sides. Antennæ with the 4th joint small and moniliform, the 5th to 10th rather strongly transverse. Thorax transverse, trapezoidal, the sides evenly rounded in front, rather strongly retracted and a little sinuate behind to the obtuse posterior angles; disc trisulcate, the median sulcus a little wider and deeper in front, the lateral a little wider, almost straight, as long as the median, at the sides broadly impressed; finely and sparingly punctured on the disc, more coarsely and closely at the sides, the punctures more or less confluent. Elytra a little longer and broader than the thorax, scarcely transverse, rather closely punctured, indistinctly striate. Abdomen finely, very sparingly punctured, coriaceous. 7th ventral segment produced in the middle into a short reddish plate, the sides slightly converging to the apex, which is truncate; on either side crescentically emarginate.

Manipur (*Doherty*).

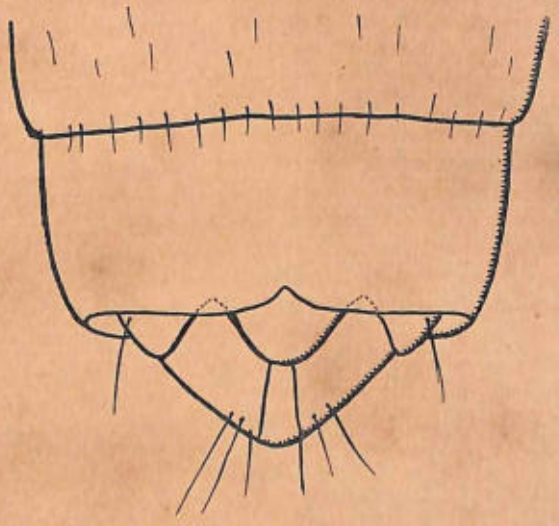


Fig. 47.—*Oxytelus* (*Tanycraerus*) *pallidipennis*, apex of abdomen; ventral surface of ♂.

250. **Oxytelus (Tanycraerus) pallidipennis**, sp. n. (Fig. 47.)

Shining, head black, thorax and abdomen pitchy, elytra pale testaceous. Antennæ black, the first four joints reddish testaceous. Legs pale testaceous. Length 3·5 to 4 mm.

In build somewhat resembling *O. micans* Kr., but larger,

differently coloured, the sculpture different, and the head larger. ♂: Head slightly broader than the thorax, widest behind, the post-ocular region dilated and rounded, much longer than the curve of the eye; clypeus a little depressed, without sculpture, the anterior border narrow and slightly emarginate; disc without impressions, finely and sparingly punctured. Antennæ with the 4th joint small, the 5th to 10th transverse, the penultimate about half as broad again as long. Thorax transverse (6 : 4½), the sides gently rounded in front, straighter and rather strongly retracted to the rounded posterior angles; disc trisulcate, the lateral a little wider and curved, as long as the median, towards the sides rather feebly impressed; the sulci punctured, the spaces between impunctate, at the sides with some moderately close punctures. Elytra slightly longer and broader than the thorax, transverse, moderately closely, obsoletely punctured, not striate. Abdomen almost impunctate, finely coriaceous. 7th ventral segment produced in the middle as a reddish plate, the sides gradually converging, the apex truncate, on each side with a deep and wide triangular emargination; 6th ventral segment in the middle of the posterior border with a small arcuate excision.

Dehra Dun.

251. **Oxytelus (Tanycraerus) megaceros.** (Fig. 48.)

Oxytelus megaceros Fauv., Rev. d'Ent. xiv, 1895, p. 201.

Black, shining, the elytra pale testaceous, the base, suture, sides and apical margin infuscate. Antennæ black, the first two joints more or less reddish. Legs testaceous. Length 4·5 to 5 mm.

♂: Head large, but narrower than the thorax, the post-ocular region rounded and feebly dilated, distinctly longer than the rather large eye; clypeus depressed, coriaceous, produced, narrowed, and truncate in front, the rest of the surface with a few more or less fine scattered punctures. Antennæ long and stout, the 4th joint as long as broad, scarcely narrower than the 5th, the rest scarcely transverse. Thorax transverse, trapezoidal, widest at about the anterior third, the sides feebly rounded in front, more retracted and almost straight behind to the rounded posterior angles; disc with three sulci, the lateral ones abbreviated in front, lightly curved, the sides broadly impressed, almost impunctate except in the sulci and impressions. Elytra about as long as, but a little broader than, the thorax, transverse, scarcely striate, moderately coarsely punctured. Abdomen finely and sparingly punctured, very finely coriaceous. 7th ventral segment produced in the middle into a short broad plate, the sides

of which converge slightly, the apical border broadly emarginate.

♀: Head smaller, eyes larger, their length about equal to that of the rounded post-ocular space.

Mussoorie district. Burma. Also in the Malay Peninsula, Sumatra, Borneo, Philippines, and Formosa.

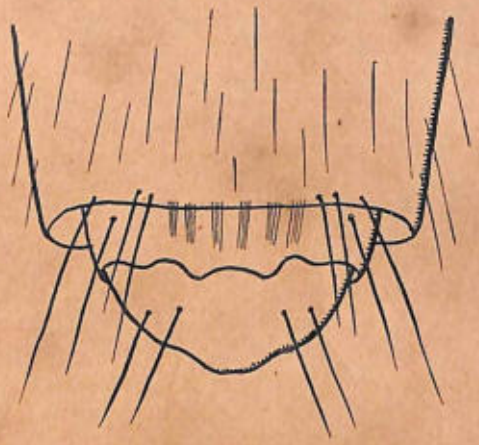


Fig. 48.—*Oxytelus* (*Tanycraerus*) *megaceros*, apex of abdomen of ♂; ventral surface.

252. **Oxytelus (Tanycraerus) hingstoni.**

Oxytelus (*Tanycraerus*) *hingstoni* Cam., Ann. Mag. Nat. Hist. (10) ii, 1928, p. 559.

Entirely black, shining. Thorax 3-sulcate. Antennæ black, the 1st joint pitchy. Legs with the femora pitchy, the tibiæ and tarsi pitchy-testaceous. Length 5 mm.

Near *O. megaceros* Fauv., but differently coloured, etc.

♀: Head narrower than the thorax, suborbicular, the post-ocular region about half as long again as the eye; clypeus declivous, the front emarginate and with a few scattered punctures; vertex even, the whole disc moderately finely and moderately closely punctured. Antennæ with the 4th joint small, the 5th to 10th transverse, the penultimate about twice as broad as long. Thorax as in *lucens* Bernh., the sides in front evenly rounded, slightly emarginate before the obtuse posterior angles, the disc trisulcate, the lateral sulci somewhat abbreviated in front and behind, at the sides deeply and broadly impressed, the puncturation closer at the sides, not striate. Elytra a little longer than the thorax, closely punctured, scarcely striate. Abdomen almost impunctate, coriaceous.

♂ unknown.

Sikkim: Lachen, alt. 10,000 feet, 26. iv. 24.

253. **Oxytelus (Tanycraerus) nilgiriensis**, sp. n. (Fig. 49.)

Black, moderately shining, the head coriaceous, the elytra testaceous, the suture and apex narrowly, the base and sides more broadly infuscate. Antennæ black, the first four joints reddish, more or less spotted with brown. Legs testaceous. Length 4 mm.

Head less shining than in *O. megaceros* Fauv. and *discalis*, owing to the coriaceous ground-sculpture, which is present all over but is less marked on the middle of the neck.

♂: Head large, widest behind, fully as broad as the thorax, the base truncate, the temples diverging backwards, slightly longer than the eyes, the posterior angles rounded; clypeus

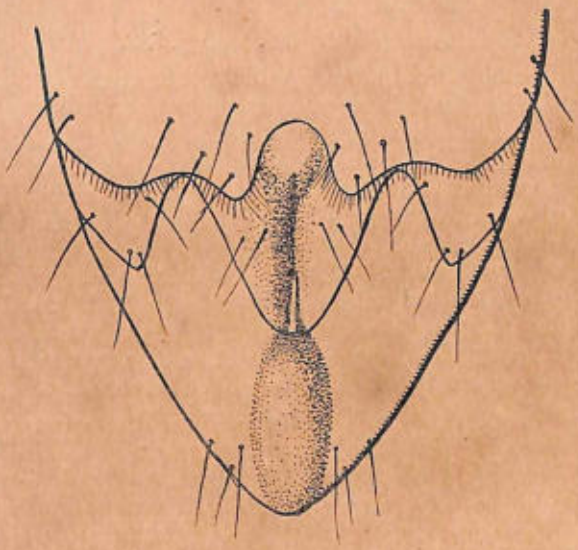


Fig. 49.—*Oxytelus (Tanycraerus) nilgiriensis*, apex of abdomen of ♂; ventral surface.

depressed, the front margin broad, truncate, at each anterior angle with a small tubercle; the disc with a few more or less elongate punctures, towards the sides obsoletely striate and with a few punctures, the front and clypeus impunctate. Antennæ with the 4th joint moniliform, 5th to 10th slightly transverse, 11th rather long, longer than the two preceding together. Mandibles reddish, very strongly curved. Thorax transverse, trapezoidal, widest a little behind the anterior angles, the sides nearly straight, narrowed behind to the rounded posterior angles; disc 3-sulcate, the sulci equal in length, the lateral broader, lightly curved, near the sides feebly impressed, the sulci scarcely punctured, the disc with a few punctures,

the lateral impression with some more or less elongate punctures. Elytra a little longer and broader than the thorax, transverse, moderately closely punctured, more finely and sparingly externally, not striate. Abdomen very finely and sparingly punctured, coriaceous. 7th ventral segment produced in the middle into a triangular reddish plate with rounded apex, on each side deeply emarginate; 6th ventral segment in the middle with a deep, broad, arcuate excision fringed with long yellow pubescence, on either side with a broader and shallower emargination.

♀ unknown.

Nilgiri Hills.

254. **Oxytelus (Tanycraerus) robustus.**

Oxytelus robustus Schub., D. E. Z. 1906, p. 383.

Black, shining, tibiæ and tarsi pitchy, thorax deeply 3-sulcate; front anteriorly foveolate, impunctate; thorax at the sides rugosely punctured, the elytra strongly striate, more or less punctured. ♂: Head broader, as wide as the thorax, in front more deeply impressed. 7th ventral segment produced in the middle in a narrow tongue-shaped lobe. Length 4·5 mm. Breadth nearly 1·2 mm.

Near *O. sculpturatus* Gr., but with entirely black and differently constructed antennæ, darker legs, and very different ♂ characters. Deep black, shining, only the tibiæ and tarsi lighter. The head in the ♀ is distinctly narrower, in the ♂ at least as broad as the thorax, large, finely and sparingly punctured, the front deeply impressed, with rounded sides, smooth and shining in both sexes. Antennæ strongly incrassate, the penultimate joints fully twice as broad as long, the 7th comparatively broadest since it is the shortest, from the 8th again a little longer; the 3rd joint longer and narrower than the 2nd, 4th moniliform, 5th transversely oval. Thorax twice as broad as long, in the ♂ as broad as, in the ♀ narrower than, the elytra, in the middle with three strong, equally long sulci, at the sides more or less impressed and rugosely striate-punctate. Elytra longer than the thorax, more strongly striate throughout, the puncturation feeble. Abdomen finely shagreened, not punctured, in the ♂ the 7th ventral segment in the middle with a rather long, narrow, tongue-shaped middle lobe. Anterior and middle tibiæ at the apex rather broadly emarginate.

Kashmir: Sintan (ex *Schubert*).

255. **Oxytelus (Tanycraerus) micans.** (Fig. 50.)

Oxytelus micans Kr., Arch. Naturg. xxv, 1859, i, p. 175.
Oxytelus puncticeps Kr., ♀, id., p. 176.
Oxytelus monoceros Cam., E. M. M. lv, 1919, p. 226.

Black, shining, elytra yellow; thorax with the sides evenly

rounded, the posterior angles completely effaced; 1st joint of the antennæ and legs testaceous. Length 2·3 to 3 mm.

Head in the ♂ large †, transverse, nearly as wide as the thorax, transversely depressed between the antennal tubercles, the anterior border in front of the right antennal tubercle produced into a short, pointed, triangular process, so that the front is asymmetrical; vertex without fovea; sculpture posteriorly consisting of larger and smaller and not very closely placed punctures, anteriorly impunctate and coriaceous, but shining; eyes moderately large, their diameter about half the length of the rounded and feebly dilated post-ocular

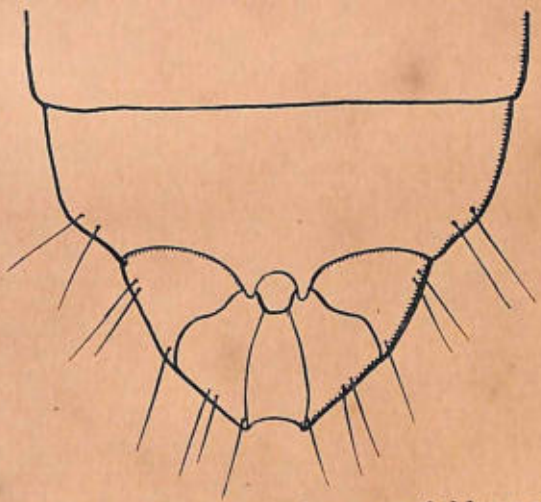


Fig. 50.—*Oxytelus* (*Tanycraerus*) *micans*, apex of abdomen of ♂; ventral surface.

space: in the ♀ smaller, subtriangular, the anterior border evenly rounded; sculpture as in the ♂, but the front with a row of punctures just behind the anterior margin and a small fovea on the vertex. Antennæ with the 2nd and 3rd joints equal in length, the 4th small, moniliform, the 5th to the 10th transverse, gradually increasing in breadth. Thorax nearly one-third broader than long, the sides evenly rounded, the posterior angles effaced; median sulcus complete, extending the whole length of the disc, the lateral grooves deeper and broader, curved, not quite reaching the anterior margin, the sides strigose; puncturation scattered and moderately large. Elytra as long as and slightly broader than the thorax,

† A form of ♂ with the head scarcely differing from that of the ♀ is also found.

transverse, feebly strigose, rather sparingly and moderately coarsely punctured. Abdomen coriaceous, very obsoletely and sparingly punctured.

♂: 6th ventral segment furnished on either side of the middle line with a triangular pointed tooth, the two teeth diverging from each other and separated by a rounded emargination; 7th segment with the posterior margin produced into a subquadrate plate which is rounded behind, and at the base furnished with an oblique crest on each side, on each side of the plate deeply emarginate.

Widely distributed in Ceylon and India. Also in Madagascar and Africa.

256. **Oxytelus (Tanycraerus) fœtidus**, sp. n. (*specularis* Fauv., *in litt.*).

Shining; head black, thorax and abdomen pitchy, elytra pale yellow, scarcely infuscate at the base. Antennæ black, the first four joints testaceous. Legs testaceous. Length 2·75 mm.

In build resembling *O. pallidipennis* but with the head dilated behind, the elytra not so pale, and of smaller size.

♂: Head as broad as the thorax, transverse, scarcely dilated behind, the post-ocular area rounded, about twice as long as the curve of the eye; clypeus depressed, without sculpture, the anterior border semi-circularly emarginate in the middle; the rest of the surface very finely and very sparingly punctured, on either side behind with a punctured impression. Antennæ with the 4th joint small, 5th to 10th transverse, the penultimate about twice as broad as long. Thorax transverse, the sides feebly rounded in front, straighter and more retracted behind to the rounded posterior angles; disc with a narrow, shallow sulcus, on each side with a broader, shorter sulcus, feebly impressed laterally, and with a few elongate punctures, the rest of the surface sparingly and rather finely punctured. Elytra as long as, but a little broader than, the thorax, transverse, finely, moderately closely punctured, not striate. Abdomen very sparingly punctured, coriaceous. 7th ventral segment scarcely produced in the middle, rounded, feebly emarginate on either side.

♀: Head smaller, rounded, a little narrower than the thorax, the curve of the eye about equal to that of the post-ocular space.

United Provinces: Dehra Dun (*Cameron*). Bihar: Ranchi. Ceylon: Dikoya (*Lewis*).

Key to the Species of the Subgenus Caccoporus.

1. Subopaque species	2.
Shining species	3.
2. Last joint of the antennæ elongate, as long as the three preceding together. Larger, 5–6 mm.	*lividus* Motsch., p. 231.
Last joint of the antennæ short, conical, as long as the two preceding together. Smaller, 5 mm	*bengalensis* Er., p. 232.
3. Head black	4.
Head ferruginous-red	*ferrugineus* Kr., p. 235.
4. Thorax clear reddish-testaceous, the base and posterior two-thirds of the sides narrowly black	*nigriceps* Kr., p. 233.
Thorax black or pitchy	*varipennis* Kr., p. 234.

257. Oxytelus (Caccoporus) lividus. (Fig. 51.)

Oxytelus lividus Motsch., Bull. Mosc. xxx, 1857, iv, p. 503; Kraatz, Arch. Naturg. xxv, 1859, i, p. 171.

Subopaque, fusco-ochraceous, the sides of the thorax, base, and lateral margins of the elytra paler, the extreme basal and side-margins of the former narrowly black; abdomen more shining, along the middle with a longitudinal dark line, and on each segment with a dark transverse line. Antennæ

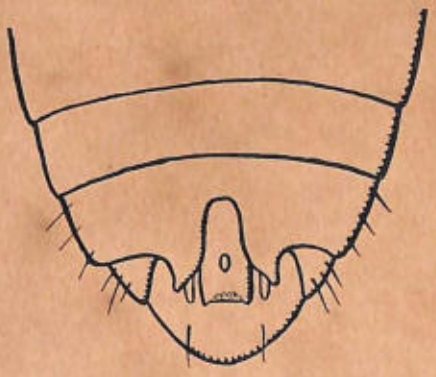


Fig. 51.—*Oxytelus* (*Caccoporus*) *lividus*, apex of abdomen of ♂; ventral surface.

blackish, the first three joints testaceous. Legs testaceous. Length 5 to 6 mm.

♂: Head large, a little narrower than the thorax, the post-ocular region rounded but scarcely dilated, about as long as the curve of the eye; clypeus depressed, the anterior angles obtuse, the front border with three small equal emarginations; vertex with a narrow impressed line, obliquely sulcate on each

side of the neck, the whole surface strongly coriaceous, scarcely punctured, towards the sides with some obsolete striæ. Antennæ with the 4th joint moniliform, the 5th to 10th transverse, the penultimate about half as broad again as long, the 11th elongate, fully as long as the three preceding together. Thorax trapezoidal, rather strongly narrowed behind, the sides straight, the posterior angles obtusely rounded; median sulcus broader and shallower than the lateral, these curved and, like the median, not abbreviated; sculpture as on the head. Elytra transverse, strongly coriaceous, striate and finely obsoletely punctured. Abdomen coriaceous, scarcely punctured; 7th ventral segment very deeply excised on either side, the central portion forming a broad trifid lobe, its central portion broad, lamellate, slightly narrowed towards the apex which is truncate, and a little before the apex with a transverse keel; the lateral portion on each side much narrower, cultriform, nearly attaining the level of the apex of the median portion, and separated from it by a deep triangular emargination; 6th ventral segment on either side of the middle with a triangular obliquely ca inate plate, separated by a deep and rather broad excision, with apex rounded.

♀: Head smaller, subtriangular, the eyes very large, about three times longer than the post-ocular region.

Ceylon: Belligam. Also in Java and Shanghai.

258. **Oxytelus (Caccoporus) bengalensis.** (Fig. 52.)

Oxytelus bengalensis Er., Gen. Spec. Staph. 1840, p. 789; Kr., Arch. Naturg. xxv, 1859, i, p. 171.
Oxytelus bicolor Walker *, Ann. Mag. Nat. Hist. (3) iii, 1859, p. 52.

Subopaque; head pitchy, the clypeus, antennal tubercles, thorax, and elytra reddish-ochraceous, the base and side-margins of the thorax and the suture of the elytra narrowly black; abdomen brownish-ochraceous. Antennæ brown, the first four joints testaceous. Legs testaceous. Length 5 mm.

Differs from *O. lividus* in the smaller size, redder colour, darker head, shorter terminal joint of the antennæ, and less deep lateral sulci of the thorax.

♂: Head transverse, narrower than the thorax, post-ocular region rounded, shorter than the eye; clypeus truncate; vertex with narrow, deep sulcus, the neck separated from the base by a deep curved sulcus, the whole surface except the antennal tubercles strongly coriaceous, with traces of punctures. Antennæ very similar to those of *lividus*, except that the 11th joint is of normal length. Thorax as in *lividus*, but the sulci wider and less deep, more distinctly striate. Elytra less distinctly punctured than in *lividus*; 7th ventral segment deeply and narrowly excised on either side of the middle,

thus forming a large, subquadrate, central plate, the sides of which are straight and almost parallel, the broad apical margin slightly produced in the middle, in the centre of the plate with

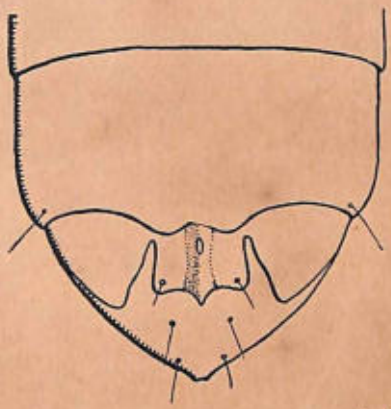


Fig. 52.—*Oxytelus* (*Caccoporus*) *bengalensis*, apex of abdomen of ♂; ventral surface.

a little tubercle; 6th ventral segment broadly, shortly produced in the middle and truncate, not emarginate as figured.

♀: Eyes larger, occupying the whole side of the head.

Ceylon: Kandy. Bengal. Dehra Dun. Also in the Malay Peninsula.

259. **Oxytelus (Caccoporus) nigriceps.** (Fig. 53.)

Oxytelus nigriceps Kr.*, Arch. Naturg. xxv, 1859, i, p. 171.

Moderately shining; head black, in front more or less reddish-testaceous; thorax and elytra reddish-testaceous, the former with the base and posterior three-fourths of the sides narrowly black, the latter with the suture and disc more or less infuscate; abdomen testaceous-brown. Antennæ reddish, the first four joints testaceous. Legs testaceous. Length 5 mm.

Narrower, more shining, and more yellow in colour than *O. bengalensis*, with much more evident puncturation. Head subtriangular, narrower than the thorax, the eyes very large, and occupying the whole side of the head; clypeus coriaceous, with a few fine punctures, the anterior margin gently rounded; vertex with short median sulcus, rather closely and moderately finely punctured. Antennæ with 4th joint small, moniliform, the 5th to 10th transverse. Thorax transverse, widest before the middle, the sides gently rounded in front, straighter and

more retracted behind, the posterior angles rounded; disc with narrow median sulcus extending throughout, the lateral broader, slightly curved, scarcely abbreviated in front, at the sides moderately impressed, moderately finely and moderately closely punctured, at the sides more or less striate. Elytra a little longer and broader than the thorax, moderately finely and rather closely punctured, striate. Abdomen coriaceous, practically impunctate.

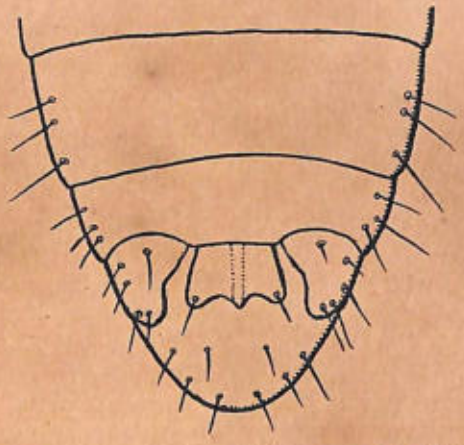


Fig. 53.—*Oxytelus* (*Caccoporus*) *nigriceps*, apex of abdomen of ♂ ventral surface.

♂: 7th ventral segment deeply and narrowly excised on each side of the middle, the median lobe so formed subquadrate, slightly widened from the base to the posterior border, which is bi-emarginate, and along the middle carinate; 6th ventral segment in the middle produced into a short broad plate.

Ceylon. Bengal. Dehra Dun. Also in the Malay Peninsula, Singapore, Hong Kong, Formosa.

260. **Oxytelus (Caccoporus) varipennis.** (Fig. 54.)

Oxytelus varipennis Kr., Arch. Naturg. xxv, 1859, i, p. 172.

Shining; head black, the antennal tubercles reddish-testaceous; thorax pitchy; elytra testaceous, more or less infuscate on the disc; abdomen pitchy. Antennæ blackish, the first four joints reddish-testaceous. Legs testaceous. Length 4 mm.

♂: Head as wide as the thorax, convex, the post-ocular space rounded, about one-third the length of the large eye; clypeus depressed, coriaceous, the anterior border slightly emarginate and obtusely angulate on either side; vertex sulcate in the middle, separated from the neck by a deep

arcuate sulcus, moderately finely and moderately closely punctured, towards the sides more or less striate-punctate. Antennæ with the 4th joint moniliform, the 5th to 10th transverse, the penultimate about a half broader than long. Thorax transverse (7 : 5), the sides gently rounded in front, straighter and more retracted behind, the posterior angles obtusely rounded; sulci not abbreviated, the lateral curved and wider than the median, towards the sides distinctly impressed, the sulci and disc moderately closely punctured, the sides more closely striate-punctate. Elytra a little longer



Fig. 54.—*Oxytelus* (*Caccoporus*) *varipennis*, apex of abdomen of ♂ ventral surface.

and broader than the thorax, punctate-striate. Abdomen coriaceous, nearly impunctate; 7th ventral segment deeply and narrowly excised on either side of the middle, the median lobe so formed gradually widening backwards, the posterior margin feebly rounded, a little in front of the middle with a small tubercle; 6th ventral segment in the middle produced into a narrow plate with truncate apex.

♀: Head subtriangular, narrower than the thorax, eyes very large, occupying the whole side of the head; vertex without sulcus or fovea.

Ceylon. Dehra Dun. Bengal.

261. **Oxytelus (Caccoporus) ferrugineus.** (Fig. 55.)

Oxytelus ferrugineus Kr., Arch. Naturg. xxv, 1859, i, p. 173; Fauv., Rev. d'Ent. xx, 1901, p. 71; Sharp, Faun. Hawaiens. iii, v, 1908, p. 543.

Oxytelus bledioides Blackb., Trans. Roy. Dubl. Soc. (2) iii, 1885, p. 125.

Oxytelus lævior Shp., Trans. Ent. Soc. Lond. 1874, p. 92.

Oxytelus laxipennis Fairm., Ann. Soc. Ent. Belge, 1893, p. 527.

Shining; head and thorax ferruginous red, the base and posterior three-fourths of the sides narrowly black; elytra

testaceous, more or less broadly infuscate onthe disc; abdomen yellowish-brown, with the posterior margins of the segments paler. Antennæ black, the first four joints testaceous. Legs testaceous. Length 3 mm.

♂ : Head short, transverse, as broad as the thorax, post-ocular region rounded, about half the length of the curve of the eye ; clypeus depressed, coriaceous, with a few very fine punctures, the front margin broadly and slightly rounded, vertex with small median sulcus, moderately finely and rather closely punctured. Antennæ with the 4th joint small, moniliform, the following slightly transverse. Thorax transverse ($5\frac{1}{2} : 4$), the sides rounded in front, straighter and retracted behind, the posterior angles obtusely rounded ; the sulci a little abbreviated in front, the lateral curved,

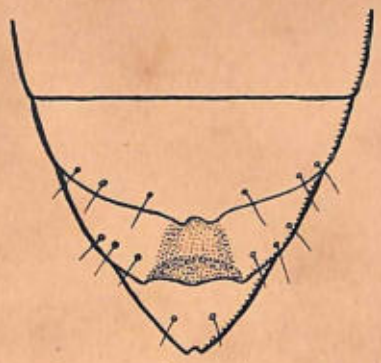


Fig. 55.—*Oxytelus (Caccoporus) ferrugineus*, apex of abdomen of ♂ ; ventral surface.

externally broadly impressed ; disc and sulci rather sparingly punctured, at the sides more coarsely and more or less striate. Elytra a little longer and broader than the thorax, striate-punctate. Abdomen nearly impunctate, coriaceous ; 7th ventral segment with a large semicircular impression before the posterior margin, on each side of the impression with a little tooth, the margin between slightly obtusely produced ; 6th ventral segment a little produced in the middle and obsoletely bituberculate.

♀ : Head smaller, more triangular, narrower than the thorax, eyes larger, occupying the whole side of the head.

Ceylon. Andaman Islands. Widely distributed on the mainland and throughout the Oriental Region. Hawaii. Japan. Seychelles. Aden. E. Africa. West Indies.

Key to the Species of the Subgenus Anotylus.

1.	Species in great part black or pitchy	2.
	Species in great part red or reddish-testaceous	21.
2.	Fourth joint of antennæ small, moniliform or transverse	3.
	Fourth joint of antennæ at least as long as broad	20.
3.	Legs more or less pitchy	4.
	Legs entirely testaceous.....	6.
4.	Larger (4 to 5·5 mm.)	5.
	Smaller (3 to 3·5 mm.)	*tibialis* Schub., p. 242.
5.	More shining; elytra entirely black.....	*cephalotes* Epp., p. 239.
	Opaque; elytra with reddish markings behind	*megacephalus* Fauv., [p. 241.
6.	Sides of thorax distinctly bisinuate	*birmanus*, sp. n., p. 240.
	Sides of thorax not bisinuate	7.
7.	Anterior tibiæ emarginate before the apex.	8.
	Anterior tibiæ not emarginate	13.
8.	Clypeus shining	9.
	Clypeus opaque	10.
9.	Larger (3·75 to 4 mm.) and more robust; less shining	*sikkimi* Fauv., p. 242.
	Smaller (2·5 to 3 mm.) and narrower; more shining.....	*nitidulus* Gr., p. 247.
10.	Penultimate joints of antennæ three times broader than long.....	11.
	Penultimate joints of antennæ twice as broad as long	*andrewesi*, sp. n., p. 244.
11.	Larger (3 to 4·5 mm.); base of head without foveæ	*opacellus*, sp. n., p. 243.
	Smaller (1·8 to 3 mm.)	12.
12.	Thorax finely striate, impunctate; smaller (1·8 to 2·2 mm.)	*occultus*, sp. n., p. 245.
	Thorax punctate-striate; larger (3 mm.)..	*masuriensis*, sp. n., [p. 244.
13.	Larger (3·3 mm.) First five joints of antennæ testaceous; facies of *nitidifrons*; abdomen roughly punctured	[p. 258. *distincticollis* Cam.,
	Smaller. First five joints of antennæ not testaceous; abdomen very finely sparingly punctured.....	14.
14.	Intra-ocular ridge distinct and continued back to the base of head.....	*latiusculus* Kr., p. 250.
	Intra-ocular ridge indistinct, not continued to the base	15.
15.	Clypeus obviously more shining than the rest of the head, practically devoid of sculpture	16.
	Clypeus not or scarcely more shining than the rest of the head, distinctly sculptured.	17.
16.	Thoracic ridges sharp and distinct; penultimate joints of antennæ more transverse	[p. 249. *intermedius*, sp. n.,
	Thoracic ridges indistinct; penultimate joints of antennæ less transverse	[p. 246. *myrmecophilus* Cam.,

17. Thoracic ridges indistinct, not more shining than the rest of the surface; clypeus slightly more shining than the rest of the head, finely striate ..... *similaensis*, sp. n., p. 247.
Thoracic ridges sharp and distinct, more shining than the rest of the surface; clypeus not more shining than the rest of the head, finely striate ..... 18.

18. Vertex of head with small shining plaque on each side; thoracic ridges obviously more shining than the rest of surface .. *pygmæus* Kr., p. 248.
Vertex of head without shining plaques, uniformly striate ..... 19.

19. Larger (2·75 mm.). Antennæ stouter, the base black ..... [p. 250. *pumiloides*, sp. n.,
Smaller (1·75 mm.). Antennæ thinner, the base more or less testaceous ..... *pauper*, sp. n., p. 249.

20. Head striate-punctate; clypeus not sculptured; species more shining, the penultimate joints of the antennæ distinctly transverse ..... *exasperatus* Kr., p. 261.
Head on disc finely striate, almost impunctate, postero-externally strongly rugose; clypeus sculptured; species less shining, the penultimate joints of the antennæ less transverse ..... *frater*, sp. n., p. 262.

21. Thorax polished, finely punctured, sulci obsolete ..... [p. 260. *thoracicus* Motsch.,
Thorax more or less rugose, punctate-striate ..... 22.

22. Head deep black, shining ..... *alternans*, sp. n., p. 253.
Head pitchy or red ..... 23.

23. Head red, densely coriaceous except the clypeus, base, and post-ocular regions .. [p. 251. *kraatzi* Bernh. (♂),
Head punctured, striate or striate-punctate. 24.

24. Head simply punctured ..... 25.
Head striate or striate-punctate ..... 26.

25. Larger (3 to 3·75 mm.). Head not at all coriaceous ..... [p. 252. *lætus*, sp. n. (♂ ♀),
Smaller (2·75 to 3 mm.). Head coriaceous behind the clypeus ..... [p. 252. *kraatzi* Bernh. (♀).

26. Head distinctly striate or rugose internal to the intra-ocular ridge ..... 27.
Head punctate, scarcely striate internal to the ridge ..... 30.

27. Vertex of head sparingly punctured, not striate ..... *ruber*, sp. n. (♂), p. 256.
Vertex closely striate or striate-punctate . 28.

28. Vertex scarcely foveate in the middle, on each side with a superficial rounded impression ..... *rufus* Kr. (♂), p. 254.
Vertex distinctly foveate or sulcate, not impressed on either side ..... 29.

29. Larger (3·2 mm.), more shining, sculpture coarser ..... [p. 259. *rubidus*, sp. n. (♂ ♀),
Smaller (2·1 mm.), less shining, sculpture finer ..... [(♂ ♀), p. 255. *rubicundus*, sp. n.

30. Head pitchy-black ..... *nitidifrons* Woll.,
Head red ..... 31. [p. 256.

31. Intra-ocular ridge distinct, extending to the base ..... *cavicola* Bernh., p. 257.
Intra-ocular ridge confused with the general sculpture, not extending to the base ..... *rufus* Kr. (♀), p. 254.

262. **Oxytelus (Anotylus) cephalotes.** (Fig. 56.)

Oxytelus cephalotes Epp., W. E. Z. xiv, 1895, p. 66.

Black, the head, thorax, and abdomen more shining than the elytra. Antennæ black, the 1st or 1st and 2nd joints more or less reddish at the base and apex. Femora dark, tibiæ and tarsi reddish. Length 4 to 5 mm.

♂: Head large, as wide as the thorax, the temples straight and diverging backwards, much longer than the eye, the posterior angles rather broadly rounded, the base truncate; clypeus not separated from the front, declivous, coriaceous,

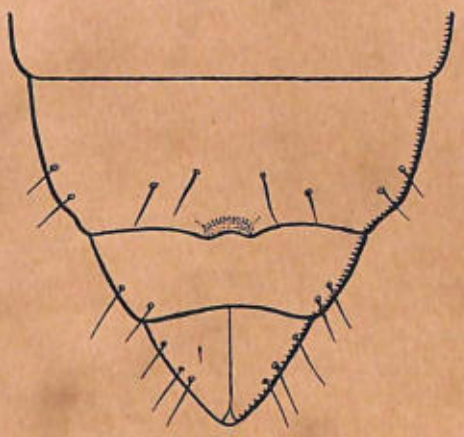


Fig. 56.—*Oxytelus (Anotylus) cephalotes*, apex of abdomen of ♂; ventral surface.

broadly rounded in front; antennal tubercles elevated, pointed; vertex sulcate, sparingly punctured, towards the sides finely striate; front coriaceous. Antennæ with the 3rd joint a little longer than the 2nd, 4th small, moniliform, 5th to 10th transverse, the penultimate three times broader than long. Thorax transverse (9 : 5), widest in front, the sides gently rounded, strongly retracted behind; median sulcus shallow, more or less obsolete in front, the lateral deeper, almost straight, the sides deeply and broadly impressed; moderately finely and not very closely punctured on the disc, the lateral impression striate-punctate, the sulci coriaceous. Elytra a little longer than the thorax, transverse, finely and

closely striate on the disc, less finely at the sides, finely and not very closely punctured. Abdomen very finely, moderately closely punctured, feebly coriaceous. 7th ventral segment broadly and very slightly emarginate; 6th with two small tubercles on the posterior margin separated by a narrow feebly rounded emargination.

♀: Head smaller, distinctly narrower than the thorax, the post-ocular region rounded and retracted to the neck, longer than the curve of the eye; surface more coriaceous and less punctured; thorax more punctured.

Simla Hills: Gahan; Fagu; Theog; alt. 7000 to 8000 feet.

263. **Oxytelus (Anotylus) birmanus**, sp. n.

Black, shining, the elytra opaque, pitchy. Antennæ with the first four joints more or less pitchy-brown. Legs testaceous. Length 5 to 5·5 mm.

Intermediate between *O. cephalotes* Epp. and *O. megacephalus* Fauv., having the lustre of the former, but the head more like the latter in shape.

♂: Head as broad as the thorax, the eyes small, the post-ocular space a little dilated and evenly rounded to the neck, much longer than the eye; clypeus depressed, truncate in front, finely, irregularly punctured; vertex sulcate, the base on each side broadly impressed, puncturation moderately fine and close behind the clypeus, posteriorly more sparingly, the punctures irregular and varying in size, the post-ocular region striate. Antennæ as in *cephalotes*. Thorax short, strongly transverse, much narrower behind, the sides with distinct emargination before the middle, slightly sinuate before the obtuse posterior angles; median sulcus entire, broader in front, the lateral broad and feeble, the sides with a deep impression, closely striate, along the sides of the medial sulcus with a few punctures, towards the sides with a few others. Elytra very finely longitudinally striate, superficially and not very closely punctured, externally with a keel. Abdomen finely, moderately closely punctured. 6th ventral segment with a small, shallow, rounded emargination, longitudinally impressed behind it; 7th ventral segment retracted, its structure not evident.

♀: Head smaller, narrower than the thorax; eyes much larger, post-ocular space not at all dilated, simply rounded to the neck, a little longer than the curve of the eye; sculpture behind the clypeus and antennal tubercles striate, with a few punctures about the sulcus of the vertex.

Burma: Ruby Mines. Assam: Manipur.

264. **Oxytelus (Anotylus) megacephalus.** (Fig. 57.)

Oxytelus megacephalus Fauv., Rev. d'Ent. xxiii, 1904, p. 99.

Black, dull, the clypeus and abdomen shining; elytra with indeterminate reddish marking on each. Antennæ black, the 1st and 2nd joints more or less reddish at base and apex. Palpi black, femora pitchy, tibiæ and tarsi ferruginous. Length 4·5 to 5 mm.

Near *O. cephalotes* Epp., but usually a little larger, dull, and with a reddish mark on each elytron, the elytra also more coarsely striate.

♂: Head as broad as the thorax, widest behind, the post-ocular region dilated and rounded to the neck, three times as long as the curve of the eye; clypeus not separated from the

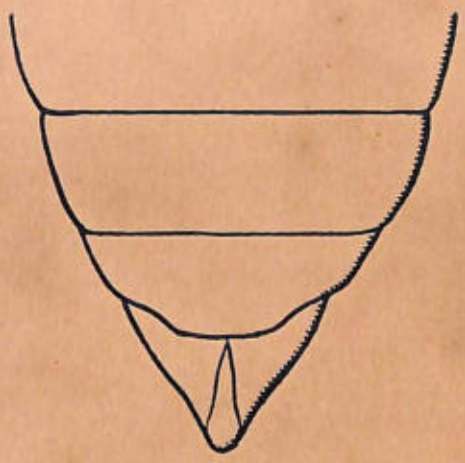


Fig. 57.—*Oxytelus (Anotylus) megacephalus*, apex of abdomen of ♂; ventral surface.

front, declivous, shining, scarcely coriaceous, and with a few small scattered punctures, the anterior border with a small emargination in the middle; antennal tubercles only slightly elevated; vertex deeply, narrowly sulcate, separated from the striate neck by a deep arcuate sulcus; antennal tubercles and the region adjacent to the clypeus coriaceous, the rest of the surface coarsely closely striate and punctured. Antennæ very similar to those of *cephalotes*. Thorax transverse (10 : 6), the sides rounded and indistinctly crenulate in front, strongly retracted and a little sinuate before the rounded posterior angles, broadly and superficially sulcate in the middle, the sulcus wider in front, lateral sulci narrower, abbreviated in front, deeper and broader behind, at the sides deeply transversely impressed, the whole surface coarsely, longitudinally striate, scarcely punctured. Elytra a little longer and broader

than the thorax, transverse, strongly striate. Abdomen finely and not very closely punctured, 7th ventral segment broadly produced.

♀: Head smaller, narrower than the thorax, the post-ocular region not dilated, scarcely twice as long as the eye, the clypeus finely and densely striate and with a few fine punctures.

Sikkim: Darjeeling. Bengal: Kurseong. Mussoorie district: Mossy Falls, Dhobi Ghat. Chakrata district: Bodyar; Manjgaon; Bangar; alt. 6000 to 8000 feet.

265. Oxytelus (Anotylus) sikkimi.

Oxytelus sikkimi Fauv., Rev. d'Ent. xxiv, 1905, p. 115.

Black, shining, the elytra pitchy on the disc. Antennæ black, the 2nd to 4th joints more or less testaceous. Legs testaceous. Length 3·75 to 4 mm.

♂: Closely allied to *O. vicinus* Shp., of the same colour and lustre, but the head is shorter and broader, the eyes a little larger, and the post-ocular region a trifle more dilated, the thorax more coarsely striate and less distinctly punctured. Head a little broader than the thorax, the post-ocular region rounded and slightly dilated, about twice the length of the eye; clypeus depressed, declivous, impunctate, the front margin rounded, transversely elevated between the antennal tubercles; vertex with small sulcus, before the base with four foveæ placed transversely, the inner ones much larger than the outer; rather strongly striate, especially at the sides, the vertex with a few punctures. Antennæ short, the 4th joint small, the 5th to 10th transverse, the penultimate about three times as broad as long. Thorax transverse ($7\frac{1}{2} : 5$), the sides rounded in front, straighter and more retracted behind, the posterior angles obtuse; sulci deep and rather broad, entire; coarsely striate at the sides, less striate and more punctured in the sulci, the sides rather deeply impressed. Elytra a little longer than the thorax, closely striate-punctate. Abdomen finely and rather closely punctured, finely, moderately closely pubescent, with a fine coriaceous ground-sculpture; 6th ventral segment with two small tubercles close together at the middle of the posterior margin.

♀: Head smaller, transversely orbicular, vertex foveate; thorax narrower, not much narrowed behind.

Sikkim: Darjeeling (*Christie*). Mount Everest Exp., alt. 7,000 feet, 11–20. iii. 1924 (*R. W. G. Hingston*).

266. Oxytelus (Anotylus) tibialis.

Oxytelus (*Anotylus*) *tibialis* Schub., D. E. Z. 1908, p. 626.

Moderately shining, black, the tibiæ and tarsi ferruginous, head and elytra very finely striate, thorax more strongly

striate-punctate, abdomen shining, very finely and not closely punctured. Length 3 to 3·5 mm. Breadth nearly 1 mm.

♂: 6th ventral segment at the middle of the posterior border bituberculate, 7th polished along the middle.

Near *O. complanatus* Er., but the fore-parts less opaque, the puncturation of the thorax stronger and the legs differently coloured. Rather depressed, moderately narrowed in front, uniformly black, with reddish-brown tibiæ and tarsi, slightly shining fore-parts and rather strongly shining abdomen. The head in both sexes is narrower than the thorax, the anterior margin to a slight extent dull, the antennal tubercles and around the vertex shining, behind the eyes finely rugosely striate-punctate. Antennæ short and stout, formed as in *O. cephalotes* Epp., the 3rd joint shorter and more slender than the 2nd, the 4th small, moniliform, 5th moderately, 6th to 10th strongly, transverse, fully twice as broad as long (the 7th joint the shortest and comparatively the broadest), the 11th as long as the two preceding together. Thorax twice as broad as long, a little narrower than the base of the elytra, slightly convex, the sides evenly and slightly rounded, almost parallel, as broad behind as in front, with very blunt but distinct posterior and produced and somewhat rounded anterior angles, the ridges shining, the sulci striate and more opaque, with rather strong confluent puncturation, at each side with a strong impression extending to the anterior border; the margins of the median sulcus narrow, almost carinate, slightly diverging in front, those of the lateral sulci broader and converging behind. Elytra scarcely longer at the suture than the thorax, widened behind, the apex truncate, flat, slightly shining, the suture elevated and more shining, very finely, at the base and sides more sparingly, striate, finely, moderately closely, asperately punctured. Abdomen polished, shining, sparingly, scarcely perceptibly punctured. In the ♂ the 6th ventral segment is furnished at the posterior border with two small oblique tubercles close together, the 7th polished in the middle. Legs reddish-brown, the femora blackish, the anterior tibiæ emarginate before the apex (ex *Schubert*).

Kulu, W. Himalayas.

267. **Oxytelus (Anotylus) opacellus**, sp. n.

Fore-parts subopaque; abdomen shining, black. Head black, thorax pitchy-black, elytra yellowish-brown, more or less infuscate at the base. Antennæ black, the first three joints more or less testaceous. Legs testaceous. Length 3 to 4·5 mm.

Near *O. complanatus* Er., but larger, not quite so dull, the antennæ with lighter base, the thoracic sulci broader, the sculpture exactly similar in character.

♂: Head very nearly as broad as the thorax, subquadrate, the post-ocular region slightly dilated and rounded, nearly three times as long as the eye; clypeus flat, scarcely depressed, not separated from the front, finely longitudinally striate except for a narrow smooth area immediately behind the truncate anterior margin; vertex with short sulcus, on each side with a smooth shining plaque carrying a few fine punctures, the rest of the surface striate as in *complanatus*, the striæ coarser at the sides and punctured. Antennæ with the 4th joint small, moniliform, the 5th to 10th transverse, the penultimate three times broader than long. Thorax transverse, nearly twice as broad as long, the sides gently rounded and retracted from the rather prominent anterior to the obtuse posterior angles; sulci broad and shallow, the median broader in front, broader than the lateral, the sides distinctly impressed, the disc finely striate, the sides more coarsely striate-punctate. Elytra a little longer and broader than the thorax, transverse, finely striate and superficially punctured, the striæ coarser at the sides. Abdomen rather closely and asperately punctured, more sparingly behind, less finely than in *complanatus*; 7th ventral segment broadly emarginate; 6th with two little tubercles close together at the middle of the posterior border.

♀: Head smaller, eyes larger, the post-ocular area about half as long again as the eye.

Dehra Dun. Bihar: Pusa.

268. **Oxytelus (Anotylus) andrewesi**, sp. n.

Closely allied to *O. opacellus*, of the same colour, build, and lustre, but smaller, the antennæ with the penultimate joints much less transverse, the ♂ with scarcely dilated post-ocular region, which is scarcely twice as long as the eye, the sculpture more coriaceous, less striate, the vertex scarcely foveate, and with scarcely visible shining plaques; thorax with the lateral sulci indistinct, the striæ of the disc less fine; the sculpture of the elytra and abdomen scarcely differs. Abdomen without sexual characters.

♀: Head smaller, suborbicular, the rounded post-ocular space as long as the eye; vertex scarcely foveate and without shining plaques. Length 2·8 to 3 mm.

Nilgiri Hills (*H. L. Andrewes*).

269. **Oxytelus (Anotylus) masuriensis**, sp. n.

Greasy-lustrous, black, the elytra brown; abdomen more shining. Antennæ black, the base pitchy-testaceous. Legs testaceous. Length 2·8 to 3 mm.

Closely related to *O. complanatus* Gr., but differs in the smaller size, the sides and base of the head more coarsely and rugosely punctured, the sulci of the thorax narrower, less deep, the posterior angles rounded, the base of the antennæ lighter, and in the ♂ characters.

♂: Head a little narrower than the thorax, the post-ocular region rounded, about half as long again as the curve of the eye; clypeus depressed, not separated from the front, coriaceous; vertex with an impression in the middle and another on each side, the front and the impressions coriaceous, around the middle with a few fine punctures, towards the sides coarsely and closely punctured. Antennæ as in *complanatus*, the 4th to 10th joints transverse, the penultimate three times as broad as long. Thorax transverse (5 : 3½), the sides slightly rounded in front, straighter and more retracted behind, the posterior angles rounded; sulci shallow, the median wider in front, the lateral slightly curved, the sides impressed; the sulci finely striate; the rest of the surface, especially laterally, coarsely punctate-striate. Elytra a little broader and about a third longer than the thorax, closely striate, obsoletely punctured. Abdomen very finely, moderately closely punctured, without ground-sculpture; 7th ventral segment broadly feebly emarginate. Anterior tibiæ emarginate.

♀: Head smaller, the post-ocular region about as long as the eye.

Mussoorie and Simla districts, altitude 6000 to 8000 feet.

270. **Oxytelus (Anotylus) occultus**, sp. n. (Fig. 58.)

Opaque, black, the elytra brownish, abdomen a little more shining. Antennæ black, the first two joints more or less testaceous. Legs testaceous. Length 1·8 to 2·2 mm.

Near *O. tetracarinatus* Block, but smaller, the eyes larger, the sculpture striate, less coriaceous, antennæ shorter, the penultimate joints more strongly transverse and with different ♂ characters.

♂: Head as broad as the thorax, the post-ocular region rounded, a little longer than the eye; clypeus in the same plane as the front, separated from it by a fine (but not shining) line; vertex sulcate, the whole surface (including the clypeus) closely and finely striate. Antennæ with the 5th to 10th joints transverse, the penultimate about three times broader than long. Thorax transverse, nearly twice as broad as long, the sides very little rounded in front, straighter and more retracted behind to the rounded posterior angles; median sulcus narrow, scarcely wider in front, the lateral much broader, lightly curved, the sides slightly, broadly impressed; sculpture as on the head. Elytra a little longer and broader than the

thorax, rather finely and closely striate, obsoletely punctured. Abdomen very finely, moderately closely punctured, very finely coriaceous; 7th ventral segment broadly impressed, the posterior margin produced into a broad plate which, near the base, is suddenly contracted into a long tongue-shaped

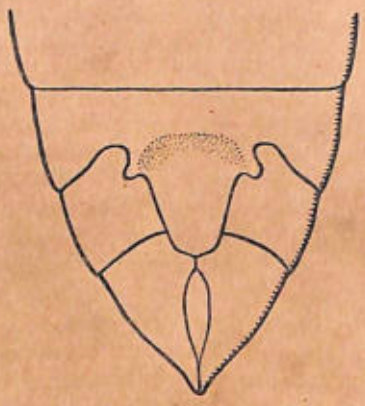


Fig. 58.—*Oxytelus* (*Anotylus*) *occultus*, apex of abdomen of ♂; ventral surface.

process gradually narrowed to the rounded apex; on each side of the plate deeply emarginate.

♀: Head smaller, narrower than the thorax, the post-ocular region about as long as the eye. Anterior tibiæ emarginate.

Dehra Dun.

271. Oxytelus (Anotylus) myrmecophilus.

Oxytelus myrmecophilus Cam., Trans. Ent. Soc. Lond. 1913, p. 526.

Black, opaque, the front of the head and the abdomen a little shining; thorax feebly trisulcate, impressed laterally, the sides narrowed posteriorly in a straight line. Antennæ entirely black, legs testaceous. Anterior tibiæ not emarginate. Length 2 mm.

Very similar to *O. tetracarinatus* Block, but the antennæ stouter, the sculpture of the head and thorax longitudinally strigose, the sculpture of the elytra stronger and the abdomen much less distinctly punctured.

Head large, transverse, subquadrate, scarcely as wide as the thorax in either sex, temples as long as the diameter of the eyes; impressed with a narrow transverse line towards the front between the antennal tubercles, which, with the part anterior to the line, are smooth and shining, the rest densely and finely strigose, impunctate. Vertex sometimes foveolate. Antennæ with the 3rd joint shorter than 2nd, 4th small, transverse,

5th square, 6th to 10th transverse, gradually increasing in width, 11th pointed. Thorax transverse (less in ♀), broadest just behind the anterior angles, gradually narrowed posteriorly in a straight line to the blunted posterior angles. The sulci feeble, the external curved, the sides impressed, strigose, impunctate. Elytra transverse, longer than the thorax, strigose and obsoletely punctured. Abdomen shining, finely and moderately closely punctured.

♂: 6th ventral segment broadly emarginate.

Nilgiri Hills, with *Pheidologeton diversus* Jerd., in decayed *Ficus* stump. Dehra Dun and Mussoorie, in dung.

272. **Oxytelus (Anotylus) simlaensis**, sp. n.

Closely allied to *O. pauper*, of almost the same build, colour, and opacity, but at once distinguished by the much stouter antennæ and the thoracic ridges not at all shining, the build also is more robust. Very similar to *O. myrmecophilus*, the lustre and antennal structure being similar, but differing in the striate clypeus. The post-ocular region is a little shorter than in *O. pauper*, the sculpture more granular or striate-coriaceous; vertex not foveate. Thorax transverse, one-half broader than long, sulci less marked than in *pauper*, the ridges of exactly the same lustre as the rest of the surface, the sculpture as on the head.

♂: 7th ventral segment broadly, feebly emarginate on each side, rounded in the middle. Length 2 mm.

Simla District: Theog; Kotgarh, alt. 7000 to 8000 feet.

273. **Oxytelus (Anotylus) nitidulus.**

Oxytelus nitidulus Grav., Col. Micr. Brunsv. 1802, p. 102; Er., Käf. Mark. Brand. i, 1839, p. 594; id., Gen. Spec. Staph. 1839–40, p. 795; Kr., Nat. Ins. Deutsch. ii, 1856–58, p. 860; Thoms. Skand. Col. iii, 1861, p. 132; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 171; Muls. et Rey, Col. Fr. Brévip. 1879, p. 76; Cas., Ann. N. York Ac. vii, 1893, p. 394; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 642.

Oxytelus angustatus Steph., Ill. Brit. v, 1832, p. 320.

Oxytelus asper Muls. et Rey, Col. Fr. Brévip. 1879, p. 78.

Oxytelus flavipes Steph., Ill. Brit. v, 1832, p. 318.

Oxytelus pedicellus Grav., Col. Micr. Brunsv. 1802, p. 102.

Oxytelus piceus Schrank., Enum. Ins. Aust. 1781, p. 236.

Oxytelus piceus var., Payk., Faun. Suec. iii, 1800, p. 384.

Oxytelus punctatus J. Lec., Trans. Am. Ent. Soc. vi, 1877, p. 236.

Oxytelus ruficrus Steph., Ill. Brit. v, 1832, p. 320.

Shining, black, the elytra often pitchy. Antennæ and palpi black. Legs testaceous, the femora occasionally infuscate. Length 2·5 to 3 mm.

♂: Head a little narrower than the thorax, the post-ocular region rounded and more or less dilated, a good deal longer than the curve of the eye; clypeus depressed, continuous with the front and with a few fine punctures; vertex with a short sulcus, finely punctured, towards the sides more coarsely and rugosely punctured. Antennæ with the 4th to 10th joints transverse, the penultimate about twice as broad as long. Thorax transverse (5 : 3), the sides slightly rounded in front, straighter and more retracted behind the middle to the rounded posterior angles; median sulcus narrow, the lateral broader, less deep, slightly curved, towards the sides lightly impressed, the whole surface covered with close elongate punctures which at the sides are confluent. Elytra a little broader and a third longer than the thorax, closely striate and punctured. Abdomen extremely finely, rather sparingly punctured, without ground-sculpture; 7th ventral segment feebly emarginate in the middle. Anterior tibiæ emarginate.

♀: Head smaller and shorter, the post-ocular region not dilated, almost as long as the eye; 7th ventral segment produced in the middle and rounded.

Mussoorie district. Chakrata district: Saiya; Kanasar; Deoban. Simla district: Fagu; Narkanda, alt. 3600 to 9300 feet. Almora; Dauli Ganga, alt. 6500 feet. Also in the Federated Malay States, Europe, and North America.

274. Oxytelus (Anotylus) pygmæus.

Oxytelus pygmæus Kr., Arch. Naturg. xxv, 1859, i, p. 176; Sharp, Faun. Haw. iii, v, 1908, p. 543.
Oxytelus pusillimus Kr., l. c., p. 177.
Oxytelus tenuis Motsch., Et. Ent. viii, 1859, p. 70.

Black, elytra yellowish-brown, darker at the base and scutellum. Head and thorax nearly opaque, the clypeus, antennal tubercles, vertex, and keels of the thorax shining; elytra and abdomen more shining. Antennæ black, the base occasionally pitchy. Legs testaceous. Length 1·5 to 2 mm.

In build, colour, and lustre very similar to *O. speculifrons* Kr., but much smaller, the antennæ thinner, etc.

♂: Head subquadrate, narrower than the thorax, the temples parallel, a little longer than the eye, the posterior angles rounded; clypeus declivous, separated from the front by a fine transverse line, shining, finely striate; vertex foveate, shining, practically without sculpture; antennal tubercles shining, the rest of the surface finely and closely striate. Antennæ with the 3rd joint small, 4th to 10th transverse, the penultimate joints about a half broader than long. Thorax one-half broader than long, the sides very slightly rounded, more retracted behind, the posterior angles rounded; median

sulcus narrow, wider in front, the lateral broader, slightly curved, the sides impressed, the ridges shining and prominent, without sculpture, the rest of the surface finely longitudinally striate. Elytra a little longer and broader than the thorax, finely, closely striate, finely punctured. Abdomen extremely finely, moderately closely punctured; 6th ventral segment with a shallow crescentic emargination in the middle of the posterior border; 7th broadly, longitudinally impressed along the middle. Anterior tibiæ simple.

♀: Head smaller and shorter, the temples about as long as the eyes.

Widely distributed in India and Ceylon. Also in the Indo-Malay region; Annam; Hawaii. Aden.

275. **Oxytelus (Anotylus) pauper**, sp. n.

Size and build of *O. pygmæus*, but more opaque, the antennal tubercles and vertex not shining, the penultimate joints of the antennæ a little more transverse, the 11th joint longer; ridges of thorax narrower, scarcely shining, and finely striate.

♂: Head a little narrower than the thorax, the post-ocular region rounded, twice as long as the curve of the eye; clypeus finely striate, not more shining than the rest of the surface, separated from the front by a fine transverse shining line; vertex with a minute fovea, on each side before the base with another, the whole surface closely, finely striate, impunctate. Thorax a half broader than long, the sides a little rounded in front, straight and more retracted behind, the posterior angles rounded; median sulcus narrower than the lateral, the sides impressed, the whole surface finely striate, like the head. Elytra scarcely longer than the thorax, finely, closely striate and finely, obsoletely punctured. Abdomen more shining, extremely finely, moderately closely punctured; ventral segments without distinguishing characters.

♀: Post-ocular region shorter, only slightly longer than the curve of the eye; 7th ventral segment a little produced in the middle and rounded. Length 1·75 mm.

Mussoorie: Arni Gad. Dehra Dun. Ceylon: Colombo; Belligam.

276. **Oxytelus (Anotylus) intermedius**, sp. n.

Of the same size, colour, lustre and build as *O. pauper*, but at once distinguished from it by the shining clypeus, which is not striate, but presents a few fine punctures. In both sexes the head is a little larger, with longer post-ocular region.

Dehra Dun. Mussoorie.

277. **Oxytelus (Anotylus) pumiloides**, sp. n.

Black, nearly opaque, the ridges of the thorax and the abdomen more shining; elytra brown, greasy lustrous. Antennæ black. Legs testaceous. Length 2·7 mm.

In build and lustre very similar to *O. pauper*, but larger and more robust, with thicker antennæ.

♂: Head almost as broad as the thorax, subquadrate, the post-ocular region about half as long again as the curve of the eye; clypeus separated from the front by a fine, shining transverse line, finely striate; vertex sulcate, the whole surface of the head finely striate and impunctate. Antennæ with the 4th to 10th joints transverse, the penultimate about one-half broader than long. Thorax transverse ($3\frac{1}{2} : 2\frac{1}{2}$), the sides slightly rounded in front, straighter and more retracted behind, the posterior angles rounded; median sulcus narrow, wider in front, the lateral broader, almost straight, the sides impressed, the ridges more shining, punctured, the rest of the surface dull, striate. Elytra about one-third longer than the thorax, closely striate, obsoletely punctured. Abdomen very finely, rather closely punctured in front, more sparingly behind; 7th ventral segment broadly and slightly emarginate on each side, obtusely angulate in the middle. Anterior tibiæ not emarginate.

♀: Head smaller, temples shorter, a little longer than the eye.

Chakrata district: Kanasar; Bodyar; Manjgaon; Konain; alt. 6000 to 8000 feet.

278. **Oxytelus (Anotylus) latiusculus.** (Fig. 59.)

Oxytelus latiusculus Kr., Arch. Naturg. xxv, 1859, i, p. 176; Fauv., Rev. d'Ent. xxi, 1902, p. 67.
Oxytelus sulcifrons Fauv., Faun. Gallo-Rhén. iii, 1875, Cat. p. xi.

Minute, black, nearly opaque, the abdomen more shining, the elytra yellowish-brown, darker at the base or brownish-black. Antennæ black, occasionally pitchy at the base. Legs testaceous. Length 1·5 to 1·75 mm.

Head narrower than the thorax, flat, the post-ocular region not dilated, broadly rounded with the base, about twice the length of the curve of the eye; clypeus continuous with, and in the same plane as, the front, the sides and truncate anterior border margined; on either side lightly longitudinally sulcate from base to apex; vertex with a short sulcus; intra-ocular ridge well developed, continuous in front with the margin of the clypeus and behind extending to the base, the whole surface closely, finely, longitudinally striate, the interstriæ interrupted at short intervals, so that it appears coriaceous. Antennæ short, the 3rd joint very small, 4th to 10th transverse, the penultimate joints almost three times broader than long.

Thorax one half broader than long, the sides gently rounded from apex to base, more retracted behind, the posterior angles rounded; median sulcus wider in front, the lateral broader; sides lightly impressed, sculpture as on the head and with numerous scattered punctures. Elytra broader and a little longer than the thorax, striate, moderately closely, superficially punctured. Abdomen extremely finely, moderately closely punctured.



Fig. 59.— *Oxytelus* (*Anotylus*) *latiusculus*, apex of abdomen of ♂ ventral surface.

♂: 5th ventral segment in the middle, on the posterior margin with a tubercle; 6th deeply and broadly impressed in the middle in the whole length, the fundus on each side with an impressed diverging line, and a transverse curved one across the middle †; 7th broadly and slightly emarginate.

Widely distributed throughout India and Ceylon. Also in the Malayan Archipelago; Formosa; Australia; Aden; East, West, and South Africa; Egypt; Syria.

279. **Oxytelus (Anotylus) kraatzi**, nov. nom.

Oxytelus pulcher Kr.*, Arch. Naturg. xxv, 1859, i, p. 173 (nec Grav.).

Reddish-testaceous, shining, the elytra behind and the bases of the abdominal segments more or less broadly infuscate. Antennæ and legs reddish-testaceous. Length 2·75 to 3 mm.

♂: Head large, transverse, a little broader than the thorax, the post-ocular region slightly dilated and broadly rounded to the neck, almost twice as long as the large eye; clypeus deeply depressed, semicircular, broadly emarginate in front and without limiting line behind, shining and without sculpture; vertex narrowly sulcate; intra-ocular ridge well marked, extending nearly to the base, the whole upper surface finely coriaceous (and less shining than in the ♀); the post-ocular region with a few punctures and striæ, but without ground-

† The curved lines on this segment are wrongly shown in the figure as reaching the *lateral* margin, and giving the impression of an additional segment. They actually extend to the *posterior* margin.

sculpture. Antennæ with the 1st joint rather long, thickened apically, 3rd slightly longer than the 2nd, 4th small, about as long as broad, 5th to 10th transverse, the penultimate only slightly so. Thorax transverse (5 : 3), the sides almost straight, retracted behind, before the rounded posterior angles with a small emargination, the anterior angles rather prominent; median sulcus distinct, broader than the lateral, these curved, abbreviated in front and behind, externally broadly impressed; middle of the disc and lateral impressions with some rather large, close punctures, almost impunctate elsewhere. Elytra a little longer and broader than the thorax, closely striate and punctured. Abdomen almost impunctate and without ground-sculpture; terminal ventral segments without distinctive characters.

♀: Head smaller, narrower than the thorax, transversely suborbicular, the post-ocular region evenly rounded to the neck and about as long as the eye; clypeus truncate in front, separated from the front by a transverse line; vertex with a short sulcus, intra-ocular ridge less marked, the region just behind the clypeus coriaceous, the rest of the surface with a few scattered punctures and without ground-sculpture; thorax less transverse.

Burma: Tenasserim; Tavoy. Also in the Malay Peninsula, Sumatra, and Java.

280. **Oxytelus (Anotylus) lætus, sp. n.** (Fig. 60.) (Pl. II, fig. 7.)

Shining; head red, thorax and abdomen reddish-testaceous, the latter infuscate behind; elytra blackish, more or less testaceous at the base. Antennæ with the first four or five joints testaceous, the following reddish. Legs testaceous. Length 3 to 3·75 mm.

♂: Head large, a little broader than the thorax, the post-ocular region a little dilated and rounded to the neck, about twice as long as the curve of the eye; front deeply excavated, not separated from the clypeus, which is slightly rounded in front; vertex with deep sulcus extending to the clypeus; intra-ocular ridge evanescent before the base, this on each side of the middle with a small fovea, the whole surface except the clypeus and excavated front with scattered larger and smaller punctures. Antennæ with the 4th joint about as long as broad, the 5th to 10th transverse, the penultimate about twice as broad as long. Thorax transverse ($5\frac{3}{4} : 3\frac{1}{2}$), the sides nearly straight, rather strongly retracted behind, the posterior angles rounded; median sulcus rather deep, the lateral broader, abbreviated behind; the sides impressed; the whole surface rather closely punctured, the punctures larger at the sides. Elytra transverse, closely punctate-striate. Abdomen

almost impunctate, with a fine retiform ground-sculpture. 4th and 5th ventral segments in the middle with a small shallow pubescent impression, 6th with larger impression reaching the posterior margin, the margin of the impression produced on each side into a short, sharp, oblique tooth directed outwards and backwards; 7th in the middle with short broad lobe,

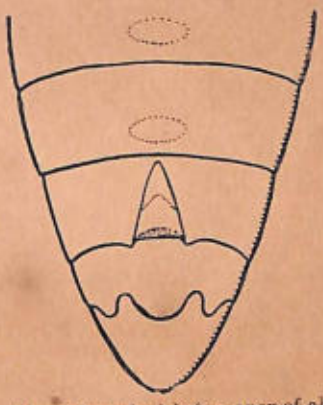


Fig. 60.— *Oxytelus* (*Anotylus*) *lætus*, apex of abdomen of ♂; ventral surface.

narrowed towards the apex which is truncate, on either side arcuately excised.

♀: Head smaller, a little narrower than the thorax, the post-ocular region rounded, scarcely dilated, and about a half longer than the curve of the eye; front less deeply excavated.

Dehra Dun. Siwaliks: Malhan Range, in fungus. Almora: Dindihar, alt. 6500 feet.

281. **Oxytelus (Anotylus) alternans**, sp. n. (Fig. 61.)

Shining; head black, the antennal tubercles reddish-testaceous, thorax red, elytra brownish-yellow, more or less infuscate behind, abdomen brown, obscurely lighter at the sides. Antennæ reddish-testaceous, the intermediate joints scarcely infuscate. Legs testaceous. Length 3·5 to 4 mm.

Very closely allied to *O. rubidus*, of exactly the same build and antennal structure, but differing in the deep black head and secondary ♂ characters.

♂: Head more finely striate behind the antennal tubercles, the vertex simply punctured; 4th and 5th ventral segments scarcely impressed in the middle, but with a small tuft of yellow pubescence; 6th with deep semicircular excision, the spine at each side of the excision much less oblique, the margin of the excision more closely ciliate, the impression shorter; 7th with the central lobe broader.

♀: Head formed as in *rubidus*, but the eye smaller, the post-ocular space longer, nearly twice as long as the curve of the eye, the sculpture scarcely differing.

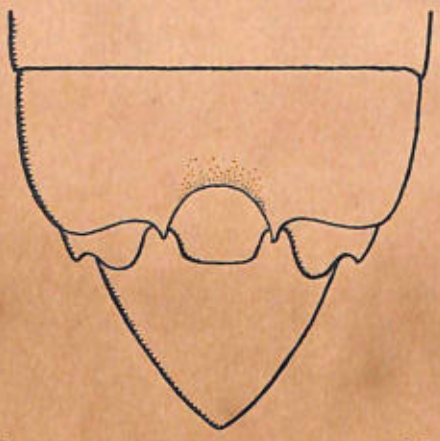


Fig. 61.—*Oxytelus* (*Anotylus*) *alternans*, apex of abdomen of ♂; ventral surface.

Mussoorie. Simla Hills: Theog, 6000 to 8000 feet. In fungus.

282. Oxytelus (Anotylus) rufus.

Oxytelus rufus Kr.*, Arch. Naturg. xxv, 1859, i, p. 174.

Moderately shining, red, the elytra occasionally infuscate behind, the abdomen reddish-testaceous. Antennæ and legs reddish-testaceous. Length 2·75 mm.

♂. Head large, transverse, as broad as the thorax, the post-ocular region evenly rounded to the neck, a little longer than the large eye; front declivous, without sculpture, clypeus narrow, separated from the front by a fine transverse ridge, in front very slightly emarginate, polished; vertex with a short sulcus, on either side with a rather large but shallow impression; intra-ocular ridge obsolete, the whole of the region behind the declivous front closely, longitudinally striate and more or less punctured. Antennæ with the 4th joint a little longer than broad, 5th and 6th slightly, 7th to 10th more strongly transverse, the penultimate fully twice as broad as long. Thorax transverse (5 : 3), the sides almost straight, distinctly retracted behind, the posterior angles obtuse; median sulcus wider in front, the lateral broader, the sides impressed, closely striate-punctate on the disc, less closely and less striate at the sides. Elytra a little longer and broader than the thorax, rather closely punctured, more striate-punctate at the sides.

Abdomen practically impunctate, extremely finely coriaceous; 7th ventral segment slightly emarginate.

♀: Head smaller, the post-ocular region about as long as the eye; front less abruptly declivous, punctured; clypeus truncate in front, extremely finely coriaceous; vertex sulcate; much less striate, closely punctured; thorax less transverse.

Ceylon.

283. **Oxytelus (Anotylus) rubicundus**, sp. n. (Fig. 62.)

Head and thorax reddish-testaceous, a little shining; elytra blackish, reddish at the base; abdomen more shining, reddish-testaceous, the bases of the segments more or less infuscate. Antennæ red. Legs testaceous. Length 2·1 mm.

♂: Head transverse, as broad as the thorax, the post-ocular region rounded and a little dilated, rather more than twice the length of the eye; clypeus depressed, feebly rounded in front, separated from the front of the head by a curved groove,

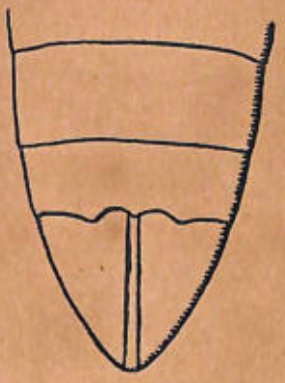


Fig. 62.—*Oxytelus* (*Anotylus*) *rubicundus*, apex of abdomen of ♂; ventral surface.

shining and without sculpture; vertex with a short sulcus; intra-ocular ridge reaching the base and curved inwards; a narrow space behind the clypeus almost impunctate, about the vertex finely and closely punctured, the punctures more or less confluent; externally closely and obliquely striate. Antennæ slender, the 4th joint small, the 5th to 10th distinctly transverse, the 11th as long as the two preceding together. Thorax transverse ($3\frac{1}{2} : 2\frac{1}{2}$), the sides nearly straight, distinctly retracted behind, the posterior angles obtuse; median sulcus distinct, widest in front, the lateral scarcely evident, at the sides impressed, rather closely striate, the striæ more or less interrupted, impunctate. Elytra about a third longer than the thorax, closely striate and rather closely punctured.

Abdomen practically impunctate, very finely coriaceous; 7th ventral segment crescentically emarginate on each side, rounded in the middle.

♀: Head smaller, a little narrower than the thorax, the post-ocular region rounded to the neck, about half as long again as the eye; vertex closely striate-punctate.

Dehra Dun. Siwaliks: Malhan Range. In rotting fruit.

284. **Oxytelus (Anotylus) ruber**, sp. n.

♂: Very closely allied to *O. rubicundus* but more robust, the head more shining, larger, of a ferruginous-red colour, the eye larger, the post-ocular region longer, about twice the length of the eye; sulcus of vertex shallower and broader, the surrounding area more sparingly punctured, the lateral region more regularly striate; posterior angles of the thorax a little more prominent; secondary sexual characters the same. Length 2·3 mm.

♀: Very similar to *O. raffrayi* Fauv., ♀, but thorax and elytra less coarsely sculptured, the head a little narrower, the fovea of the vertex deeper, sculpture at base of head closer and finer. The head is transverse, narrower than the thorax, the post-ocular region rounded to the neck, a little longer than the curve of the eye, the vertex with deep fovea, behind the smooth clypeus coriaceous, more posteriorly more coarsely and irregularly wrinkled.

Dehra Dun. Burma: Tenasserim; Tavoy. Also in Penang.

285. **Oxytelus (Anotylus) nitidifrons.** (Fig. 63.)

Oxytelus nitidifrons Woll.*, Ann. Mag. Nat. Hist. (4) viii, 1871, p. 411.

Oxytelus advena Shp., Trans. Ent. Soc. Lond. 1880, p. 50; Trans. Roy. Soc. Dublin, iii, 1885, p. 223; Faun. Haw. iii, v, 1908, p. 543; Fauv., Rev. d'Ent. xxi, 1902, p. 65.

Shining; head pitch-black, thorax red, elytra reddish-testaceous, more or less extensively infuscate behind, abdomen reddish-brown, darker behind. Antennæ with the first four joints reddish-testaceous, the following blackish. Legs testaceous. Length 2·75 to 3 mm.

♂: Head transversely suborbicular, as broad as the thorax, the post-ocular area evenly rounded to the neck, about twice as long as the large eye; clypeus depressed, slightly rounded anteriorly, separated from the front by an impressed line and with a few scattered punctures; vertex with a narrow sulcus; intra-ocular ridge distinct, extending nearly to the base; behind the clypeus with a few fine punctures, the rest of the surface coarsely, closely striate and punctured. Antennæ with the 4th joint as long as broad, the 5th to 10th transverse,

the 9th and 10th distinctly more transverse than the preceding. Thorax transverse (5 : 3), the sides almost straight, very slightly retracted behind and scarcely emarginate before the obtuse posterior angles; median sulcus narrow, wider in front, the lateral broader, less distinct, at the sides broadly impressed; rather coarsely, irregularly punctured, the punctures here and there confluent. Elytra a little broader and about a third longer than the thorax, closely striate-punctate. Abdomen extremely finely, moderately closely punctured,

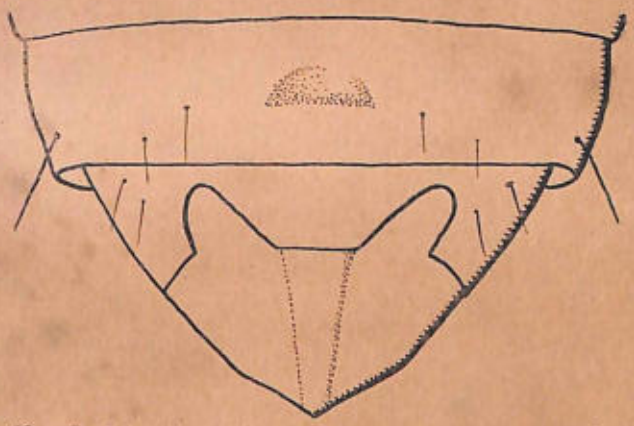


Fig. 63.—*Oxytelus* (*Anotylus*) *nitidifrons*, apex of abdomen of ♂; ventral surface.

very finely coriaceous; 6th ventral segment in the middle with a transverse impression; 7th deeply emarginate on each side, forming a central lobe narrowed towards the slightly rounded apex.

♀: Head smaller, slightly narrower than the thorax; post-ocular region shorter, a little longer than the eye, the disc closely punctured, scarcely striate.

Nilgiri Hills (*Andrewes*). Dehra Dun (*Cameron*). Burma. Also in the Philippines, Hawaii, Madeira, St. Helena, W. Africa, Zanzibar.

286. Oxytelus (Anotylus) cavicola.

Oxytelus cavicola Bernh *, W. E. Z. xliii, 1926, p. 22.

Red, shining, the elytra more or less infuscate behind. Antennæ and legs reddish-testaceous. Length 2 to 3 mm.

♀: Very similar to *O. nitidifrons* Woll., but red, the head more rounded and less transverse, the antennæ stouter, entirely reddish-testaceous, the thorax a little broader, the sulci less deep, the puncturation rather closer. Head sub-

orbicular, narrower than the thorax, post-ocular region rounded, a little shorter than the curve of the eye; clypeus shining, without ground-sculpture, but with a few small punctures, the anterior border slightly rounded, separated from the front by a transverse depression; intra-ocular ridge distinct, reaching the base and then directed inwards; vertex narrowly sulcate, the whole surface rather closely punctured as in *nitidifrons*. Antennæ with the 4th joint moniliform, 5th to 10th transverse, the 9th and 10th more strongly than the preceding, about twice as broad as long. Thorax transverse (5 : 3), the sides slightly rounded in front, not much retracted behind, the posterior angles obtuse and slightly prominent; median sulcus wider in front, the lateral less distinct, rather coarsely and closely punctured, substriate, at the sides superficially impressed. Elytra one-third longer than the thorax, rather closely punctured and striate. Abdomen practically impunctate, extremely finely coriaceous. According to Bernhauer the ♂ has the 5th ventral segment with the posterior margin arcuately emarginate and an impression in the middle of the base.

Burma: Moulmein, in a cave (*Gravely*).

287. **Oxytelus (Anotylus) distincticollis.**

Oxytelus (*Anotylus*) *distincticollis* Cam., E. M. M. lv, 1919, p. 226.

Black, shining, the elytra brown, the thoracic sulci more or less obsolete; first five joints of the antennæ and legs reddish-testaceous. Length 3·3 mm.

Easily recognised by the very indistinct thoracic furrows and coarse sculpture. Facies of *nitidifrons* Woll. Head transverse, convex, the eyes moderately large, the temples long, broadly rounded behind, about twice as long as the eyes; the front transversely depressed between the antennal tubercles, smooth, shining, almost impunctate, the rest of the surface coarsely, closely and rugosely punctured. Antennæ with the 2nd joint about as long as the 3rd, the 4th small, as broad as long, the 5th to the 10th transverse, gradually increasing in width, the 11th short, oval. Thorax very nearly one-half broader than long, feebly rounded at the sides, narrower at the obtuse posterior angles than anteriorly; the disc with a narrow, shallow, obsolete furrow throughout the whole length of the median line, and on either side with a broader yet more obsolete impression posteriorly, scarcely traceable beyond the middle, the sides rather broadly impressed; the whole surface coarsely, closely and rugosely punctured. Elytra a little broader than, and about half as long again as, the thorax, slightly transverse, the sculpture consisting of moderately coarse, somewhat closely placed granules. Abdomen with

sculpture consisting of moderately large, superficial, closely placed, obsolete punctures, the interspaces raised so that the surface appears irregular and granular, the 7th and 8th segments nearly smooth.

♂ unknown. Type in the British Museum.

Ceylon: Bogawantalawa (*G. Lewis*).

288. **Oxytelus (Anotylus) rubidus, sp. n.** (Fig. 64.)

Moderately shining; head red, the rest reddish-testaceous, the elytra more or less blackish, the base of each abdominal segment with narrow transverse blackish fascia. Antennæ red. Legs testaceous. Length 3·2 mm.

Near *O. nitidifrons* Woll., but with differently coloured head and antennæ and narrower build; in the ♂ with broader head, the post-ocular region slightly dilated, the sculpture behind the antennal tubercles more finely striate and less punctured, the intra-ocular ridge obsolete, sulcus of vertex deeper, thorax

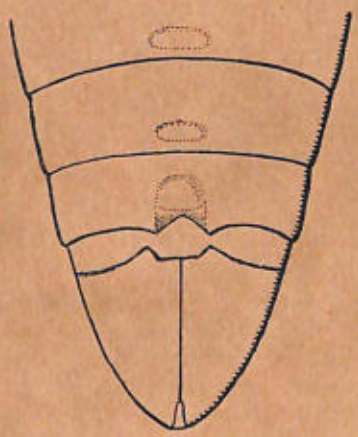


Fig. 64.—*Oxytelus* (*Anotylus*) *rubidus*, apex of abdomen of ♂: ventral surface.

less transverse, less shining, lateral sulci less deep, the sculpture a little finer and more striate. In the ♀ the head is distinctly striate-punctate, but in build is similar to *nitidifrons*.

♂: Head transverse, as broad as the thorax, the post-ocular region a little dilated and rounded to the neck, about a half longer than the curve of the eye; clypeus depressed, truncate in front, shining, devoid of sculpture, not separated behind from the front, this polished like the clypeus, but with a few fine punctures; vertex sulcate, intra-ocular crest feeble, the region between this and the sulcus closely, moderately finely, obliquely striate, practically impunctate. Antennæ as in

nitidifrons. Thorax transverse (5 : 3½), the sides nearly straight, not much retracted behind, the posterior angles rounded; median sulcus more defined than the lateral, wider in front, at the sides impressed; median sulcus without sculpture, the rest of the surface with rather close, more or less elongate punctures, with tendency to unite. Elytra a little longer and broader than the thorax, transverse, punctate-striate. Abdomen practically impunctate, with obsolete ground-sculpture; 4th and 5th ventral segments with a small pubescent impression in the middle a little in front of the posterior margin; 6th with a nearly semicircular ciliated excision in the middle of the posterior margin, the margin of the excision on each side produced into a sharp outwardly and backwardly directed spine, in front of the emargination with an impression reaching nearly to the middle of the segment; 7th emarginate on each side, thus forming a small median lobe.

♀: Head smaller, transverse, almost as broad as the thorax, the post-ocular region rounded, almost as long as the curve of the eye; vertex sulcate; intra-ocular ridge distinct, reaching the base, the sculpture between this and the sulcus rather coarsely striate. 7th ventral segment a little produced in the middle and rounded.

Dehra Dun. In fungus.

289. **Oxytelus (Anotylus) thoracicus.**

Oxytelus thoracicus Motsch., Bull. Mosc. xxx, 1857, iv, p. 504.

Shining reddish-testaceous, the head and disc of thorax often more or less infuscate. Thorax with fine median line, lateral sulci short, basal, indistinct. Antennæ brown, the first four joints testaceous. Legs testaceous. Length 3 mm.

Readily recognised by the colour, the finely punctured head and thorax, and the obsolete sulci of the thorax. Allied to *O. bubalus* Fauv.

♂: Head transverse, suborbicular, almost as broad as the thorax, the post-ocular region very short, the eye very large; clypeus depressed, without sculpture, continuous with the front, the anterior margin gently rounded; disc flat, on each side before the base with a small fovea, the whole surface finely and not very closely punctured. Antennæ with the 4th to 10th joints transverse, the penultimate twice as broad as long. Thorax transverse, one-third broader than long, convex, widest just behind the rounded anterior angles, the sides straighter and a little retracted to the rounded posterior angles; in the middle with a fine impressed line, lateral sulci very feeble, placed near the base, the sides impressed, on the disc rather finely and not closely punctured, at the sides with larger and closer punctures more or less confluent.

Elytra a little longer and broader than the thorax, moderately finely and moderately closely punctured, at the sides and apex more or less striate. Abdomen practically impunctate, with feeble ground-sculpture; 7th ventral segment produced in the middle into a short plate with rounded apex, on each side emarginate; 6th in the middle before the posterior margin with a closely punctured impression clothed with yellow pubescence. Anterior tibiæ emarginate before the apex.

♀: Head a little smaller, thorax less transverse.

Bengal: Rajmahal. Baroda State: Bilimora. Also in the Malay Peninsula, Sumatra, Java, etc.

290. **Oxytelus (Anotylus) exasperatus.**

Oxytelus exasperatus Kr.*, Arch. Naturg. xxv, 1859, i, p. 175.

Moderately shining, black, the elytra yellowish-brown, darker at the scutellary region. Antennæ black, the first two or three joints reddish. Legs testaceous. Length 2·75 to 3 mm.

♂: Head as broad as the thorax, subquadrate, the temples very slightly dilated, rather broadly rounded behind, about as long as the large eye, the base rather broadly emarginate; clypeus depressed, separated from the front by a distinct transverse line, shining, practically without sculpture, truncate in front; vertex deeply sulcate; the surface longitudinally striate and with a few punctures, at the base more coarsely and irregularly rugose; immediately behind the clypeus smooth and shining and with a few extremely fine punctures. Antennæ with the 4th joint a little longer than broad, the 5th to 10th moderately transverse. Thorax trapezoidal, a little more than a third broader than long, the sides almost straight, retracted behind, the posterior angles rounded; sulci distinct, not abbreviated, the median widest in front, the lateral narrower, curved, the sides strongly impressed, the whole surface rather coarsely striate and rugose, not definitely punctured. Elytra a little longer and broader than the thorax, closely, asperately punctured, scarcely striate. Abdomen very finely, moderately closely punctured on the anterior segments; 7th ventral segment truncate, a little in front of the posterior margin with a short, transverse, bidenticulate ridge.

♀: Head smaller, shorter, transverse, a little narrower than the thorax, temples parallel, a little shorter than the length of the large eye, the posterior angles briefly rounded; vertex more narrowly sulcate, at the base on each side with a fovea.

Ceylon: Dikoya, alt. 3800 to 4200 feet (*Lewis*).

291. **Oxytelus (Anotylus) frater**, sp. n.

Black, opaque, abdomen shining, elytra pitchy, a little shining. Sulci of the thorax feeble. Antennæ black, the first four joints more or less testaceous. Legs testaceous. Length 3 mm.

Allied to *O. exasperatus*, Kr., but more opaque, the head more densely striate, antennæ with the 4th and 5th joints longer, the penultimate less transverse; thoracic sulci less deep, the sculpture finer, elytra with less interrupted striæ, and so less asperate.

♂: Head as wide as the thorax, widest at the briefly rounded posterior angles, subtriangular, the temples twice as long as the eye, the base deeply emarginate; clypeus depressed, separated from the front, smooth and shining, in front with a few fine striæ, the anterior border scarcely emarginate; vertex sulcate, on each side of the sulcus with a small, more shining tubercle, behind which is a small impression, the surface finely longitudinally striate, at the sides and base more coarsely and irregularly. Antennæ with the 2nd joint shorter than the 3rd, 4th and 5th distinctly longer than broad, the following slightly transverse. Thorax formed as in *exasperatus*, but the sulci less marked, the sculpture similar but finer. Elytra a little longer than the thorax, striate, scarcely punctured. Abdomen very finely, moderately closely punctured; 7th ventral segment broadly and slightly emarginate. Anterior tibiæ simple.

♀: Head smaller, narrower than the thorax, less widened behind, the eye about as long as the temple.

Dehra Dun, Mussoorie, Chakrata and Simla districts, alt. 2300 to 8000 feet.

292. **Oxytelus simplex.**

Oxytelus simplex Motsch., Et. Ent. viii, 1859, p. 70.

Black, more or less brown, palpi, base of antennæ, legs, humeral angles, and middle of the elytra pale testaceous.

Head rather triangular, strongly punctured towards the sides, smooth and shining in the middle in front; antennæ longer than the head and thorax together, 2nd joint nearly as long as the 1st, 3rd a little shorter, 4th to 10th very transverse, from the 5th black, 11th oval, twice as long as the 10th, pointed, black, a little lighter at the apex. Thorax transverse, rather depressed, shining, punctured like the head, with three little impressions on the middle, of which two are behind and one on the anterior margin; there is, moreover, on either side a fovea; lateral borders rounded, anterior angles rounded, the posterior prominent, nearly rectangular. Scutellum very

transverse, rounded. Elytra longer than the thorax, nearly square, depressed, a little less strongly punctured than the thorax. Abdomen shining, almost impunctate, very finely and very sparingly pubescent. Last segment rounded. Length 1¼ lin. (It almost wants the central groove, as in *Phlœonœus*.)

Ceylon (ex *Motschoulsky*).

293. **Oxytelus incisus.**

Oxytelus incisus Motsch., Bull. Mosc. xxx, 1857, iv, p. 504.

Near *O. insecatus*, but smaller and notably more elongate. Sides of thorax not crenulate. Colour of thorax and abdomen redder. Last eight joints of the antennæ brown, the others testaceous.

Head with well marked foveæ. Sixth abdominal segment in the ♂ with two small, not very apparent projections on the margin; 7th with a transverse depression in the middle, making the lobes prominent like teeth on the middle of the pygidial segment, which is there concave.

♀: 6th segment with triangular emargination in the middle of the external (? posterior) border; 7th without lateral lobes, on the pygidial segment with a little fovea near the apex.

"Ind. or." (ex *Motschoulsky*).

294. **Oxytelus (?) parasitus.**

Oxytelus (?) parasitus Motsch., Et. Ent. viii, 1859, p. 69.

Elongate, parallel, depressed, punctured, moderately shining, black; mouth, palpi, base of antennæ and legs testaceous.

Head subtransverse, subopaque, rugosely punctured, uneven, bifoveolate behind, longitudinally impressed in the middle of the front, between the eyes and antennæ on each side produced into a little tooth. Thorax scarcely broader than the head, subtransverse, uneven, rugosely punctured, in front somewhat triangularly produced, in the middle with three crenulate sulci, the sulci wider behind; the sides in front somewhat dilated, in the middle broadly emarginate, the anterior angles rounded, the posterior obtuse. Elytra a little broader than the thorax, almost transverse, with a very close granular sculpture, somewhat infuscate. Abdomen a little narrower than the elytra, shining, finely punctured behind, with a very short, sparing pubescence, the apex pointed, the sides strongly reflexed, at the apex arcuately narrowed, the posterior margin of the segments more or less infuscate; anal segment very shining, subconvex. Length 1½ lin. Breadth ⅓ lin.

Ceylon (ex *Motschoulsky*).

Genus **PLATYSTETHUS** Mannh.

Platystethus Mannh., Brachél. 1830, p. 46; Er., Käf. Mark. Brand. i, 1837–39 (1839) p. 585; Gen. Spec. Staph. 1839–40 (1840) p. 781; Lac., Gen. Col. ii, 1854, p. 116; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 55; Kr., Naturg. Ins. Deutsch. ii, 1856–58, p. 838; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 178; Muls. et Rey, Hist. Nat. Col. Fr., Brévip., Oxyp., Oxytél. 1879, p. 13; Sharp, B. C.-A. i, 2, 1882–87 (1887) p. 686; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 627.

Subgen. *Pyctocraerus* Thoms., Skand. Col. iii, 1861, p. 125.

„ *Platystethus*, s. str., Thoms., l. c. p. 122.

Biology. Rupertsb., Biol. Lit. Käf. Eur. 1894, p. 126; Xamben, Ann. Soc. Linn. Lyon, xxxviii, 1891, p. 181; Mœurs, vi, p. 123; Schiødte, Nat. Tidskr. iii, 1864, p. 210, t. 11, ff. 15–22: t. 12, f. 3; Bouché, Nat. Ins. Deutsch. 1834, p. 182, t. 8, ff. 14–21.

Elongate, somewhat depressed species, the head not or but little constricted behind (subgen. *Pyctocraerus*). Clypeus not separated by a suture from the front, usually armed (at least in the ♂) with two spines. Gular sutures fused along the middle, diverging behind and enclosing a small triangular gular plate. Labrum transverse, slightly, broadly emarginate in front, the anterior angles furnished with a ciliated membrane, the front margin closely setose. Mentum transverse, slightly, broadly emarginate in front, the anterior angles a little prominent. Tongue broadly, rather deeply emarginate, on either side of the middle with a setiferous tubercle; paraglossæ extending slightly beyond the anterior angles. Labial palpi with the 1st joint cylindrical, twice as long as broad, the 2nd narrower and longer, the 3rd narrower and about half as long as the 2nd, cylindrical. Inner lobe of the maxilla pointed, its inner margin furnished with strong teeth; outer lobe a little longer than the inner, its apex closely dentate and ciliate. Maxillary palpi with the 1st joint very small, the 2nd elongate, lightly curved and thickened apically, the 3rd about as long as the 2nd, slightly thickened at the apex, the 4th conical, about half as long as the preceding. Mandibles slightly curved, pointed, the inner margins with two or three small teeth. Prosternum short, sometimes with a tubercle in the middle, its process short and rounded, scarcely projecting between the coxæ. Epipleura narrow. Epimera wanting. Trochantin visible, tongue-shaped. Mesosternum short, its process short and broad, rounded behind, the coxæ widely separated. Metasternum a little produced backwards in the middle, its process long and broad, united with that of the mesosternum. Scutellum large. Elytra dehiscent behind. Legs moderate, the anterior coxæ elongate, as long as the femora. Anterior and middle tibiæ spinose, the posterior setose. Tarsi 3-jointed, the first two joints very short, the 3rd two or three times longer than the first two together.

The genus is found throughout the world in dung and decaying matter. It has been divided into two subgenera: *Platystethus*, s. str., in which the head is not constricted behind, and *Pyctocraerus*, in which a constriction is present.

Key to the Species of Platystethus Mannh.

1. Testaceous; the head more or less infuscate. Otherwise coloured	*testaceus* Motsch.,	[p. 265.
	2.	
2. Head coriaceous	3.	
Head not coriaceous	4.	
3. Thorax and elytra coriaceous; thorax sulcate in the middle	*cornutus* Gr., p. 265.	
Thorax and elytra not coriaceous; thorax not sulcate	*dilutipennis* Cam.,	[p. 266.
4. Thorax bright reddish-testaceous	*indicus*, sp. n., p. 267.	
Thorax black or pitchy	5.	
5. Frontal horns red, elytra testaceous, rather strongly punctured	*spectabilis* Kr., p. 268.	
Frontal horns black; elytra largely infuscate, finely and sparingly punctured	*crassicornis* Motsch.,	[p. 269.

295. **Platystethus testaceus.**

Platystethus testaceus Motsch., Bull. Mosc. xxx, 1857, iv, p. 506.

Build of *P. nodifrons* Sahlb., but more narrowed at the extremities. Shining reddish-testaceous, the head and terminal joints of the antennæ, which are distinctly widened, a little infuscate; eyes clear; puncturation not very distinct on the head and thorax, closer on the elytra. Thorax with feeble median line, the lateral impressions stronger; it is transverse, with all the angles rounded, almost the same as in some species of *Oxytelus*.

India (ex *Motschoulsky*).

296. **Platystethus cornutus.**

Platystethus cornutus Gr., Col. Micr. Brunsv. 1802, p. 109; Er., Käf. Mark. Brand. i, 1837-39 (1839) p. 586; Gen. Spec. Staph. 1839-40, p. 782; Kraatz, Naturg. Ins. Deutsch. ii, 1856-58, p. 841; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, t. 21, f. 101; Thoms., Skand. Col. iii, 1861, p. 122; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 180; Muls. et Rey, Col. Fr., Brévip. 1879, p. 23; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 631.

Platystethus degener Muls. et Rey, Col. Fr., Brévip. 1879, p. 26.

Platystethus maxillosus Peyron, Ann. Soc. Ent. Fr. (3) vi. 1858, p. 432.

Platystethus scybalarius Runde, Brach. Hal. 1835, p. 19.

Black, moderately shining, the fore-parts coriaceous, the elytra brownish-yellow, at the base and sides more or less

infuscate. Antennæ black, the first joint sometimes brownish-testaceous. Legs testaceous, the femora more or less infuscate. Length 3 to 4 mm.

♂: Head large, not constricted behind, as broad as the thorax, the post-ocular region gently rounded and narrowed to the neck, more than twice as long as the eye; clypeus coriaceous, not separated from the front, the anterior angles produced into a long, pointed, slightly diverging and decurved spine; vertex with a short sulcus, on either side foveate; intra-ocular sulcus deep and narrow: moderately strongly and rather closely punctured, coriaceous. Antennæ with the 3rd joint a little shorter than the 2nd, 4th to 6th a little longer than broad, 7th to 10th a little transverse. Thorax transverse ($6\frac{1}{2}$: 5), the sides evenly rounded with the base, anterior angles rather prominent; sulcate in the middle line, about as closely but rather more finely punctured than the head, the ground-sculpture similar. Elytra as long as the thorax, the apex margined, finely, rather sparingly punctured, coriaceous. Abdomen widened behind, almost impunctate, coriaceous; 6th ventral segment at the middle of the posterior margin with a crescentic impression; 7th broadly impressed along the middle, on each side with a little tooth.

♀: Head smaller, scarcely as wide as the thorax, spines shorter.

Dehra Dun. Chakrata and Mussoorie districts. Bihar: Pusa. Poona. Also in Europe and the Canary Islands.

297. **Platystethus dilutipennis.** (Fig. 65.)

Platystethus dilutipennis Cam., Trans. Ent. Soc. Lond. 1914, p. 527.

Black, shining; thorax with a row of three or four punctures on either side of the middle line and two or three near the sides, otherwise impunctate. Elytra testaceous, infuscate about the scutellum and the postero-external angles. Antennæ with first four joints reddish-testaceous, the rest black. Mandibles, palpi, and legs testaceous. Length 3·5 to 4 mm.

Head in ♂ very large, transversely suborbicular, densely coriaceous, scarcely perceptibly punctured, broader than the thorax; in ♀ scarcely as broad as the thorax, more shining, much less coriaceous, very finely and sparingly punctured. In both sexes the clypeus is produced into two rather short triangular spines. Antennæ with 2nd and 3rd joints of equal length, 4th globose, 5th slightly, the following gradually more strongly transverse, 11th elongate, oval. Thorax almost semicircular, posterior angles obliterated, the anterior rectangular; disc with three or four large punctures on either side of the middle line and two or three nearer the sides, not sulcate,

no perceptible ground-sculpture. Elytra transverse, emarginate posteriorly; measured along the suture a little shorter than the thorax, very sparingly and obsoletely punctured. Abdomen almost impunctate.

♂: 5th ventral segment with an emargination closed by a

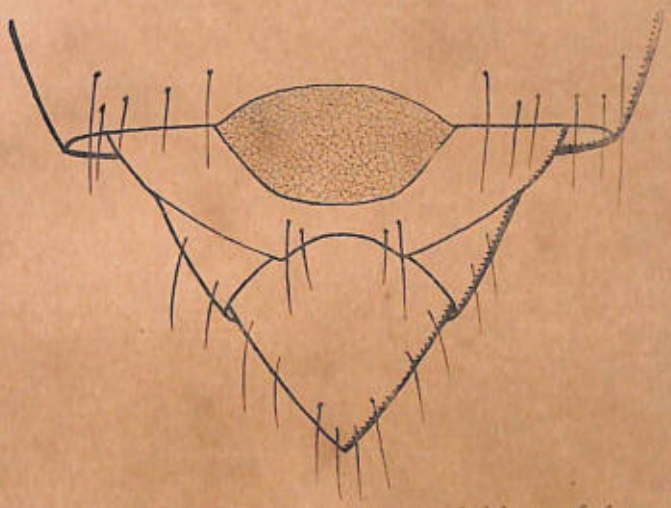


Fig. 65.—*Platystethus dilutipennis*, apex of abdomen of ♂; ventral surface.

white membrane which projects backwards beyond the margin of the segment with a free rounded edge; 6th ventral segment impressed and broadly emarginate posteriorly; 7th yet more broadly emarginate.

S. India: Nilgiri Hills, 3500 feet above the sea-level (*H. L. Andrewes*).

298. **Platystethus indicus**, sp. n.

Shining; head and abdomen black, the latter obscurely lighter at the base: thorax bright ferruginous-red or reddish-testaceous; elytra testaceous, more or less infuscate behind. Antennæ brown, the first three joints testaceous. Legs testaceous. Length 4 to 4·5 mm.

♂: Head large, transversely suborbicular, slightly broader than the thorax, post-ocular region scarcely rounded, obliquely retracted to the neck, scarcely longer than the large eye; clypeus impunctate, produced on each side into a long, pointed, slightly decurved, scarcely diverging spine with reddish apex; vertex not sulcate, on each side before the base with a small fovea, moderately finely, rather sparingly punctured. Antennæ with the 3rd joint as long as the 2nd, 4th to 10th transverse, the

penultimate fully half as broad again as long. Thorax transverse (6 : 4½), the sides rounded with the base, sulcate in the middle, rather finely and sparingly punctured. Elytra at the suture as long as the thorax, apex not margined, obsoletely and sparingly punctured. Abdomen a little widened behind, extremely finely and very sparingly punctured, without ground-sculpture; 7th ventral segment a little produced and rounded in the middle.

♀: Head smaller, but a little broader than the thorax, which is narrower than in the ♂.

Dehra Dun.

299. **Platystethus spectabilis.** (Fig. 66.)

Platystethus spectabilis Kr., Arch. Naturg. xxv, 1859, i, p. 170.

Shining; head black, the horns testaceous; thorax pitchy, the sides and base narrowly reddish; elytra testaceous; abdomen pitchy, lighter at the base. Antennæ ferruginous. Legs testaceous. Length 4 mm.

Near *P. indicus*, but a little more robust, the frontal horns

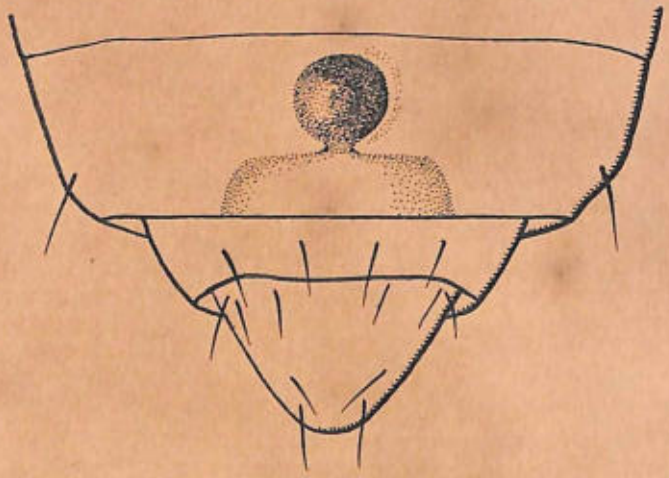


Fig. 66.—*Platystethus spectabilis*, apex of abdomen of ♂; ventral surface.

longer, the antennæ longer, with the penultimate joints less transverse, the elytra longer, differently coloured and much more distinctly punctured.

♂: Head large, suborbicular, broader than the thorax, the feebly rounded post-ocular region as long as the eye; clypeus reddish, coriaceous, produced on either side into a long, pointed, decurved striate spine; vertex obsoletely sulcate, on either

side with a large shallow impression, rather finely, moderately closely punctured. Antennæ with the 2nd and 3rd joints equal in length, 4th as long as broad, 5th to 10th transverse, the penultimate only slightly, 11th as long as the two preceding together. Thorax transverse (7 : 5), the sides almost straight and retracted behind to the rounded posterior angles, in the middle with a fine impressed line, at the sides lightly impressed, moderately finely, irregularly punctured. Elytra scarcely longer than the thorax, moderately finely, irregularly punctured. Abdomen a little wider behind, finely, moderately closely punctured, coriaceous; 6th ventral segment at the middle of the base with a large tubercle, the surface behind flattened; 7th broadly truncate behind

♀: Head smaller, as broad as the thorax, the horns much shorter.

Bihar: Pusa.

300. **Platystethus crassicornis.** (Fig. 67.)

Platystethus crassicornis Motsch., Bull. Mosc. xxx, 1857, iv, p. 506.
Platystethus robustus Cam., E. M. M. liv, 1918, p. 102.

Black, shining; elytra testaceous, more or less infuscate behind. Antennæ reddish-brown, the first four joints reddish-testaceous, the 1st often pitchy above. Legs testaceous. Length 4·8 to 5·5 mm.

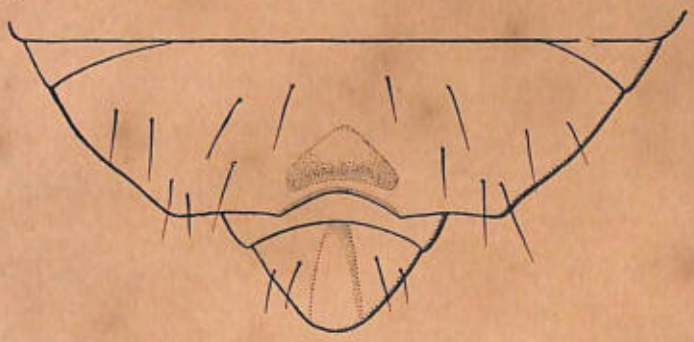


Fig. 67.—*Platystethus crassicornis*, apex of abdomen of ♂; ventral surface.

A large robust species, larger and more robust than *P. spinosus* Gr.

♂: Head large, transversely suborbicular, wider than the thorax, the post-ocular region as long as the eye; clypeus impunctate, on either side with a long, pointed, slightly divergent spine, the space between the spines semicircularly emarginate. Vertex without sulcus, on each side before the base with a fovea, the whole surface rather finely and rather sparingly

punctured. Antennæ stout, the 2nd and 3rd joints subequal, 4th slightly, 5th to 10th more strongly transverse, the penultimate about twice as broad as long, the 11th fully as long as the two preceding together. Thorax transverse, the sides retracted behind, the posterior angles obtuse, in the middle with a punctured sulcus, towards the sides feebly and broadly impressed; puncturation fine and sparing on the middle of the disc, at the sides coarser and closer. Elytra as long as the thorax, very finely and very sparingly punctured. Abdomen almost impunctate, ground-sculpture feeble; 6th ventral segment with a crescentic emargination in the middle of the posterior border, slightly impressed in front of it, on each side with a very shallow emargination; 7th ventral segment broadly and slightly emarginate.

♀: Head smaller, as broad as the thorax, spines shorter, the margin between truncate; post-ocular region scarcely as long as the eye.

Ceylon. Nilgiri Hills. Dehra Dun. Also in Perak.

Genus **BLEDIUS** Mannh.

Bledius Mannh., Brach. 1830, p. 44; Er., Käf. Mark. Brand. i, 1837–39 (1839) p. 578; Gen. Spec. Staph. 1839–40, p. 760; Lac., Gen. Col. ii, 1854, p. 134; Kr., Naturg. Ins. Deutsch. ii, 1856–58, p. 816; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 54; J. Leconte, Col. N. Amer. in Smiths. Misc. Coll. iii, 1862, p. 69; Fauv., Not. Ent. v, 1, 1867, p. 21; Faun. Gallo-Rhén. iii, 1872, p. 185; Muls. et Rey, Hist. Nat. Col. Fr., Brévip., Oxyp., Oxyt. 1879, p. 109; Lynch, Bol. Ac. Nac. Cord. vii, 1884, p. 351; Sharp, B. C.-A. i, 2, 1882–87 (1887) p. 685; Casey, Ann. N. York Ac. v, 1889–91 (1889) p. 41; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 610; Blackb., Tr. Roy. Soc. Aust. xxvi, 1902, p. 23.

Bledius + *Hesperophilus* Steph., Ill. Brit. Ent. v, 1832, pp. 307, 309.

Bledius + *Hesperophilus* + *Astycops* Thoms., Skand. Col. iii, 1861, pp. 118, 120, 121.

Bledius + *Tudunus* + *Bargus* + *Astycops* + *Hesperophilus* Schiødte, Nat. Tidskr. (3) iv, 1866–67, pp. 144–145, 164–165.

Subgen. *Astycops* Muls. et Rey, l. c. p. 195.
" *Belidus* Muls. et Rey, l. c. p. 215.
" *Bledioides* Muls. et Rey, l. c. p. 134.
" *Bledius*, s. str., Muls. et Rey, Hist. Nat. Col. Fr., Brévip Oxyp., Oxyt. 1879, p. 113.
" *Elbidus* Muls. et Rey, l. c. p. 130.
" *Hesperophilus* Muls. et Rey, l. c. p. 189.
" *Pucerus* Muls. et Rey, l. c. p. 212.

Biology. Schiødte, Nat. Tidskr. (3) iii, 1864–65, pp. 211–214, t. 12, ff. 4–32; Fauv., Faun. Gallo-Rhén. iii, 1872, Supp. p. 18; Rupertsb., Biol. Käf. Eur. 1880, p. 125.

More or less cylindrical, parallel species, the head not or scarcely constricted behind. The clypeus separated from the

front by a more or less distinct suture. Gular sutures fused except behind, where they are divergent and enclose a small, triangular, gular plate. Submentum short, transverse. Antennæ geniculate, the 1st joint much elongated in the subgenus *Pucerus*, especially in the ♂. Labrum transverse, truncate or bilobed, the anterior angles furnished with a ciliated membrane, the anterior margin setose. Submentum transverse. Mentum more or less transverse, the sides parallel, the anterior margin truncate. Tongue broad, membranous, more or less emarginate in front or bilobed, at the middle of the anterior margin with two or more setæ. Paraglossæ well developed, not extending beyond the outer angles of the tongue. Labial palpi 3-jointed, the 1st joint very thick, a little longer than broad, the outer border curved, 2nd narrower, strongly transverse, the 3rd yet narrower and oval. Inner lobe of the maxilla pointed, the inner margin furnished with curved spines or cilia; outer lobe short and broad, with long curved spines and cilia on the apical margin. Maxillary palpi with the 1st joint very small, 2nd obconical, 3rd longer than the 2nd, oval, truncate at base and apex, 4th narrower and a little shorter than the 3rd, conical. Mandibles variable, long and slender or short and stout, and with or without teeth. Prosternum short, produced backwards between the coxæ as a triangular sharply keeled plate. Epimera large, triangular, fused externally with the epipleura, its anterior border more or less fused with the prosternum, so that a smaller or larger notch is formed in which the trochantin is more or less visible, the notch is larger in *Bledius*, s. str., and smaller in *Hesperophilus*. Mesosternum well developed in front, forming a distinct neck, its process pointed and extending for about a third of the length of the coxæ, its apex free, the coxæ contiguous. Metasternum long, slightly emarginate behind in front of the coxæ and without process in front. Scutellum visible. Legs rather short, the anterior and middle tibiæ strongly spined, usually in two rows, the posterior setose. Tarsi 3-jointed, the 1st and 2nd joints short, the 3rd longer than the two preceding together; claws slender, lightly curved.

The various species are usually found in colonies forming galleries in the vicinity of water; they are frequently attracted to light, and are found throughout the world.

Key to the Subgenera of Bledius.

1. Thorax in ♂ with a spine at the middle of the anterior border directed forwards .... BLEDIUS, s. str., p. 272.
   Thorax unarmed ..... 2.

2. Clypeus bidentate or bituberculate in front; 1st joint of the antennæ very long (especially in ♂); mandibles long and slender, each with a tooth in the ♂, edentate in ♀ ..... [p. 275. PUCERUS Muls. & Rey,

Clypeus unarmed (except in *bispinus*): 1st joint of antennæ normal; mandibles shorter and stouter, dentate ..... 3.

3. Antennal tubercles much elevated, compressed, auricular or lamellate ..... [p. 274. ELBIDUS Muls. & Rey,

Antennal tubercles normal ..... HESPEROPHILUS + BLEDIOIDES Muls. & Rey, p. 278.

Two species, *rugosicollis* Bernh. and *minusculus* Motsch., whose systematic position is doubtful, are not shown in the keys.

Key to the Species of Bledius, *s. str.*

1. Head in ♂ with two horns ..... 2. [p. 272.
Head in ♂ with three horns ..... *quadricornis* Bernh.,
2. Sculpture of thorax consisting of flat discrete granules ..... [p. 273. *brunneipennis* Fab.,
Sculpture of thorax coriaceous and punctate. 3.
3. Thorax closely and distinctly punctured; elytra red, the base and scutellary region blackish ..... *hoplites* Fauv., p. 274.
Thorax sparingly and obsoletely punctured; elytra reddish-yellow ..... *bison*, sp. n., p. 273

301. **Bledius** (s. str.) **quadricornis.**

Bledius quadricornis Bernh., W. Z. B. lxv, 1915, p. 135.

Readily recognised by the structure of the head. Pitch-black, the elytra red, the antennæ and palpi reddish-yellow, the legs pale yellow.

♂: Head much smaller than the thorax, shining, impunctate, the anterior third depressed, dull, coriaceous, limited behind by a straight transverse sulcus, in front and near each eye with a long, slender, vertical horn, towards the apex sabre-shaped and curved backwards, behind, in the middle, with a third horn small and erect, over which the long, slender, shining, decurved fourth horn arising from the anterior margin of the thorax extends. Antennæ rather short, thickened towards the apex, the penultimate joints distinctly transverse. Thorax as broad as long, as broad as the elytra, with straight sides scarcely narrowed behind, from the distinct, blunt, posterior angles obliquely narrowed to the base; moderately finely and sparingly, at the sides much more thickly punctured, and here also less shining and rather thickly pubescent, along the middle broadly impunctate and shining. Elytra as long as the

thorax, almost square, rather finely and rather closely punctured, rather shining. Abdomen sparingly punctured, rather dull. Length 4·5 mm.

Madura (ex *Bernhauer*).

302. **Bledius** (s. str.) **bison**, sp. n.

♂: Head black, opaque, the clypeus and horns reddish. Thorax shining ferruginous-red, elytra and abdomen reddish-yellow. Antennæ and legs reddish. Length 5 mm.

Head narrower than the thorax, coriaceous, impunctate, the clypeus depressed, its margins elevated; on either side with a rather stout, vertical, inwardly curved, pointed horn, which together appear like a pair of calipers. Antennæ rather short, the 2nd and 3rd joints equal, 4th and 5th short, subequal, 6th to 10th transverse. Thorax slightly transverse, the sides straight and slightly convergent backwards to beyond the middle, then strongly retracted in a straight line to the rectangular posterior angles; anterior angles prominent; in the middle with a narrow sulcus abbreviated in front, at the middle of the anterior margin with a rather short, forwardly directed horn, the blunt apex of which is furnished with a tuft of yellow hairs; sculpture about the basal region of the horn granular coriaceous, elsewhere simply coriaceous and with a few superficial punctures. Elytra a little longer than the thorax, longer than broad, moderately finely, not closely punctured. Abdomen coriaceous, almost impunctate. 7th ventral segment produced in the middle as a small point.

"Ind. or.," without further indication. A single example in the British Museum.

303. **Bledius** (s. str.) **brunnipennis.**

Staphylinus brunnipennis F., Syst. Eleuth. ii. 1801, p. 596; Er., Gen. Spec. Staph. 1839–40, p. 779; Kraatz, Arch. Naturg. xxv, 1859, i, p. 168 (note); Fauv., Rev. d'Ent. xxii, 1903, p. 151.
Staphylinus productus Walker *, Ann. Mag. Nat. Hist. (3) ii, 1858, p. 205 (*Oxytelus*).
Staphylinus rudis Walker *, id. p. 208 (*Oxytelus*).

Entirely reddish-brown: the head and thorax greasy-lustrous, the elytra and abdomen more shining, the former brighter in colour. Antennæ and legs reddish-testaceous. Length 5 mm.

♀: Head a little narrower than the thorax, vertex with a fovea, the whole surface with a fine rough granular sculpture. Antennæ with the 2nd and 3rd joints equal, 4th to 6th longer than broad, gradually decreasing in length, 7th as long as broad, 8th to 10th slightly transverse. Thorax slightly transverse, the sides straight and parallel to beyond the middle, thence strongly obliquely retracted to the base,

in the middle with a narrow shining sulcus throughout, the rest of the surface with a rather close granular sculpture. Elytra a little longer than the thorax, rather coarsely and closely punctured. Abdomen sparingly punctured, coriaceous.

Madras: Ganjam district; Mahé; Calicut; Coonoor. Bombay: Kanara. Ceylon. Burma.

304. **Bledius (s. str.) hoplites.**

Bledius hoplites Fauv., Rev. d'Ent. v, 1886, p. 146.

Robust. Thorax opaque black, the head greasy-lustrous: elytra shining red, the scutellum and about half of the suture blackish; abdomen shining black, the apex reddish. Antennæ pitchy, the first two or three joints reddish. Legs ferruginous. Length 5 to 7 mm.

Very similar in build and colour to *B. tricornis* Hbst., but larger and more robust, and the thorax with granular sculpture.

♂: Head narrower than the thorax, impunctate, coriaceous, on either side with a stout horn directed forwards and upwards. Antennæ with the penultimate joints slightly transverse. Thorax transverse, the sides straight and slightly converging to behind the middle, then strongly retracted to the base, the angle very obtuse; anterior angles broadly rounded; anterior margin in the middle with a long forwardly directed, slightly decurved horn, sulcate at the base; median line sulcate throughout, the whole surface with a granular, vermicular sculpture, coriaceous and impunctate. Elytra longer than the thorax, with a rather close, moderately fine umbilicate puncturation and with a rather indistinct ground-sculpture. Abdomen finely, moderately closely punctured, distinctly coriaceous, and with a long yellow pubescence. 7th ventral segment slightly rounded in the middle, very slightly and broadly emarginate on either side.

♀: Head with normally elevated antennal tubercles, and with a few obsolete punctures. Thorax without horn, middle of the disc distinctly and closely punctured, elsewhere as in the ♂. The type-form has entirely pitchy-black elytra.

Madras: Ganjam district, Chilka Lake. Also in Siam, Philippines, etc.

305. **Bledius (Elbidus) taruensis.**

Bledius (Elbidus) taruensis Cam., E. M. M. lvi, 1920, p. 144.

Pitchy-red, elytra brownish-yellow, moderately shining; thorax and elytra moderately strongly and moderately closely punctured. Antennæ reddish, the first joint and the legs testaceous. Length 4 mm.

In colour similar to *B. vitulus* Er., but smaller, with less transverse and much more closely punctured thorax and more distinctly punctured elytra.

♀: Head pitchy-red, blackish posteriorly, on either side above the insertion of the antennæ with a laterally compressed erect plate, the upper margin obliquely truncate, the posterior angle above the level of the anterior; front with transverse impressed line, vertex broadly impressed; sculpture coriaceous, without punctures. Antennæ with the 1st joint moderate, 2nd and 3rd subequal, 4th a little longer than broad, the 5th to 10th transverse, gradually increasing in breadth. Thorax slightly transverse, widest in front, slightly retracted in a nearly straight line to behind the middle, then broadly rounded; disc in the middle with a fine impressed median line; finely coriaceous, moderately shining, and with moderately large and not very close puncturation. Elytra brownish-yellow, a little darker at the scutellum, moderately strongly and moderately closely punctured; sparingly pubescent. Abdomen black, shining, the last segment pitchy red, coriaceous, almost impunctate, pubescence moderately long, sparing, yellow.

Peshawar: Taru (*T. B. Fletcher*). Unique. In the British Museum.

Key to the Species of the Subgenus Pucerus.

1.	Abdomen testaceous, the 7th and 8th segments more or less pitchy	*palliatus* Fauv., p. 278.
	Abdomen black, at most with the apex lighter	2.
2.	Elytra entirely pitch-black	*verres* Er. var. *monachus*, [nov., p. 275.
	Elytra at least in part testaceous	3.
3.	Thorax rather shining, finely, indistinctly coriaceous	4.
	Thorax opaque, strongly coriaceous	*tuberculatus* F., p. 276.
4.	Elytra pitchy-black, with large testaceous mark occupying the postero-external area from the apex of the suture to the middle of the outer margin	*transversus*, sp. n., [p. 277.
	Elytra testaceous, with the base and suture more or less infuscate	5.
5.	Elytra longer, more closely punctured	*rhinoceros*, sp. n., p. 277.
	Elytra shorter, less closely punctured	*gracilicornis* Kr., p. 276.

306. **Bledius (Pucerus) verres** var. **monachus**, nov. (Bernhauer, *in litt.*).

Bledius verres Er., Gen. Spec. Staph. 1832–40 (1840), p. 776; Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 819, note; Jacq. du Val, Gen. Col. d'Eur. 1858, t. 20, f. 100; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 196; Muls. et Rey, Col. Fr. Brévip. 1879, p. 212; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 627.
Bledius cinctus Motsch., Bull. Mosc. xxxiii, 1860, ii, p. 555; Hochh., id. xxxiv, 1862, iii, p. 84.

This variety only differs from the type-form in the entirely black body. Black, the head except the clypeus opaque; the rest of the body shining. Antennæ reddish-testaceous. Legs testaceous. Legs 4·5 mm.

♂: Head a little narrower than the thorax, the antennal tubercles much elevated, the clypeus shining, coriaceous, with two small short teeth close together, the rest of the surface opaque, finely granular, impunctate; mandibles each with a long oblique tooth. Antennæ very long, the first four joints especially long 5th and 6th distinctly longer than broad, 7th to 10th slightly transverse. Thorax one-third broader than long, the sides almost straight to behind the middle, then strongly retracted and rounded with the base; in the middle narrowly sulcate throughout, superficially, moderately closely punctured, coriaceous. Elytra a third longer than the thorax, moderately finely, rather closely punctured. Abdomen almost impunctate, finely coriaceous; ventral segments without characteristics.

♀: Antennal tubercles much less elevated; mandibles edentate; antennæ shorter, the penultimate joints more transverse.

Siwaliks: Lachiwala (*Cameron*). Kumaon: Ranikhet (*H. G. Champion*). The type-form is found in Europe.

307. **Bledius (Pucerus) tuberculatus.**

Staphylinus tuberculatus F., Ent. Syst. Supp. 1798, p. 181; Kraatz, Arch. Naturg. xxv. 1859, i, p. 168; Fauv., Rev. d'Ent. xxii, 1903, p. 151.

Head and thorax black, subopaque, elytra more shining, testaceous, the base and suture triangularly blackish, the lateral margin occasionally infuscate. Abdomen black, shining. Antennæ and legs reddish-testaceous. Length 4·75 mm.

Build of *B. verres* Er., but the head and thorax less shining, with stronger ground-sculpture, the thorax and elytra more closely punctured.

♂: Antennal tubercles strongly elevated; clypeus with two small, sharp, widely separated tubercles, the whole surface granular. Antennæ very long, the 8th to 10th joints transverse, all the preceding much longer than broad. Thorax formed as in *verres*. Elytra about a third longer than the thorax, rather closely and moderately finely punctured. Abdomen very sparingly punctured, finely coriaceous. 7th ventral segment a little produced in the middle and rounded.

♀: Antennal tubercles much less elevated; antennæ shorter; tubercles of clypeus much less evident.

Mysore. Madras: Chilka Lake; Calicut; Mahé; Genji; Madura; Kanara. Ceylon. Also in Bechuanaland and Egypt (imported).

308. **Bledius (Pucerus) gracilicornis.**

Bledius gracilicornis Kr.*, Arch. Naturg. xxv, 1859, i, p. 169.

Black, moderately shining, elytra testaceous, the base and

suture infuscate. Antennæ blackish, the first four or five joints testaceous. Legs testaceous. Length 3 mm.

Head impunctate, finely granular, clypeus with two short teeth in front. Antennal tubercles elevated in ♂, less so in ♀. Antennæ with the penultimate joints transverse. Thorax with the sides parallel to behind the middle, then retracted and rounded with the base, in the middle with a sulcus, rather closely and rather superficially punctured, finely coriaceous. Elytra half as long again as the thorax, rather closely and distinctly punctured. Abdomen almost impunctate, finely coriaceous.

Ceylon. Burma : Ruby Mines.

309. **Bledius (Pucerus) rhinoceros**, sp. n.

Moderately shining, black, the elytra either testaceous, with the base and suture triangularly infuscate to the apex, or blackish, with a large lateral spot nearly reaching the suture, testaceous. Antennæ reddish, the first four or five joints testaceous. Legs testaceous. Length 3·75 mm.

Closely allied to *B. gracilicornis*, of the same build and lustre, but with longer, more closely and more finely punctured elytra and different clypeal structure, which takes the form of a transverse, slightly bifid tubercle in the ♂, and in the ♀ of two small widely separated denticles, smaller than in *gracilicornis*.

♂ : 7th ventral segment a little produced and rounded in the middle.

Assam. Burma : Teinzo, 1886 (*L. Fea*).

310. **Bledius (Pucerus) transversus**, sp. n.

Black, shining, the elytra with a large triangular yellow marking occupying the postero-external region from the apex of the suture to the middle of the external margin. Antennæ and legs reddish-testaceous. Length 3·75 mm.

♀ : Head with fine coriaceous ground-sculpture, the vertex obsoletely punctured. Antennal tubercles rather strongly elevated : clypeus with two small widely separated tubercles. Antennæ with the first three joints very long, the 3rd a little shorter than the 2nd, 4th to 6th a little longer than broad, decreasing in length, 7th to 10th about as long as broad. Mandibles long and slender. Thorax transverse, the sides parallel till behind the middle, then obliquely retracted and a little emarginate to the rounded posterior angles : in the middle with a fine sulcus : rather closely finely and obsoletely punctured, with a fine coriaceous ground-sculpture. Elytra about half as long again as the thorax, rather closely and

superficially punctured. Abdomen almost impunctate, feebly coriaceous.

♂ unknown.

Dehra Dun.

311. Bledius (Pucerus) palliatus.

Bledius palliatus Fauv.*, Rev. d'Ent. xiv, 1895, p. 203.

Head black, subopaque; thorax shining, pitchy; elytra shining brown, the sides (including the humeral angles and greater part of the apical margin) broadly testaceous; abdomen shining, testaceous, the posterior margin of the 7th and most of the 8th segment pitchy. Antennæ testaceous, infuscate towards the apex. Legs testaceous. Length 3·75 to 4 mm.

♂: Head black, greasy-lustrous, coriaceous, impunctate; antennal tubercles strongly elevated; clypeus more shining, the ground-sculpture indistinct, in front with two small teeth near together. Antennæ long and slender, the first two joints very long, the 3rd to 7th elongate, gradually decreasing in length, 8th to 10th slightly transverse. Thorax transverse ($5\frac{1}{2} : 4\frac{1}{4}$) the sides almost straight to behind the middle, then rounded and coarctate with the base; in the middle with a fine groove, very finely, obsoletely, sparingly punctured, coriaceous. Elytra longer than the thorax ($6 : 4\frac{1}{4}$), on the disc obsoletely punctured, towards the sides more distinctly and closely, the punctures there more or less elongate. Abdomen practically impunctate, obsoletely coriaceous. 7th ventral segment broadly, very feebly produced and rounded in the middle.

♀: Antennal tubercles much less elevated, clypeal teeth smaller (not absent, as stated by Fauvel).

Burma: Myingyan, 27. ii. 86 (*L. Fea*).

Key to the Species of the Subgenera Bledioides *and* Hesperophilus.

1. Elytra at least in part testaceous	2.
Elytra entirely black or brown	7.
2. Elytra unicolorous reddish-yellow	*beesoni*, sp. n., p. 285.
Elytra bicolorous	3.
3. Apical margin of the elytra broadly testaceous	*pulchellus* Kr., p. 283.
Elytra differently marked	4.
4. Larger (3·5 mm.); thorax densely coriaceous, impunctate	*maindroni* Fauv., [p. 282.
Smaller (2·75 mm.); thorax coriaceous and punctured	5.
5. Elytra testaceous, the base and suture very narrowly blackish	*dilutipennis* Motsch., [p. 284.
Elytra testaceous, the base and suture broadly blackish	6.
6. Subopaque; thorax scarcely transverse	*helferi* Fauv., p. 284.
Shining; thorax distinctly transverse	*birmanus*, sp. n., p. 283.

7.	Reddish-brown shining species	*lucidus* Shp., p. 279.
	Black, partly opaque species	8.
8.	Thorax entirely opaque, finely and closely granular	9.
	Thorax opaque in front and granular, at the base and postero-externally shining and coriaceous. Antennæ infuscate	*championi* Bernh., p. 281.
9.	Antennæ entirely testaceous	10.
	Antennæ largely infuscate	*fuscicornis*, sp. n., p. 280.
10.	Elytra a little longer than the thorax, about as long as broad, moderately finely punctured	*bispinus* Kr., p. 279.
	Elytra one-half longer than the thorax, distinctly longer than broad, very finely and closely punctured	*indicus*, sp. n., p. 282.

312. **Bledius (Hesperophilus) lucidus.**

Bledius lucidus Shp.*, Trans. Ent. Soc. Lond. 1874, p. 90.
Bledius capitalis Fauv., Ann. Mus. Civ. Gen. x, 1877, p. 204.
Bledius fischeri Bernh., Stett. Ent. Zeit. lxiv, 1903, p. 35.

Head subopaque, blackish, the rest shining reddish or brownish-red, the elytra often darker behind, the abdomen often darker than the fore-parts. Antennæ and legs testaceous. Length 3·3 to 4 mm.

Head with eyes as broad as the thorax, coriaceous, impunctate. Antennæ with the 3rd to 5th joints longer than broad, gradually decreasing in length, 6th and 7th as long as broad, 8th to 10th slightly transverse. Thorax one-fifth broader than long, the sides in front straight, very slightly converging to the middle, here obtusely angulate and retracted to the base, the posterior angles rounded; in the middle sulcate throughout, with a moderately coarse, superficial, umbilicate and rather sparing puncturation and coriaceous ground-sculpture. Elytra broader and about a third longer than the thorax, moderately coarsely and rather closely punctured. Abdomen almost impunctate, very finely coriaceous.

♂: 6th and 7th ventral segments a little produced and rounded in the middle.

♀: 6th ventral segment truncate; 7th as in the ♂.

Nilgiri Hills. Karachi. Sarda. Assam. Also in Japan, China, Singapore, Java, Sumatra, Australia, Madagascar, and Congo.

313. **Bledius bispinus.** (Fig. 68.)

Bledius bispinus Kr.*, Arch. Naturg. xxv, 1859, i, p. 169.

Black; head and thorax dull, elytra and abdomen shining. Antennæ and legs reddish-testaceous. Length 3·75 to 4 mm.

Build of *B. fossor* Heer, but with shorter elytra, the sculpture very similar but more granular, the punctures on the thorax less superficial. Head distinctly narrower than the thorax,

distinctly granular, with a few very obsolete punctures, the anterior angles of the clypeus a little prominent. Antennæ with the 3rd joint a little longer than the 2nd, 4th a little longer than broad, 5th to 10th transverse, the penultimate about twice as broad as long. Thorax a little transverse, the sides slightly diverging backwards to beyond the middle, from thence rounded with the base, without trace of angles; middle with an impressed line abbreviated in front, coriaceous like the head, and with numerous moderately large superficial

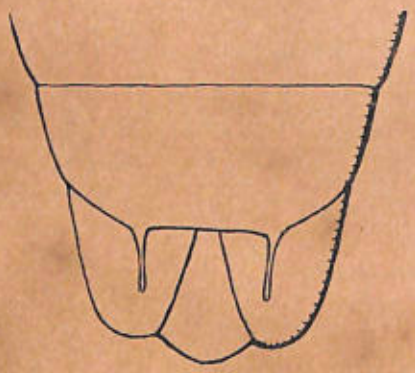


Fig. 68.—*Bledius bispinus*, apex of abdomen of ♂; ventral surface.

punctures. Elytra a little longer than the thorax, rather closely, moderately coarsely punctured. Abdomen sparingly punctured, the ground-sculpture very fine.

♂: 6th ventral segment with a rather broad and feeble emargination in the middle of the posterior border, with a strong slightly incurved spine on each side of it; 7th a little produced and rounded in the middle, slightly emarginate on either side, so forming a median broadly rounded lobe (not shown in the figure, the segment being retracted).

Ceylon.

314. **Bledius fuscicornis**, sp. n. (Fig. 69.)

Only differs from *B. bispinus* Kr., in the colour and structure of the antennæ and in the ♂ characters. The antennæ are extensively infuscate, including the 1st joint, the penultimate joints are broader, three times as broad as long. In the ♂ the 5th ventral segment is impressed behind in the middle, the 6th is deeply arcuately emarginate, with a strong spine on each side, the whole length of the segment in front of the emargination impressed; 7th ventral segment rather deeply and broadly emarginate on each side, forming in the middle a lobe

which is narrower and more pointed than in *bispinus*. Length 4 to 4·5 mm.

Almora: Dhauli Ganga, alt. 6500 feet. Kumaon: Tanakpur (*H. G. Champion*).



Fig. 69.—*Bledius fuscicornis*, apex of abdomen of ♂ ventral surface.

315. **Bledius championi.** (Fig. 70.)

Bledius championi Bernh., W. E. Z. xliii, 1926, p. 23.

Black; the head and anterior and median regions of the thorax opaque, the lateral and postero-external rather shining; elytra and abdomen shining. Antennæ testaceous, the first and intermediate joints infuscate. Legs reddish-testaceous. Length 3 to 3·3 mm.

Of the build of *B. bispinus*, Kr., but smaller, and with differently coloured antennæ, different thoracic sculpture, and more finely punctured elytra. Head narrower than the thorax, finely and closely granular. Antennæ with the 2nd and 3rd joints subequal, 4th slightly longer than broad, 5th to 10th distinctly transverse. Thorax one-fourth broader than long, the sides almost straight and slightly divergent to behind the middle, then rounded with the base, not angulate; middle with a very fine impressed line, more abbreviated in front than behind, for about the anterior two-thirds closely and finely granular, the base and postero-lateral areas finely coriaceous, more shining, finely and sparingly punctured. Elytra slightly longer than the thorax, rather closely, moderately finely and deeply punctured. Abdomen very sparingly punctured, indistinctly coriaceous.

♂: 6th ventral segment broadly superficially impressed in the whole length along the middle, on each side of the

impression on the posterior margin with a tubercle; 7th ventral segment produced and broadly rounded in the middle, arcuately emarginate on each side, broadly and superficially impressed in the middle throughout its length.

Kumaon: Haldwani district. Dehra Dun: Nim Nadi.

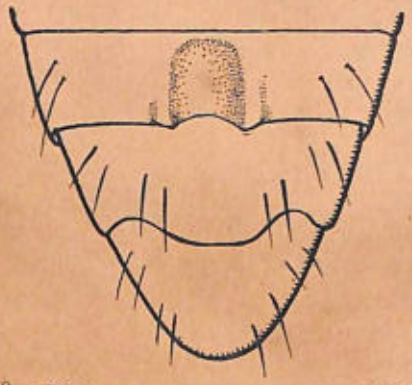


Fig. 70.—*Bledius championi*, apex of abdomen of ♂; ventral surface.

316. **Bledius indicus**, sp. n.

Black, opaque, the elytra slightly, the abdomen more shining. Antennæ and legs reddish-testaceous. Length 3·3 mm.

Closely allied to *B. tibialis* Heer, of the same build but larger, the penultimate joints of the antennæ less transverse, the elytra less finely punctured.

Head narrower than the thorax, densely and finely granular, impunctate. Antennæ with the 4th joint slightly longer than broad, the 5th as long as broad, the 6th to 10th slightly transverse. Thorax one-fourth broader than long, the sides gently rounded and slightly dilated to beyond the middle, from thence rounded with the base, not angulate; in the middle with a very fine impressed line, the sculpture very similar to that of the head. Elytra one-half longer than the thorax, longer than broad, finely and closely punctured. Abdomen finely and moderately closely punctured on the first four segments, the 5th and 6th almost impunctate, finely and sparingly pubescent.

Kumaon: Haldwani (*H. G. Champion*).

317. **Bledius maindroni.**

Bledius maindroni Fauv., Rev. d'Ent. xxii, 1903, p. 151.

Greasy-lustrous; abdomen shining; black, elytra with a large pale yellow marking at the sides and apex and pro-

longed inwards in front. Antennæ reddish-testaceous, the base paler. Legs testaceous. Length 3·3 to 3·75 mm.

Var. Thorax pitchy; elytra pale yellow, the base and suture to beyond the middle blackish, and there occasionally dilated.

Near *B. debilis* Er., but more robust and less shining, more pubescent and more finely punctured. Head a little narrower than the thorax, coriaceous and finely pubescent. Antennæ rather short, the 4th and 5th joints a little longer than broad, 6th to 10th transverse, the penultimate nearly twice as broad as long. Thorax transverse (7 : 5), the sides a little rounded and diverging backwards to beyond the middle, then rounded rapidly to the base, not angulate; in the middle with a fine impressed line and with a fine granular coriaceous ground-sculpture and fine pubescence. Elytra a little longer, but scarcely as broad as the thorax, finely and closely punctured and pubescent. Abdomen moderately closely punctured, coriaceous, with a rather long and moderately close pubescence.

Mahé; Calicut; Tuticorin. A maritime species.

318. **Bledius birmanus, sp. n.**

Shining, black, the thorax sometimes pitchy, the elytra testaceous, the base and suture nearly to the apex triangularly blackish. Antennæ reddish-testaceous. Legs testaceous. Length 2·5 mm.

Build and lustre of *B. arenarius* Payk., but much smaller, with shorter, differently marked elytra. Head finely coriaceous, finely and rather closely punctured. Antennæ with the 2nd to 5th joints longer than broad, gradually decreasing in length, the 6th to 10th transverse, the penultimate about three times broader than long. Thorax one-third broader than long, the sides parallel to behind the middle, then suddenly obliquely retracted to the rectangular posterior angles; middle with a narrow sulcus, puncturation rather fine, moderately close, becoming finer behind, finely coriaceous. Elytra about a third longer than the thorax, rather closely and finely punctured. Abdomen almost impunctate, distinctly coriaceous. Would appear to be closely allied to *B. helferi* Fauv.

Burma: Tavoy.

319. **Bledius pulchellus.**

Bledius pulchellus Kr.*, Arch. Naturg. xxv, 1859, i, p. 169.

Reddish-brown, the head greasy-lustrous, the rest more shining; thorax ferruginous, the elytra with the apical margin broadly testaceous (more broadly externally); 7th and 8th abdominal segments blackish. Antennæ reddish-testaceous. Legs testaceous. Length 3 mm.

Approaching *B. arenarius* Payk. in build, but quite different in other respects. Head narrower than the thorax, labrum feebly emarginate; clypeus unarmed, more shining, the rest of the surface roughly coriaceous, rather closely and superficially punctured. Antennæ with the 2nd to 5th joints longer than broad, gradually decreasing in length, the 6th to 10th transverse, the penultimate about twice as broad as long. Thorax one-third broader than long, the sides quite straight and parallel to behind the middle, then obliquely truncate to the base; in the middle narrowly sulcate, more shining than the head, feebly coriaceous, finely and moderately closely punctured, the punctures superficial and umbilicate. Elytra one-third longer than the thorax, with moderately close superficial puncturation. Abdomen with sparing asperate punctures and without ground-sculpture.

Ceylon. Mahé; Calicut; Pondicherry.

320. **Bledius helferi.**

Bledius helferi Fauv., Rev. d'Ent. xxiii, 1904, p. 112.

Near *B. pulchellus* Kr., but quite different. Smaller, subopaque, abdomen rather shining, elytra with rather long golden pubescence. Pitchy, head black, mouth, antennæ and legs testaceous; elytra each with a large pale marking, triangular in shape, reaching from the side to the apex of the suture. Antennæ short, the 6th to 10th joints strongly transverse. Head very finely roughly punctured, with a minute fovea on the vertex. Thorax scarcely transverse, in front closely finely punctured, behind nearly impunctate; the sides parallel in front, behind strongly narrowed, in the middle with a very fine sulcus. Elytra a little longer than broad, closely and finely punctured. Abdomen nearly impunctate. Length 2·5 mm.

Burma. Unique (ex *Fauvel*).

321. **Bledius dilutipennis.** (Plate II. fig. 9.)

Bledius dilutipennis Mot-ch., Bull. Mosc. xxx, 1857, iv, p. 507; Kraatz, Arch. Naturg. xxv, 1859, i, p. 170.

Black, the elytra bright yellow, the base and suture narrowly infuscate; head scarcely, the rest more shining. Antennæ and legs testaceous. Length 2·5 to 2·75 mm.

In build very similar to *B. nanus* Er., but with rather shorter elytra. Head with fine granular sculpture, impunctate. Antennæ short, the 5th to 10th joints transverse, the penultimate twice as broad as long. Thorax one-third broader than long, the sides straight and parallel to behind the middle, then suddenly retracted to the base, not angulate; in the middle with fine sulcus; rather closely and superficially

punctured, finely coriaceous. Elytra one-third longer than the thorax, rather closely and more finely punctured than the thorax. Abdomen finely and sparingly punctured, finely coriaceous, sparingly pubescent.

♂: 7th ventral segment very slightly emarginate on either side, narrowly rounded in the middle.

Not uncommon along the streams in the Dehra Dun district.

322. **Bledius beesoni, sp. n.**

Head black, opaque; thorax shining reddish-brown; elytra shining yellowish-red or ochraceous; abdomen black, shining. Antennæ reddish-testaceous. Legs testaceous. Length 2·75 mm.

Near *B. nanus* Er., of the same build but narrower and with shorter elytra.

Head narrower than the thorax, granular-coriaceous. Antennæ rather short, the 3rd joint shorter than the 2nd, 4th and 5th about as long as broad, 6th to 10th transverse, the penultimate about twice as broad as long. Thorax transverse, the sides slightly rounded and a little divergent backwards to beyond the middle, then abruptly rounded to the base, not angulate; in the middle sulcate, closely but superficially punctured, coriaceous. Elytra about a third longer than the thorax, rather finely and rather closely punctured. Abdomen finely, rather sparingly punctured, finely coriaceous. The sexes appear to present no secondary characters.

Dehra Dun: Nim Nadi; Arni Gad.

323. **Bledius rugosicollis.**

Bledius rugosicollis Bernh., D. E. Z. 1902, p. 43.

Pitchy-red, thorax and elytra reddish-brown, antennæ, mouth, and legs reddish-testaceous; head and thorax subopaque, elytra and abdomen rather shining, thorax in front rugose-granular, the anterior angles nearly rectangular. Length 5 mm.

Similar in build to ♀ of the *tricornis* group. Reddish-brown, the head and abdomen darker, antennæ, mouth, and legs dark reddish-yellow. Head much smaller than the thorax, the front posteriorly deeply impressed, the lamellæ of the antennal tubercles strongly developed, between and in front of them flat, behind finely, in front less finely granular-coriaceous, dull. Thorax as broad as the elytra, about one-fourth broader than long, in front nearly straight, truncate, the sides as far as the posterior fourth straight, quite parallel, from thence suddenly narrowed to the narrow base, forming a distinct but obtuse angle, the base continuous with the sides without sharp angle; the anterior angles rectangular, the extreme apex rounded; along the middle with a sharply impressed line, the front half

very closely wrinkled, posteriorly less closely and not wrinkled, granular, dull in front, a little shining behind. Elytra only a little longer than the thorax, coarsely, moderately closely punctured, shining. Abdomen very finely coriaceous, moderately shining, at the sides rather strongly and sparingly punctured.

Ceylon: Weligama. Unique (ex *Bernhauer*).

I do not know this species; the systematic position is doubtful, and it is not included in the Key.

Genus **THINOBIUS** Kiesw.

Thinobius Kiesw., Stett. Ent. Zeit. v, 1844, p. 355; Lacord., Gen. Col. ii, 1854, p. 147; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 57; Kr., Naturg. Ins. Deutsch. ii, 1856–58, p. 881; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 134; id., Rev. d'Ent. viii, 1889, pp. 83, 89; Shp., B. C.-A. i, (2) 1882–87 (1887), p. 705; Casey, Ann. N. York Acad. v, 1889–91 (1889), p. 78; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 659.

Thinophilus+*Thinobius* Muls. et Rey, Hist. Nat. Col. Fr., Brévip., Oxyp., Oxyt. 1879, pp. 322, 342.

Small or very small species, more or less depressed, with dehiscent elytra. Head prominent, the clypeus usually separated by a suture from the front. Gular sutures fused in front, diverging behind. Labrum transverse, slightly but broadly emarginate in front, the anterior angles rounded. Mentum transverse, narrowed in front, the anterior border truncate. Tongue broad, slightly emarginate in front and with two small chitinous processes on the anterior margin close together. Paraglossæ fine, projecting beyond the tongue. Labial palpi small, the 1st joint cylindrical, the 2nd about half as long, slightly dilated apically, the 3rd shorter and much narrower than the preceding. Inner lobe of the maxilla narrow, pointed, with fine curved spines along the inner margin. Outer lobe more produced, oblong, its apex furnished with fine curved spines. Maxillary palpi with the 1st joint very small, the 2nd distinctly dilated towards the apex and slightly curved, the 3rd long and stout, oval, the 4th very small, subulate, sometimes absent (?). Mandibles rather slender, bifid at the apex, and each with a strong tooth internally, between the tooth and the base with a ciliated membrane. Prosternum short, broadly rounded behind; pronotal epipleura narrow; epimera absent. Mesosternal process very short, obtuse, projecting only slightly between the coxæ, these contiguous. Metasternum long, scarcely emarginate on each side behind, its process obtuse, scarcely projecting between the middle coxæ. Scutellum visible. Legs short; tibiæ narrowed at base and apex, without spines or teeth; tarsi short, 2-jointed, the 1st short, a little produced internally,

the 2nd two or three times as long as the 1st, strongly thickened towards the apex; claws with a little tooth at the base, strongly curved. The insects live at the margins of damp places, either fresh or salt.

Of the two subgenera only one, *Thinobius*, s. str., has so far been found in our Fauna; it has the head smaller than the thorax, with rounded sides.

Key to the Species.

1.	Elytra obscure testaceous. Antennæ testaceous, the penultimate joints a little infuscate. Thorax pitchy brown.....	*simlaensis*, sp. n., p. 289.
	Elytra black or pitchy-brown. Antennæ dark	2.
2.	Temple about as long as the eye	3.
	Temple obviously shorter than the eye. . . .	*pruinosus* Cam., p. 287.
3.	Elytra twice as long as the thorax. Penultimate joints of the antennæ about as long as broad	[p. 288. *himalayicus* Cam.,
	Elytra one-half longer than the thorax. Penultimate joints of the antennæ distinctly longer than broad	[p. 288. *antennarius* Cam.,

324. **Thinobius** (s. str.) **pruinosus.**

Thinobius (s. str.) *pruinosus* Cam., Trans. Ent. Soc. Lond. 1924, p. 177.

Linear, subdepressed, subopaque, black; elytra half as long again as the thorax, pruinose; head suborbicular; antennæ testaceous, more or less infuscate distally; legs testaceous, femora infuscate. Length 1·5 mm.

Differs from *T. longipennis* Heer, in the smaller head, shorter thorax and elytra, different antennæ, etc. Head smaller than the thorax, suborbicular, the eyes large, the post-ocular region completely rounded, vertex foveate, the front longitudinally impressed on either side, densely and finely coriaceous; antennæ with 3rd joint shorter than 2nd, 4th as long as broad, narrower than 3rd and 5th, 5th slightly longer than broad, 6th narrower than 5th, as long as broad, 7th broader than 6th, a little longer than broad, 8th to 10th a little longer than broad and stouter than the preceding, 11th oval, longer than 10th. Thorax one-third broader than long, subsemicircular, the sides evenly rounded with the posterior angles, the disc without impressions, the sculpture as on the head. Elytra longer than broad, more strongly sculptured than the thorax, very finely grey pubescent, pruinose. Abdomen extremely finely and closely alutaceous and grey pubescent, subsericeous, the 6th segment smooth and shining.

Siwaliks: Lachiwala; Song River.

325. **Thinobius** (s. str.) **himalayicus.**

Thinobius himalayicus Cam., Trans. Ent. Soc. Lond. 1924, p. 176.

Linear, subdepressed, moderately shining, black, the elytra yellowish-brown, twice as long as the thorax; head subquadrate, eyes moderate; first two or three joints of antennæ testaceous; legs testaceous. Length 2 mm.

Head about as broad as long, nearly as broad as the thorax, the eyes moderate, their diameter about as long as the temples, these feebly rounded, the posterior angles rather broadly rounded; vertex broadly impressed, front longitudinally impressed on either side, extremely closely and finely punctured, finely grey pubescent; antennæ longer than the head and thorax, gradually thickened towards apex, the 3rd joint shorter than 2nd, 4th to 7th longer than broad, gradually decreasing in length, 8th and 9th as long as broad, 10th slightly transverse, 11th oblong, stout, as long as the 9th and 10th together. Thorax transverse, subsemicircular, a little wider in front than behind, the sides gently rounded, the posterior angles broadly rounded, the disc obsoletely impressed on either side of the middle, the puncturation as on the head. Elytra a little wider and much longer than the thorax, much longer than broad, parallel, closely and more finely punctured than the thorax, very finely grey pubescent. Abdomen parallel, moderately shining, extremely finely shagreened, and extremely finely grey pubescent, subsericeous on the first five (visible) segments, the 6th smooth and shining.

Mussoorie district: Dhobi Ghat; Aglar River; Arni Gad.

326. **Thinobius** (s. str.) **antennarius.**

Thinobius antennarius Cam., Trans. Ent. Soc. Lond. 1924, p. 177.

Linear, subdepressed, moderately shining black; elytra pitchy-brown, a little longer than the thorax; head subquadrate, eyes moderate; first two joints of antennæ fusco-testaceous; legs testaceous, femora infuscate. Length 1·75 mm.

Differs from *T. himalayicus* in the smaller size, more shining head and thorax, longer and more slender antennæ, rather broader more quadrate usually foveate thorax, shorter elytra and punctured and pubescent 6th abdominal segment. Head subquadrate, slightly transverse, nearly as broad as the thorax; temples shorter than the diameter of the eyes, posterior angles briefly rounded, front deeply impressed on either side, very closely and very finely punctured; antennæ with 3rd joint a little shorter than 2nd, 4th to 10th all distinctly longer than broad, gradually decreasing in length, 11th long oval, half as long again as the 10th. Thorax transverse, subquadrate, the sides almost straight, a little narrower at the

briefly rounded anterior than at the broadly rounded posterior angles, disc on either side deeply obliquely impressed, sometimes the impressions obsolete or wanting, puncturation and pubescence as on the head. Elytra a little longer than the thorax, parallel, a little longer than broad, densely and more finely punctured than the thorax. Abdomen densely and finely shagreened, less shining than the fore-parts, very finely grey pubescent, subsericeous, the 6th (visible) segment not smooth and shining, but closely pubescent like the preceding.

Dehra Dun district : Song River.

327. **Thinobius** (s. str.) **simlaensis**, sp. n.

Narrow, depressed, the fore-parts moderately shining, finely closely pubescent, the abdomen sericeous. Head and abdomen black, thorax pitchy, elytra obscure testaceous. Antennæ testaceous, the penultimate joints infuscate. Legs testaceous. Length 1·5 mm.

A narrow fragile species. Head subtriangular, a little narrower than the thorax, the temples longer than the eyes, the posterior angles briefly rounded, the base emarginate, extremely finely and closely punctured. Antennæ with the 3rd joint a little shorter than the 2nd, 4th scarcely longer than broad, 5th to 8th almost moniliform, 9th and 10th a little wider than the preceding, fully as long as broad, the 11th nearly as long as the two preceding together. Thorax subsemicircular, the sides rounded with the base, the sculpture as on the head, very finely pubescent. Elytra about half as long again as the thorax, extremely finely and closely punctured, and with a fine, close, short, yellow pubescence. Abdomen parallel, scarcely perceptibly punctured, extremely finely alutaceous, sericeous.

Simla Hills : Fagu, alt. 8000 feet.

Tribe 8. OSORIINI.

Oxytelini, Subtribe *Osorini* Er., Gen. Spec. Staph. 1839-40, p. 753.
Oxytélides, Sous-tribe *Osoriides* Lac., Gen. Col. ii, 1854, p. 111.
Osorii Fauv., Fn. Gallo-Rhén. iii, 1872, p. 213 (note).
Oxytelini, Group *Osorii* Lec. & Horn, Class. Col. N. Amer. 1883, p. 102.
Oxitelini, I, *Osoraria* Lynch, Bol. Ac. Nac. Cord. 1884, p. 344.
Oxytelinæ, Group *Osoriina* Shp., B. C.-A. i, 2, 1882-87 (1887), p. 677.

This tribe consists for the most part of cylindrical species with large head which is not or scarcely constricted behind, and immarginate abdomen which below is furnished with a median basal keel. The anterior coxæ are prominent and the tarsi all 5-jointed.

Key to the Genera.

1.	Anterior tibiæ strongly dentate and spinose .	Osorius Latr., p. 290.
	Anterior tibiæ not dentate, usually spinose .	2.
2.	Last joint of the maxillary palpi subulate; first joint of tarsi minute	Paragonus Fauv., [p. 306.
	Last joint of maxillary palpi not subulate; first joint of tarsi distinct	3.
3.	Body covered with a sparing coarse pubescence	Mimogonus Fauv., [p. 304.
	At least the fore parts glabrous	Holotrochus Er., [p. 307.

Genus **OSORIUS** Latr.

Osorius Latr., Règne Anim. iv, 1829, p. 438; Er., Gen. Spec. Staph. 1839–40, p. 753; Lac., Gen. Col. ii, 1854, p. 112; Kr., Naturg. Ins. Deutsch. ii, 1856–58, p. 806; Shp., Trans. Ent. Soc. Lond. 1876, p. 381; id., B. C.-A. i, 2, 1882–87 (1887), p. 677; Lynch, Bol. Ac. Nac. Cord. vi, 1884, p. 345.

Molosoma Say, Trans. Am. Phil. Soc. (n. s.) iv, p. 462.

Biology.—Lac., Nouv. Ann. Mus. Paris, ii, 1833, p. 65; Coquerel, Ann. Soc. Ent. Fr. (2) vi, 1848, p. 180, t. 7, no. 4, f. 3 *a*; Kr., Arch. Naturg. xxv, 1859, i, p. 167; Candèze, Mém. Soc. Sci. Liége, 1861, p. 331, t. 1, f. 3.

Cylindrical, elongate species covered with a long coarse pubescence, with large head not or scarcely constricted behind the eyes, the neck very stout. Clypeus not separated from the front. Gular sutures completely fused, obsolete. Labrum strongly chitinised, broadly, slightly emarginate in front, setose, the anterior angles with a small membranous ciliated appendage. Mentum transverse, narrowed in front, the sides slightly emarginate, the anterior border broadly and more deeply emarginate. Tongue broad, horny, obtusely angulate in front, keeled below along the middle. Paraglossæ well developed as free chitinous rods, ciliate. Labial palpi with the 1st joint longer than broad, 2nd almost twice as long as the 1st, dilated towards the apex, 3rd narrower, as long as the 2nd, narrowed at the base and apex. Inner lobe of maxilla horny, narrow, pointed, the inner margin with strong setæ; outer lobe extending beyond the inner, a little broader, slightly curved, pointed, with a few strong setæ. Maxillary palpi with 1st joint very small, 2nd elongate, thickened towards the apex, 3rd shorter than 2nd, 4th as long as the two preceding together, pointed. Mandibles strong, stout, pointed, crenulate internally. Antennæ geniculate. Prosternum moderately long, in the middle with a large tubercle, its process acute, extending moderately between the coxæ. Pronotal epipleura broad. Epimera well developed, triangular, fused with the epipleura externally, the trochantin exposed. Mesosternum rather long, its process pointed and carinate, extending about half the length of the coxæ, these narrowly separated.

Metasternum rather long, scarcely emarginate before the posterior coxæ, its process rather short, truncate, not extending to the mesosternal process. Anterior coxæ rather long, stout, somewhat prominent. Anterior and middle tibiæ considerably thickened towards the apex, strongly dentate and spinose, the posterior less thickened, spinose. Tarsi slender, 5-jointed, the first four joints short and subequal, the 5th as long as the four preceding together. Scutellum visible.

The species are found in decaying tree-trunks; according to Champion also on the sandy banks of streams. They are widely distributed throughout the tropics.

Key to the Species †.

1.	Front of head on each side produced into a horn	*rugicollis* Kr., p. 292.
	Front of head without horns	2.
2.	Head at the middle of the anterior margin with a distinct transverse elevation or tubercle	3.
	Head without such tubercle (see also *kempi*)	4. [p. 293.
3.	Thorax with simple puncturation	*callifrons* Bernh.,
	Thorax with elongate tubercles	*beebei* Bernh., p. 293.
4.	Thorax before the base suddenly constricted	5.
	Thorax before the base gradually narrowed	10.
5.	Front margin of the head distinctly crenulate	6.
	Front margin of the head not crenulate	8.
6.	Elytra rather closely and deeply punctured	*puncticollis* Kr., p. 294.
	Elytra sparingly and superficially punctured	7.
7.	Thorax rather closely, uniformly punctured	[p. 294. *sikkimensis* Bernh.,
	Thorax more sparingly and irregularly punctured	[p. 295. *stricticollis* Fauv.,
8.	Head strongly striate	9.
	Head not striate, but with more or less vermicular impressions	*calvus*, Epp., p. 295.
9.	Elytra closely and finely punctured. Abdomen closely, finely, asperately punctured	[p. 296. *constrictus* Fauv.,
	Elytra closely, rather coarsely punctured. Abdomen less finely punctured	[p. 296. *strangulatus* Fauv.,
10.	Thorax on each side of the middle with a long deep sulcus	*robustus* Cam., p. 297.
	Thorax without such sulci	11.
11.	Front margin of the head crenulate	12.
	Front margin of the head not crenulate	15.
12.	Larger (8 to 10 mm.)	13. [p. 298.
	Smaller (6·5 mm.)	*peguanus* Bernh.,

† *O. madurensis* Schub. is not included in this key.

13.	Front of head almost devoid of rugæ or granules	[p. 298. *pectinifrons* Fauv.,
	Front of head with distinct rugæ or granules	14.
14.	Sculpture of sides of front striate, interstriæ scarcely interrupted	*kraatzi* Bernh., p. 299.
	Sculpture of sides of front granular, the interstriæ distinctly interrupted	*kempi* Bernh., p. 299.
15.	Thorax very closely punctured. Elytra closely and distinctly punctured	16.
	Thorax less closely punctured. Elytra more sparingly and superficially punctured	20.
16.	Head with fine but distinct median keel extending to the anterior margin	17.
	Head without such keel	18.
17.	Larger (8 mm.). Anterior border of head emarginate	[p. 300. *punctipennis* Fauv.,
	Smaller (5·5 mm.). Anterior border of head slightly rounded	*scolytinus* Fauv., p. 300.
18.	Small species (3·5 mm.)	*birmanus*, sp. n., p. 301.
	Large species (4·5 to 5·5 mm.)	19.
19.	Larger (5·5 mm.). Sides of thorax almost straight	*monticola* Cam., p. 301.
	Smaller (4·5 mm.). Sides of thorax more rounded	[p. 302. *punctulatus* Motsch.,
20.	Larger (6 mm.). Anterior border of head emarginate	21.
	Smaller (4 to 4·3 mm.). Anterior border truncate or feebly rounded	*rufipes* Motsch., p. 302.
21.	Interstriæ of head sharper; thorax more finely punctured, without trace of ground-sculpture	[p. 303. *nilgiriensis* Fauv.,
	Interstriæ weaker; thorax less finely punctured and with an obscure ground-sculpture	*indicus* Cam., p. 304.

328. **Osorius rugicollis.** (Plate III. fig. 2.)

Osorius rugicollis Kr.*, Arch. Naturg. xxv, 1859, i, p. 167.

Black, shining. Antero-external angles of the front produced into two short stout processes, the margin between truncate and even. Antennæ and legs dark reddish-brown. Length 9 mm.

At once distinguished from all the known Indian species by the frontal processes. Head closely and uniformly striate, the striæ extending almost to the truncate anterior border and scarcely interrupted on the sides. Antennæ with the penultimate joints as long as broad. Thorax transverse, the sides almost straight and gradually retracted to a little before the slightly obtuse, prominent posterior angles, where they are emarginate, with an impression adjacent; along the middle smooth, the rest of the surface longitudinally and more coarsely striate than the head. Elytra a little longer than the thorax,

longitudinally impressed at the basal half of the suture, sparingly, superficially, irregularly punctured. Abdomen rather closely, finely, asperately punctured, coriaceous, and with a rather coarse pubescence.

Ceylon. Nilgiri Hills.

329. **Osorius callifrons.**

Osorius callifrons Bernh.*, W. E. Z. xliii, 1926, p. 24.

Black, shining, the antennæ and legs reddish-brown. Length 9 to 11 mm. Head with the front margin elevated in the middle, forming a transverse tubercle, the margin crenulate, the elevation and the space immediately behind impunctate, at the sides with some fine asperities. In the middle line with a distinct smooth keel extending back to the broad impunctate basal region; between the keel and the eyes with numerous longer and shorter, not very close, rugæ, the neck with a fine more or less transverse wavy ground-sculpture. Penultimate joints of antennæ about as long as broad. Thorax transverse, the sides almost straight, at the posterior third more strongly retracted to the obtuse and slightly explanate posterior angles, without fovea; in the middle with a slight, smooth keel, more distinct behind, moderately coarsely, irregularly, but rather closely punctured, with a small impunctate space behind the middle on each side; anterior angles not prominent. Elytra a little longer than the thorax, more superficially and less closely punctured. Abdomen rather closely, asperately punctured.

Rotung, alt. 1400 feet (Abor Expedition, 23. xii. 1911) (*Kemp*).

330. **Osorius beebei.**

Osorius beebei Bernh., W. Z. B. lxiv, 1914, p. 86.

A large species belonging to the group with constricted thorax, and distinct by the sculpture of the fore-parts from the allied species. Deep black, moderately shining, the antennæ, palpi and legs ferruginous red or ferruginous brown. Head a little narrower than the thorax, in front almost truncate and slightly crenulate, in the middle broadly elevated, so that the nterior margin, seen from the front, appears to be emarginate; vertex impunctate, shagreened, more shining in the middle, in front between the eyes with moderately close, long, sharp rugæ, which are oblique adjacent to the eyes, the front with sparing, elongate tubercles, the antennal tubercles and frontal elevation smooth, ground-sculpture coriaceous, rather dull. Antennæ rather long and slender, the penultimate joints not transverse. Thorax in front as broad as the elytra, broader than long, the sides rounded, retracted behind, and emarginate

before the rectangular posterior angles, adjacent to which is a distinct impression and a slighter one against the side; towards the anterior angles sparingly, near the posterior angles more closely sculptured, along the middle with a broad impunctate space and with irregular impunctate spaces elsewhere. The sculpture consists of coarse elongate tubercles. Elytra longer than the thorax, rather shining, moderately strongly but distinctly and somewhat sparingly, simply punctured. Abdomen rather strongly and rather closely, roughly punctured. Length 10 mm.

N.E. Burma: Sansi Gorge, alt. 6000 to 8000 feet (*Beebe*) (ex *Bernhauer*).

331. **Osorius puncticollis.**

Osorius puncticollis Kr.*, Arch. Naturg. xxv, 1859, i, p. 168.
Osorius granulifrons Cam., Trans. Ent. Soc. Lond. 1924, p. 178.

Black, shining, cylindrical, the declivous part of the head on either side closely and rather finely granular, in the middle finely and irregularly wrinkled, the anterior margin slightly emarginate and crenulate; vertex on either side longitudinally strigose, the ridges more or less interrupted, posteriorly smooth, centrally exceedingly finely wrinkled. Thorax transverse, constricted before the base, cupuliform, closely, rather strongly and simply punctured, the median line and a small space near the posterior angles smooth, the latter impressed. Elytra half as long again as the thorax, longer than broad, rather closely and deeply punctured. Abdomen very finely and not very closely punctured, coriaceous, and with long yellow pubescence. Antennæ and legs red, all the joints of the former longer than broad, the 9th and 10th very slightly so. Length 9 mm.

Closely allied to *O. stricticollis* Fauv., and differing only in the closer and less coarse puncturation; also very near *O. strangulatus* Fauv., but differing in the larger size, the distinctly granular sculpture of the sides of the front, the wrinkled non-strigose median area, and the almost smooth, central, oblong space between the eyes on the vertex, which in *O. strangulatus* is entirely strigose.

Simla Hills: Gahan, alt. 7000 feet.

332. **Osorius sikkimensis.**

Osorius sikkimensis Bernh., Arch. Naturg. lxxxiv, 1918, p. 177.

Pitchy, shining, the antennæ, palpi and legs rust-red. Head narrower than the thorax, oblong, between the eyes dull, and with long, rather close rugæ, in front shining, and on either side furnished with a few small, irregular tubercles, posteriorly shining and impunctate. Thorax in front as broad as the elytra, distinctly broader than long, in front with the sides

parallel, behind the middle strongly retracted and slightly emarginate before the posterior angles; along the middle with broad smooth space in part sulcate, the rest rather thickly, strongly, and rather regularly punctured. Elytra longer than the thorax, strongly and rather closely punctured. Abdomen moderately strongly and moderately closely punctured. Length over 7 mm.

Allied to *O. stricticollis*, Fauv., but half the size; the emargination before the posterior angles of the thorax is much more marked in *stricticollis*, the puncturation of the thorax is much less close and not so uniform as in the new species.

Sikkim: Darjeeling (*Christie*). Bernhauer and Wasmann's collections (ex *Bernhauer*).

333. Osorius stricticollis.

Osorius stricticollis Fauv.*, Rev. d'Ent. xiv, 1895, p. 196.

Black, shining; the front border of the head scarcely emarginate and strongly crenulate. Thorax strongly contracted at the base. Antennæ and legs reddish. Length 9 to 13 mm.

Head between the eyes with rather broad striæ not continued on to the declivous part of the front, on the middle of the vertex with an oblong smooth space; declivous part of the front in the middle somewhat coriaceous, quite smooth behind the anterior margin, at the sides with a few granules. Antennæ with the penultimate joints about as long as broad. Thorax distinctly transverse, cupuliform, the sides almost straight and slightly retracted to a little in front of the rounded posterior angles, there suddenly contracted and rather deeply impressed; along the middle smooth, sometimes with a fine short sulcus, the rest somewhat irregularly, but on the whole rather closely, moderately coarsely punctured, the punctures subasperate. Elytra a little longer than the thorax, moderately closely, not deeply punctured. Abdomen rather finely, asperately, moderately closely punctured, coriaceous. The whole insect covered with sparing yellow pubescence.

Burma: Carin Ghécu, alt. 1300 to 1400 metres; Tenasserim; Mount Mooleyit (*L. Fea*).

334. Osorius calvus.

Osorius calvus Epp.*, D. E. Z. 1895, p. 406.

Shining, the head and abdomen black, thorax and elytra pitchy red. Antennæ and legs reddish-testaceous. Length 6·75 mm.

Head with the front border very slightly emarginate, not distinctly crenulate, at the sides with a few small punctures, in the middle between the antennal tubercles with numerous

small, close, rounded or oval superficial impressions; middle of vertex practically smooth, at the sides up to the eyes with a deeper, more irregular and more confluent sculpture, but not striate. Antennal tubercles smooth. Antennæ with the penultimate joints slightly longer than broad. Thorax one-third broader than long, widest in front, the sides scarcely rounded, gradually retracted almost to the base, then suddenly emarginate before the obtuse posterior angles, near which is a short impression; middle line smooth, the rest of the surface rather finely and rather closely punctured, and with an extremely fine accessory puncturation. Elytra one-third longer than the thorax, about as closely but more obsoletely punctured. Abdomen moderately finely and moderately closely punctured, strongly coriaceous, and with a coarse yellow pubescence.

Sikkim (*Waagen*). Type in the National Museum, Vienna.

335. **Osorius constrictus.**

Osorius constrictus Fauv.*, Rev. d'Ent. xiv, 1895, p. 196.

Pitchy black, moderately shining. Antennæ and legs reddish. Length 6·75 to 7·3 mm.

Head with the front border deeply crescentically emarginate, not crenulate; between the eyes closely striate, without an elevated median line, the front rather closely granular. Antennæ with the penultimate joints scarcely transverse. Thorax slightly transverse, the sides straight and parallel to a little before the base, then suddenly narrowed and again parallel, the posterior angles nearly rectangular, and with an adjacent impression, along the middle narrowly smooth, the rest very closely and asperately punctured. Elytra distinctly longer than the thorax, closely, moderately finely, rather deeply punctured. Abdomen rather closely, finely and asperately punctured with long yellow pubescence.

Burma: Carin Ghécu, alt. 1300 to 1400 metres (*L. Fea*).

336. **Osorius strangulatus.** (Plate III. fig. 1.)

Osorius strangulatus Fauv.*, Rev. d'Ent. xxiii, 1904, p. 47.

Shining, black, the elytra pitchy, obscurely reddish about the suture. Front of head broadly, slightly emarginate, even. Antennæ reddish. Legs reddish-testaceous. Length 6 to 7·5 mm.

Head between the eyes closely, evenly, longitudinally striate: the middle of the front more finely and less regularly striate, at the sides with a few elongate granules, the front border broadly and slightly emarginate, even. Antennæ with the penultimate joints as long as broad. Thorax nearly a third broader than long, the sides almost straight and slightly retracted to a little in front of the rounded posterior angles

where they are suddenly constricted and slightly impressed; along the middle smooth, elsewhere very closely, moderately coarsely punctured, the punctures more or less confluent, so that there is a tendency to the formation of longitudinal rugæ. Elytra distinctly longer than the thorax, a little longer than broad, rather closely, moderately finely, rather deeply punctured. Abdomen moderately closely, asperately punctured, coriaceous. The whole insect covered with a long yellow pubescence.

Differs from *O. stricticollis* Fauv. in the smaller size, the even frontal margin, the head uniformly striate between the eyes without central smooth space, the much more closely punctured thorax and elytra.

N. Kanara. Nilgiri Hills (*Andrewes*).

337. **Osorius robustus.**

Osorius robustus Cam., E. M. M. lvi, 1920, p. 145.

Black, shining; the head with the anterior border broadly and slightly emarginate, not crenulate, at the sides rather coarsely, asperately punctured, between the eyes rather coarsely, longitudinally striate, the interstriæ short and interrupted, the neck finely and closely punctured, the vertex with a broad smooth space along the middle. Thorax sulcate on either side of the smooth median space, the sides with coarse and more or less confluent punctures. Elytra sparingly, moderately finely punctured. Antennæ slender, brown. Legs pitchy brown. Length 10 mm.

Very similar in build to *O. rugicollis*, Kr. (the thorax in this respect being exactly similar), but larger and more robust, the antero-external angles of the front not produced into horns, the head much more coarsely striate, the thorax scarcely striate, the abdomen more sparingly punctured. Head rather coarsely punctured behind the anterior margin and at the sides, the rest of the front, a median space on the vertex, and the antennal tubercles smooth, internal to the eyes rather coarsely striate. Antennæ slender, 2nd joint shorter than the 3rd, 3rd to 10th all longer than broad, gradually decreasing in length, the 9th and 10th not much longer than broad. Thorax a little broader than long, the sides almost straight and retracted to a little before the obtuse but prominent posterior angles, where they are slightly emarginate; disc on each side with a narrow irregular sulcus from base to apex, externally with a coarse confluent puncturation, the region of the posterior angles impunctate and with an adjacent impression. Elytra a little longer and broader than the thorax, sparingly and moderately finely punctured. Abdomen finely and rather sparingly punctured, coriaceous; pubescence sparing and yellow.

Sidapur, Coorg. Nilgiri Hills.

338. **Osorius peguanus.**

Osorius peguanus Bernh., W. Z. B. lxiv, 1914, p. 87.

Very closely allied to *O. annandalei*, Bernh. [*nilgiriensis*, Fauv.], but differing in the following points. The head is much more sparingly striate, the individual interstriæ much shorter, in the middle with a broader impunctate area, the clypeus is not emarginate as in *annandalei*, but truncate or rounded, and crenulate. The thorax is scarcely more thickly, but much more strongly and deeply punctured, the side-margin, at the rectangular posterior angles is broadly and rather deeply impressed, so that the lateral margin appears raised. The elytra and the abdomen are much more strongly and deeply punctured. Length 6·2 to 6·5 mm.

Pegu.

This insect was confused with *O. rufipes* Motsch. in Waagen's collection. From this species it differs in the size being more than twice as large, more sparing sculpture and different build of the posterior angles of the thorax (ex *Bernhauer*).

339. **Osorius pectinifrons.**

Osorius pectinifrons Fauv.*, Rev. d'Ent. xiv, 1895, p. 196.

Black, shining; front border of the head crenulate, truncate. Antennæ and legs reddish. Length 7·5 mm.

Head with the front border truncate and crenulate, the sides with a few small asperate punctures, in the middle coriaceous, not striate; between the eyes with rather wide striæ, the interstriæ short and not extending on to the declivous front; behind the striate area with a short transverse space without sculpture, behind this with the usual reticulate ground-sculpture. Antennæ with the penultimate joints about as long as broad. Thorax slightly broader than long, the sides almost straight and slightly retracted to behind the middle, from thence more strongly retracted and a little rounded to the rounded posterior angles, adjacent to which is a rather broad, shallow impression; along the middle narrowly smooth, the rest with a moderately fine, moderately close, subasperate puncturation. Elytra distinctly longer than the thorax, with a rather close, superficial, moderately fine puncturation. Abdomen finely, moderately closely, asperately punctured, coriaceous.

Burma: Carin Ghécu, alt 1300 to 1400 metres (*L. Fea*); Ruby Mines, alt. 5000 to 7000 feet (*Doherty*). Also in Siam.

340. **Osorius kraatzi.**

Osorius kraatzi Bernh., Cat. Col. Staph. ii, 1911, p. 144.
Osorius rugiceps Kr.*, Arch. Naturg. xxv, 1859, i, p. 166 (præoc.).
Osorius crenulatus Cam., Ent. Mitt. xvii, 1928, p. 109.

Near *O. punctipennis* Fauv., but larger (10 mm.) and more robust, the head without a smooth space on the vertex and the striæ stronger, the build and sculpture of the thorax scarcely differing in the two species, but the elytra are much more finely, sparingly and obsoletely punctured and the abdomen much more sparingly punctured. Front of head truncate, distinctly crenulate, with the anterior angles rounded, in the middle immediately behind the anterior margin with a smooth space, on either side with small elongate tubercles, the whole of the rest of the surface closely striate; the sculpture of the head somewhat similar to that of *O. rugifrons* Kr., but the smooth space in front larger and the tubercles more sparing and finer. Antennæ with the penultimate joints as long as broad. Thorax transverse, trapezoidal, the anterior angles not prominent, the sides straight, converging behind, the posterior angles obtuse, slightly explanate and impressed, in the middle with a moderately broad impunctate space, and between this and the posterior angles with an ill-defined one, the rest of the surface rather deeply and moderately coarsely punctured, the punctures smaller and less close towards the middle than at the sides. Elytra longer than the thorax, superficially, rather sparingly punctured towards the sides, yet more sparingly towards the suture. Abdomen coriaceous, very sparingly, asperately punctured.

Burma: Tavoy. Also in the Malay Peninsula, Sumatra, and Borneo.

341. **Osorius kempi.**

Osorius kempi Bernh.*, W. E. Z., xliii, 1926, p. 24.
Osorius kempi var. *parvipennis* Bernh.*, W. E. Z. xliii, 1926, p. 25.

Black, shining. Antennæ and legs reddish. Length 10 mm.

Head with the front margin feebly emarginate and crenulate, feebly elevated in the middle, the anterior angles broadly rounded; front without median raised line, the whole of the space between the eyes furnished with longer and shorter rugæ placed rather close together, the front with close, elongate tubercles, coriaceous; neck with a fine retiform ground-sculpture. Penultimate joints of antennæ as long as broad. Thorax transverse, the sides straight and converging slightly to behind the middle, from there more retracted in a straight line to the obtuse and very slightly explanate posterior angles, lateral impression feeble; along the middle smooth, the rest of the

surface with rather close, elongate tubercles, which are larger and closer towards the sides. Elytra a little longer than the thorax, superficially and moderately closely punctured, coriaceous. Abdomen moderately closely, asperately punctured coriaceous, with long, coarse, yellow pubescence. The sculpture of the thorax is similar to that of *O. rugifrons* Kr., but less close.

Upper Renging, alt. 2150 feet (Abor Expedition, 4. ii. 1912) (*Kemp*).

O. parvipennis Bernh.* is a smaller and narrower race (8 to 9 mm.). I can find no other distinguishing characters.

Kobo (Abor Expedition, 3. xii. 1911) (*Kemp*).

342. Osorius punctipennis.

Osorius punctipennis Fauv.*, Rev. d'Ent. xiv, 1895, p. 195.

Black, moderately shining; front border of head broadly crescentically emarginate, not crenulate. Antennæ and legs reddish. Length 8 mm.

Head with the front border broadly crescentically emarginate, not crenulate, throughout the middle with a raised line, at the sides with interrupted rugæ, between the eyes closely striate. Antennæ with the penultimate joints as long as broad. Thorax slightly transverse, the sides in front scarcely rounded, gradually retracted to the rounded posterior angles, against which there is a superficial impression; along the middle smooth, elsewhere rather strongly and rather closely, asperately punctured. Elytra longer than the thorax, closely, moderately coarsely and deeply punctured. Abdomen rather closely, asperately punctured, coriaceous. Near *O. scolytinus* Fauv., but larger, the elytra black, the front emarginate, the thorax longer, more strongly and less closely punctured, elytra more shining, more strongly punctured.

Burma: Carin Ghécu, alt. 1300 to 1400 metres; Carin Cheba, 900 to 1100 metres; Carin Asciuii Cheba, 800 to 1400 metres (*L. Fea*).

343. Osorius scolytinus.

Osorius scolytinus Fauv.*, Rev. d'Ent. xiv, 1895, p. 195.

Narrow, pitchy black, moderately shining, the elytra pitchy. Antennæ and legs reddish. Length 5·5 mm.

Head with the front margin feebly rounded, even: between the eyes closely longitudinally striate, the interstriæ interrupted on the front, in the middle with a raised line extending to the anterior margin. Penultimate joints of the antennæ slightly transverse. Thorax slightly transverse, the sides straight and

gradually retracted to the obtuse posterior angles, scarcely emarginate and scarcely impressed; in the middle smooth, the rest of the surface closely, asperately sculptured, the granules more or less elongate. Elytra distinctly longer than the thorax, closely, finely, rather deeply punctured. Abdomen closely, asperately punctured, coriaceous. The whole insect with a rather close, long yellow pubescence. Longer than *O. rufipes* Motsch., the front with a median raised line, the thorax longer, much more closely and asperately punctured; elytra longer, more deeply and closely punctured; abdomen more punctured.

Burma: Carin Ghécu, alt. 1300 to 1400 metres (*L. Fea*).

344. **Osorius monticola.**

Osorius monticola Cam., Trans. Ent. Soc. Lond. 1914, p. 527.

Black or pitchy, shining, thorax transverse, closely and rather coarsely punctured; elytra distinctly but less closely punctured. Antennæ and legs reddish-testaceous. Length 5·5 mm.

Of the size and superficial appearance of *O. nilgiriensis* Fauv., the head is, however, broader, the thorax shorter and broader, with much closer puncturation, and the elytra are more closely punctured.

Head nearly as broad as the thorax, emarginate anteriorly, but not crenulate, strigose, except the vertex, which is smooth and shining, and the sides of the front, which are sparingly punctured; pubescence scanty, yellowish. Antennæ with elongate 1st joint, 2nd much shorter, 3rd shorter than 2nd, 4th to 10th moniliform. Thorax transverse, as broad as the elytra, widest at the anterior angles, narrowed in a slightly curved line to the base, without perceptible sinuation before the posterior angles, which are pretty distinctly impressed; closely punctured, disc with smooth central line, sparingly pubescent. Elytra a little longer than broad, rather closely but superficially punctured. Abdomen coriaceous, sparingly punctured at the sides, pubescence yellow, long, scanty.

Nilgiri Hills (*H. L. Andrewes*).

345. **Osorius birmanus**, sp. n.

Differs from *O. monticola* Cam. in the small size (3·5 mm.), shorter, yellow antennæ and much more closely punctured abdomen. In build and sculpture it is in other respects similar. At once distinguished from all the Indian species by its small size.

Burma: Tenasserim; Tavoy.

346. **Osorius rufipes.**

Osorius rufipes Motsch., Bull. Mosc. xxx, 1857, iv, p. 508.
Osorius compactus Walk.*, Ann. Mag. Nat. Hist. 1859, p. 52.
Osorius syriacus Fauv., Ann. Soc. Ent. Fr. (5) v, 1875, Bull. p. viii; Faun. Gallo-Rhén. iii, Cat. Syst. 1875, p. xiii; Bull. Soc. Linn. Norm. (3) ii, 1877–78, p. 160.

Black, shining, the elytra pitchy, obscurely reddish about the suture. Frontal margin scarcely emarginate, even. Antennæ and legs yellowish-red. Length 4·5 mm.

Head with the front margin practically truncate, even; between the eyes and on the front finely longitudinally striate almost up to the anterior border, the striæ less distinct in front, the interstriæ coriaceous. Antennæ with the penultimate joints a little transverse. Thorax transverse, the sides a little rounded at the anterior angles, then almost straight and gradually retracted to a little before the rounded posterior angles, where they are very slightly emarginate and slightly impressed; along the middle smooth, the rest of the surface moderately finely and moderately closely punctured. Elytra a little longer than the thorax, rather finely, superficially, moderately closely punctured. Abdomen finely, moderately closely, asperately punctured, coriaceous, with coarse yellow pubescence.

Ceylon: Dikoya. Nilgiri Hills. Dehra Dun. Also in Sumatra, Mauritius, Réunion, Egypt.

347. **Osorius punctulatus.**

Osorius punctulatus Motsch., Bull. Mosc. xxx, 1857, iv, p. 508.

Very near *O. rufipes*, Motsch., but differs in the narrower build, the sides of the thorax more rounded and less retracted to the base, finer and more obsolete striation of the head, much finer and denser puncturation of the thorax, finer and much closer puncturation of the elytra, and rather closer puncturation of the abdomen. The front margin of the head is slightly, broadly emarginate.

"Ind. or."

348. **Osorius madurensis.**

Osorius madurensis, Schub., D. E. Z. 1911, p. 5.

Elongate, black, moderately shining; head strongly strigose between the eyes, the antennal tubercles smooth; clypeus sparingly, not very distinctly punctured, thorax strongly, not very closely punctured, with median smooth line, elytra rather longer than the thorax, irregularly, sparingly punctured. Length 4·75 to 5 mm.

Near *O. rufipes*, Motsch.; differs in the sculpture of the head,

the strong puncturation of the thorax, and much more slightly punctured elytra. The antennæ are rather long and stout, extending to the base of the thorax, thickened, the penultimate joints subequal, globose, rather thickly covered with yellow pubescence. The head between the eyes strongly and rather closely striate, in the striæ with a few scattered punctures, only the antennal tubercles and a small strip at the base of the head smooth, the clypeus with the continuation of the striæ and some large indistinct punctures. Thorax a little broader than the head, almost broader than long, a little narrowed behind, moderately closely but very coarsely and deeply punctured, along the middle with a somewhat raised, rather broad and smooth space, before the rounded posterior angles with an impression, finely bordered. Elytra scarcely narrower, distinctly longer than the thorax, sparingly and slightly, towards the sides more strongly punctured, with scattered, erect, short hairs. Abdomen rather parallel, slightly widened behind, at the sides sparingly and rather finely punctured. The legs pitch-brown, with lighter knees and reddish tibiæ and tarsi. The tibiæ with long yellow hairs.

Shembaganur, Madura (ex *Schubert*).

349. **Osorius nilgiriensis.**

Osorius nilgiriensis Fauv.*, Rev. d'Ent. xxii, 1903, p. 152.
Osorius annandalei Bernh.*, Ent. Blätt. vii, 1911, p. 56.

Shining, black, the elytra dark castaneous. Antennæ reddish. Legs reddish-testaceous. Length 5·5 to 6·5 mm.

Near *O. rufipes*, Motsch., but larger, the antennæ longer and thicker, the front distinctly emarginate, thorax more narrowed at the base, elytra more sparingly punctured. Head crescentically emarginate in front, not crenulate, in the middle of the front finely and irregularly wrinkled, at the sides with a few fine asperate punctures, between the eyes closely and regularly striate, the striæ evanescent amongst the wrinkles of the front, the antennal tubercles and a transverse space at the base of the head smooth and shining, the neck with a fine ground-sculpture. Antennæ with the penultimate joints as long as broad. Thorax slightly transverse, the sides almost straight and gradually retracted, only slightly emarginate before the rounded posterior angles and slightly impressed; along the middle smooth, the rest of the surface moderately closely, moderately finely, subasperately punctured. Elytra narrower and a little longer than the thorax, with rather large, superficial, sparing punctures. Abdomen sparingly, asperately and finely punctured, yellow pubescent.

Nilgiri Hills, Coonoor. Shembaganur, Madura. W. Bengal: Paresnath (*Annandale*).

350. **Osorius indicus.**

Osorius indicus Cam., Trans. Ent. Soc. Lond. 1914, p. 528.

Similar in size, build and colour to *O. nilgiriensis* Fauv., and only differing in the following respects: the striæ of the head are a little broader and the interstriæ less pronounced, the declivous front more coriaceous; the puncturation of the thorax is distinctly coarser, and a weak ground-sculpture is present.

Nilgiri Hills (*H. L. Andrewes*).

Genus **MIMOGONUS** Fauv.

Mimogonus Fauv., Rev. d'Ent. xxii, 1903, p. 261.

Near *Osorius* Latr., but with the last joint of the maxillary palpi strongly conical, more than twice as long as the preceding, which is very short, mentum flat, suborbiculate; antennæ scarcely geniculate, the 1st joint very short, the 3rd scarcely longer, scarcely clavate; legs slender, the tibiæ scarcely dilated externally, not dentate, spinose, tarsi very short, with the last joint gradually dilated towards the apex (ex *Fauvel*).

Holotrochus Gr. has the last joint of the tarsi similarly dilated, but the species of this genus are practically glabrous, whereas in *Mimogonus* the whole body is covered with a long and coarse yellow pubescence as in *Osorius*. It is found in rotten tree-trunks and also in tobacco.

Key to the Species.

1.	Elytra red, often infuscate behind	2.
	Elytra pitchy, closely and deeply punctural .	*andrewesi*, sp. n., p. 305.
2.	Elytra superficially punctured.....	*fumator* Fauv., p. 304.
	Elytra strongly punctured	*rufipennis* Motsch., [p. 305.

351. **Mimogonus fumator.**

Osorius fumator Fauv., Rev. d'Ent. viii, 1889, p. 246; xxii, 1903, p. 261; Bernh., W. Z. B. lx, 1910, p. 310.
Osorius fauveli Cam., Ann. Mag. Nat. Hist. (8) xii, 1913, p. 326.

Black, shining; elytra red, a little infuscate behind; antennæ, legs, and posterior margins of the abdominal segments narrowly reddish-testaceous. Head, thorax, and elytra moderately coarsely, but not very closely punctured. Abdomen with sparse superficial puncturation. Length 2·3 to 3 mm.

Head narrower than the thorax, truncate in front, with scattered umbilicate puncturation and coriaceous ground-sculpture, without a smooth central line. Antennæ with

4th to 10th joints transverse, gradually increasing in breadth; mouth-parts yellow. Thorax a little broader than the elytra, a little broader than long; sides almost parallel for four-fifths of their length, then suddenly contracted to the nearly rectangular posterior angles, with a deep rounded fovea in front of the latter, and with rather large, scattered, superficial, umbilicate puncturation, and with a smooth central line; ground-sculpture distinct, coriaceous; pubescence rather long, coarse, and sparing. Elytra a little longer than the thorax, as long as broad, with puncturation, ground-sculpture, and pubescence similar to that of the thorax. Abdomen with very sparing and still more superficial puncturation, and similar ground-sculpture to the elytra; pubescence long, coarse, and sparing.

Dehra Dun. Also in Sumatra, Federated Malay States, New Caledonia, Madagascar, and the West Indies.

352. **Mimogonus andrewesi**, sp. n.

Shining, black, the elytra pitchy, the posterior margins of the abdominal segments narrowly rufescent. Antennæ yellow. Legs reddish-testaceous. Length 2·4 mm.

Distinguished by the obscurely coloured and deeply punctured elytra. Head with a superficial, rather close umbilicate puncturation, closer than in *fumator*, ground-sculpture feeble. Penultimate joints of antennæ rather strongly transverse. Thorax less abruptly strangulate than in *fumator*, with a similar but rather closer puncturation and ground-sculpture. Elytra much more closely and deeply punctured than in *fumator*. Abdomen very similarly punctured to *fumator*, and with similar pubescence throughout.

Nilgiri Hills (*Andrewes*).

353. **Mimogonus rufipennis**.

Osorius rufipennis Motsch., Bull. Mosc. xxx, 1857, iv, p. 508.

Build of *Osorius punctulatus* Motsch. but smaller. Black; mouth, antennæ, legs, and elytra red; anterior borders of the thorax and abdominal segments of the same colour but deeper. Above clothed with yellow, sparse hairs. Puncturation of head feeble, that of the thorax very strong, in the middle with a smooth space, that of the elytra similar, the abdomen more finely punctured. Thorax as broad as long, impressed on each side at the posterior angles and brusquely contracted and cordiform, the side-margins straight, anterior angles obtuse.

"Ind. or." (ex *Motschoulsky*).

Genus **PARAGONUS** Fauv.

Paragonus Fauv., Rev. d'Ent. xiv, 1895, p. 197.

Small, short, convex, rough, pubescent species. Head small, eyes rather prominent. Labrum transverse, truncate. Mandibles short, stout, toothed, the apex curved. Maxillary palpi stout, short, 4-jointed, the 1st joint broad, 2nd short, transverse, 3rd obconical, 4th very narrow, subulate. Mentum large, truncate apically. Antennæ scarcely geniculate. Thorax short, strongly constricted at the base. Scutellum rather large, subtriangular. Elytra short, truncate. Abdomen as in *Osorius*, not margined, subcylindrical. Legs slender, all the coxæ close together, scarcely contiguous. Mesosternum keeled, tibiæ scarcely angularly dilated nor spinose, more or less setose, tarsi 5-jointed, the 1st joint minute, scarcely visible (ex *Fauvel*).

The genus is so far only known from the Oriental region. The species are found in decaying wood and often in débris.

354. Paragonus birmanus.

Paragonus birmanus Fauv.*, Rev. d'Ent. xiv, 1895, p. 197.

Black, scarcely shining. Antennæ ferruginous. Legs reddish-testaceous. Length 3·3 to 3·75 mm.

Head narrower than the thorax, convex, rounded in front, not constricted behind, temples short, closely and rather coarsely punctured; eyes rather prominent. Antennæ with the 3rd joint a little longer than the 2nd, 4th to 8th oval, 9th and 10th slightly transverse. Thorax transverse ($6\frac{1}{2} : 4$), the sides from the anterior angles to behind the middle straight and slightly diverging, then obtusely angulate and strongly retracted in a straight line to the rounded base, finely crenulate, adjacent to the contracted part with a rather large, deep, shining fovea, closely and rather more coarsely punctured than the head. Elytra a little longer than the thorax, transverse, the sculpture as on the thorax but somewhat rugulose. Abdomen thick, convex, narrowed at apex, closely, more finely punctured than the fore-parts, rather coarsely and moderately closely pubescent.

Burma: Carin Cheba, alt. 900 to 1100 metres, i. 89; Carin Asciuii Ghécu, alt. 1400 to 1500 metres (*L. Fea*).

Genus **HOLOTROCHUS** Er.

Holotrochus Er., Gen. Spec. Staph. 1839–40, p. 757; Lac., Gen. Col. ii, 1854, p. 113; Kr., Naturg. Ins. Deutsch. ii, 1856–58, p. 807; Fauv., Not. Ent. v, 1867, p. 46; Sharp, Tr. Ent. Soc. Lond. 1876, p. 387; B. C.-A. i, 2, 1882–87 (1887), p. 682.

Cylindrical or subcylindrical shining species with at least the foreparts glabrous, and edentate tibiæ. Head scarcely constricted behind, the eyes moderate, scarcely prominent. Labrum strongly transverse, truncate in front, the anterior angles with a small ciliated membrane, the anterior border with some long setæ. Mandibles short and stout, each with two teeth. Outer lobe of maxilla corneous, narrow, the apex ciliate; inner lobe narrow, corneous, the apex with two strong teeth, posteriorly ciliate. Maxillary palpi stout, the 1st joint minute, 2nd very short, obconical, the 3rd transverse, the 4th elongate, oval, the apex pointed. Labium about as long as broad, or transverse, the sides and apex rounded. Tongue corneous, transverse. Labial palpi 3-jointed, the 1st joint elongate, dilated towards the apex, the 2nd as long as broad, the 3rd elongate, three times as long as broad, the apex truncate. Paraglossæ scarcely visible. Prosternum short, its process pointed. Epimeron triangular, separated by a suture from the pronotal epipleura, the anterior coxæ exserted. Mesosternum with a transverse ridge separating off an anterior part or "collar," its process pointed, carinate, and meeting the metasternal process, the coxæ narrowly separated. Metasternum scarcely emarginate behind for the coxæ. Abdomen cylindrical, keeled below at the base, immarginate above. Scutellum small. Elytra with a sutural stria. Femora rather stout; anterior and middle tibiæ with a few small spines, the posterior unarmed. Tarsi short, 5-jointed, the first four joints very short, the 5th longer than all the preceding together.

The species are found in decaying tree-trunks throughout the tropics.

Key to the Species.

Larger (4·5 mm.). Elytra seriately punctured ..... *annandalei* Bernh., [p. 307.

Smaller (2 mm.). Elytra extremely finely, irregularly punctured ..... *chatterjeei*, sp. n., p. 308.

355. **Holotrochus annandalei.**

Holotrochus annandalei Bernh., Ent. Blätt. vii, 1911, p. 56.

Shining, pitchy-black, antennæ, palpi, and legs ferruginous; head finely and less closely, thorax more strongly and closely punctured, transverse; elytra rather strongly and rather

closely punctate-striate; abdomen more finely, rather closely punctured. Length 4·5 mm.

Differs from *H. minusculus* Fauv. in the obviously broader and more robust build, being about half as large again; the colour is lighter, the elytra more reddish, the head is scarcely more strongly, but more closely punctured, the thorax more finely and closely; the thorax is much shorter. Elytra more strongly and much more thickly, more seriately punctured. Abdomen much more strongly, distinctly and thickly punctured.

Travancore: Kulattupuzha, W. Ghats, 19. xi. 08 (*Annandale*) (ex *Bernhauer*).

356. **Holotrochus chatterjeei**, sp. n.

Shining black, the apex of the abdomen ferruginous, extremely finely punctured. Antennæ and legs ferruginous. Length 2 mm.

Head extremely finely, sparingly punctured, obscurely coriaceous. Antennæ with the 4th joint as long as broad, the 5th to 10th transverse, the penultimate twice as broad as long. Thorax transverse ($4\frac{1}{2}$: 3), rounded and widest at the middle, from thence equally retracted in a straight line in front and behind, the surface without impressions, the sculpture as on the head. Elytra one-third longer than, but as broad as, the thorax, a little broader than long, yet more finely and not very closely punctured. Abdomen a little more distinctly but sparingly punctured, feebly coriaceous.

Dehra Dun: Golattappar. Bred from *Odina wodier* (*N. C. Chatterjee*).

Subfamily III. OXYPORINÆ.

This subfamily contains a single genus, *Oxyporus* F., and consists of rather large and robust species. The head is large and prominent, scarcely constricted behind, the neck thick. Mandibles prominent. Eyes rather small, temples long. Antennæ inserted under the margin of the head in front of the eye; clypeus short, separated by a fine transverse line from the front. Gular sutures distinct, parallel, the gular plate long. Labrum rather large, slightly transverse, chitinous, the anterior border narrowly membranous, broadly rectangularly emarginate, closely ciliate. Mentum broad behind, considerably narrowed in front, the sides emarginate, keeled in the middle below, in front produced on each side into a short broad lobe with rounded apex. Labium elongate, well developed, chitinous; tongue very short, transverse, broadly

feebly emarginate in front, ciliate; paraglossæ well developed, elongate, pointed, extending beyond the tongue, densely ciliate. Labial palpi 3-jointed, the 1st joint short, curved, the 2nd elongate, a little thickened towards the apex, the 3rd very large, transverse, triangular, inserted at the inner border of the 2nd at the apex. Inner lobe of maxilla pointed, triangular, densely ciliated; outer lobe extending beyond the inner, wider at the truncate apex, which is densely ciliated. Maxillary palpi with the 1st joint short, 2nd elongate, a little thickened towards the apex, 3rd shorter, a little thickened towards the apex, the 4th about as long as the preceding, the apex rounded and a little narrowed. Mandibles very long, rather slender, pointed, the left with a tooth on the under surface about the middle, which is not visible from above. Prosternum short and broad, its process slender, extending about half the length of the coxæ, these prominent. Epipleura narrow; epimera triangular, separated from the epipleura by a suture. Mesosternum very short and broad, transversely sulcate, without process. Metasternum large, extending as a broad process between the middle coxæ to the mesosternum, its posterior margin on each side slightly emarginate, in the middle angulate; middle coxæ widely separated. Metathoracic episterna narrowed behind: the epimera widened behind and extending a little beyond the episterna. Scutellum small. Abdomen not keeled below at the base. Legs rather slender, tibiæ setose. Tarsi 5-jointed, the 1st joint shorter than the 2nd, this elongate, 3rd and 4th short, subequal, 5th elongate; claws simple.

The genus is found in fungus, where it preys on dipterous larvæ. It is distributed throughout the world except Australia, New Guinea, Tropical Africa, and South America.

Key to the Species of Oxyporus.

1. Thorax with two transverse sulci, one behind the anterior border, the other a little before the middle	2.	
Thorax with a single transverse sulcus before the middle or without sulcus	3.	
2. Head entirely red; elytra with a large triangular black spot occupying the postero-external region from the apex of the suture to the posterior half of the reflexed margin	*birmanus*, sp. n.	p. 311.
Head red, with transverse black fascia along the anterior margin; elytra with a round black spot at the postero-external angles	*bucephalus* Fauv.,	[p. 310.
3. Thorax with single transverse sulcus	4.	
Thorax without sulcus	9.	

4.	Black species, the elytra with narrow oblique yellow streak near the postero-external angles	*stigmaticus*, sp. n., [p. 311.
	Species in great part red or reddish-yellow	5.
5.	Thorax entirely black	6.
	Thorax entirely or in part red	7.
6.	First three abdominal segments entirely red; elytra more coarsely and closely punctured	*apicata*, nov. nom., [p. 311.
	First two abdominal segments reddish-yellow, occasionally slightly infuscate in the middle; elytra more finely, less closely punctured	*flavicornis* var. *nigriceps* *flavicornis* Schnb., [Cam., p. 312.
7.	Thorax entirely red	8.
	Thorax in part black	[p. 312.
8.	Elytra reddish-yellow, with large triangular black spot extending from the apex of the suture to the posterior half of the reflexed margin	*cephalotes*, sp. n., p. 313.
	Elytra black, at the base with large transverse yellow spot not reaching the suture	*variegatus*, sp. n., p. 313.
9.	Thorax red with black markings. Abdomen with the first two segments reddish-yellow, the rest black	*stigma* Fauv., p. 313.
	Thorax black. Abdomen black, the lateral margins of the first three segments yellow	10.
10.	Antennæ entirely testaceous; thorax strongly transverse, trapezoidal	*dohertyi*, sp. n., p. 314.
	Antennæ black, the base testaceous; thorax scarcely transverse	*nigricornis*, sp. n., [p. 314.

357. Oxyporus bucephalus.

Oxyporus bucephalus Fauv.*, Rev. d'Ent. xiv, 1895, p. 204.

Shining, red, the mandibles, the front to the posterior margin of the eyes, a rounded spot at the postero-external angles of the elytra, the 4th segment of the abdomen (except the sides and adjacent area of the base), the whole of the 5th, and the base and sides of the 6th segment black. Antennæ and legs testaceous. Length 11 to 12 mm.

Head large, transverse, widest behind at the rounded posterior angles, temples about as long as the eyes, in front impressed on each side, practically impunctate. Antennæ short, the 3rd joint a little longer than the 2nd, 4th and 5th about as long as broad, 6th to 10th strongly transverse and compressed. Thorax transverse, a good deal narrower than the head, the sides rounded, more retracted behind, immediately behind the anterior border with a narrow, straight, transverse sulcus, across the middle with a broader sinuate sulcus, both extending to the side-margins, on either side of the middle before the base with a short longitudinal sulcus, the whole

surface almost impunctate. Elytra a little longer than the thorax, as broad as the head, middle of the disc impressed and with numerous punctures, the outer ones more or less biseriate. Abdomen almost impunctate.

Burma: Carin Cheba, alt. 900 to 1100 metres, vi., xii. 88 (*L. Fea*).

358. **Oxyporus birmanus**, sp. n.

Head and thorax shining red, elytra reddish-yellow, the postero-external region from the apex of the suture to the posterior half of the reflexed margin black. Abdomen black, the first two segments entirely, the sides of the 3rd and apex of the last reddish-yellow. Mandibles ferruginous-red. Antennæ testaceous, darker along the middle. Coxæ and legs entirely testaceous. Length 7·3 mm.

Very similar in build to *O. apicata* Cam., but the thorax more retracted behind and with a narrow transverse sulcus behind the anterior margin; the elytra are less coarsely punctured.

Burma: Ruby Mines.

359. **Oxyporus stigmaticus**, sp. n.

Shining, black, the elytra near the postero-external angles with a narrow oblique yellow streak. Mandibles and palpi black. Antennæ black, the first four joints more or less testaceous. Coxæ black, femora yellow, the base and apex black, tibiæ black, tarsi more or less testaceous. Length 7·5 mm.

At once distinguished from all the Indian species by the colour. In build very similar to *O. apicata*, but the head a little shorter. The thorax is without trace of anterior sulcus, but the ante-medial one is well marked whilst the longitudinal pre-basal ones are entirely absent; the elytra have two distinct rows of close and rather small punctures and a few irregular ones nearer the suture.

Burma: Ruby Mines.

360. **Oxyporus apicata**, nov. nom. (Plate III. fig. 3.)

Oxyporus apicalis Cam., Trans. Ent. Soc. Lond. 1914, p. 529 (præoc.).

Black, shining, elytra red anteriorly; abdomen with first three visible segments, the extreme sides of the fourth, and the apex of the last red. Antennæ, palpi, femora (except the extreme base), and tarsi testaceous, the tibiæ and extreme base of the femora black. Length 7 to 10 mm.

Head larger than the thorax, scarcely dilated behind the

eyes, black, shining, impressed on the front and with a single puncture near posterior margin of each eye, otherwise impunctate; clypeus testaceous, mandibles black. Antennæ with 2nd to 4th joints a little longer than broad, the subsequent gradually strongly transverse. Thorax scarcely broader than long, broadest just before the middle, narrowed posteriorly in a straight line; disc with a longitudinal impression on either side of the middle line posteriorly and a transverse impression across the middle from side to side. Prosternum black, rest of pectus red. Scutellum impunctate, reddish. Elytra scarcely broader than long, more than the posterior third black and the suture narrowly black almost to the scutellum, the colours are not sharply defined from each other. Puncturation coarse and scattered. Abdomen with the first three visible segments red, 4th black, with the lateral margins and a small triangular adjacent area at the base red; 5th entirely black, 6th black with apex testaceous.

Burma: Ruby Mines (*Brit. Mus. Coll.*).

361. **Oxyporus flavicornis.**

Oxyporus flavicornis Schub., D. E. Z. 1908, p. 623.
Oxyporus flavicornis var. *nigriceps* Cam., Trans. Ent. Soc. Lond. 1924, p. 178.
Oxyporus flavicornis var. *maculatus*, nov.

Shining, red; the mandibles and front margin of the head narrowly black; scutellum black; elytra reddish-yellow, the posterior margin and the postero-external angles broadly black; meso- and metasternum black; abdomen with the first two (visible) segments reddish-yellow, the 3rd and 4th (except at the sides) black, 5th entirely black, 6th black, the posterior margin narrowly yellow; anal styles yellow. Antennæ and legs yellow, the tibiæ and coxæ blackish. Length 9·5 to 11 mm.

Var. *nigriceps*. Head and thorax entirely black; 2nd (visible) dorsal segment a little infuscate in the middle.

Var. *maculatus*. Head and thorax more or less spotted with black. Between the type-form and the varieties every grade of replacement of red by black is found.

Head large, slightly widened behind the eyes and gradually narrowed to the base; in front with a triangular impression, sparingly, scarcely perceptibly punctured. Antennæ with the penultimate joints three times as broad as long. Thorax a good deal narrower than the head, about as long as broad, with a transverse sulcus across the middle and a short longitudinal sulcus on each side before the base. Elytra much broader than the thorax, more or less serially punctured on the disc. Abdomen almost impunctate.

Simla Hills: Theog; Narkanda, alt. 7600 to 9200 feet. Almora: Kali Valley, alt. 9000 feet.

362. **Oxyporus cephalotes**, sp. n.

Shining, head yellowish-red, not or scarcely infuscate along the anterior border and on the vertex; thorax yellowish-red, with a transverse black fascia (not extending to the anterior angles) from the anterior border to the median sulcus, posterior margin with a narrower black fascia, its anterior border emarginate in the middle; elytra yellow, with a black triangular mark extending from the apex of the suture to the middle of the reflexed margin; abdomen black, the first two segments entirely, the sides of the 3rd, posterior margin of the 5th, and whole of the 6th reddish-yellow. Mandibles black. Antennæ, palpi, and legs entirely testaceous. Length 7·5 to 11 mm.

Head large, suborbicular, truncate in front, broader than the thorax. Thorax with transverse sulcus just before the middle, the longitudinal pre-basal sulci feeble. Elytra with two rows of rather fine, close punctures and some larger scattered ones nearer the suture.

Burma: Ruby Mines.

363. **Oxyporus variegatus**, sp. n.

Head reddish-yellow, with large V-shaped black spot on the vertex. Thorax black, with a transverse reddish-yellow fascia across the middle, narrow in the centre and dilated externally. Elytra black, with large transverse reddish-yellow basal spot extending from the shoulder but not reaching the suture. Abdomen black, the first two segments, the sides of the 3rd, posterior margin of the 5th, and whole of the 6th reddish-yellow. Mandibles black. Antennæ and palpi testaceous. Legs testaceous, the apical half of the tibiæ black. Length 7 mm.

Head suborbicular, truncate in front. Thorax with transverse sulcus just before the middle, the longitudinal pre-basal sulci feeble. Elytra with two rows of rather fine punctures and with a few scattered ones nearer the suture.

Burma: Ruby Mines.

364. **Oxyporus stigma**.

Oxyporus stigma Fauv.*, Rev. d'Ent. xiv, 1895, p. 203.

Shining; head black, thorax red in front, with a triangular black mark with the apex at the middle, on each side with another extending from the anterior angles to behind the middle; elytra red, the postero-external angles black;

abdomen with the first two visible segments reddish-yellow, the 3rd black, with the sides and apex narrowly yellow, 4th and 5th entirely black, 6th yellow, with the sides black. Antennæ with the first three joints testaceous, the following brown, yellowish externally. Legs reddish-yellow. Length 9 mm.

Near *O. rufus* L., but with larger eyes, narrower thorax, longer and more slender antennæ and different coloration. Head large, transverse, wider than the thorax, the post-ocular region as long as the eye, in front with an impression on each side; scarcely perceptibly punctured. Antennæ with the 5th to 10th joints strongly transverse. Thorax about as broad as long, the sides gently rounded in front, more retracted behind, convex, lightly impressed at the sides, scarcely punctured. Elytra about as long as the thorax, slightly transverse, uneven, the middle of the disc impressed and with two rows of punctures, the outer abbreviated behind. Abdomen practically impunctate.

Burma: Carin Cheba, alt. 900 to 1100 metres, vi., xii. 88 (*L. Fea*).

365. **Oxyporus dohertyi**, sp. n.

Head and thorax black, shining, the anterior margin of the latter obscurely pitchy. Elytra reddish-yellow, the postero-external angles and posterior half of the reflexed margin black. Abdomen black, the lateral margins of the first three segments yellow. Mandibles black. Antennæ, palpi, and legs reddish-testaceous. Length 7·75 mm.

Readily recognised by the colour and the absence of sulci on the thorax, which is more trapezoidal in shape than the other species. The two rows of punctures on the elytra are abbreviated and the space near the suture almost impunctate.

Burma: Ruby Mines.

366. **Oxyporus nigricornis**, sp. n.

Colour of *O. dohertyi*, but at once distinguished from it by the colour of the antennæ; these have the 1st joint testaceous, the 2nd to 4th pitchy-testaceous, the rest black except for the extreme lateral margins of the joints and the apex of the 11th which are testaceous. The build is likewise less robust, the head smaller, the thorax scarcely transverse, not trapezoidal, the sides rounded. The palpi are dark. Length 6·5 mm.

Burma: Ruby Mines.

Subfamily IV. MEGALOPINÆ.

Megalopinæ Sharp, B. C.-A. i, 2, 1882–87 (1886) p. 668.
Oxytelini, Subtribus *Megalopini* Er., Gen. Spec. Staph. 1839–40, p. 750.
Oxytélides, Sous-tribu i, *Mégalopides* Lac., Gen. Col. ii, 1855, p. 110.
Mégalopides Motsch., Bull. Mosc. xxx, 1857, ii, p. 509.
Oxytelini, Group i. *Megalopes* Lec. & Horn, Class. Col. N. Amer. 1883, p. 102.

This subfamily is represented only by a single genus.

Genus MEGALOPSIDIA Leng.

Megalopsidia Leng, Jl. N. York Ent. Soc. xxvi, 1918, p. 204.
Megalops Er., Gen. Spec. Staph. 1839-40, p. 751; Lac., Gen. Col. ii, 1855, p. 111; Sharp, Trans. Ent. Soc. Lond. 1876, p. 378; B. C.-A. i, 2, 1882–87 (1886) p. 668 (præoc.).
Subgen. *Megalops*, s. str., Ben., Ent. Blätt. xiii, 1917, p. 190 (præoc.).
Subgen. *Stylopodus* Ben., id.
,, *Perostylus* Ben., id.

The species of this genus have a facies much resembling the STENINÆ, the eyes being large and prominent, occupying the whole of the side of the head, and the thorax being narrower than the head and elytra; the insects are glabrous, coarsely punctured, the thorax transversely sulcate, the elytra ample, uneven, the abdomen with a little oblique stria at the sides of the segments (at least in our species) and practically impunctate, antennæ 11-jointed. Clypeus very short, more or less separated from the front by a sulcus, the anterior angles acutely pointed, unarmed, the anterior border truncate. Labrum transverse, chitinous, produced on each side into a long, pointed, prominent process†, the anterior margin and the inner margin of the process closely ciliate. Mentum horny, subquadrate, a little narrowed towards the front. Labrum horny, longer than broad, rounded behind, truncate in front, the sides scarcely emarginate. Tongue consisting of two triangular lobes united by a short commissure at the base; paraglossa distinct, ciliated, not extending beyond the tongue. Labial palpi with the 1st joint rather long, the 2nd about as long as broad, 3rd a little longer than the 1st, oval, a little narrowed at the apex, its outer border curved. Inner lobe of maxilla triangular, the apex with a strong, curved tooth, the inner margin with numerous slender spines; outer lobe extending beyond the inner, its apex rounded, spinose.

† These have sometimes been referred to as "clypeal spines"; they have, however, nothing to do with the clypeus.

Maxillary palpi with the 1st joint short, 2nd and 3rd elongate, about equal in length, the 4th oval, a little longer than the 3rd. Mandibles exserted, pointed, lightly curved, the right with one or two little teeth on the inner border, the left with a similar tooth and another on its under surface not visible from above. Antennæ 11-jointed, the last two joints larger than the preceding, forming a club. Prosternum large, transversely sulcate behind the anterior border, its process short and sharp: epipleura and epimera fused together, the latter with pointed apex. Mesosternum keeled, its process keeled, extending for about two-thirds the length of the coxæ, narrowly truncate at the apex and meeting the metasternal process, the coxæ moderately separated. Metasternum large, slightly emarginate on each side behind; episterna and epimera long and narrow. Scutellum rather large, rounded behind. Abdomen bordered, the base below with a median keel. Legs moderate; tibiæ without teeth or spines. Tarsi (in the Indian species) distinctly 5-jointed, the 1st joint moderately long, the 2nd to 4th gradually shorter, the 5th longer than the 1st, about as long as the three preceding together; claws slender.

The genus is distributed throughout the tropics, and frequents fungus growing on fallen trees. Only two species have so far been found in India, and they both belong to the subgenus *Megalopsidia* s. str., in which the tarsi are distinctly 5-jointed, as described above.

Key to the Species.

Elytra with a longitudinal yellow fascia adjacent to the posterior half of the suture; legs testaceous, the apex of the femora and the tibiæ infuscate. Head less coarsely, more closely punctured .... *sexdentata* Cam., [p. 316

Elytra without such fascia; legs entirely testaceous. Head more coarsely, less closely punctured ..... *subfasciata* Champ., [p. 317.

367. **Megalopsidia sexdentata.**

Megalops sexdentatus Cam., Trans. Ent. Soc. Lond. 1914, p. 529.

Black, shining, elytra partly yellow. Thorax viewed from above with three distinct teeth on either side. Antennæ ferruginous, with black club, palpi testaceous, femora pale testaceous (except the apex and extreme base, which are brown), tibiæ ferruginous, tarsi testaceous. Length 3·2 mm.

Head large, distinctly broader than the thorax, rather coarsely and closely punctured, with an irregular smooth space in front between the eyes. Antennæ short, 1st joint rather short and stout, 2nd stouter, and much shorter than

3rd, which is elongate, 4th quadrate, 5th to 7th scarcely longer than broad, 8th as long as broad, 9th strongly transverse, 10th much larger and broader than 9th, 11th large, oval. Thorax as long as broad, broadest in front, viewed from above with three teeth on either side, one at the anterior angles, one before the middle, and one near the posterior angles: deeply impressed with four more or less transverse coarsely punctured grooves, the ridges between these smooth and shining: the first groove follows the anterior margin and is not interrupted on the middle line of the disc, the 2nd and 3rd are both interrupted by a narrow longitudinal keel, the 4th follows the posterior margin and is not interrupted; the 3rd ridge has a large puncture on either side. Elytra transverse, shorter than the thorax, shoulders prominent, dilated and rounded at the sides: disc irregular, the surface of each with three elevations or calli, one longitudinal near the suture, one passing back from the humeral angle, the 3rd rounded and situated at the middle of the lateral border: the depressions between the calli present some large irregular punctures, the rest of the surface smooth and shining, black, with an irregular yellow band passing from near the base of the suture outwards and slightly backwards to the middle of the lateral border, but not quite reaching it, and an elongated yellow patch reaching from the inner end of the 1st to the posterior margin along the suture: nowhere, however, does the yellow coloration involve the margins, which are entirely black. Abdomen smooth and shining, the first five visible segments with an oblique stria on either side of the base.

Ceylon: Galle. Assam: Patkai Mountains (*Brit. Mus. Coll.*)

368. **Megalopsidia subfasciata.** (Plate III. fig. 4.)

Megalops subfasciatus Champ.*, E. M. M. lix, 1923, p. 45.

Black, shining; the elytra with an uneven yellow fascia across the middle, extending from the reflexed margin but not reaching the suture, widest internally; apex of mandibles reddish-testaceous. Antennæ reddish-testaceous, the last joint infuscate. Legs testaceous. Length 4·5 mm.

Readily distinguished from *M. sexdentata* by the different colour-pattern of the elytra and the entirely testaceous legs. Head as broad as the elytra, coarsely, somewhat irregularly but rather closely punctured. Antennæ with the 9th and 10th joints transverse, the 10th much broader than the 9th, the 11th large, stout, oval. Thorax transverse, the sides rounded, each with four little teeth; the upper surface with four transverse sulci separated by three shining, smooth ridges, the 3rd sulcus divided in the middle by a shining impunctate keel; sulci

closely punctured. Elytra ample, convex, uneven, as long as but broader than the thorax, with a large longitudinal humeral, a smaller longitudinal discal, and a yet smaller, rounded, lateral callus, the calli smooth, the rest of the surface rather coarsely and rather closely punctured. Abdomen practically impunctate, on either side with a small oblique stria on the first five segments.

Kumaon: Ranikhet, vii. 1921 (*H. G. Champion*). Also in the Malay Peninsula.

Subfamily V. STENINÆ.

Steninæ Sharp, B. C.-A. i, 2, 1882–87 (1886) p. 640; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 546; Reitt., Faun. Germ. ii, 1909, p. 153.

Stenini Er., Käf. Mark. Brand. i, 1837–39 (1839), p. 526; Gen. Spec. Staph. 1839–40, p. 687 (excl. *Euæsthetus*); Kr., Nat. Ins. Deutsch. ii, 1856–58, p. 732 (excl. *Euæsthetus*); Lec. & Horn, Class. Col. N. Amer. 1883, p. 97; Lynch, Bol. Soc. Ac. Nac. Cordoba, vii, 1884, p. 331; Casey, Rev. Stenini America north of Mexico, 1884, p. 3.

Sténides Lacord., Gen. Col. ii, 1854, p. 106 (excl. *Euæsthetus*).

Stenites Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 50 (excl. *Euæsthetus*).

Stenina Thoms., Skand. Col. ii, 1860, p. 210.

Stenini, Sect. ii. *Steni* Fauv., Faun. Gallo-Rhén. iii, 1872, p. 224.

Stenides Muls. et Rey, Ann. Soc. Agr. Lyon, (5) viii, 1875, p. 205; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 175.

Head constricted behind, the neck thick, the eyes large and prominent. Antennæ 11-jointed, freely inserted at the inner margin of the eye, the last three joints forming a slender club. Clypeus fused with the front. Labrum transverse, horny, broadly rounded in front. Gular sutures separated, parallel, submentum elongate; mentum subquadrate. Mandibles long and slender, curved, pointed, each with a long sharp tooth at the middle of the inner margin, the tooth itself and the margin behind denticulate. Inner lobe of maxilla triangular, the inner margin densely ciliate; outer lobe oblong, its apical margin densely ciliate. Maxillary palpi elongate, the 1st joint long, about half as long as the 2nd, 3rd as long as or longer than the 2nd, slightly thickened apically, 4th minute, subulate. Prosternum well developed, its process pointed, slightly produced between the prominent coxæ; epimera trapezoidal, fused externally with the epipleura. Mesosternum well developed, its process acute or blunted at apex, extending about two-thirds of the length of the coxæ, these moderately separated. Metasternum long, its process short, rounded at apex and meeting that of the mesosternum, on either side behind rather deeply and broadly emarginate, in the middle produced into a short, broad, bilobed process; episternum not separate;

epimeron elongate, widened and free behind. Abdomen keeled at the base below; 7th ventral segment with a short spine or short bunch of hairs on each side (*Stenus*), or a bunch of long fine hairs (*Dianous*). Scutellum small. Anterior coxæ conical, prominent; intermediate globose; posterior short, conical. Tibiæ without teeth or spines externally. Tarsi 5-jointed, variable, the 4th joint often bilobed.

This subfamily comprises only two genera.

Key to the Genera of the Steninæ.

Eyes very large, occupying the whole side of the head, temples wanting; 7th ventral segment with a short spine or short bunch of hairs on each side	STENUS Latr., p. 319.
Eyes large, temples present; 7th ventral segment with a tuft of long fine hairs on each side	DIANOUS Sam., p. 404.

Genus **STENUS** Latr.

Stenus Latr., Préc. Car. gén. Ins. 1796, p. 77; Er., Käf. Mark. Brand. i, 1837–39 (1839) p. 528; id., Gen. Spec. Staph. 1839–40, p. 689; Kr., Nat. Ins. Deutsch. ii, 1856–58, p. 740; Jacq. du Val, Gen. Col. d'Eur. ii, 1858, p. 51; Thoms., Skand. Col. ii, 1860, p. 211; Rye, E. M. M. I. 1864–65. p. 6; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 225; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 180; Lynch, Bol. Ac. Nac. Cordoba, vii, 1884, p. 332; Shp., B. C.-A. i, 2, 1882–87 (1886) pp. 640, 798; Meinert, Vidensk. Medd. math. For. Kopenh. 1884–86, pp. 180–207, t. 15, 16; Zool. Anz. x, pp. 136–139; Casey, Ann. N. York Ac. vi, 1892, p. 711; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 549.

Subgen. *Stenus*, s. str., Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 183; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 552.

Subgen. *Nestus* Rey, ibid. p. 183; Ganglb., ibid. p. 552.

Subgen. *Tesnus* Rey, ibid. p. 183; Ganglb., ibid. p. 552. [*Mutinus* Cas., Rev. Sten. Amer. north of Mexico, 1884, p. 186.]

Subgen. *Hypostenus* Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 183; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 555. [*Areus* Cas., *l. c.* p. 150 (ex parte); *Astenus* Lynch, Bol. Ac. Nac. Cordoba, vii, 1884, p. 341; *Hemistenus* Motsch., Bull. Mosc. xxxiii, 1860, ii, p. 557 (ex parte); *Stenosidotus* Lynch, *l. c.* p. 338.]

Subgen. *Hemistenus* Motsch., Bull. Mosc. xxxiii, 1860, ii, p. 557 (ex parte). [*Areus* Cas., *l. c.* p. 150 (ex parte); *Mesostenus* Rey, *l. c.* p. 183; *Parastenus* Heyd., W. E. Z. xxiv, 1905, p. 262.]

STRUCTURE.—Benick, D. E. Z. 1915. pp. 235–247.

BIOLOGY.—Schiødte, Nat. Tidskr. 3, viii, 1872–73, pp. 548–552, t. 18, ff. 1–9; Ganglb., Käf. Mitt. Eur. ii, 1895, pp. 547, 551.

Characters similar to those of the subfamily except in the structure of the labium and mentum; this latter is subquadrate, strongly keeled in the middle below, the keel produced forwards as a short tooth; the labium is very long and narrow, truncate in front, the tongue completely divided into two pedun-

culated round lobes, separated by the insertion of the labial palpi; paraglossæ not evident; labial palpi rather long, the 1st joint elongate and slender, slightly curved and slightly thickened apically, 2nd short, oval, much broader than the 1st, 3rd minute, subulate. In repose the labium rests on the mentum and submentum, but can be extended beyond the mandibles when in use. The species are widely distributed throughout the globe, usually in the vicinity of water.

Key to the Subgenera.

1.	First tarsal joint at most slightly emarginate	2.
	First tarsal joint distinctly bilobed	4.
2.	Abdomen completely margined throughout	3.
	Abdomen not, or only the first and second segments very finely margined. Posterior tarsi short, the 1st joint as long as the last	Tesnus Rey.
3.	Posterior tarsi long, the 1st joint longer than the last	Stenus, s. str., p. 320.
	Posterior tarsi short, the 1st joint not longer than the last	Nestus Rey.
4.	Abdomen not, or very indistinctly, margined on 1st, 5th, and 6th segments only	[p. 347. Hypostenus Rey.
	Abdomen completely and distinctly margined	5.
5.	Posterior tarsi short, the 1st joint about as long as the last	Hemistenus Motsch.
	Posterior tarsi long, the 1st joint longer than the last	[p. 383. Mesostenus Rey.

In this work the species are divided amongst *Stenus*, *Hypostenus*, and *Mesostenus*. No examples of the subgen. *Hemistenus* are as yet known in our Fauna.

Key to the Species of Stenus, *s. str.* + Tesnus + Nestus.

1.	Abdomen very finely bordered, cylindrical as in *Hypostenus*	*lugubris*, sp. n., p. 347.
	Abdomen normally bordered	2.
2.	Elytra with a reddish spot behind on each	*kraatzi* Bernh., p. 322.
	Elytra immaculate	3.
3.	Black, bronze-black, or leaden black species.	4.
	Metallic green, blue, or coppery species, at least in part	24.
4.	Legs entirely or in great part dark	5.
	Legs entirely or in great part testaceous or reddish-testaceous	11.
5.	Larger (5 to 6·75 mm.). Elytra with rugæ; base of femora reddish testaceous.	6.
	Smaller (2·2 to 4 mm.). Legs entirely black or reddish-brown	7.
6.	Abdomen finely punctured	*tortuosus*, sp. n., p. 324.
	Abdomen coarsely punctured	*sikkimensis* Cam., p. 324.

7.	Elytra with distinct rugæ behind; 1st joint of posterior tarsi longer than the last	*confluens* Cam., p. 325.
	Elytra normally punctured; 1st joint of posterior tarsi as long as the last	8.
8.	Basal segments of the abdomen with median keel	*simlaensis*, sp. n., p. 345.
	Basal segments of abdomen without median keel; more or less crenulate	9.
9.	Thorax even, simply punctured	10.
	Thorax uneven, transversely rugulose	*nigripes*, sp. n., p. 342.
10.	Abdomen more broadly bordered, finely and rather sparingly punctured	*annamita* Fauv., p. 341.
	Abdomen narrowly bordered, moderately coarsely and moderately closely punctured	*fuscipes* Gr., p. 343.
11.	Basal segments of the abdomen with median keel	12.
	Basal segments of the abdomen without median keel	18.
12.	First two joints of the antennæ dark	13.
	First two joints of antennæ light	16.
13.	Basal segments of abdomen without lateral keels	*rugicollis* Kr., p. 337.
	Basal segments of abdomen with lateral keels	14.
14.	Thorax distinctly sulcate. Larger (5 to 5·75 mm.)	15.
	Thorax not sulcate. Smaller (3·3 mm.)	*carinatus* Cam., p. 345.
15.	Elytra shorter than the thorax. Larger (5·75 mm.)	*venator* Fauv., p. 328.
	Elytra as long as the thorax. Smaller (5 mm.)	[p. 327. *clavicornis* Scop.,
16.	Thickly pubescent species; 3rd joint of palpi testaceous; anterior abdominal segments without lateral keels	*hirsutus*, sp. n., p. 342.
	Normally pubescent species	17.
17.	First joint of posterior tarsi much longer than the last; anterior abdominal segment without lateral keel	*diffidens* Cam., p. 329.
	First joint of posterior tarsi not longer than the last; anterior abdominal segment with lateral keel	[p. 337. *chatterjeei*, sp. n.,
18.	Thorax distinctly sulcate	19.
	Thorax not or scarcely sulcate	21.
19.	Sides of thorax crenulate. Larger (5 to 5·5 mm.)	*crenicollis* Epp., p. 327.
	Sides of thorax even. Smaller (3·3 to 4 mm.)	20.
20.	Larger (4 mm.). Elytra a little longer than the thorax; head more deeply bisulcate	*musicola*, sp. n., p. 339.
	Smaller (3·3 mm.). Elytra as long as the thorax; head feebly bisulcate	*morosus*, sp. n., p. 339.
21.	Larger (4·3 to 4·5 mm.)	22.
	Smaller (2·5 to 3·75 mm.)	23.

22.	Elytra a little longer than the thorax; sculpture less coarse; knees infuscate ..	*collium* Fauv., p. 336.
	Elytra as long as the thorax; sculpture coarser; knees scarcely infuscate	*comes* Fauv., p. 336.
23.	Larger (3·2 to 3·75 mm.). Head narrower than the elytra at the widest part, these longer than the thorax.....	*peratus*, sp. n., p. 344.
	Smaller (2·5 mm.). Head as broad as the elytra at the widest part, these as long as the thorax.....	[p. 342. *inconspicuus*, sp. n.,
24.	Legs entirely black	25.
	Legs in part testaceous	30.
25.	Elytra with rugæ	26.
	Elytra simply punctured.....	28. [p. 335.
26.	Larger (5·2 mm.). Shining dark green ..	*viriditinctus* Champ.,
	Smaller (4·2 to 4·3 mm.).....	27. [p. 326.
27.	Fore-parts blue-black; abdomen black ..	*carinipennis* Bernh.,
	Fore-parts green; abdomen bronze-green .	*cyaneovirens*, sp. n.,
28.	Fore-parts brassy.....	29. [p. 335.
	Fore-parts leaden-blue	*plumbeus*, sp. n., p. 339.
29.	Abdomen black	[p. 330. *seminiger*, Champ.,
	Abdomen distinctly brassy.....	*aeratus*, sp. n., p. 337.
30.	1st joint of posterior tarsi distinctly longer than the last. Elytra with more or less distinct rugæ.....	31.
	1st joint of posterior tarsi not or scarcely longer than the last. Elytra without definite rugæ.....	34.
31.	Antennæ reddish-testaceous, the apical joints more or less infuscate	32.
	Antennæ dark pitchy-red	33.
32.	Abdomen black, scarcely æneous; antennæ long and slender, the penultimate joints much longer than broad; elytra with less distinct rugæ	[p. 333. *nigrovirens* Fauv.,
	Abdomen green; antennæ shorter, the penultimate joints not much longer than broad; elytra with strong oblique rugæ .	[p. 333. *bracteatus* Champ.,
33.	Larger (4·5 to 5·5 mm.). Bright green, antennæ long and slender; sculpture of elytra less coarse	[p. 331. *aurichalceus* Champ.,
	Smaller, 4 mm. Dark green, antennæ shorter; sculpture of elytra much coarser.	[p. 335. *assamensis*, sp. n.,
34.	1st (visible) segment of the abdomen without keels.....	[p. 340. *viridescens*, sp. n.,
	1st (visible) segment of the abdomen with three distinct keels	*beesoni*, sp. n., p. 346.

369. **Stenus kraatzi.** (Fig. 71.) (Pl. III, fig. 5.)

Stenus kraatzi Bernh.*, Ent. Blätt. vii, 1911, p. 59.
Stenus bidentatus Champ.*, E. M. M. lvi, 1920, p. 170.

Black, slightly shining, the elytra with a small round orange spot in the middle of each at about the level of the middle

and posterior thirds. Antennæ black, the 3rd to 6th joints dark brown. Palpi reddish-testaceous, the 3rd joint extensively infuscate. Legs reddish-testaceous, the knees infuscate, tarsi black. Length 4·5 to 5 mm.

Head a little narrower than the elytra, excavate, raised along the middle and sulcate on either side, the whole surface coarsely, closely rugosely punctured. Antennæ reaching the base of the thorax, all the joints longer than broad. Thorax slightly longer than broad, widest about the middle, the sides rounded in front, more retracted and slightly emarginate behind, along the middle narrowly sulcate, the sculpture as on the head. Elytra about a third longer than the thorax



Fig. 71.—*Stenus kraatzi* Bernh., apex of abdomen of ♂; ventral surface.

and very similarly punctured. Abdomen gradually narrowed from base to apex, the first four (visible) segments each with three strong keels, coarsely and very closely punctured, more finely behind; 7th dorsal segment with a slender spine on each side; 7th ventral segment with a rather stout spine on either side. First joint of posterior tarsi longer than the last. ♂: 6th ventral segment rather deeply excised, the apex of the incision rounded; 5th with the posterior margin broadly and slightly emarginate and crescentically impressed, the impression glabrous, the sides shortly keeled; middle tibiæ with a minute black spur at the inner side of the apex.

Simla Hills: Fagu; Theog; Kotgarh; Narkanda. Chakrata district: Khedar and Korawa Khuds; Kanassar. Mussoorie district. W. Almora, Kumaon, alt. 7000 to 9000 feet.

370. **Stenus tortuosus**, sp. n.

Black, moderately shining, the elytra with coarse, confluent, tortuous rugæ. Antennæ black, the 3rd to 6th joints reddish-testaceous. Palpi testaceous, the 3rd joint largely infuscate. Legs black, the base of the femora reddish-testaceous. Length 6·75 mm.

In size and build somewhat resembling *S. bimaculatus* Gyll., but in other respects quite different. Head distinctly narrower than the elytra, along the middle with a shining impunctate keel, on either side broadly impressed, coarsely and closely punctured, the interspaces feebly coriaceous. Antennæ reaching the base of the thorax, all the joints longer than broad. Thorax scarcely longer than broad, widest about the middle, the sides rounded in front, straighter and more retracted behind, before the middle of the base with a short, shining keel, in front of this with a shallow sulcus, just behind the anterior border with an irregular plaque, the whole surface with a coarse, confluent, rugose sculpture, the irregular confluent rugæ with a very fine ground-sculpture. Elytra a little longer than the thorax, uneven, with sharp, irregular, confluent, tortuous rugæ separating large irregular punctures. Abdomen gradually narrowed from base to apex, the anterior segments transversely impressed at the base, the impressions closely and moderately coarsely punctured, the rest more finely and less closely punctured to the apex, ground-sculpture indistinct; penultimate segment on each side with a sharp spine, the last segment with a stout, pointed process on each side. First joint of the posterior tarsi longer than the last.

♂ unknown.

Chakrata district: Chulli Khud, alt. 8000 feet.

371. **Stenus sikkimensis.**

Stenus (s. str.) *sikkimensis* Cam., Ann. Mag. Nat. Hist. (10) ii, 1928, p. 559.

Black, moderately shining; thorax and elytra with coarse confluent rugæ. Antennæ pitchy, the first two joints black. Legs black, the base of the femora and the middle of the tibiæ reddish-testaceous. Length 5 mm.

Near *S. guynemeri* Jacq. du Val., similarly coloured but less shining, the antennæ a little longer, the head broader, more broadly excavated, with a small, scarcely elevated, smooth central plaque, more evenly punctured; thorax longer, less uneven; elytra with very similar but rather coarser sculpture; abdomen much more closely and more coarsely punctured. Head nearly as broad as the base of the elytra, broadly excavated, scarcely elevated along the middle, in the centre

with a small impunctate plaque, otherwise closely and coarsely punctured. Antennæ with all the joints longer than broad. Palpi testaceous, the 3rd joint black. Thorax a little longer than broad, widest at the middle, a little more narrowed behind than in front, scarcely sulcate and scarcely impressed at the sides, with coarse confluent rugæ and punctures. Elytra a little longer than the thorax, with coarse confluent rugæ which tend to become vorticose on the middle of the disc and very coarse confluent punctures. Abdomen gradually narrowed from base to apex, closely and rather coarsely punctured, rather less coarsely behind. Last segment with a short spine on each side.

One ♀ example.

Sikkim: Darjeeling, alt. 7000 feet, 11–20. iii. 1924.

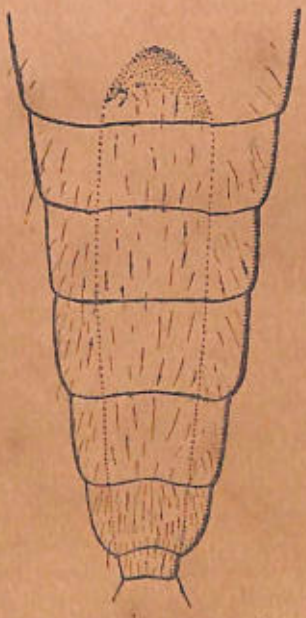


Fig. 72.—*Stenus confluens* Cam., abdomen of ♂ ventral surface.

372. **Stenus confluens.** (Fig. 72.)

Stenus (s. str.) *confluens* Cam., E. M. M. liv, 1918, p. 102.

Bronze-black, shining, with scarcely perceptible æneous reflex on the fore-parts; elytra behind with more or less transverse rugæ. Antennæ and legs black. Palpi with the last two joints black. Length 4 mm.

Near *S. guynemeri* Jacq. du Val., but smaller and less shining, the thorax less uneven, the legs differently coloured. Head narrower than the elytra, the lateral impressions broad and shallow, not much elevated along the middle, which behind has a short shining keel, the rest of the surface coarsely and closely punctured. Antennæ moderate, constructed as in *guynemeri*, all the joints longer than broad. Thorax scarcely longer than broad, widest just before the middle, the sides slightly rounded in front, straighter and more retracted behind, in the middle before the base with a shallow longitudinal sulcus and on each side with a small shining plaque, very coarsely and closely punctured. Elytra longer (7 : 5) than the thorax, uneven, in front coarsely and closely punctured, behind with subtransverse rugæ and coarse, confluent punctures. Abdomen gradually narrowed from base to apex, the anterior segments more or less crenulate at the base, the first two segments moderately coarsely, closely punctured, the following much less coarsely but rather closely punctured. The fore-parts almost glabrous, the abdomen with whitish pubescence which is more evident at the sides. First joint of the posterior tarsi much longer than the last.

♂: 6th ventral segment broadly emarginate, the 1st to the 5th feebly impressed in the middle line throughout.

Sikkim : Lebong, alt. 5000 feet (*H. M. Lefroy*).

373. **Stenus** (s. str.) **carinipennis.**

Stenus carinipennis Bernh., W. Z. B. lxiv, 1914, p. 94.

Belongs to the subgenus *Stenus*, s. str., and very distinct by the colour, sculpture, and structure of the posterior tarsi, and impossible to confuse with any known species. Black, shining ; head, thorax, and elytra blue-black. Head much broader than the thorax, but a good deal narrower than the elytra, broadly but not very deeply excavated, without distinct longitudinal impressions, closely, coarsely, and uniformly punctured all over. Antennæ rather stout, shorter than the head and thorax together, the penultimate joints scarcely as long as broad. Thorax much narrower than the elytra, longer than broad, somewhat widened before the middle, distinctly narrowed and rounded to the base, coarsely, very deeply rugosely punctured except for a small space at the middle of the anterior margin, the raised interspaces confluent. Elytra about a third longer than the thorax, somewhat quadrangular, longer than broad, with angulate shoulders, more strongly and deeply punctured than the thorax, the interspaces, especially on the disc, considerably elevated and forming longitudinally confluent keels and tumid ridges. Abdomen extremely finely and not very thickly punctured,

along the middle and behind sparingly punctured and very shining. Length 4·3 mm.

Chambaganoor, Madura. Two examples (*Donckier*) (ex *Bernhauer*).

374. **Stenus crenicollis.**

Stenus crenicollis Epp.*, W. E. Z. xiv, 1895, p. 65.
Stenus mucronatus Champ.*, E. M. M. lvi, 1920, p. 171 (præoc.).
Stenus bimucronatus Champ.*, id. lix, 1923, p. 180.

Black, moderately shining. Antennæ reddish-testaceous, the club blackish. Palpi testaceous. Legs reddish-testaceous, the knees and tarsi blackish. Length 4·75 mm.

In build very similar to *S. guynemeri* Jacq. du Val, but less shining, the thorax less uneven, the elytra broader, and the sculpture different. Head a little narrower than the elytra, a little elevated along the middle and longitudinally impressed on each side, behind the insertion of the antennæ with a small shining plaque, the rest of the surface closely, coarsely, and rugosely punctured. Antennæ short, the 9th and 10th joints only slightly longer than broad. Thorax as long as broad, widest before the middle, the sides slightly rounded in front, straighter and more retracted behind, crenulate, the front margin distinctly elevated in the middle, in the middle with a broad sulcus abbreviated in front and behind, on each side lightly impressed, the whole surface very coarsely, closely, and rugosely punctured. Elytra at the suture as long as the thorax, at the sides a little longer, the sides rounded, the disc rather flat and punctured like the thorax. Abdomen a little narrowed behind, flatly margined, deeply, closely, and coarsely punctured throughout. First joint of the posterior tarsi longer than the last.

♂: 6th ventral segment triangularly excised. Posterior tibiæ sinuate, with a small tooth at the inner side of the apex; intermediate tibiæ feebly sinuate.

Simla (type). W. Almora, Kumaon (*H. G. Champion*).

375. **Stenus clavicornis.**

Stenus clavicornis Scop., Ent. Carn. 1763, p. 100; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 242; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 564.
Stenus atricornis Steph., Ill. Brit. Ent. v, 1832, p. 294.
Stenus boops Gyll., Ins. Suec. ii, 1810, p. 469; Thoms., Skand. Col. ii, 1860, p. 215; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 234.
Stenus brunnipes Grimmer, Steirm. Col. 1841, p. 33.
Stenus bophthalmus Schrank, Beytr. Naturg. 1776, p. 72.
Stenus canaliculatus Steph., Ill. Brit. Ent. v, 1832, p. 294.

Stenus cicindeloides Ljungh in Web. und Mohr, Arch. i 1804 p. 62.
Stenus nigricornis Steph., Ill. Brit. Ent. v. 1832, p. 293.
Stenus punctatissimus Steph., ibid. p. 293.
Stenus simplex Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 236 (note).
Stenus speculator Boisd. et Lac., Faun. Ent. Paris, i, 1835, p. 445; Er., Käf. Mark. Brand. i, 1839, p. 545; id., Gen. Spec. Staph. 1839–40, p. 706; Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 761.

Black, moderately shining. Anterior segments of the abdomen tricarinate at the base. Antennæ dark, the 3rd to 5th joints brownish. Palpi testaceous. Legs reddish-testaceous, the knees and tarsi blackish. Length 5 to 5·5 mm.

Near *S. venator* Fauv., but a little smaller, similarly coloured, with the elytra as long as the thorax. Head as broad as the base of the elytra, longitudinally impressed on each side, the impressions slightly converging in front, along the middle slightly elevated, coarsely and very closely punctured all over. Antennæ moderate, the 9th and 10th joints slightly longer than broad. Thorax as long as broad, widest at the middle, the sides rounded and retracted in front, straighter and more strongly retracted behind, in the middle behind with a sulcus, the sculpture as on the head. Elytra as long as the thorax and similarly punctured. Abdomen gradually narrowed, the first four segments with distinct median keel at the base, on either side with a less defined one, puncturation rather coarse and close anteriorly, gradually finer and more sparing behind. Apex with a short spine on each side. Fore-parts with short, white, scanty pubescence, the abdomen more distinctly pubescent. First joint of the posterior tarsi longer than the last.

♂: Metasternum impressed along the middle and furnished with long pubescence, the apex of the mesosternal process more closely pubescent. 5th ventral segment impressed along the middle, the impression deeper behind and keeled at the sides, the adjacent posterior border lightly emarginate; 6th almost smooth along the middle and deeply triangularly emarginate behind. Posterior femora a little thickened apically, the inner aspect of the basal half furnished with rather long hairs.

India, without further indication. A single ♀ example in the British Museum. Widely distributed in the Palæarctic region.

376. Stenus venator.

Stenus venator Fauv.*, Rev. d'Ent. xiv, 1895, p. 208.

Black, scarcely shining. Abdomen tricarinate on the basal segments. Antennæ short, reddish-testaceous, the first two

and the last four joints blackish. Palpi testaceous, the 3rd joint infuscate. Legs reddish-testaceous, the knees and tarsi infuscate. Length 5·75 mm.

Head narrower than the elytra at the base, broadly, rather deeply excavated on each side, broadly elevated along the middle, coarsely and rugosely punctured. Thorax longer than broad, nearly cylindrical, only slightly wider before the middle, distinctly sulcate along the middle, coarsely sculptured. Elytra shorter than the thorax, slightly transverse, on each disc with a broad shallow impression. Abdomen with the first four segments tricarinate, coarsely and closely punctured, especially at the bases of the anterior segments, more finely behind; 7th segment with the lateral margin prolonged into a long sharp spine, 8th with a strong curved tooth on each side of the apical border.

♂: 6th ventral segment deeply and narrowly excised, the apex of the excision rounded; 5th crescentically emarginate, behind the emargination deeply impressed, the sides carinate, posteriorly glabrous, 2nd to 4th segments broadly, rather deeply, semicircularly impressed, the impressions on each side furnished with long yellow hairs. Femora stout, the posterior clothed internally with long yellow hairs.

Burma: Carin Cheba; Carin Ghécu, alt. 900 to 1400 metres (*L. Fea*).

377. **Stenus diffidens.** (Fig. 73.)

Stenus diffidens Cam., Trans. Ent. Soc. Lond. 1914, p. 530.

Black, shining, abdomen bordered, with a median keel at the base of the first four visible segments. Elytra ample, as broad as long. Antennæ, legs, and palpi testaceous, the club of the former scarcely infuscate. Fourth joint of the tarsi simple. Length 2·8 mm.

In the build of the fore-parts somewhat similar to *S. bispinus* Motsch., but much less shining and quite distinct by its smaller size and the structure of the tarsi and abdomen.

Head broad, about one-third broader than the thorax, narrower than the elytra, depressed on either side of the front which is elevated and more finely punctured than at the sides, where the puncturation is much stronger and closer. Antennæ moderately long, not reaching the base of the thorax, all the joints longer than broad, the last three forming a club. Thorax about a fourth longer than broad, broadest at the middle, sides slightly rounded and equally narrowed in front and behind, rather coarsely and closely punctured: pubescence whitish, moderate. Elytra ample, convex, as long as the thorax and as broad as long, similarly punctured to the thorax. Abdomen gradually narrowed posteriorly, broadly margined, first four

visible segments with a median keel, puncturation fine and close on the basal parts of the segments, much finer and more sparing on the apical parts, much closer on the last three segments, pubescence whitish, rather distinct. First joint of posterior tarsi longer than the last.

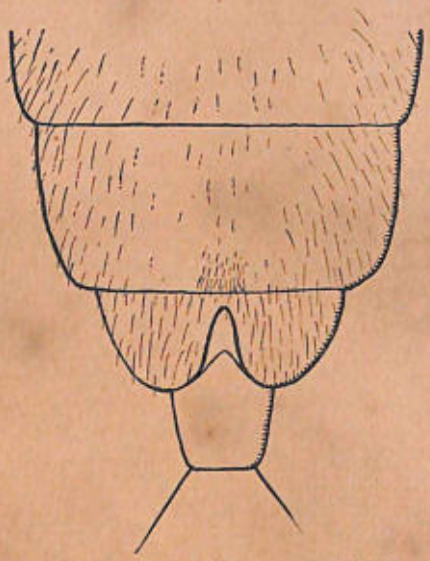


Fig 73.—*Stenus diffidens* Cam., apex of abdomen of ♂; ventral surface.

♂: 6th ventral segment with acute triangular excision, the edges bevelled; 5th more closely punctured and pubescent along the middle behind.

Assam: Sadiya (*Brit. Mus. Coll.*). Naga Hills: Laimatak.

378. **Stenus seminiger.** (Fig. 74.)

Stenus seminiger Champ.*, E. M. M. lvi, 1920, p. 171.

Rather shining, the head and thorax black with bronze-green reflex, the elytra bronze-green, the abdomen black. Antennæ and legs black; palpi with the 3rd joint and the greater part of the preceding black. Length 5 mm.

In build very similar to *S. ater* Mannh., but differently coloured and without a central keel on the basal segments of the abdomen. Head a little narrower than the elytra, broadly excavated and but slightly raised along the middle, coarsely, closely, and deeply punctured all over. Antennæ short, not reaching the base of the thorax, the 9th and 10th joints only slightly longer than broad. Thorax scarcely longer than broad,

widest about the middle, the sides rounded in front and rather distinctly emarginate behind, with a coarse, close, more or less confluent puncturation. Elytra (along the suture) about a third longer than the thorax, with a rather large basal callus, the sculpture very similar. Abdomen narrowed from base to apex, closely, moderately coarsely punctured and more or less crenulate at the bases of the anterior segments, less coarsely elsewhere, the apical segments rather closely and rather finely punctured. The fore-parts very sparingly pubescent, the abdomen more closely, especially at the sides.

♂: 6th ventral segment with broad and deep triangular excision, the edges bevelled; 5th with broad obtuse excision, broadly impressed along the middle nearly to the base of the



Fig. 74.—*Stenus seminiger* Champ., apex of abdomen of ♂; ventral surface.

segment; 4th crescentically excised and with a much broader and deeper impression in the middle, almost reaching the base.

Kumaon: W. Almora (*H. G. Champion*). Chakrata district: Khedar Khud; Bodyar. Simla Hills: Fagu; Theog; Kotgarh; alt. 7000 to 8000 feet.

379. **Stenus aurichalceus.** (Fig. 75.)

Stenus aurichalceus Champ.*, E. M. M. lvi, 1920, p. 172.

Shining, dark green. Antennæ black. Palpi black, the

1st joint testaceous. Femora black, the base reddish-testaceous, tibiæ reddish-testaceous, tarsi dark. Length 4·5 to 5·5 mm.

Head as broad as the elytra, deeply excavated and not raised along the middle, very coarsely and closely punctured. Antennæ reaching the base of the thorax, all the joints longer than broad. Thorax slightly longer than broad, widest a little behind the middle, the sides rounded in front, emarginate behind; in the middle before the base with a short sulcus, slightly obliquely impressed on each side, with coarse, close, more or less confluent punctures. Elytra about a third

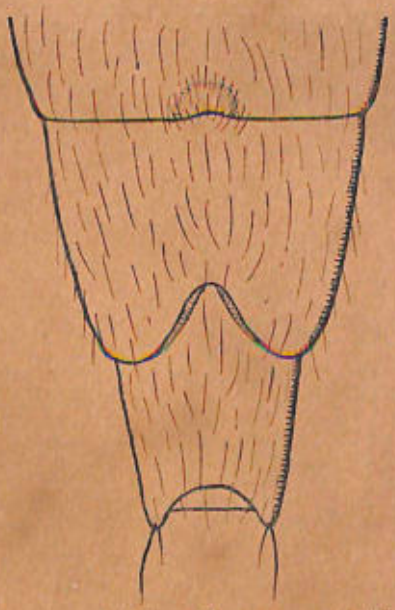


Fig. 75.—*Stenus auricholceus* Champ., apex of abdomen of ♂; ventral surface.

longer than the thorax, longer than broad, with coarse confluent punctures and oblique confluent rugæ, especially at the sutural region. Abdomen narrowed from base to apex, moderately coarsely and closely punctured at the bases of the segments, finely and rather closely elsewhere, the last segment and posterior half of the preceding much less closely. Fore-parts almost glabrous, abdomen finely, moderately closely pubescent. First joint of posterior tarsi longer than the last.

♂: 6th ventral segment deeply triangularly emarginate, the edges bevelled; 5th feebly emarginate and slightly impressed, the impression more closely pubescent.

Kumaon: W. Almora; Naini Tal; Sunderdhunga. Chakrata and Simla Hills.

380. **Stenus bracteatus.** (Fig. 76.)

Stenus bracteatus Champ.*, E. M. M. lvi, 1920, p. 173.

Shining bright green, the abdomen less shining. Antennæ reddish-testaceous, infuscate towards the apex. Palpi testaceous, the 3rd joint infuscate. Legs testaceous, the apex of the femora more or less infuscate. Length 3·5 to 4·2 mm.

Closely allied to *S. aurichalceus* Champ., but smaller and of a brighter colour, the antennæ differently coloured, the femora

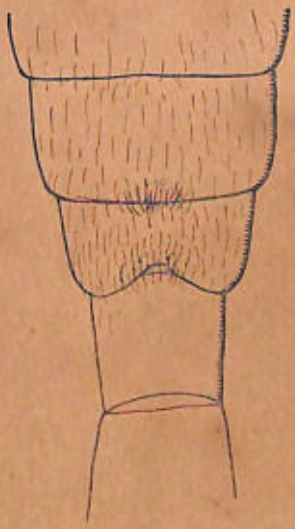


Fig. 76.—*Stenus bracteatus* Champ., apex of abdomen of ♂ ventral surface.

much less deeply infuscate, the sculpture of the fore-parts not so coarse. In build and other respects similar.

♂: 6th ventral segment crescentically emarginate; the 5th a little flattened at the middle of the posterior margin, the flattened area more closely pubescent.

Kumaon: W. Almora; Ranikhet (*H. G. Champion*). Chakrata district: Konain; Manjgaon. Mussoorie: Mossy Falls, alt. 6500 feet.

381. **Stenus nigrovirens.** (Fig. 77.)

Stenus nigrovirens Fauv.*, Rev. d'Ent. xiv, 1895, p. 200.
Stenus cupreoæneus Champ.*, E. M. M. lix, 1923, p. 45.

Moderately shining, the fore-parts green, the abdomen black,

scarcely æneous. Antennæ testaceous, the club infuscate. Palpi with the 3rd joint infuscate. Legs testaceous, the apical half of the femora and the base of the tibiæ slightly infuscate. Length 4 to 5 mm.

In build somewhat similar to *S. biguttatus*, L., but smaller and narrower. Very near *S. aurichalceus*, Champ., but on the average a little smaller, less shining, the antennæ (except the club) testaceous, the femora and tibiæ less deeply infuscate, the head and thorax less coarsely punctured, the elytra with less strongly developed rugæ, the abdomen scarcely greenish. Head as broad as the elytra, deeply excavated, not elevated along the middle, closely and coarsely punctured. Antennæ reaching the base of the thorax, all the joints longer than broad. Thorax scarcely longer than broad, widest at the middle, the sides rounded in front, more retracted and emarginate behind, slightly, obliquely impressed on each side of

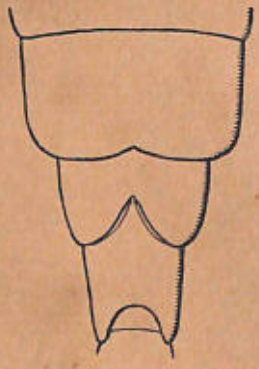


Fig. 77.—*Stenus nigrovirens* Fauv., apex of abdomen of ♂; ventral surface.

the middle, the sculpture more rugose than on the head, Elytra a little longer than the thorax, a little longer than broad, with coarse confluent punctures, behind with more or less confluent rugæ. Abdomen narrowed from base to apex, at the bases of the segments moderately coarsely and closely punctured, elsewhere closely and finely punctured, the last segment more sparingly and less finely. Pubescence on the fore-parts sparing, more obvious on the abdomen. First joint of the posterior tarsi longer than the last.

♂: 6th ventral segment deeply triangularly emarginate; 5th longitudinally impressed along the middle, with the posterior border slightly emarginate.

Burma: Carin Cheba; Carin Asciuii Cheba, alt. 500 to 1300 metres. Kumaon: Bodyar. Mussoorie: Keyarkuli, alt. 6000 feet.

382. **Stenus assamensis**, sp. n.

Shining dark green. Antennæ pitchy-black, the club scarcely lighter. Palpi with the 3rd (except the extreme base) and 4th joints black. Legs black, the base of the femora narrowly reddish-testaceous. Length 4 mm.

Size and build of *S. bracteatus*, Champ., and of the same lustre, but of a much darker green colour, dark antennæ and legs, coarser and more confluent sculpture of the thorax and elytra, the latter with stronger rugæ; in other respects the insects are similar.

♂: 6th ventral segment with a large crescentic emargination with bevelled edges; 5th in the middle behind more closely and finely punctured and pubescent than the rest of the surface.

Naga Hills: Kampison, alt. 6000 feet, in stream moss.

383. **Stenus viriditinctus.**

Stenus viriditinctus Champ.*, E. M. M. lvi, 1920, p. 172.

Shining, dark green, here and there lighter in colour. Antennæ and legs entirely black, the 2nd and 3rd joints of the palpi black. Length 5·2 mm.

Build of *S. aurichalceus* Champ., but a little more robust and of a darker green colour, with entirely dark antennæ and legs. Thorax not sulcate, lightly impressed on either side, more coarsely sculptured with coarser more or less transverse rugæ, the elytra more coarsely punctured with coarser radiating rugæ. Resembling in colour *S. assamensis*, but larger and with entirely dark legs and antennæ, the sculpture also is more like that of *assamensis*.

♂: 6th ventral segment deeply triangularly emarginate.

Kumaon: W. Almora, alt. 6000 feet; Sunderdhunga, alt. 8000 to 12,000 feet (*H. G. Champion*).

384. **Stenus cyaneovirens**, sp. n.

Shining green, the thorax and elytra more or less suffused with blue, the abdomen rather less shining, bronze-green. Antennæ black, the club reddish-testaceous; palpi with the 2nd and 3rd joints black. Legs black. Length 4·2 mm.

In build somewhat similar to *S. fasciculatus* Sahlb. Closely allied to *S. assamensis*, of the same size and build, but more brightly coloured, with less coarsely sculptured thorax and elytra and entirely black legs. Head as broad as the base of the elytra, broadly excavated between the eyes and not elevated along the middle, coarsely and closely punctured. Thorax as long as broad, widest at the middle, the sides rounded

in front, more retracted and emarginate behind, distinctly obliquely impressed on each side at the middle, the sculpture coarse, confluent, and rugose. Elytra nearly a third longer than the thorax, coarsely and closely punctured, posteriorly with numerous oblique, confluent rugæ. Abdomen narrowed from base to apex, at the bases of the segments rather coarsely and closely punctured, the rest much more finely but rather closely to the apex. Fore-parts glabrous, the abdomen finely and moderately closely pubescent. First joint of posterior tarsi longer than the last.

♂: 6th ventral segment with rectangular excision, the margins not bevelled; 5th more thickly punctured and pubescent along the middle.

Assam: Naga Hills, alt. 9000 feet.

385. **Stenus collium.**

Stenus collium Fauv.*, Rev. d'Ent. xiv, 1895, p. 207.

Black, scarcely shining. Antennæ short, yellow, the apical joints infuscate. Palpi reddish-yellow. Legs yellow, knees infuscate. Length 4·5 mm.

In size and build somewhat resembling *S. sylvester* Gr., but broader and less convex, the fore-parts more strongly and rugosely punctured, head a little broader and more deeply excavate, elytra broader and shorter, etc. Head as wide as the base of the elytra, broadly excavate, scarcely raised along the middle, coarsely, closely, rugosely punctured. Thorax scarcely longer than broad, the sides rounded and dilated in front, widest just before the middle, indistinctly impressed in the middle before the base, the sculpture as on the head. Elytra a little longer than the thorax, very slightly transverse, even, rather depressed, rugosely punctured, but rather less coarsely than the thorax. Abdomen gradually narrowed from base to apex, the anterior segments transversely impressed and crenulate at the base, finely and rather closely punctured and with a fine grey pubescence.

♂ unknown.

Burma: Tenasserim, Thagata (*L. Fea*).

386. **Stenus comes.**

Stenus comes Fauv.*, Rev. d'Ent. xiv, 1895, p. 207.

Very similar to *S. collium* Fauv., but a little smaller, the elytra a little shorter and at once distinguished by the much coarser sculpture of the fore-parts and the less finely punctured abdomen. Length 4·3 mm.

♂: 6th ventral segment feebly, subtriangularly emarginate.

Burma: Tenasserim, Thagata (*L. Fea*).

387. **Stenus rugicollis.**

Stenus rugicollis Kr.*, Arch. Naturg. xxv, 1859, i, p. 162.

Black, shining. Fore-parts very coarsely punctured; the first four abdominal segments medially keeled at the base. Antennæ with the first two and the last three joints pitchy, the intermediate ferruginous; palpi testaceous. Legs testaceous, the knees narrowly infuscate. Length 3 mm.

Smaller and narrower than *S. silvester* Er., the frontal furrows deeper, more shining and more coarsely punctured, the thorax narrower and the elytra shorter. Head with frontal sulci rather deep, medially elevated, closely and coarsely punctured. Antennæ rather short, the 9th and 10th joints transverse. Thorax slightly longer than broad, widest just before the middle, from thence almost equally retracted in front and behind, the whole surface covered with large, transversely confluent punctures, hence transversely rugose. Elytra scarcely as long as the thorax, as long as broad, similarly sculptured. Abdomen narrowed from base to apex, the bases of the anterior segments moderately finely, closely punctured, their apices almost impunctate, the last two segments finely and sparingly punctured. Pubescence scanty, white.

♂ unknown.

Recorded from India, without further indication.

388. **Stenus chatterjeei**, sp. n.

Very near *S. rugicollis* Kr., but differing in the following respects: the antennæ are shorter, reddish with the club black, the last joint of the palpi is infuscate, the thorax and elytra are less coarsely and less rugosely sculptured, the puncturation of the abdomen is stronger and extends to the posterior margins of the segments, the last two segments are much less finely and more closely punctured. The head is a little narrower than the elytra, thorax a little longer than broad, the elytra as long as the thorax. The first joint of the posterior tarsi as long as the last. Length 3 mm.

♂: 6th ventral segment with small triangular excision, the apex of which is rounded; posterior tibiæ with a small black spur at the inner side of the apex.

Assam: Naga Hills, Laimatak.

389. **Stenus aeratus**, sp. n. (Fig. 78.)

Fore-parts shining brassy-black, the abdomen black, scarcely metallic. Antennæ black. Palpi with the last joint and apical half of the preceding black. Legs black. Length 4·5 mm.

In size and build not unlike *S. asphaltinus* Er. Head as broad as the elytra at the base, longitudinally impressed on

each side and elevated along the middle, coarsely and rather closely punctured. Antennæ slender, the penultimate joints a little longer than broad. Thorax a little broader than long, widest just before the middle, the sides rounded in front, a little emarginate and more retracted behind; in the middle posteriorly with a shallow sulcus, on each side of the middle with a small shining plaque; the sides very feebly impressed, coarsely and closely punctured. Elytra nearly a third longer than the thorax, not quite so coarsely and distinctly less closely punctured. Abdomen gradually narrowed from base to apex, the anterior segments with a small median basal keel,

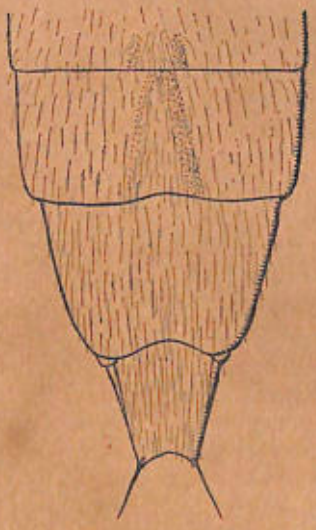


Fig. 78.—*Stenus aeratus*, apex of abdomen of ♂; ventral surface.

closely and rather coarsely punctured on the anterior segments, gradually more finely but not less closely behind; pubescence white and close, especially at the sides; the fore-parts much more sparingly pubescent. First joint of the posterior tarsi longer than the last.

♂: 6th ventral segment with shallow crescentic emargination, the surface in front flattened along the middle; 5th feebly emarginate, impressed throughout the middle; 4th very slightly impressed in the middle at the posterior margin. Chakrata district: Chulli Khud, Deoban, alt. 8000 to 9300 feet. Simla Hills: Tabratach, alt. 10,000 feet (*Beeson*).

390. **Stenus plumbeus**, sp. n.

Rather shining, black, with distinct bluish reflex. Antennæ and legs black. Palpi with the last two joints black. Length 4·2 mm.

Very near *S. aeratus*, but a little narrower and quite differently coloured, being of a leaden-blue hue; the thorax is less dilated in front, the puncturation of the fore-parts is finer, especially on the elytra, where it is also closer. In all other respects the two insects are similar.

♂ unknown.

Chakrata district: Chulli Khud, alt. 8000 feet.

391. **Stenus musicola**, sp. n.

Black, shining; thorax sulcate. Antennæ, palpi, and legs reddish-brown, the club of the former, the 3rd joint of the palpi, and the apex of the femora broadly blackish. Length 4 mm.

Very near *S. fossulatus* Er., but a little smaller, the antennæ with lighter base, the thorax deeply sulcate, the elytra more deeply impressed, and the abdominal puncturation much coarser. Head a little narrower than the elytra at the widest part, broadly and superficially bisulcate, elevated, convex and smooth in the middle, otherwise coarsely, closely, rugosely punctured. Antennæ slender, reaching the base of the thorax. Thorax as broad as long, widest at the middle, the sides rounded in front, straighter and more retracted behind, along the middle deeply and broadly sulcate, the sulcus abbreviated in front and behind, coarsely, closely, rugosely punctured like the head. Elytra at the suture a little longer than the thorax, scarcely broader than long, deeply longitudinally impressed within the shoulders, coarsely and closely punctured, rugose, the rugæ chiefly longitudinal. Abdomen narrowed from base to apex, strongly bordered, closely and coarsely punctured, less coarsely but nearly as closely behind. Fourth tarsal joint lightly bilobed; 1st joint of posterior tarsi much longer than the last.

Simla Hills: Kotgarh, alt. 7000 feet.

392. **Stenus morosus**, sp. n.

Black, moderately shining. Antennæ reddish-brown, the club black. Palpi with the 2nd and 3rd joints testaceous at the base. Legs reddish-brown. Length 3·3 mm.

In build, size, and general aspect very similar to *S. alpicola* Fauv., but the antennæ are longer, the head broader, the elytra a little shorter and less parallel, and the puncturation coarser. Head as broad as the elytra, slightly, broadly excavate

on each side of the slightly raised median region, coarsely and closely punctured all over. Antennæ moderate, the last three joints very slightly longer than broad. Thorax scarcely broader than long, widest at the middle, the sides evenly rounded, in the middle sulcate, the sculpture as on the head. Elytra at the suture as long as the thorax, slightly widened behind, uneven, the sculpture as on the thorax, but with a tendency to confluence here and there. Abdomen narrowed from base to apex, the anterior segments coarsely and closely punctured, gradually finer and a little more sparing behind. First joint of the posterior tarsi longer than the last.

♂: 6th ventral segment with a small triangular excision; middle tibiæ with a minute black spur at the inner aspect of the apex.

Simla Hills: Fagu; Kotgarh. Chakrata district: Konain, alt. 7000 to 8000 feet.

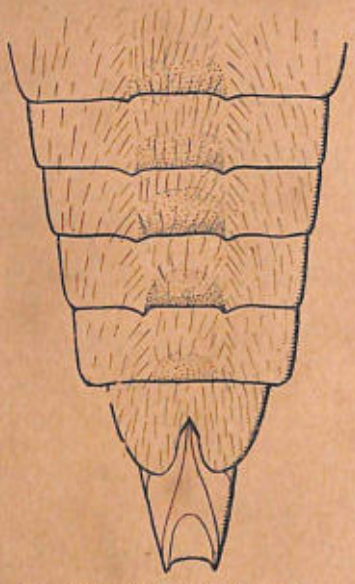


Fig. 79.—*Stenus viridescens*, abdomen of ♂; ventral surface.

393. **Stenus viridescens**, sp. n. (Fig. 79.)

Moderately shining, olive-green. Antennæ reddish, the club black. Palpi with the 2nd joint slightly, the 3rd more deeply infuscate. Legs reddish, the knees and tarsi darker. Length 3·5 mm.

In build resembling *S. buphthalmus* Gr., but differing in all other respects. Head as broad as the elytra at the base, distinctly elevated along the middle and longitudinally impressed on each side, very coarsely and closely punctured. Antennæ short, the 9th and 10th joints transverse. Thorax as long as broad, widest at the middle, the sides rounded in front, straight but equally retracted behind, in the middle with a distinct sulcus abbreviated in front, the sides not impressed, the sculpture rather coarser than that of the head. Elytra a little longer and broader than the thorax, with coarse, close, somewhat confluent puncturation, but without oblique rugæ. Abdomen narrowed from base to apex, coarsely and closely punctured on the first two segments, gradually becoming less coarse and less close behind. First joint of the posterior tarsi as long as the last.

♂: 6th ventral segment with acute triangular excision, the edges scarcely bevelled, the 1st to 5th with semicircular impression before the posterior border, which is also slightly emarginate on the first four segments.

Chakrata district: Manjgaon; Chulli and Khedar Khuds, alt. 6500 to 7500 feet. A small example (2·75 mm.) from West Almora (Dhaub China) may represent a local race of this species, and may be distinguished as var. *almorensis*.

394. **Stenus annamita.**

Stenus annamita Fauv., Rev. d'Ent. xiv, 1895, p. 207.

Black, rather shining; abdomen without keels at the base of the anterior segments, but more or less crenulate. Antennæ, last three joints of the palpi and legs black. Length 3 to 3·3 mm.

Near *S. mendicus* Er., but narrower, the thorax narrower, less rounded at the sides, puncturation coarser throughout, and on the abdomen less close. Head narrower than the elytra, rather superficially sulcate on each side, slightly elevated along the middle, coarsely and deeply punctured all over. Antennæ short, the 9th joint scarcely longer than broad, the 10th short, as long as broad. Thorax as long as broad, widest at the middle, the sides gently and evenly rounded, not sulcate, but occasionally with a narrow shining line, the sculpture as on the head. Elytra about a third longer than the thorax, similarly punctured. Abdomen gradually narrowed from base to apex, rather sparingly and moderately finely punctured throughout. The whole insect with a fine, moderately long, sparing white pubescence. First joint of posterior tarsi not longer than the last.

♂: 6th ventral segment feebly, obtusely emarginate.

Burma: Teinzo. Assam: Shugnu. Khandesh. Poona. Ceylon: Maturata; Dikoya. Also in Sumatra and Annam.

395. **Stenus nigripes**, sp. n.

Closely allied to *S. annamita* Fauv., and only differing in the following points: less shining; the thorax with distinct smooth median line, the sculpture closer, more or less confluent and transversely rugose; elytra more closely punctured; abdomen less finely and more closely punctured, the apex with a short sharp spine on each side.

♂ unknown.

Central Provinces: Rahatgaon, Hoshangabad (*S. N. Chatterjee*).

396. **Stenus hirsutus**, sp. n.

Leaden-black, moderately shining, thickly covered with a rather long grey pubescence. Abdomen with median basal keel on the anterior segments. Antennæ testaceous, the club infuscate. Palpi and legs testaceous. Length 3 mm.

Colour and pubescence of *S. wasmanni* Fauv., but much smaller, with bordered abdomen, etc., size and build more resembling *S. incanus* Er., but of leaden hue, more thickly pubescent, head larger, elytra shorter and more ample. Head narrower than the elytra, deeply and rather narrowly sulcate on each side, elevated along the middle, moderately coarsely, rather closely punctured all over. Antennæ not reaching the base of the thorax, the 9th and 10th joints scarcely longer than broad. Thorax scarcely broader than long, slightly wider before the middle, the sides feebly rounded in front, more retracted and straight behind, in the middle for the posterior half with a smooth shining line; puncturation coarser and deeper than on the head. Elytra one-fourth longer than the thorax, ample, convex, the sculpture rather coarser. Abdomen narrowed from base to apex, broadly margined, the first four segments with a little median basal keel, puncturation fine and moderately close throughout. First joint of posterior tarsi longer than the last.

♂: 6th ventral segment with small, acute, triangular excision, the margins bevelled; 5th in the middle behind a little flattened, with rather thicker pubescence than elsewhere.

Siwaliks: Lachiwala. Mussoorie district, alt. 3000 to 6000 feet. Assam: Naga Hills, Laimatak. Burma: Tenasserim; Tavoy.

397. **Stenus inconspicuus**, sp. n.

Black, shining, acuminate behind. Head large. Antennæ and legs testaceous, the club of the former infuscate. Palpi testaceous the 3rd joint scarcely infuscate. Length 2·5 mm.

In general facies much resembling *S. vafellus* Er., but at once distinguished by the colour of the legs, etc. Head broader than the elytra, slightly impressed on each side and slightly elevated along the middle, coarsely, closely, and rugosely punctured all over. Antennæ short, not reaching the base of the thorax, the 9th and 10th joints scarcely longer than broad. Thorax scarcely broader than long, widest before the middle, the sides rounded in front, straighter and more retracted behind, the sculpture as on the head. Elytra as long as, but a little broader than, the thorax, very similarly sculptured. Abdomen gradually narrowed from base to apex, coarsely and closely punctured at the bases of the anterior segments, much more finely, but rather closely elsewhere, the last two segments with a fine ground-sculpture. The whole insect very sparingly pubescent. First joint of the posterior tarsi longer than the last.

♂: 6th ventral segment with a small crescentic emargination.

Simla Hills: Matiana; Theog; Kotgarh. Chakrata district: Konain, alt. 7000 to 8000 feet.

398. **Stenus fuscipes.**

Stenus fuscipes Gr., Col. Micr. Brunsv. 1802, p. 157; Er., Käf. Mark. Brand. i, 1837–39 (1839) p. 555; Gen. Spec. Staph. 1839–40, p. 716; Kr., Nat. Ins. Deutsch. ii, 1856–58, p. 772; Thoms., Skand. Col. ii, 1860, p. 225; ix, 1867, p. 195; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 259; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 303; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 579 (*Nestus*).

Stenus argyrostoma Steph., Ill. Brit. Ent. v, 1832, p. 288.

Stenus carniger Motsch., Bull. Mosc. xxx, 1857, iv, p. 513.

Stenus curvipes Steph., *l. c.* p. 285.

Stenus femorellus Zett., Ins. Lapp. 1838, p. 71.

Stenus fulvipes Boisd. et Lac., Faun. Ent. Par. i, 1835, p. 446.

Stenus vilis Kr., Arch. Naturg. xxv, 1859, i, p. 162.

Rather convex, black, moderately shining. Anterior segments of the abdomen irregularly crenulate at the base, the sides very finely bordered. Antennæ and last three joints of the palpi black. Legs dark reddish-brown. Length 2·2 to 2·5 mm.

Head as broad as the elytra, broadly and feebly impressed on each side, in the middle but little elevated, closely and coarsely punctured all over. Antennæ short, the 9th and 10th joints as long as broad, the 11th a little longer than broad. Thorax as long as broad, widest at the middle, the sides rounded in front, straighter and more retracted behind, the sculpture very similar to that of the head. Elytra slightly longer than the thorax, convex, even, similarly punctured. Abdomen

subcylindrical, a little narrowed behind, the sides very finely bordered, the bases of the anterior segments crenulate, moderately coarsely and rather closely punctured, more finely and sparingly behind. First joint of the posterior tarsi a little longer than the last. The whole insect covered with short, sparing, white hairs.

♂: 6th ventral segment slightly emarginate.

"Ind. or."

I have not seen Indian examples of this insect, which is widely distributed in Europe.

399. **Stenus peratus**, sp. n. (Fig. 80.)

Moderately shining, black. Thorax obsoletely sulcate. Antennæ, palpi, and legs reddish-yellow, the club of the former scarcely infuscate. Length 3·2 to 3·75 mm.

Near *S. argus* Gr., but with differently coloured antennæ and legs, and rugose sculpture, the abdomen more coarsely

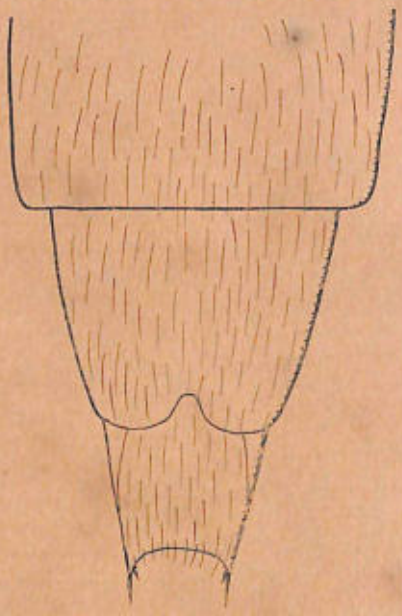


Fig. 80.—*Stenus peratus*, apex of abdomen of ♂; ventral surface.

and closely punctured. Head a little narrower than the elytra at their widest part, feebly, broadly bisulcate, slightly raised and convex along the middle, rather coarsely, closely, somewhat rugosely punctured. Antennæ slender, reaching the base of the thorax. Thorax as long as broad, widest at the middle

the sides rounded in front, straight and more retracted behind, not or obsoletely sulcate along the middle, the sculpture more rugose than that of the head. Elytra at the suture as long as the thorax, as long as broad, scarcely impressed, less coarsely but similarly punctured. Abdomen narrowed from base to apex, rather strongly bordered, moderately coarsely, closely punctured in front, less coarsely and more sparingly behind. Fourth joint of tarsi lightly bilobed; 1st joint of posterior tarsi longer than the last.

♂: 6th ventral segment with rounded excision.

Simla Hills. Chakrata district: Konain; Kanasar, alt. 7000 to 8000 feet.

400. **Stenus simlaensis**, sp. n.

Entirely black, scarcely shining. Antennæ, legs, and last three joints of the palpi black. Length 2·2 to 3 mm.

Near *S. carbonarius* Gyll., but much narrower and with smaller head, the lustre and sculpture very similar. Head scarcely broader than the thorax, distinctly narrower than the elytra, distinctly, rather narrowly sulcate on each side, along the middle broadly elevated, the whole surface coarsely and closely punctured. Antennæ short, extending but little beyond the base of the head, the 8th joint moniliform, the 9th and 10th slightly transverse. Thorax slightly transverse, widest at the middle, the sides almost evenly rounded from base to apex, narrowly and superficially sulcate along the middle, at least behind, the sculpture as on the head, but more or less confluent at the base. Elytra longer (5 : 4) than the thorax, the sculpture rather coarser, more or less confluent about the suture. Abdomen gradually narrowed from base to apex, the first three segments with a little keel at the middle of the base, the anterior segments rather coarsely and closely punctured, gradually finer but scarcely less close behind. Pubescence short and fine, more evident on the abdomen. First joint of the posterior tarsi as long as the last.

Simla Hills: Fagu; Theog; Gahan. Chakrata district: Khedar, Korawa and Dodora Khuds; Kanasar, alt. 7000 to 8000 feet.

401. **Stenus carinatus.**

Stenus (*Nestus*) *carinatus* Cam., Trans. Ent. Soc. Lond. 1914, p. 532.

Black, shining, puncturation of the fore-parts coarse, more or less transversely confluent on the thorax. Abdomen pointed, margined, the first three visible segments each with three distinct keels at the bases, 4th with a smaller median keel only, the segments rather closely punctured in the basal

depressions, much less closely towards the apical borders. Palpi and legs testaceous, the extreme apices of the femora brownish. Antennæ with first seven joints brownish-testaceous, the rest blackish. Fourth joints of tarsi simple. Length 3·3 mm.

In size and build almost exactly similar to *S. tricarinatus* Kr., but easily distinguished by the carinate, margined abdomen and the simple 4th tarsal joints.

Head a little broader than the thorax, not so broad as the elytra, impressed on either side of the front, elevated in the centre, coarsely punctured all over without any smooth space. Antennæ rather short, 1st and 2nd joints of equal length, 3rd to 7th longer than broad, gradually decreasing in length, 8th but little longer than broad, 9th to 11th forming a club. Thorax convex, a little longer than broad, widest at the middle, sides rounded and equally narrowed in front and behind; puncturation coarse, close, and rugose, more or less transversely confluent on the disc, without depressions. Elytra ample, very slightly broader than long, and about as long as the thorax, puncturation as coarse as on the latter, but not confluent. Abdomen distinctly pointed, the first three visible segments each with three distinct keels, one median and one on either side, the 4th with a single median keel; bases of the segments closely, but much more finely punctured than the fore-parts, the apices yet more finely and sparingly punctured; pubescence grey, scanty.

♂ unknown.

Ceylon: Kandy.

402. **Stenus beesoni**, sp. n.

Black, shining, with slight greenish reflex. Antennæ reddish, the club black. Palpi testaceous, the 3rd joint infuscate. Legs reddish-testaceous, the knees narrowly infuscate. Length 2·75 to 3 mm.

In size and build not unlike *S. opticus* Gr. Head as broad as the base of the elytra, rather deeply sulcate on each side and raised along the middle, coarsely and closely punctured. Antennæ short, the 9th and 10th joints slightly transverse. Thorax as long as broad, widest at the middle, evenly rounded and retracted in front and behind, distinctly sulcate along the middle behind, the sculpture a little coarser than on the head. Elytra as long as the thorax, similarly punctured. Abdomen narrowed from base to apex, the first three segments each with three basal keels, closely and rather coarsely punctured throughout, less closely on the last two segments. The whole insect covered with a short and sparing pubescence. First joint of posterior tarsi a little longer than the last.

♂: 6th ventral segment with a very small, scarcely angulate emargination.

Chakrata district: Sainj, Manjgaon and Khedar Khuds; Bangar. Mussoorie district. Assam: Naga Hills, alt. 5000 to 7500 feet.

403. **Stenus lugubris**, sp. n.

Black, subopaque, coarsely punctured throughout. Antennæ and legs black. Palpi with the 3rd joint black. Length 4·8 mm.

Near *S. lepidus* Wse., but larger, the head broader, the puncturation throughout coarser and the legs entirely black. Head as broad as the base of the elytra, rather deeply and narrowly impressed on each side and broadly raised along the middle, the whole surface closely and coarsely punctured. Antennæ short, not reaching the base of the thorax, the 9th and 10th joints slightly transverse. Thorax a little longer than broad, widest at the middle, the sides evenly rounded in front and behind, in the middle rather broadly superficially sulcate, scarcely impressed at the sides, with very coarse, more or less confluent, rugose sculpture. Elytra at the suture a little longer than the thorax, longitudinally impressed within the shoulders, the sculpture as on the thorax. Abdomen cylindrical, extremely finely bordered, gradually narrowed from base to apex, closely and only a little less coarsely punctured than the elytra throughout; 8th segment (6th visible) with a backwardly directed spine on each side; last ventral plate with short inwardly curved spine on each side. First joint of posterior tarsi shorter than the last, the 4th slightly bilobed.

♂ unknown.

India, without further indication (*Brit. Mus.*).

Key to the Species of Hypostenus †.

1. Abdomen bicolorous	2.	
Abdomen unicolorous	4.	[p. 352.
2. Elytra entirely testaceous	*fulvescens* Motsch.,	
Elytra not entirely testaceous	3.	
3. Elytra black, with large subovate yellow marking on each	*pulcher* Motsch., p. 350.	
Elytra black, the shoulders, and a small spot on each side of the suture behind, testaceous	*pictus* Motsch., p. 351.	

† *Stenus piliferus* Motsch. is unknown to me, and not included in the key.

4. Elytra dark, with yellow or orange markings ..... 5.
Elytra unicolorous ..... 16.
5. Elytra each with a *large* round spot..... 6.
Elytra otherwise marked ..... 8.
6. Head completely excavated, without elevation in the middle..... 7.
Head with distinct shining, raised, median keel..... [p. 356. *flavostigma*, sp. n.,
7. Head broader, in the middle with an irregular, shining, impunctate space; elytral spot smaller ..... [p. 356. *bivulneratus* Motsch.,
Head narrower, without median smooth space; elytral spot larger..... [p. 355. *rufoplagiatus* Champ.,
8. Each elytron with a round orange spot .. 9
Elytra otherwise marked ..... 12. [p. 354.
9. Head with a smooth median elevation.... *pustulatus* Bernh.,
Head uniformly punctured..... 10.
10. First three joints of antennæ reddish-testaceous, the rest infuscate; posterior femora infuscate ..... [p. 354. *ventricosus* Fauv.,
Antennæ reddish-testaceous, the club infuscate; femora testaceous ..... 11.
11. Less shining; elytral spot larger and brighter. ♂ : middle and posterior tibiæ with a small spur internally near the apex. [p. 353. *rajpurianus* sp. n.,
More shining; elytral spot smaller and duller. ♂ : tibiæ without spur..... *guttalis* Fauv., p. 352.
12. Elytra each with a narrow oval yellow spot..... [p. 357. *himalayicus* Bernh.,
Elytra otherwise marked ..... 13.
13. Each elytron with a broad yellow fascia extending from the base to the posterior margin and widened behind, only the reflexed margin and sutural region black. [p. 359. *flexuosus* Champ.,
Elytra otherwise marked ..... 14.
14. Each elytron with a securiform testaceous spot extending from the posterior margin to the anterior third. Thorax with two little tubercles on the disc. Long and slender species ..... *signifer* Fauv., p. 359.
Each elytron with a submarginal fascia extending backwards from the shoulder. Thorax without tubercles; more robust species ..... 15.
15. The submarginal fascia not quite reaching the posterior margin. Elytra and abdomen more coarsely and closely punctured. [p. 360. *flavovittatus* Champ.,
The submarginal fascia reaching the posterior margin and extending along it towards the suture. Elytra and abdomen more finely and less closely punctured .. *sinuatus*, sp. n., p. 360.
16. Thorax in both sexes with a large laterally compressed, erect tubercle in the middle, with bifid apex ..... [p. 361. *tuberculicollis*, sp. n.,
Thorax without such structure ..... 17.

17. Base of the antennæ black or pitchy	18.
Base of the antennæ testaceous or reddish-testaceous	20.
18. First two joints of antennæ dark	19.
First joint only dark	[p. 380. *monomerus* Fauv.,
19. First joint of palpi testaceous, the following black	[p. 375. *cribellatus* Motsch.,
Palpi testaceous, the 3rd joint scarcely infuscate.....	[p. 382. *planifrons* Fauv.,
20. Antennæ short, the penultimate joints not or but little longer than broad	21.
Antennæ long and slender, the penultimate joints much longer than broad	27.
21. Head at the base with three raised impunctate plaques	22.
Head without such plaques	23.
22. More shining, less pubescent, more coarsely punctured; the shining plaques on head larger	[p. 380. *tricarinatus* Kr.,
Less shining, more pubescent, less coarsely punctured; the shining plaques on head usually smaller	[p. 381. *microcephalus* Bernh.,
23. Larger (5·5 mm.)	*birmanus* Fauv., p. 363.
Smaller (2·6 to 3·5 mm.)	24.
24. Larger (3·5 mm.). Facies of *S. similis* Hbst.	[p. 376. *ceylonicus* Bernh.,
Smaller (2·6 to 3 mm.). Facies of *S. fornicatus* Steph.	25.
25. Thorax in middle with a short shining line.	*fistulosus* Ben., p. 381.
Thorax without shining line	26.
26. Puncturation of head and thorax coarser and closer	*acuminatus* Kr., p. 379.
Puncturation of head and thorax less coarse and less close.....	[p. 379. *lacertoides* Niet.,
27. Head more or less bisulcate and more or less elevated along the middle	28.
Head completely excavated, without or with scarcely perceptible elevation in the middle	39.
28. Head uniformly punctured all over	29.
Head with more or less distinct shining median space or line.....	35.
29. Apex of abdomen with two spines	30.
Apex of abdomen without spines	32.
30. Abdomen thickly pubescent	31.
Abdomen sparingly pubescent	*basicornis* Kr., p. 365.
31. Larger (4·75 mm.). More shining, more coarsely punctured	[p. 364. *bispinus* Motsch.,
Smaller (4 mm.). Less shining; more finely punctured	*gastralis* Fauv., p. 378.
32. Larger (5·5 to 6 mm.). More shining; thorax distinctly longer than broad	33.
Smaller (4·5 to 5 mm.). Less shining; thorax slightly longer than broad	34.
33. More finely punctured throughout	[p. 365. *cœlogaster* Champ.,
Less finely punctured throughout.....	*persimilis*, sp. n., p. 367.

34.	4th and 5th abdominal segments rather strongly and closely punctured. Less shining, more pubescent	*wasmanni* Fauv., [p. 376.
	4th and 5th abdominal segments finely and sparingly punctured. More shining, less pubescent	*consors* Fauv., p. 377.
35.	Larger (6 to 7 mm.). Apex of femora broadly infuscate	*kurseonginus* Bernh., [p. 362.
	Smaller (5 to 6 mm.). Legs entirely testaceous	36.
36.	Thorax nearly twice as long as broad; puncturation superficial	*serpens* Ben., p. 374.
	Thorax about one-fourth longer than broad; puncturation deep	37.
37.	Fifth abdominal segment scarcely more finely or less closely punctured than the preceding. Species more closely punctured	*frater*, sp. u., p. 370.
	Fifth abdominal segment obviously more finely and more sparingly punctured than the preceding. Species less closely punctured	38.
38.	More shining, less pubescent	*nitidulus* Cam., p. 373.
	Less shining, more pubescent	*angusticollis* Epp., [p. 371.
39.	Very narrow, slender species, the abdomen not very closely punctured	*barbatus* Niet., p. 373.
	More robust, abdomen closely punctured	40.
40.	More closely and finely punctured species	*millepunctus* Fauv., [p. 368. *albidicornis* Bernh., [p. 369.
	Less closely and less finely punctured species	*andrewesi* Fauv., [p. 369.

404. **Stenus (Hypostenus) pulcher.** (Fig. 81.)

Stenus pulcher Motsch., Et. Ent. 1859, p. 71.

Shining; head and thorax black; elytra with a large orange-yellow spot occupying the greater part of the dorsal surface, the base, suture, apical and reflexed margins black; abdomen with the 1st, 5th, and 6th segments black, the rest red. Antennæ testaceous, the apical half infuscate. Palpi testaceous. Legs reddish-testaceous, the knees infuscate. Length 6 to 7 mm.

Head broader than the base of the elytra, deeply longitudinally sulcate on each side, in the middle with a broad, smooth, elevated area throughout, the rest of the surface coarsely and closely punctured. Antennæ long and slender. Thorax longer than broad, widest at the middle, the sides rounded in front, straighter behind, more coarsely punctured than the head. Elytra at the suture scarcely longer than the thorax, about as long as broad, similarly punctured. Abdomen cylindrical, narrowed behind, the anterior segments constricted at the

base, the base of the 1st segment rather closely, moderately finely punctured, elsewhere finely and very sparingly punctured; the apex without spines. First joint of the posterior tarsi as long as the four following together.

♂: 6th ventral segment with deep, nearly parallel excision, the apex rounded, the sides not bevelled; 4th deeply impressed

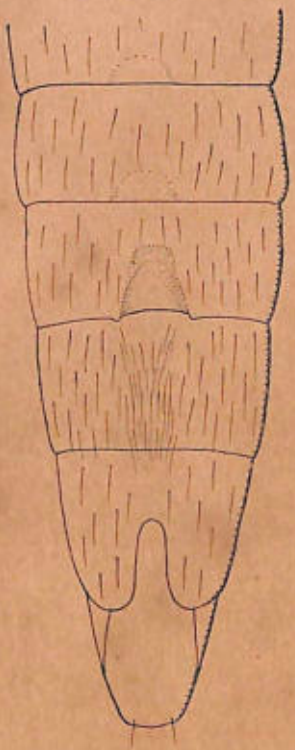


Fig. 81.—*Stenus* (*Hypostenus*) *pulcher*, abdomen of ♂; ventral surface.

behind in the middle, the margins carinate, the posterior border adjacent emarginate.

Ceylon: Madulsima; Kandy; Dikoya. Nilgiri Hills. Also in Java.

405. Stenus (Hypostenus) pictus.

Stenus pictus Motsch., Bull. Mosc. xxx, 1857, iv, p. 515.
Hypostenus pæderinus Champ.*, E. M. M. lx, 1924, p. 160.

Shining, head black (occasionally narrowly red along the middle, occasionally entirely red), thorax reddish-testaceous; elytra black, the shoulders and a narrow mark behind on each side of the suture red; abdomen reddish-testaceous, the last

three segments black. Antennæ, palpi, and legs yellow. Length 5 mm.

Head narrower than the elytra, rather deeply impressed on each side, impunctate and raised along the middle, elsewhere rather coarsely and closely punctured. Antennæ long and slender. Thorax longer than broad, nearly cylindrical, the sides very slightly rounded, punctured like the head all over. Elytra square, very coarsely and closely punctured. Abdomen cylindrical, gradually narrowed behind, the first four segments rather coarsely and closely punctured, the following very finely and very sparingly. First joint of posterior tarsi as long as the following together.

N. India: Haldwani (*H. G. Champion*). Calcutta.

406. **Stenus (Hypostenus) fulvescens.**

Stenus fulvescens Motsch., Bull. Mosc. xxx, 1857, iv, p. 515.

Of the size and build of large examples of *S. guttula* Müll., but more elongate and entirely reddish-testaceous, the humeral angles of the elytra, antennæ, palpi, and legs lighter. Abdomen with the last two segments black, the pygidium testaceous and emarginate at apex. Puncturation coarse, not very close, finer on the abdomen, especially on the last segments. Antennæ with the 3rd joint almost twice as long as the 4th.

"Ind. or." (ex *Motschoulsky*).

407. **Stenus (Hypostenus) guttalis.** (Fig. 82.)

Stenus guttalis Fauv.*, Rev. d'Ent. xiv, 1895, p. 212.

Black, moderately shining, the elytra with moderate, rounded, orange-red spot on each. Antennæ, palpi, and legs reddish-testaceous. Length 5·5 to 6 mm.

Head broad, wider than the base of the elytra, broadly excavated, rather broadly elevated along the middle, closely and coarsely punctured all over. Antennæ moderate, not reaching the base of the thorax. Thorax scarcely longer than broad, widest a little before the middle, the sides rounded in front, straighter and more retracted behind, along the middle posteriorly deeply sulcate, impressed laterally, coarsely, closely, rugosely punctured. Elytra at the suture as long as the thorax, similarly punctured, the elytral spot equidistant from the suture and lateral margins, scarcely nearer the posterior margin than to the suture. Abdomen with the anterior segments constricted, moderately finely, closely punctured, only a little less closely behind, apex on each side with stout curved spine.

♂: 6th ventral segment coarsely and sparingly punctured, narrowly triangularly excised, the apex rounded, the sides

narrowly bevelled ; 5th in the middle at the posterior margin more densely pubescent, scarcely emarginate.

Burma : Carin Cheba ; Carin Asciuii Ghécu ; Tienzo, Bhamo. Also in the Malay Peninsula.

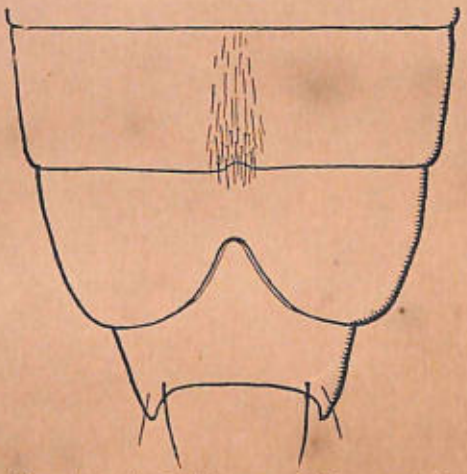


Fig. 82.—*Stenus* (*Hypostenus*) *guttalis*, apex of abdomen of ♂ ; ventra surface.

408. **Stenus (Hypostenus) rajpurianus**, sp. n. (Fig. 83.)

Very similar in all respects to *S. guttalis* Fauv. in build, colour, etc., but the ♂ characters are quite different. It is also less shining with the elytral spot larger and brighter.

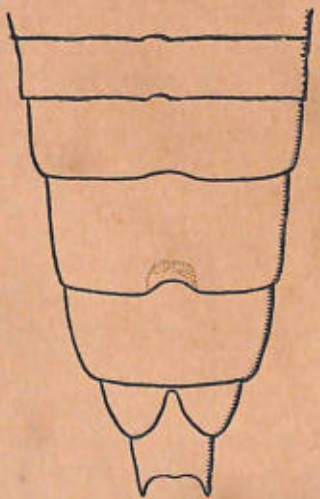


Fig. 83.—*Stenus* (*Hypostenus*) *rajpurianus*, abdomen of ♂ ; ventral surface.

♂ Middle and posterior tibiæ with small yellow spur internally near the apex. 6th ventral segment deeply, narrowly, triangularly excised, the margins not bevelled; 5th more closely punctured and pubescent along the middle; the 1st to the 4th slightly emarginate behind in the middle and feebly impressed.

Dehra Dun: Singhbhum.

409. Stenus (Hypostenus) pustulatus.

Stenus (*Hypostenus*) *pustulatus* Bernh., W. Z. B. lxiv, 1914, p. 95.

Near *S. guttalis* Fauv., but more parallel, more shining, with coarser and much more sparing puncturation throughout, the head more deeply excavated and with a distinct median smooth elevation, the thorax longer and less widened, longer and in comparison with the thorax narrower elytra and more cylindrical abdomen, the basal segments of which are more constricted. Length 5·6 mm.

♂ unknown.

Pegu (ex *Bernhauer*).

410. Stenus (Hypostenus) ventricosus.

Stenus ventricosus Fauv., Rev. d'Ent. xxxiii, 1904, p. 48.

Of the size and robust build of *S. bimaculatus* Gyll. (Europe), but the spot on the elytra half as large, the abdomen not bordered, and the fourth tarsal joint bilobed. Rather shining, black, the palpi, first three joints of the antennæ, and the legs dirty reddish-testaceous, the posterior femora and the rest of the antennæ infuscate, the red elytral spot placed a little behind the middle. Antennæ short, scarcely reaching the base of the thorax. Head excavate, very closely punctured, a little keel behind the base of the antennæ smooth, sulcate on each side, the space between broad, only slightly convex. Thorax scarcely longer than broad, suborbicular, rather obsoletely impressed on each side, with a deep sulcus abbreviated in front in the middle, coarsely rugosely punctured all over. Elytra much broader than the thorax, a fourth part shorter than long (?), rather flat, slightly uneven, more finely, closely, and rugosely punctured than the thorax. Abdomen stout, closely, strongly, uniformly punctured, with a fine, rather golden pubescence.

♂: 4th and 5th ventral segments scarcely impressed, the apex a little emarginate; 6th not emarginate, more densely pubescent along the middle; 7th triangularly excised. Length 6·5 mm.

Dugeli, in dry leaves, in May. Khandesh (ex *Fauvel*).

411. **Stenus (Hypostenus) rufoplagiatus.** (Fig. 84.)

Hypostenus rufoplagiatus Champ.*, E. M. M. lx, 1924, p. 160.

Narrow, elongate, shining, black, the elytra with a very large round orange spot posteriorly not reaching the adjacent margins. Antennæ with the first three joints testaceous, the rest infuscate. Legs testaceous, all the tarsi and the posterior knees a little infuscate. Length 5 to 5·5 mm.

Head as broad as the elytra at the base, broadly excavate and without trace of sulci or elevated median area, closely and rather coarsely punctured except for a small space in the middle of the vertex behind. Antennæ long and slender.

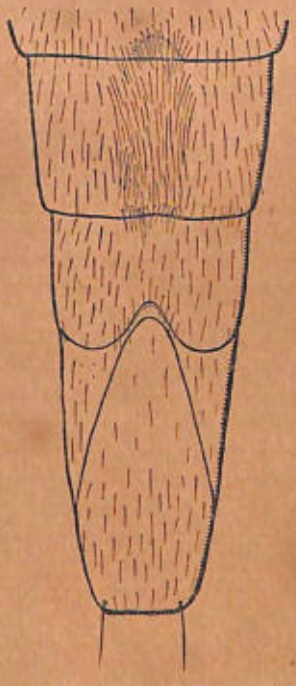


Fig. 84.—*Stenus* (*Hypostenus*) *rufoplagiatus*, apex of abdomen of ♂; ventral surface.

Thorax narrow, nearly cylindrical, a little longer than broad, the sides gently rounded, coarsely and rather more closely punctured than the head, without median sulcus or line. Elytra a good deal broader and a little longer than the thorax, convex, very similarly punctured. Abdomen narrow, cylindrical, the anterior segments constricted, closely and rather coarsely punctured in front, more sparingly and more finely

behind. The whole insect covered with a sparing white pubescence.

♂: 6th ventral segment with acute triangular excision, the sides bevelled, the apex rounded; 5th impressed throughout along the middle, more deeply in front and more finely and closely punctured.

Kumaon: Sudlimath, Deoba Nadi (*H. G. Champion*). Siwaliks: Mohan Rau (*Cameron*).

412. **Stenus (Hypostenus) bivulneratus.**

Stenus bivulneratus Motsch., Bull. Mosc. xxx, 1857, ii, p. 514.

Black, shining, coarsely punctured. Elytra with a large round orange spot situated postero-externally but not extending quite to the lateral margin. Antennæ long and slender, testaceous, more or less infuscate from the 5th joint. Legs testaceous, the apices of the femora and bases of the tibiæ slightly infuscate. Length 6 mm.

Near *S. rufoplagiatus*, Champ., but the head broader, the puncturation throughout coarser, and the elytral spot smaller, not approaching so closely either the base or the suture. Head broad, as wide as the elytra at the base, completely flat between the eyes and moderately finely punctured, more sparingly in the middle, leaving an impunctate, irregular, shining space. Antennæ with all the joints much longer than broad. Thorax nearly cylindrical, but little widened at the middle, equally and slightly narrowed in front and behind; sculpture coarse and rugose, coarser than in *rufoplagiatus*. Elytra scarcely as long as the thorax, very slightly transverse, very slightly dilated behind, the sides rounded, the sculpture as on the thorax. Abdomen elongate, pointed, the segments constricted, the first three rather coarsely and closely punctured to the apical margins, the 4th much more finely, the 5th finely and moderately closely punctured at the base, very finely and very sparingly towards the apex; 6th very finely and very sparingly punctured, sparingly covered with fine white pubescence.

The above description is made from a specimen determined by Kraatz and coming from Bhamo, Burma (*Fea*), viii, 1885.

413. **Stenus (Hypostenus) flavostigma,** sp. n. (Fig. 85.)

Of the same size, build, colour, etc., as *S. rufoplagiatus*, but at once distinguished by the bisulcate head with well-marked central, elevated, impunctate area and coarser, more sparing puncturation, the thorax and elytra more coarsely

punctured, the abdomen much more finely and sparingly punctured than in the allied species.

♂: 6th ventral segment with deep, parallel-sided excision with rounded apex; 5th a little flattened along the middle,

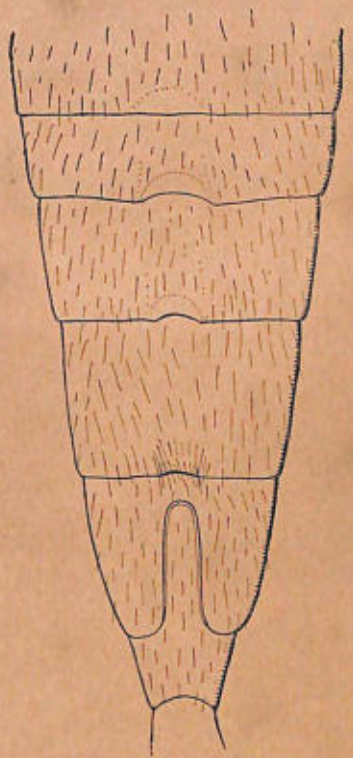


Fig. 85.—*Stenus* (*Hypostenus*) *flavostigma*, abdomen of ♂; ventral surface.

and there more closely punctured and pubescent; 2nd to 4th distinctly impressed along the middle, especially behind, the impressions glabrous and more sparingly punctured.

Assam: Naga Hills, Laimatak (*S. N. Chatterjee*).

414. **Stenus (Hypostenus) himalayicus.** (Fig. 86.)

Stenus (*Hypostenus*) *himalayicus* Bernh.*, Col. Rundsch. 1915 p. 50.

Hypostenus rugosissimus Champ.*, E. M. M. lvi, 1920, p. 173.

Moderately shining black, the elytra with a narrow oval yellow spot nearer to the lateral margin than to the suture and extending forwards beyond the middle. Antennæ with

the first four or five joints testaceous, the following infuscate. Palpi testaceous, the apex of the 3rd joint slightly infuscate. Legs testaceous, the apical half of the femora very slightly infuscate, the tarsi a little infuscate. Length 6·5 to 7 mm.

Readily distinguished by the narrow, oval, yellow spot on the elytra, the very coarse sculpture, and long, white abdominal pubescence. Head as broad as the base of the elytra, rather deeply impressed on each side, broadly elevated along the middle, the whole surface coarsely and closely punctured except for a narrow space on the vertex and behind the base of the antennæ. Antennæ long and slender, extending beyond



Fig. 86.—*Stenus (Hypostenus) himalayicus*, apex of abdomen of ♂ : ventral surface.

the base of the thorax. Thorax a little longer than broad, almost cylindrical, only a little widened at the middle, with coarse, close, more or less confluent sculpture. Elytra at the suture as long as the thorax, transverse, coarsely and closely punctured. Abdomen thick, cylindrical, narrowed behind, coarsely and closely punctured, the last two segments much more finely and sparingly, the apex without spines. Pubescence on the fore-parts scanty, on the abdomen long and rather close.

♂: 6th ventral segment narrowly, deeply excised, the margins not bevelled; 5th along the middle much more finely and closely punctured and pubescent than the rest of the surface; 4th deeply impressed behind, the margins obliquely keeled; 3rd and 2nd flattened in the middle behind, the

flattened area almost impunctate. Posterior tibiæ with a small black spur at the inner margin before the apex.

Kumaon: Bhowali, W. Almora. Simla Hills. Mussoorie.

415. **Stenus (Hypostenus) signifer.**

Stenus signifer Fauv.*, Rev. d'Ent. xiv, 1895, p. 213.

A very distinct species. Narrow elongate, black, rather shining; antennæ long and very slender, red, the penultimate joints infuscate, the 1st joint yellow; palpi very long, yellow, the 3rd joint broadly infuscate at the apex; legs slender, pale brown, the femora testaceous at the base; fore-parts closely, strongly, rugosely punctured, the abdomen also densely and rugosely but less coarsely, the last two segments more sparingly and less deeply, punctured; pubescence remarkable, more or less golden in front of the eyes, all the rest of the body, and the legs especially, covered with long, not dense, yellowish or greyish-brown hairs; head a little narrower than the elytra, excavate, scarcely bisulcate, but little elevated along the middle, and briefly smooth; thorax very long, twice as long as its breadth in front, half as broad as the elytra, cylindrical, broader at the middle, from thence more narrowed in front than behind, parallel for some distance before the posterior angles, the disc behind the middle with two small tubercles; elytra ample, quadrate, rather convex, within the shoulders and along the suture lightly impressed, with a large securiform orange spot scarcely reaching the posterior margin and produced forwards to the anterior third; abdomen more slender, cylindrical, the 3rd to 5th segments not margined. Length 7 mm.

♂: 6th ventral segment scarcely emarginate; 5th in the middle before the apex more densely punctured and with long yellow pubescence, its apex scarcely emarginate.

Burma: Carin Cheba; Carin Asciuii Cheba (*L. Fea*).

416. **Stenus (Hypostenus) flexuosus.**

Hypostenus flexuosus Champ.*, E. M. M. lvi, 1920, pp. 174, 196.

Black, shining, the elytra with a broad yellow fascia extending from the shoulder to the posterior margin and extending along it to the postero-external angle, only the reflexed sides and the sutural region black. Antennæ yellow, slightly infuscate towards the apex. Palpi and legs yellow. Length 5 mm.

Less elongate than *S. flavovittatus* Champ., the thorax shorter, very similar in build to *S. basicornis* Kr. Head as broad as the base of the elytra, longitudinally bi-impressed, with slightly elevated smooth impunctate space in the middle,

rather closely, moderately finely punctured. Antennæ rather long and slender. Thorax distinctly longer than broad, subcylindrical, a little wider before the middle, without impressions or smooth line, closely and rather coarsely punctured. Elytra as long as the thorax, very similarly punctured. Abdomen with constricted segments, closely, moderately finely punctured at the bases, more finely elsewhere, the last two much more finely and sparingly.

♂: 6th ventral segment very deeply, narrowly emarginate.

W. Almora. Kumaon: Upper Gumti Valley, iv. 1919 (*H. G. Champion*).

417. **Stenus (Hypostenus) flavovittatus.**

Hypostenus flavovittatus Champ.*, F. M. M. lvi, 1920, p. 174.

Narrow, elongate, black, shining, the elytra with a narrow testaceous fascia extending from the shoulder almost to the posterior margin, and a little dilated about the middle towards the suture, the reflexed margin black, the posterior margin very narrowly testaceous. Antennæ, palpi, and legs pale yellow. Length 6·25 mm.

Head scarcely as broad as the base of the elytra, slightly longitudinally impressed on each side, in the middle behind with a narrow, smooth, elevated space, at the base of each antenna with a small shining plaque, moderately finely and rather closely punctured. Antennæ long and slender. Thorax cylindrical, scarcely dilated at the middle, about half as long again as broad, in the posterior half along the middle with a smooth shining line; puncturation rather close and a little stronger than that of the head. Elytra as long as, but wider than the thorax, the puncturation as close, but rather coarser than that of the thorax. Abdomen elongate, the anterior segments constricted at the bases, closely and moderately finely punctured at the bases, more finely and sparingly elsewhere, the 5th yet more finely and sparingly, the 6th almost impunctate, both with a fine ground-sculpture.

♂ unknown.

W. Almora, Kumaon (*H. G. Champion*).

418. **Stenus (Hypostenus) sinuatus**, sp. n. (Fig. 87.)

Very closely allied to *S. flavovittatus* Champ., and only differing in the following respects: the elytral fascia is produced to the posterior border itself, and extends a little way along it towards the suture, the elytral puncturation is a little finer and obviously less close, the abdomen is more finely and less closely punctured. Length 6·75 mm.

♂: 6th ventral segment deeply narrowly emarginate, the apex rounded, the sides not bevelled; 5th flattened along the middle throughout, very feebly emarginate behind; 3rd and

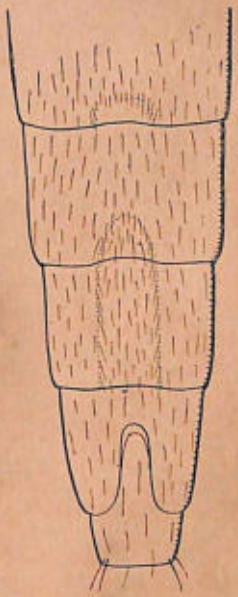


Fig. 87.—*Stenus* (*Hypostenus*) *sinuatus*, apex of abdomen of ♂; ventral surface.

4th semicircularly impressed behind, the impressions very finely punctured and pubescent.

Burma: Ruby Mines (*Doherty*).

419. **Stenus (Hypostenus) tuberculicollis**, sp. n. (Fig. 88.)

Black, moderately shining; the thorax in both sexes with a large, laterally compressed, bifid tubercle in the middle. Antennæ, palpi, and legs testaceous, the club of the former infuscate. Length 5·2 mm.

At once distinguished from all the Indian species by the tuberculate thorax, and in this respect resembling *S. monstrosicollis* Bernh. from Java, but Dr. Bernhauer informs me that it is distinct from his species. In build scarcely differing from *S. bispinus* Motsch., but less shining, the puncturation of the fore-parts a little coarser, the abdomen scarcely differing in sculpture, but the apex without spines.

♂: 6th ventral segment with rather broad, deep, arcuate

excision, the edges bevelled; 4th with a semicircular, more closely punctured and pubescent impression behind.

Assam: Naga Hills, Laimatak (*S. N. Chatterjee*).



Fig. 88.—*Stenus* (*Hypostenus*) *tuberculicollis*, apex of abdomen of ♂; ventral surface.

420. **Stenus (Hypostenus) kurseonginus.** (Fig. 89.)

Stenus (*Hypostenus*) *kurseonginus* Bernh., Ent. Blätt. vii, 1911, p. 58.

Elongate, black, rather shining, especially the abdomen. Antennæ with the first four or five joints reddish-testaceous, the following black. Palpi reddish-testaceous, the 3rd joint scarcely infuscate at apex. Legs reddish-testaceous, the apical halves of the femora, base and apex of the tibiæ, and the tarsi more or less infuscate. Length 6 to 7 mm.

Of the build of *S. bivulneratus* Motsch., but differently coloured. Head as broad as the base of the elytra, rather deeply excavated, along the middle narrowly elevated and shining, behind the base of the antennæ with a narrow shining space, very coarsely closely punctured. Antennæ long and slender, extending beyond the base of the thorax. Thorax a little longer than broad, widest at the middle, the sides rounded and equally retracted in front and behind, very coarsely and closely punctured, the punctures (especially behind) more or less confluent. Elytra at the suture a little longer than the thorax, very coarsely and closely punctured, more or less transversely rugose. Abdomen cylindrical, narrowed behind, the anterior segments constricted and (especially at the bases) coarsely and closely punctured, the last two segments rather finely and sparingly punctured. The whole insect covered with

a long white pubescence, especially on the abdomen. Apex without spines.

♂: 6th ventral segment with very deep narrow excision with rounded apex, the sides not bevelled; 5th finely and closely punctured and pubescent along the middle; 4th deeply semicircularly impressed behind, the adjacent border



Fig. 89.—*Stenus* (*Hypostenus*) *kurseonginus*, abdomen of ♂: ventral surface.

emarginate, the sides obliquely carinate; 2nd and 3rd similarly but less deeply impressed, the posterior borders scarcely emarginate, the sides not carinate. Posterior tibiæ with a small black spur at the inner margin near the apex.

Kurseong, alt. 5000 feet. Mussoorie, alt. 6000 to 7000 feet.

421. **Stenus (Hypostenus) birmanus.**

Stenus birmanus Fauv.*, Rev. d'Ent. xiv, 1895, p. 213.

Black, shining. Antennæ reddish-testaceous, the club infuscate. Palpi testaceous. Legs reddish-testaceous, the knees scarcely infuscate. Length 5·5 to 5·8 mm.

Size and build of *S. clavicornis* Scop. Head broader than the base of the elytra, rather deeply excavate, a little elevated along the middle, but not carinate, behind the antennal tubercles with a shining keel, moderately coarsely closely punctured. Antennæ moderate. Thorax a little longer than broad, widest just before the middle, the sides slightly rounded in front, more retracted behind, sulcate along the middle for the posterior two-thirds, much more coarsely punctured than the head. Elytra scarcely as long as the thorax, transverse, very similarly sculptured. Abdomen slightly narrowed from the base, the bases of the segments moderately constricted, rather closely and rather coarsely punctured, gradually more finely behind.

♂ unknown.

Burma: Carin Asciuii Ghécu, alt. 1400 to 1500 metres; Tenasserim, Meetan (*Fea*).

422. **Stenus (Hypostenus) bispinus.** (Fig. 90.)

Stenus bispinus Motsch., Bull. Mosc. xxx, 1857, iv, p. 514.

Black, shining, the first two segments of the abdomen more thickly pubescent. Antennæ, palpi, and legs pale yellow, the club of the former scarcely infuscate. Length 4·75 mm.

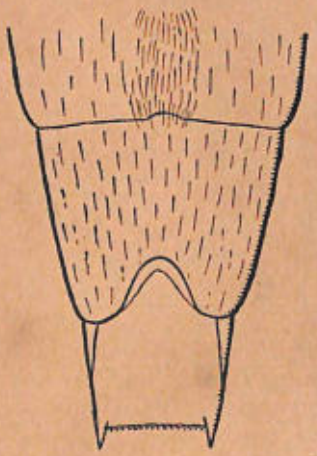


Fig. 90.—*Stenus* (*Hypostenus*) *bispinus*, apex of abdomen of ♂; ventral surface.

Very similar in build to *S. cicindeloides* Schall., but narrower. Closely allied to *S. basicornis* Kr., and only differing in the thorax being rather less cylindrical, shorter, the sides more rounded and dilated in the middle, puncturation a little closer, puncturation of the elytra obviously closer, that of the abdomen in front less fine, the pubescence, especially on the

first two segments, longer and thicker. The terminal spines and the structure of the posterior tarsi are similar.

♂: 6th ventral segment with semi-elliptical excision, the margins bevelled; 5th flattened the whole length, the puncturation there much finer, the pubescence thicker; 4th flattened behind, the pubescence there fine and sparing: 2nd and 3rd with small impunctate space at the middle of the posterior margin.

Ceylon: Nalanda. Nilgiri Hills. Assam: Naga Hills. Burma. Also in Indo-China and Sumatra.

423. **Stenus (Hypostenus) basicornis.**

Stenus basicornis Kr., Arch. Naturg. xxv, 1859, i, p. 163.

Black, shining. Abdomen very finely and sparingly punctured. Antennæ, palpi, and legs pale yellow, the club of the former scarcely infuscate. Length 5 mm.

Very similar in build to *S. bispinus* Motsch., but readily distinguished by the very much finer and more sparing abdominal puncturation and the absence of thicker pubescence on the first two segments. Head as broad as the base of the elytra, narrowly and feebly bi-impressed, the centre flat and scarcely elevated, the puncturation rather coarse, moderately close and uniform. Antennæ slender, reaching the base of the thorax. Thorax a little longer than broad, the sides feebly rounded, wider at the middle, evenly rounded and retracted in front, rather suddenly retracted behind, the sculpture similar to but closer than that on the head, without impunctate central line. Elytra as long as the thorax, convex, similarly but rather less closely punctured. Abdomen rather stout, cylindrical, narrowed behind, the anterior segments constricted, the 1st segment finely and moderately closely punctured, the following very finely and sparingly, the last extremely finely and sparingly punctured, with a fine ground-sculpture which is much more distinct on the last three segments; apex with a decurved spine on each side. The whole insect has a short, sparing, white pubescence. First joint of posterior tarsi a little shorter than the four following together.

♂: 6th ventral segment with an acute (nearly rectangular) excision.

Ceylon: Kandy; Dikoya, alt. 1680 to 4200 feet.

424. **Stenus (Hypostenus) cœlogaster.** (Fig. 91.)

Hypostenus cœlogaster Champ.*, E. M. M. lx, 1924, p. 159.

Robust, black, shining, sparingly pubescent. Abdomen without spines at apex. Antennæ, palpi, and legs pale yellow. Length 5·5 to 6 mm.

Larger and more robust than *S. bispinus* Motsch., and the abdomen without terminal spines. Head as broad as the elytra at the base, broadly and feebly bi-impressed, in the middle flat and scarcely elevated, coarsely, closely, uniformly punctured all over. Antennæ long and slender, extending beyond the base of the thorax. Thorax one-third longer than broad, widest at the middle, the sides lightly rounded and retracted in front and behind, as coarsely as but rather more



Fig. 91.—*Stenus* (*Hypostenus*) *cœlogaster*, abdomen of ♂; ventral surface.

closely punctured than the head, without sulcus or line. Elytra at the suture a little longer than the thorax, convex, similarly punctured. Abdomen cylindrical, gradually narrowed behind, the anterior segments constricted at the base, finely and rather closely punctured in front, the last two segments much more finely and sparingly. Pubescence white, scanty, more abundant on the abdomen.

♂: Posterior tibiæ feebly sinuate. First three ventral segments deeply and broadly excavate, the excavation of the 2nd and 3rd extending the whole length and nearly the whole breadth, the posterior margin adjacent slightly emarginate, the sides carinate; 4th segment flattened behind, broadly and slightly emarginate; 6th deeply triangularly emarginate, the apex rounded, the sides bevelled. All the impressions closely and finely pubescent.

Kumaon: Ranikhet.

425. **Stenus (Hypostenus) persimilis**, sp. n.

This species is exactly similar to *S. cœlogaster* in build and coloration, and only differs in the puncturation throughout

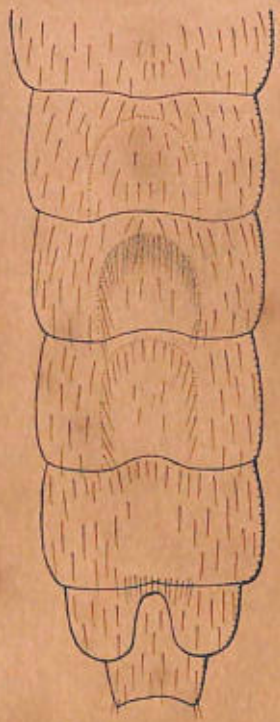


Fig. 92.—*Stenus (Hypostenus) persimilis*, abdomen of ♂; ventral surface.

being a little coarser and in the ♂ characters; the 1st ventral segment is not impressed †, the 2nd and 3rd are much less

† Champion does not mention the impression on the 1st ventral segment of *cœlogaster*, although it is plainly visible in the type.

broadly impressed and the 6th is a little more broadly emarginate.

Burma : Ruby Mines.

426. **Stenus (Hypostenus) millepunctus.** (Fig. 93.)

Stenus millepunctus Fauv.*, Rev. d'Ent. xxiii, 1904, p. 49.

Narrow, elongate, leaden-black, moderately shining. Antennæ, palpi, and legs pale yellow, the club of the former infuscate. Length 5 mm.

Narrower than *S. bispinus* Motsch., with narrower, more cylindrical thorax, longer elytra, puncturation of the fore-parts finer, that of the abdomen coarser. Head a little broader than the base of the elytra, completely excavated, without median elevation, rather closely, moderately coarsely punctured, without smooth central space. Antennæ long and slender. Thorax narrow, cylindrical, longer than broad, scarcely widened at the middle, the sides lightly rounded, along the middle with a very fine impunctate line, the rest

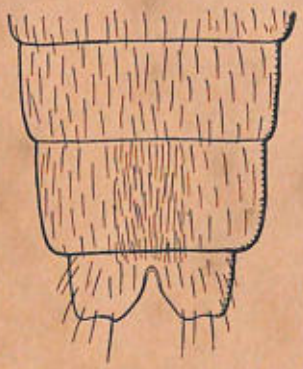


Fig. 93.—*Stenus* (*Hypostenus*) *millepunctus*, apex of abdomen of ♂ ; ventral surface.

of the surface more closely and rather more coarsely punctured than the head. Elytra at the suture longer than, and about twice as broad as, the thorax, distinctly longer than broad, convex and more coarsely punctured. Abdomen cylindrical, a little narrowed behind, a little more closely but about as coarsely punctured as the head, the 5th and 6th segments more finely and more sparingly, especially the latter ; apex without spines. The whole insect covered with a short, sparing, white, decumbent pubescence. First joint of posterior tarsi longer than the four following together.

♂: 6th ventral segment triangularly, moderately broadly

excised, the sides not bevelled; 5th along the middle more densely punctured and pubescent.

Nilgiri Hills (*Andrewes*).

427. **Stenus (Hypostenus) albidicornis.**

Stenus albidicornis Bernh., Ent. Blätt. 1915, p. 252.

Near *S. sondaicus* Bernh., similarly coloured, but larger and broader, and also differing as follows: the head is less coarsely, but much more closely punctured, the shining median space less marked, not elevated, the longitudinal impressions wanting; the thorax is less strongly but much more closely, uniformly, scarcely rugosely punctured, without impressions; the elytra are distinctly longer, less strongly, but scarcely as closely punctured; the abdomen is less coarsely and more closely uniformly punctured to the apex. Length 4 to 4·5 mm.

♂: 6th ventral segment rather broadly and deeply triangularly excised, the 5th more closely pubescent along the middle.

S. India: Shembaganur, Madura District (ex *Bernhauer*).

This species is apparently closely allied to *S. millepunctus* Fauv., if not identical with it.

428. **Stenus (Hypostenus) andrewesi.** (Fig. 94.)

Stenus andrewesi Fauv.*, Rev. d'Ent. xxiii, 1904, p. 49.

Narrow, elongate, black, shining. Antennæ, palpi, and legs pale testaceous, the club of the former slightly infuscate. Length 4·5 to 5 mm.

Near *S. millepunctus* Fauv., but the head less closely punctured and with a rather distinct impunctate space in the middle, thorax and elytra less finely punctured, abdomen more sparingly punctured. From *S. basicornis* Kr. it is at once recognised by the much longer, cylindrical thorax, longer elytra, narrower build, and more punctured abdomen. Head as broad as the base of the elytra, rather closely, moderately coarsely punctured except along the middle, which is broadly but very slightly elevated and impunctate. Antennæ long and slender. Thorax cylindrical, about one-fourth longer than broad, the puncturation as on the head. Elytra at the suture distinctly longer than the thorax, a little more coarsely punctured. Abdomen cylindrical, narrowed to the apex, the anterior segments constricted at the base, moderately finely and moderately closely punctured in front, more finely and sparingly behind. Pubescence short and very sparing. First joint of posterior tarsi longer than the four following together.

♂: 6th ventral segment deeply, narrowly, triangularly

excised, the apex of the incision rounded; 5th deeply and broadly impressed in the whole length, the fundus more finely and closely pubescent, the margins subcarinate; 4th slightly and broadly impressed nearly throughout its length, the border adjacent very slightly emarginate; 3rd broadly flattened behind in the middle.

S. India: Nilgiri Hills.

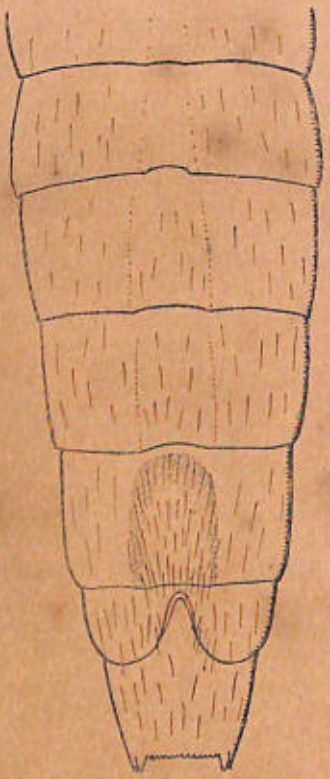


Fig. 94.—*Stenus* (*Hypostenus*) *andrewesi*, abdomen of ♂; ventral surface.

429. Stenus (Hypostenus) frater, sp. n. (Fig. 95.)

Very near *S. andrewesi* Fauv., and only differing in the following points: the head has a fine median impunctate keel in the middle and is much more closely punctured, the thorax and elytra are a little more closely punctured, more rugulose, the abdomen more coarsely punctured, the 5th segment as coarsely as the preceding. Length 5 mm.

♂: 6th ventral segment with a rather broad but acute excision, the sides bevelled; 5th along the middle with thicker and longer pubescence.

Chakrata district: Binal Gad; Deoban, alt. 7000 to 9000 feet.

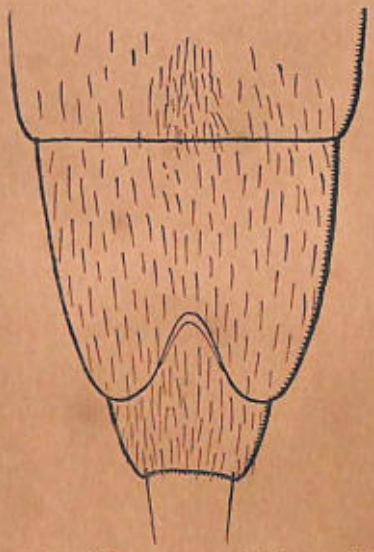


Fig. 95.—*Stenus* (*Hypostenus*) *frater*, apex of abdomen of ♂; ventral surface.

430. **Stenus (Hypostenus) angusticollis.** (Fig. 96.)

Stenus angusticollis Epp.*, D. E. Z. 1895, p. 405.

Narrow, elongate, black, rather shining, the fore-parts with short white sparing pubescence, the abdomen with rather long, less sparing white pubescence. Antennæ, palpi, and legs pale yellow, the club of the former infuscate. Length 5 to 6 mm.

Build of *S. andrewesi* Fauv., but with the abdomen much less finely punctured. Head as broad as the base of the elytra, excavate, moderately coarsely, moderately closely punctured, with a narrow, feebly elevated, impunctate line along the middle. Antennæ long and slender, extending a little beyond the base of the thorax. Thorax practically cylindrical, one-fourth longer than broad, with similar puncturation to that of the head, but closer. Elytra along the suture as long as the thorax, but much broader, similarly punctured. Abdomen cylindrical, narrowed behind, the anterior segments constricted at the base, the puncturation like that of the elytra

on the first four segments, the 5th more sparingly punctured, the 6th with a few small scattered punctures. First joint of the posterior tarsi as long as the four following together.

♂: 6th ventral segment deeply triangularly excised, the edges bevelled, the apex rounded; 5th rather broadly impressed throughout the whole length, the impression more

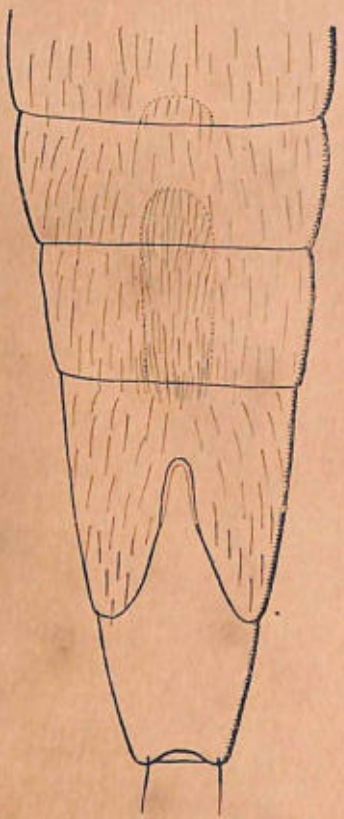


Fig. 96.—*Stenus* (*Hypostenus*) *angusticollis*, abdomen of ♂: ventral surface.

closely pubescent; 4th with a semicircular impression behind, the side-margins carinate, the fundus more pubescent, the posterior border adjacent feebly emarginate; 3rd and 2nd segments slightly impressed in the middle behind, the impressions impunctate posteriorly.

Burma: Pegu. Assam: Naga Hills. United Provinces: Siwaliks.

431. **Stenus (Hypostenus) nitidulus.**

Stenus (Hypostenus) nitidulus Cam., Trans. Ent. Soc. Lond. 1914, p. 531.

Black, shining, elongate; head carinate; thorax almost cylindrical, much narrower than the head; elytra ample, as long as broad; fore-parts moderately coarsely and closely punctured. Abdomen cylindrical, not margined, less coarsely and closely punctured than the fore-parts. Antennæ, palpi, and legs testaceous, the club of the former scarcely infuscate. Fourth joint of the tarsi bilobed, the 1st longer than the four following together. Length 4 to 5 mm.

At first sight this species is not unlike *S. bispinus* Motsch., but the head is broader and the thorax narrower, the puncturation of the fore-parts is, however, very similar, but that of the abdomen is very much coarser.

Head much broader than the thorax, as broad as the elytra behind, with a smooth elevated central space, depressed on either side, rather coarsely and closely punctured. Antennæ long and slender, 1st and 2nd joints of equal length, 3rd to 8th very long and slender, gradually decreasing in length, 9th to 11th forming a slender club. Thorax narrow, almost cylindrical when viewed from above, very slightly and equally narrowed in front and behind, one-third longer than broad, rather coarsely and closely punctured, sometimes with a smooth line in the middle of the disc. Elytra as long as the thorax, as broad as long, sometimes slightly impressed behind the shoulders, punctured similarly to the thorax. Abdomen cylindrical, the segments constricted at the bases, puncturation finer and less close than on the fore-parts, especially behind. Pubescence scanty, greyish. Anal spines wanting.

♂: 6th ventral segment with deep excision, the apex of which is rounded.

Manipur (*Brit. Mus. Coll.*).

432. **Stenus (Hypostenus) barbatus.** (Fig. 97.)

Stenus barbatus Niet., Ann. Mag. Nat. Hist. (2) xix, 1857, p. 381; Kraatz, Arch. Naturg. xxv, 1859, i, p. 163.
Stenus arachnipes Bernh., D. E. Z. 1902, p. 42, 1919, p. 362.

Narrow, elongate, black, shining. Antennæ, palpi, and legs pale yellow, the club of the former scarcely infuscate. Length 5·5 mm.

Very near *S. angusticollis* Epp., but at once distinguished by the less coarse and less close abdominal puncturation and the absence of a median keel on the head. Head as broad as the base of the elytra, broadly excavated, feebly, broadly elevated behind in the middle, moderately finely punctured, much more sparingly along the middle. Antennæ slender, reaching the

base of the thorax. Thorax narrow, cylindrical, a third longer than broad, along the middle of the posterior two-thirds with a narrow shining line, the rest of the surface rather strongly and rather closely punctured. Elytra slightly longer than the thorax and nearly twice as broad, as long as broad, the puncturation stronger and less close. Abdomen narrow, cylindrical, narrowed behind, the bases of the anterior segments constricted, rather strongly (but less strongly than the thorax), moderately closely punctured, the last two segments much



Fig. 97.—*Stenus* (*Hypostenus*) *barbatus*, apex of abdomen of ♂ : ventral surface.

more finely and sparingly. Head and abdomen with a rather long, the thorax and elytra with much shorter white pubescence. First joint of the posterior tarsi as long as the four following together.

♂: 6th ventral segment with deep, narrow, triangular excision, the apex rounded; 5th impressed along the whole of the middle, the fundus more finely punctured; 2nd to 4th flattened in the middle behind, the posterior part of the flattened area impunctate.

Ceylon: Colombo; Bogawantalawa; Dikoya, alt. 3800 to 5200 feet; Haputale.

433. Stenus (Hypostenus) serpens.

Stenus serpens Ben., Ark. Zool. xiv, 1922, p. 4, fig. 4, p. 2.

Very slender, black, shining, pubescence very short, coarsely

but superficially punctured. Antennæ, palpi, and legs bright yellow. Length 5·2 mm.

Head very broad, nearly twice as broad as the thorax, scarcely broader than the elytra, in front of the large eyes shortly pubescent, the front broadly and superficially impressed, without lateral sulci, and only behind in the middle slightly elevated, the hinder part of this and the antennal tubercles smooth. Puncturation rather close, moderately coarse but not deep. Antennæ slender, the 3rd joint a little longer than the 4th, the following gradually decreasing in length, the joints of the club longer than broad. The narrow thorax is almost parallel-sided, nearly twice as long as broad, slightly widened behind the middle, the sides retracted from thence in a straight line, the middle line in its whole extent narrowly smooth, otherwise very thickly, moderately coarsely, superficially punctured, the punctures not confluent. Elytra at the suture scarcely as long as the thorax, with distinct shoulders, almost parallel-sided, behind rather deeply arcuately emarginate, convex, in front near the suture slightly impressed, coarsely and closely, moderately deeply punctured, less closely behind. Abdomen slender, as broad as the thorax, immarginate, slightly narrowed behind, the bases of the anterior segments rather strongly constricted, in front coarsely and closely, on the 4th segment more finely and sparingly, on the last very sparingly punctured. The fine grey pubescence is very short and not close. The legs are slender, the femora at apex broadly contracted, the posterior tarsi scarcely more than half the length of the tibiæ, the 4th joint bilobed.

♂: First four ventral segments more sparingly punctured behind, almost smooth; 4th on the posterior half flattened, more finely punctured and with yellow pubescence; 5th moderately deeply impressed in its whole length, the sides parallel, with long fine pubescence, more finely punctured and scarcely emarginate behind; 6th moderately deeply and not very broadly emarginate.

Ceylon: Kandy.

This insect differs from *cylindricollis* Boh. in its larger size, the almost entire absence of a median elevation on the head, the short pubescence of the whole body (in *cylindricollis* it is long, especially on the abdomen), and slighter development of the ♂ secondary sexual characters. From *S. flavovittatus* Champ. it is distinguished by its more slender build, uniform colour, and comparatively broader head (ex *Benick*).

434. Stenus (Hypostenus) cribellatus.

Stenus cribellatus Motsch., Bull. Mosc. xxx, 1857, iv, p. 515.

Near *S. filum*, but with the elytra larger, square, and convex.

Head excavate and covered with large deep punctures like the thorax, elytra, and abdomen. Thorax elongate, the sides rounded. Abdomen half as broad as the elytra, the extremity bilobed. Base of the palpi, middle antennal joints, and legs testaceous, the first two joints of the antennæ, knees, and ends of the tarsi black.

"Ind. or." (ex *Motschoulsky*).

I do not know this species. *S. filum* Er. belongs to the subgenus *Hemistenus*, and has a bordered abdomen. In Bernhauer's Catalogue *cribellatus* is placed in *Hypostenus*.

435. **Stenus (Hypostenus) ceylonicus.**

Stenus ceylonicus Bernh., D. E. Z. 1902, p. 41.

Shining black with slight metallic reflex, not very closely punctured. Antennæ, palpi, and legs testaceous, the club of the former infuscate. Length 3·5 mm.

Rather closely allied to *S. similis* Hbst., but one-third smaller, with paler antennæ and legs and much more sparing puncturation. Black, with very slight metallic reflex, the antennæ except the 3-jointed club, the palpi, and legs pale yellow, the knees not infuscate. Head depressed between the eyes, longitudinally feebly bi-impressed, flat and scarcely elevated in the middle, behind the insertion of the antennæ with a short shining keel, the puncturation not very coarse and not very close. Thorax much narrower than the elytra, about a third longer than broad, the sides rather strongly rounded, more closely but scarcely more strongly punctured than the head, without median sulcus or shining line. Elytra quadrate, with prominent shoulders, the sides slightly rounded, the suture behind the scutellum impressed, more strongly but more sparingly punctured than the thorax. Abdomen cylindrical, not margined, at the base of the anterior segments strongly constricted, rather finely, not very closely punctured, posteriorly yet more finely and sparingly.

Ceylon: Hatton (ex *Bernhauer*).

436. **Stenus (Hypostenus) wasmanni.** (Fig. 98.)

Stenus wasmanni Fauv.*, Rev. d'Ent. xiv, 1895, p. 214.

Black, shining; antennæ and palpi testaceous, the club of the former infuscate. Legs testaceous, the apex of the femora occasionally infuscate. The whole insect covered with a fine silvery pubescence, much thicker on the abdomen. Length 4·5 to 5 mm.

Build of *S. similis* Hbst., but smaller and narrower, more finely punctured, and with differently coloured antennæ and legs.

Head as broad as the base of the elytra, broadly, slightly bisulcate, along the middle convex and feebly elevated, moderately coarsely and moderately closely punctured all over. Antennæ moderate, the penultimate joints longer than broad. Thorax a little longer than broad, the sides evenly rounded, widest at the middle, even, punctured like the head. Elytra a little longer than the thorax, a little broader than long, more coarsely punctured. Abdomen stout, the bases of the anterior

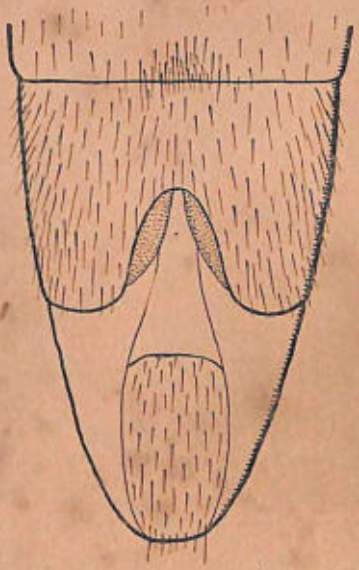


Fig. 98.—*Stenus* (*Hypostenus*) *wasmanni*, apex of abdomen of ♂; ventral surface.

segments constricted, rather coarsely and closely punctured throughout.

♂: 6th ventral segment with deep excision, the sides broadly bevelled, the apex rounded; 5th scarcely impressed along the middle, scarcely emarginate behind, but more finely and closely punctured and pubescent there.

Burma: Carin Cheba; Carin Ghécu (*L. Fea*). Sikkim: Darjeeling (*Christie*). Simla Hills. Chakrata; Ranikhet; Dehra Dun. Assam: Naga Hills.

437. **Stenus (Hypostenus) consors.** (Fig. 99.)

Stenus consors Fauv.*, Rev. d'Ent. xxiii, 1904, p. 49.

Black, rather shining, sparingly pubescent. Antennæ, palpi, and legs reddish-testaceous, the club of the former scarcely infuscate. Length 4·5 to 5 mm.

Very near *S. wasmanni* Fauv., but more shining and less pubescent, the puncturation of the fore-parts a little coarser and less close, the abdominal segments more strongly constricted and rather more finely punctured, the penultimate segments much more finely and more sparingly; thorax a little shorter and broader, elytra a little shorter.

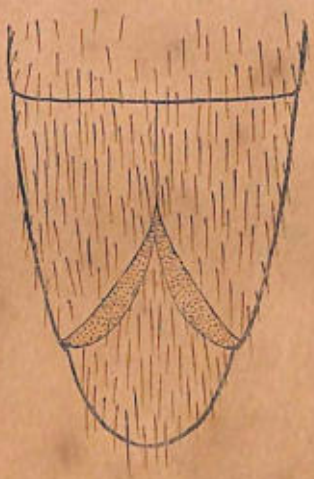


Fig. 99.—*Stenus* (*Hypostenus*) *consors*, apex of abdomen of ♂: ventral surface.

♂: Femora thickened. 6th ventral segment more narrowly triangularly excised, the edges broadly bevelled; 5th scarcely more pubescent in the middle than the rest of the surface.

Nilgiri Hills. With the ant *Myrmicaria brunnea* Saund.

438. **Stenus (Hypostenus) gastralis.**

Stenus gastralis Fauv.*, Rev. d'Ent. xiv, 1895, p. 214.

Near *S. wasmanni* Fauv., but smaller, the fore-parts with rather long pubescence, the abdomen closely covered with erect white pubescence; head scarcely flatter, thorax (especially in the middle) more sparingly punctured; elytra broader and more convex, abdomen a little more sparingly punctured and a little more narrowed at the apex. Length 4 mm.

♂: 7th ventral segment triangularly excised, the apex of the incision rounded, the sides scarcely bevelled.

Burma: Rangoon (*Fea*); Tavoy. Also in Annam.

439. **Stenus (Hypostenus) piliferus.**

Stenus piliferus Motsch., Bull. Mosc. xxx, 1857, iv, p. 514.

Build of *S. tarsalis*, but with the thorax and head much

narrower and the elytra widened at the middle. Head as broad as the thorax. Puncturation coarse, rugose, and furnished with scanty, rather long hairs of a golden-grey colour. First joint of antennæ and legs testaceous, the knees slightly infuscate.

"Indes orientales" (ex *Motschoulsky*).

440. Stenus (Hypostenus) acuminatus.

Stenus acuminatus Kr.*, Arch. Naturg. xxv, 1859, i, p. 165; Benick, Stett. Ent. Zeit. lxxxii, 1921, p. 123.

Black, slightly shining, with very slight æneous reflex, rather coarsely and roughly punctured throughout. Antennæ reddish-testaceous, the club infuscate. Palpi and legs reddish-testaceous, the 3rd joint of the former and the apex of the femora infuscate. Length 3 mm.

Head as broad as the base of the elytra, almost flat, scarcely raised along the middle, broadly and very slightly bi-impressed, rather coarsely, closely punctured. Antennæ short, the 8th to 10th joints as long as broad. Thorax scarcely longer than broad, widest at the middle, the sides evenly rounded in front, straighter and more retracted behind, rather coarsely, closely, and, especially before the base, transversely rugose. Elytra convex, a little longer and considerably broader than the thorax, closely and more coarsely punctured. Abdomen cylindrical, narrowed to the apex, the anterior segments constricted, closely and moderately coarsely punctured throughout. The whole insect sparingly covered with a fine short white pubescence. Posterior tarsi short.

♂: 6th ventral segment with small triangular excision with rounded apex; 5th with an impression along the middle throughout, the sides subcarinate.

Ceylon. Bihar: Pusa. United Provinces: Dehra Dun.

441. Stenus (Hypostenus) lacertoides.

Stenus lacertoides Nietn.*, Ann. Mag. Nat. Hist. (2) xix, 1857, p. 382; Kr. Arch. Naturg. xxv, 1859, i, p. 165; Benick, Stett. Ent. Zeit. lxxxii, 1921, p. 123.

Identical in build, size, etc., with *S. acuminatus*, and according to Benick only differs in the head being more distinctly elevated in the middle, the puncturation of the head and thorax less coarse, less close, and scarcely rugose, and the pubescence less distinct. I do not know the ♂ characters of this insect.

Ceylon. United Provinces: Dehra Dun.

A specimen in the British Museum labelled "type" appears identical with *S. acuminatus* Kr.. A specimen in my collection from Dehra Dun appears to be *lacertoides*; it was taken with *acuminatus*.

442. **Stenus (Hypostenus) monomerus.**

Stenus monomerus Fauv.*, Rev. d'Ent. xiv, 1895, p. 214.

Black, shining. Antennæ testaceous, the 1st joint and the club pitchy. Palpi testaceous. Legs testaceous, the knees very narrowly infuscate. Length 3·3 mm.

Near *S. acuminatus* Kr., but with broader head, longer antennæ, entirely testaceous palpi, more narrowly infuscate knees, longer thorax, and coarser puncturation of the fore-parts. Head a little broader than the elytra at the base, broadly excavated, in the middle broadly but very slightly elevated, coarsely and closely punctured, behind the base of the antennæ with a smooth space. Antennæ rather short, the 9th and 10th joints only slightly longer than broad. Thorax longer than broad, widest at the middle, the sides evenly rounded and retracted, uniformly punctured all over like the head. Elytra at the suture as long as the thorax, scarcely broader than long, convex, more coarsely punctured. Abdomen a little narrowed behind, the anterior segments constricted at the base, coarsely and closely punctured, 5th and 6th segments much more finely and sparingly; apex slightly emarginate, the angles a little prominent. The whole insect very sparingly pubescent. First joint of posterior tarsi shorter than the four following together.

♂: 6th ventral segment rather deeply, triangularly excised.

Burma: Carin Cheba, alt. 900 to 1100 metres, v., xii.; Pegu; Palon, viii., ix. (*L. Fea*). Also in the Malay Peninsula.

443. **Stenus (Hypostenus) tricarinatus.**

Stenus tricarinatus Kr.*, Arch. Naturg. xxv, 1859, i, p. 164.

Black, shining; head behind with three large, shining, impunctate spaces. Antennæ testaceous, the penultimate joints infuscate. Palpi testaceous, the 3rd joint infuscate. Legs testaceous, the apex of femora and the apical halves of the tibiæ infuscate. Length 3 mm.

In build somewhat resembling *S. fornicatus* Steph., but larger and with broader thorax. Head a little broader than the thorax, at the base with three large, raised, impunctate spaces, the median one the largest, the antennal tubercles and a space behind similarly raised and impunctate, the rest of the surface moderately finely and closely punctured. Antennæ rather short, the penultimate joints scarcely longer than broad. Thorax about as broad as long, the sides gently rounded and a little more retracted behind, in the middle with a well-marked longitudinal smooth shining space abbreviated in front and behind, in front of the base on each side with an irregular smooth space, otherwise rather coarsely and closely punctured.

Elytra about a fourth longer and about twice as broad as the thorax, convex, coarsely and closely punctured. Abdomen narrowed behind, the bases of the anterior segments constricted, the first two segments rather coarsely and closely punctured, the following much more finely and sparingly. The whole insect covered with a sparing, short, white pubescence.

♂: 6th ventral segment with an acute triangular excision; 5th scarcely perceptibly emarginate.

Ceylon: Colombo. Belgaum. Pusa. Also in Java and Australia.

444. **Stenus (Hypostenus) microcephalus.**

Stenus microcephalus Bernh., Ent. Mitt. xv, 1926, p. 130.

Black, moderately shining. Antennæ reddish-testaceous, the penultimate joints infuscate. Palpi testaceous. Legs testaceous, the apex of the femora very narrowly infuscate. Length 3 to 3·5 mm.

Very near *S. tricarinatus* Kr., but less shining, more pubescent, more finely and closely punctured. The head is broader than the thorax, but narrower than the base of the elytra, narrowly impressed on each side, broadly and slightly elevated along the middle, before the base with three shining impunctate plaques and a similar one behind the base of each antenna, the rest of the surface rather closely punctured. Antennæ reaching the base of the thorax, the 9th and 10th joints a little longer than broad. Thorax with smooth impunctate space in the middle, moderately coarsely and rather closely punctured. Elytra nearly half as long again as the thorax, convex, ample, more coarsely punctured than the thorax. Abdomen narrowed from base to apex, the anterior segments somewhat constricted and rather coarsely and closely punctured, the posterior gradually more finely and less closely, the apex with a short straight spine on each side. First joint of posterior tarsi not longer than the last.

♂: 6th ventral segment narrowly excised, the apex of the incision rounded, the margins not bevelled.

Kumaon: Haldwani. Siwaliks: Nakraunda; Lachiwala.

445. **Stenus (Hypostenus) fistulosus.**

Stenus fistulosus Ben., Mitt. Münch. Ent. Ges. xv, 1925, p. 78.

Near *S. tricarinatus* Kr. Black, the abdomen more shining, sparingly pubescent, closely and rather coarsely punctured. Antennæ, palpi, and legs yellow, the apical half of the former, the apex of the palpi, and apex of the femora infuscate. The head rather small, not much broader than the thorax, narrower than the elytra at the base, eyes large. Front not impressed,

the middle of the vertex broadly elevated and to some extent smooth, on each side superficially excavated, behind the insertion of the antennæ with a small shining space, the rest of the surface finely and irregularly punctured. Antennæ not reaching the base of the thorax, the 3rd joint about a third longer than the 2nd and 4th, this as long as the 5th, the 6th shorter, the last three joints longer than broad, stouter than the two preceding. The palpi long and slender. Thorax as long as broad, widest at the middle, equally narrowed in front and behind, convex, in the middle with a small shining line for about a fourth of the length, the puncturation obviously coarser than on the head, very close, the interspaces only half the diameter of the punctures. Elytra broad, the shoulders prominent, the sides slightly rounded, the posterior border slightly emarginate, convex, along the suture slightly impressed, within the shoulders distinctly impressed, closely and very coarsely punctured, much more coarsely than the thorax. Abdomen obviously narrower at the base than the elytra, narrowed behind, immarginate, the bases of the segments moderately constricted, the puncturation on the basal segments as coarse as that of the head, towards the apex becoming much finer: 5th segment with a narrow white membranous border behind; 7th with a small curved spine. Legs short and not stout, the tibiæ more slender in the basal half, the posterior tarsi hardly longer than half the tibia, the 1st joint about a half longer than the 3rd, the 4th deeply bilobed. Upper surface without ground-sculpture.

♂: 6th ventral segment slightly emarginate, the 5th slightly but more broadly emarginate.

Length 2·6 to 2·7 mm.

Belongs to the *fornicatus* section and near *tricarinatus* Kr., from which it differs in the more slender build, finer and thicker puncturation, less distinct shining spaces on the head, and the ♂ characters.

Madras (ex *Benick*).

446. **Stenus (Hypostenus) planifrons.**

Stenus planifrons Fauv., Rev. d'Ent. viii, 1889, p. 253; id. xxii, 1903, p. 262.

Black, subopaque, with a short, subsquamose, golden pubescence. Antennæ reddish-testaceous, the first two joints and the club pitchy. Palpi testaceous. Legs reddish-testaceous, the knees and occasionally the apex of the tibiæ infuscate. Length 3·2 to 3·5 mm.

Readily recognised by the pubescence in certain lights giving the insect the appearance of being dusted with gold. Head as broad as the base of the elytra, flat, only raised at the

sides, closely and rather coarsely punctured, except for a narrow smooth space at the base of the antenna. Antennæ rather short, the 9th and 10th joints only a little longer than broad. Thorax a little longer than broad, widest at the middle, the sides evenly rounded, the sculpture as on the head. Elytra at the suture scarcely longer than the thorax, convex, slightly broader than long, longitudinally impressed within the shoulders, more coarsely punctured than the thorax. Abdomen cylindrical, narrowed behind, the anterior segments constricted at the base, closely but less coarsely punctured than the fore-parts, a little less closely and a little less coarsely on the last two segments; apex bispinose. First joint of the posterior tarsi shorter than the following together, about as long as the last.

♂: 6th ventral segment with a small triangular emargination; 5th flattened and more closely punctured and pubescent along the middle.

Dehra Dun; Siwaliks. Mussoorie and Chakrata districts up to 6000 feet. Ranikhet. Also in New Caledonia, N.W. Australia, and Celebes.

Key to the Species of the Subgenus Mesostenus.

1.	Each elytron with a reddish or yellowish marking	2.
	Elytra immaculate	18.
2.	Abdomen cylindrical, extremely finely margined	3.
	Abdomen not cylindrical, normally margined	9.
3.	Head with smooth median elevation	4.
	Head uniformly punctured	8.
4.	Elytral marking round	5.
	Elytral marking otherwise	7.
5.	Larger (7·8 mm.). Thorax not longer than broad, the elytral marking larger	*grandiculus* Ben., [p. 386.
	Smaller (6·5 to 7 mm.). Thorax a little longer than broad, the elytral marking smaller	6.
6.	Thorax very uneven and rugose; elytral spot smaller	*callifrons* Ben., p. 386.
	Thorax less uneven and rugose; elytral spot larger	*gestroi* Fauv., p. 385.
7.	Elytra each with large, transverse, irregular yellow spot behind the middle, in front and behind with a slight purple reflex	*fœ* Fauv., p. 388.
	Elytra each with an obliquely placed orange spot shaped like half a dumb-bell, the narrower posterior part involving the posterior margin itself	*immsi* Bernh., p. 387.

8. Elytral spot rather large, oblique, subtriangular, narrow behind, and reaching, or almost reaching, the posterior margin itself	[p. 386. *circumflexus* Fauv.,
Elytral spot smaller, oval, well separated from the posterior margin	[p. 388. *masurianus*, sp. n.,
9. Thorax very uneven, on either side of the middle with the rugæ forming an irregular keel, interrupted in the middle	10.
Thorax even, without keels	11.
10. Head with a median shining line before the base; elytral spot smaller, narrow, oblique, pale yellow; abdomen much more coarsely punctured	[p. 390. *obliquenotatus*, sp. n.,
Head without shining line; elytral spot larger, rounder, orange-yellow. Abdomen much more finely punctured	[p. 389. *stigmaticus* Fauv., *chakratianus*, sp. n.,
11. Elytral spot large, round. Larger (7·2 mm.). Elytral spot smaller. Smaller (3·5 to 7 mm.).	12. [p. 391.
12. Third joint of maxillary palpi black; elytral spot round	*maculifer*, sp. n., p. 395.
Third joint of maxillary palpi testaceous or slightly infuscate	13.
13. Larger (5·75 to 7 mm.)	14.
Smaller (3·5 to 5 mm.)	17.
14. Elytral spot larger, oval-oblong	15. [p. 394.
Elytral spot smaller, rounded	*abdominalis* Fauv.,
15. Elytra as long as the thorax; thorax more deeply sulcate in the middle; more uneven	*peraffinis* Fauv., p. 393.
Elytra a little longer than the thorax; thorax less deeply sulcate; less uneven	16.
16. Elytral spot larger and brighter	*posticus* Fauv., p. 392.
Elytral spot smaller and duller	*languor* Ben., p. 393.
17. Larger (4·5 to 5 mm.). More shining, more metallic, thorax more deeply sulcate	*virgula* Fauv., p. 394.
Smaller (3·5 mm.). Less shining, less metallic, thorax less deeply sulcate	*belli* Fauv., p. 396.
18. Abdomen extremely finely bordered; cylindrical, as in *Hypostenus*	19.
Abdomen normally bordered	21.
19. Abdomen densely punctured	20.
Abdomen very finely and sparingly punctured; elytra at suture half as long as the thorax	[p. 402. *brachypterus* Kr.,
20. Elytra at the suture one-fourth shorter than the thorax	[p. 403. *nilgiriensis* Cam.,
Elytra at the suture scarcely shorter than the thorax	*pilicornis* Fauv., p. 397.
21. Elytra with vorticose sculpture behind; colour green	[p. 398. *viridanus* Champ.,
Elytra without vorticose sculpture; black, with or without metallic reflex	22.
22. Larger (6·5 to 8 mm.). Robust black species	*cordatus* Gr., p. 399.
Smaller (4 to 4·5 mm.)	23.

23.	Elytra widened behind; sides of thorax finely denticulate	*kempi* Bernh., p. 401.
	Elytra parallel; sides of thorax not denticulate	24.
24.	More shining; thorax less uneven, the median sulcus shallow, the elytra less closely punctured	*aceris* Steph., p. 400.
	Less shining, with distinct leaden reflex; thorax more uneven, the median sulcus deep, the elytra more coarsely and closely punctured	*submetallicus*, sp. n., [p. 400.

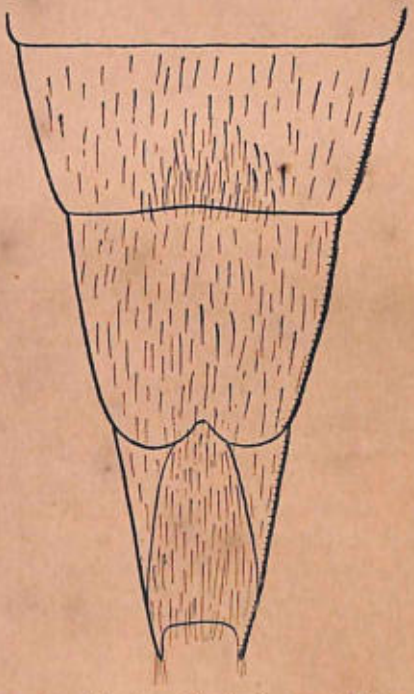


Fig. 100.—*Stenus* (*Mesostenus*) *gestroi*, apex of abdomen of ♂: ventral surface.

447. **Stenus (Mesostenus) gestroi.** (Fig. 100.)

Stenus gestroi Fauv.*, Rev. d'Ent. xiv, 1895, p. 212.

Robust, black, rather shining; each elytron with a moderate, round, orange spot behind, equidistant from the adjacent margins. Antennæ, palpi, and legs reddish-testaceous, the club of the first blackish, the knees scarcely infuscate. Length 6·5 to 7 mm.

Head as broad as the elytra at their widest part, deeply bisulcate, along the middle elevated, convex and smooth behind, the antennal tubercles and a small area behind smooth, otherwise closely and moderately coarsely punctured. Antennæ moderate, not reaching the base of the thorax. Thorax a little longer than broad, transversely impressed behind the anterior margin, deeply and broadly sulcate along the middle, the sides impressed, before the base on each side with an impression, very coarsely, closely, rugosely punctured. Elytra at the suture as long as the thorax, transverse, deeply impressed within the shoulders and along the suture, closely but scarcely as coarsely punctured as the thorax. Abdomen stout, cylindrical, extremely finely margined, the anterior segments constricted at the base, the puncturation in front very like that of the head (in the impressions coarser and closer), behind rather finer and less close.

♂: 6th ventral segment with a short, broad, but acute excision: 5th in the posterior half along the middle more densely punctured and pubescent.

Burma: Carin Cheba; Carin Asciuii Cheba; Carin Ghécu (*Fea*). Assam: Naga Hills, Laimatak (*S. N. Chatterjee*).

448. **Stenus (Mesostenus) grandiculus.**

Stenus grandiculus Ben., Ent. Mitt. xv, 1926, p. 277.

Near *S. gestroi* Fauv., but larger and more robust, the thorax evidently shorter, the elytra broader, the spot larger and nearer the suture, the abdomen more sparingly punctured. Length 7·8 mm. (with extended abdomen).

♂ unknown.

Burma, without further indication.

449. **Stenus (Mesostenus) callifrons.**

Stenus callifrons Ben., Ent. Mitt. xv, 1926, p. 276.

This only differs from *S. gestroi* Fauv. in the narrower, more uneven, more rugose thorax, smaller elytral spot, and rather less fine puncturation on the penultimate abdominal segments. The ♂ characters are similar to those of *S. gestroi*.

Dehra Dun District: Kaligad; Arni Gad.

450. **Stenus (Mesostenus) circumflexus.**

Stenus circumflexus Fauv.*, Rev. d'Ent. xiv, 1895, p. 211.

Robust, black, moderately shining; elytra each with a

triangular orange spot, the posterior extremity at the posterior margin, the external margin oblique, the antero-external angle nearly reaching the lateral margin, the anterior margin horizontal. Antennæ, palpi, and legs reddish-testaceous, the femora a little infuscate apically. Length 5·75 mm.

Head as broad as the elytra at their widest part, deeply sulcate on each side, convex and raised along the middle, behind the base of the antenna with a shining keel, otherwise uniformly, coarsely, and closely punctured. Antennæ moderate, not quite reaching the base of the thorax. Thorax a little longer than broad, widest at the middle, the sides in front gently rounded, straighter and more retracted behind, uneven, deeply sulcate in the middle, the sulcus abbreviated in front and behind, the sides impressed, rugose, more coarsely punctured than the head. Elytra at the suture as long as the thorax, but much broader, transverse, deeply impressed within the shoulders and along the suture, coarsely, closely, rugosely punctured, but less coarsely than the thorax. Abdomen stout, cylindrical, extremely finely bordered, the anterior segments constricted at their base, closely and coarsely punctured, more finely behind; apex with two stout curved spines. Fore-parts glabrous, the abdomen with a very fine, sparing pubescence. First joint of the posterior tarsi longer than the last.

♂: 6th ventral segment with broad obtuse excision; 5th along the middle of the posterior half extremely finely punctured and pubescent, scarcely emarginate.

Burma: Carin Ghécu; Carin Asciuii Ghécu, 1300 to 1500 metres.

451. Stenus (Mesostenus) immsi. (Fig. 101.)

Stenus (Mesostenus) immsi Bernh.*, Col. Rundsch. 1915, p. 49.

Robust, black, shining; elytra with a half dumb-bell-shaped orange mark, obliquely placed and extending from the posterior margin itself to about the level of the middle and equidistant from the lateral and sutural margins, the posterior part of the marking narrower than the anterior. Antennæ, palpi, and legs reddish-testaceous, the club of the former a little infuscate. Length 6 to 6·25 mm.

Near *S. circumflexus* Fauv., but larger and more robust, a little more shining, the antennæ shorter, the thorax a little broader, the sulcus less marked, the puncturation of the fore-parts a little coarser.

♂: 6th ventral segment with narrow, acute, triangular excision, the apex rounded, the edges not bevelled; 5th in the middle behind more thickly punctured and pubescent.

scarcely emarginate. Posterior tibiæ at the apex internally with a small yellow spur.

Dehra Dun. Chakrata district: Manjgaon, alt. 6500 feet.

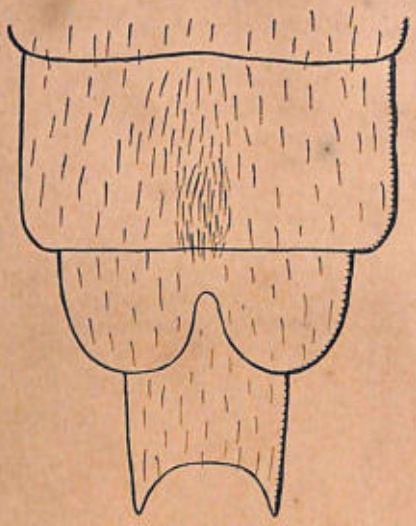


Fig. 101.—*Stenus* (*Mesostenus*) *immsi*, apex of abdomen of ♂; ventral surface.

452. Stenus (Mesostenus) feæ.

Stenus feæ Fauv., Rev. d'Ent. xiv, 1895, p. 211.

Differs from *S. circumflexus* Fauv. in the longer antennæ, more deeply bisulcate head with the interval more elevated and almost smooth, the shorter thorax with strongly dilated sides, more strongly rugose, more uneven and more deeply sulcate; the broader, more transverse and more rugose elytra, which scarcely have a coppery reflex, and the large yellow, irregular, and transverse spot situated a little behind the middle, in front and behind the spot from base to apex scarcely perceptibly purplish; the much more shining, more sparingly and strongly punctured, less finely bordered abdomen. Length 6 to 6⅓ mm.

♂ unknown.

Burma: Carin Ghécu, alt. 1300 to 1400 metres; Carin Asciuii Ghécu, 1400 to 1500 metres; Carin Cheba, 500 to 1000 metres (*L. Fea*) (ex *Fauvel*).

453. Stenus (Mesostenus) masurianus, sp. n.

Black, moderately shining; head bisulcate, feebly elevated along the middle, uniformly punctured. Elytra with a narrow, oval, longitudinal orange spot behind. Antennæ and palpi reddish-testaceous, the club of the former infuscate. Legs

reddish-testaceous, the distal part of the femora scarcely infuscate. Length 6 mm.

Very near *S. circumflexus* Fauv., but less robust, the elytral spot smaller, oval, and placed longitudinally, the fore-parts a little less coarsely punctured.

♂: 6th ventral segment with a shallow obtuse excision; 5th in the middle of the posterior half densely punctured and pubescent.

Dehra Dun District: Arni Gad.

454. **Stenus (Mesostenus) stigmaticus.** (Fig. 102.)

Stenus stigmaticus Fauv.*, Rev. d'Ent. xiv, 1895, p. 210.

Moderately shining, bronze-black; elytra each with a moderate oval orange spot behind the middle, much nearer the lateral margin than the suture, equidistant from the lateral and posterior margins. Antennæ with the first five

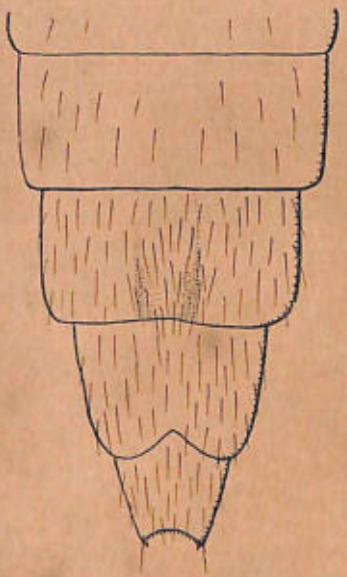


Fig. 102.—*Stenus* (*Mesostenus*) *stigmaticus*, apex of abdomen of ♂; ventral surface.

or six joints reddish-testaceous, the rest infuscate. Palpi reddish-testaceous, the 3rd joint infuscate. Legs reddish-testaceous, the apex of the femora and bases of the tibiæ a little infuscate. Length 6 to 6·75 mm.

Head a little narrower than the elytra at their widest, bisulcate, convex and raised along the middle, and here more coarsely and less closely punctured than at the sides. Antennæ slender, reaching the base of the thorax. Thorax as long as

broad, widest at the middle, the sides rounded in front, rather suddenly retracted behind, deeply and completely sulcate along the middle, with an impression on each side before the base, the sides also impressed, uneven, coarsely and closely punctured with here and there confluent rugæ. Elytra at the suture a little longer than the thorax, as broad as long, uneven, coarsely and closely punctured with confluent rugæ. Abdomen narrowed from base to apex, the anterior segments transversely impressed at base, closely, moderately finely punctured, gradually more finely and more sparingly behind. Anterior tibiæ a little sinuated internally.

♂: 6th ventral segment with obtuse excision; 5th a little flattened along the middle for about the posterior two-thirds, and there closely and finely punctured and pubescent, scarcely perceptibly emarginate.

Burma: Carin Asciuii Cheba, alt. 1200 to 1300 metres (*L. Fea*). Sikkim: Darjeeling (*Christie*). Assam: Naga Hills (*S. N. Chatterjee*). Also in Tonkin.

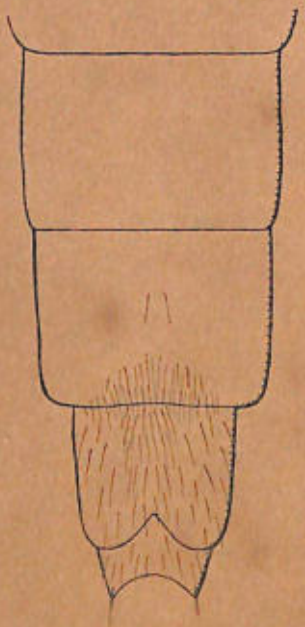


Fig. 103.—*Stenus (Mesostenus) obliquenotatus*, apex of abdomen of ♂, ventral surface.

455. Stenus (Mesostenus) obliquenotatus, sp. n. (Fig. 103.)

Black, rather shining; each elytron with a narrow, oval, yellow, oblique spot behind the middle. Antennæ, palpi, and

legs reddish-testaceous, the club of the antennæ, the 3rd joint of the palpi, and the apex of the femora infuscate. Length 6 mm.

Very closely allied to *S. stigmaticus* Fauv., but differs in the less uneven, less coarsely sculptured thorax, the narrower, *yellow* spot on the elytra, and the much more strongly and closely punctured 4th and 5th abdominal segments. The ♂ has a less obtuse excision in the 6th ventral segment, and the 5th is only impressed and thickly pubescent near the posterior margin.

Chakrata district: Deoban; Manjgaon; Khedar Khud; Bodyar; Jadi Gad, alt. 7000 to 9000 feet.

456. **Stenus (Mesostenus) chakratianus**, sp. n. (Fig. 104.)

Elongate, moderately shining, black with distinct metallic green reflex, especially on the abdomen; each elytron with a rather large round orange spot posteriorly about equidistant

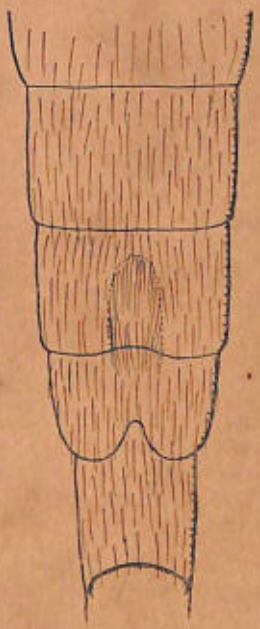


Fig. 104.—*Stenus (Mesostenus) chakratianus*, apex of abdomen of ♂; ventral surface.

from the lateral and posterior margins, more distant from the suture. Antennæ long and slender, the 8th to 11th joints infuscate; palpi reddish-testaceous, the 3rd joint infuscate

apically. Legs reddish-testaceous, the distal third of the femora infuscate. Length 7·5 mm.

Near *S. stigmaticus* Fauv., but larger, more metallic, the antennæ much longer and the elytral spot much larger. Head as broad as the elytra at their greatest width, broadly bisulcate, elevated and convex along the middle, with a small impunctate plaque behind, the antennal tubercles also smooth, the rest of the surface closely, moderately coarsely punctured, the punctures in front somewhat confluent. Antennæ reaching beyond the base of the thorax. Thorax distinctly longer than broad, widest at the middle, the sides rounded in front, straighter and more retracted behind, along the middle with a deep sulcus abbreviated behind, on each side with a rounded impression, coarsely, closely, rugosely punctured, the interspaces forming rugæ, especially on the disc. Elytra at the suture a little longer than the thorax, as long as broad, impressed within the shoulders and at the suture, less coarsely punctured. Abdomen narrowed from base to apex, distinctly bordered, the anterior segments transversely impressed at the base, closely, moderately finely punctured in front, gradually more finely and a little more sparingly behind. Apex with two short triangular spines. Anterior tibiæ a little sinuate internally.

♂: 6th ventral segment with triangular emargination, the apex rounded; 5th impressed along the middle almost throughout, the impression very finely and closely punctured and pubescent, the adjacent border feebly emarginate.

Chakrata district: Manjgaon, alt. 6500 feet.

457. **Stenus (Mesostenus) posticus.**

Stenus posticus Fauv.*, Rev. d'Ent. xiv, 1895, p. 209.

Elongate, black, shining, with slight greenish reflex; each elytron behind with an oval yellow spot which is equidistant from the posterior and lateral margins, much further from the sutural. Antennæ, palpi, and legs reddish-testaceous, the club of the first a little infuscate. Length 6 to 6·75 mm.

Head as broad as the elytra behind, slightly, broadly bisulcate in the middle, broadly and slightly elevated and convex, rather coarsely, closely and uniformly punctured, the antennal tubercles smooth. Antennæ long and slender, reaching a little beyond the base of the thorax. Thorax a little longer than broad, widest at the middle, the sides feebly rounded in front, straight and more retracted behind, scarcely sulcate in the middle, obsoletely impressed on each side, closely, more coarsely punctured than the head, rugulose. Elytra at the suture as long as the thorax, as long as broad, impressed behind the shoulders, the sculpture as on the thorax. Abdomen

narrowed from base to apex, strongly bordered, the first three visible segments closely, moderately finely, the following much more finely punctured. Apex with two short spines. Anterior tibiæ a little sinuated internally.

♂: Intermediate and posterior tibiæ with a small black spur near the apex internally; 6th ventral segment with a broad, almost crescentic excision, the edges bevelled; 5th impressed in the middle almost throughout, the impression deeper behind with carinate margins, posterior border emarginate.

Burma: Carin Cheba; Carin Asciuii Ghécu, alt. 900 to 1500 metres (*L. Fea*); Ruby Mines (*Doherty*).

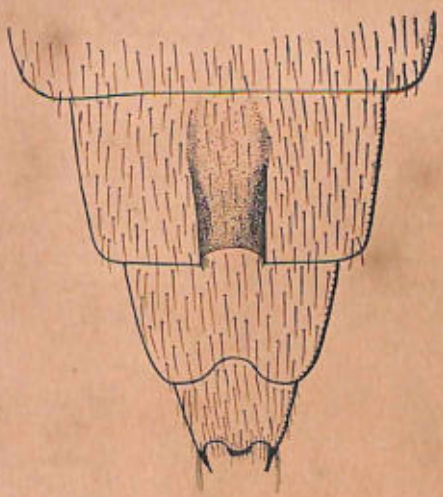


Fig. 105.—*Stenus* (*Mesostenus*) *languor*, apex of abdomen of ♂; ventral surface.

458. **Stenus (Mesostenus) languor.** (Fig. 105.)

Stenus (*Mesostenus*) *languor* Ben., Ent. Mitt. xv, 1926, p. 275.

Closely allied to *S. posticus* Fauv., but less shining and without metallic reflex; the elytral spot is smaller and duller, the sculpture on the fore-parts less coarse. The ♂ characters are similar.

Chakrata district: Kanasar, alt. 7050 feet. Mussoorie district: Jabberkhet, alt. 6800 feet.

459. **Stenus (Mesostenus) peraffinis.**

Stenus peraffinis Fauv.*, Rev. d'Ent. xiv, 1895, p. 209.

Very near *S. posticus* Fauv. and, apart from the ♂ characters,

differs only in the thorax more distinctly sulcate, the lateral impressions deeper, so that it is more uneven. The elytra are shorter, about as long as the thorax. Length 6·5 to 7 mm.

♂: 6th ventral segment broadly, subtriangularly emarginate; 5th impressed behind in the middle, the sides of the impression scarcely carinate, densely punctured and pubescent, scarcely emarginate behind. The middle and posterior tibiæ are without spurs.

Burma: Carin Asciuii Ghécu, alt. 1400 to 1500 metres, iii., iv. (*L. Fea*).

460. **Stenus (Mesostenus) abdominalis.**

Stenus abdominalis Fauv., Rev. d'Ent. xiv, 1895, p. 210.

Very near *S. peraffinis* Fauv., but a little smaller, with the antennæ, especially the 7th and 8th joints, shorter, the elytral spot smaller, rounded-oval, the abdomen nearly twice as closely and finely punctured.

♂: Anterior tibiæ scarcely sinuate internally, the middle without a spur, the posterior with a scarcely perceptible one internally near the apex; 6th † ventral segment impressed almost throughout the middle; 7th † more deeply incised, subtriangularly impressed before the excision.

Length 5·75 mm.

Burma: Carin Cheba, alt. 1300 to 1400 metres; Carin Asciuii Ghécu, 1400 to 1500 metres (*L. Fea*) (ex *Fauvel*).

461. **Stenus (Mesostenus) virgula.** (Fig. 106.)

Stenus virgula Fauv.*, Rev. d'Ent. xiv, 1895, p. 210.

Black, moderately shining: each elytron with a narrow oval, oblique, orange spot posteriorly, equidistant from the lateral and posterior margins, much further from the sutural. Antennæ, palpi, and legs reddish-testaceous, the club of the former infuscate. Length 4·5 to 5 mm.

Head as broad as the elytra behind, broadly and slightly bisulcate, slightly elevated and convex along the middle, with trace of a smooth shining line, the sculpture a little coarser and less close along the middle than at the sides. Antennæ slender, reaching the base of the thorax. Thorax slightly longer than broad, widest at the middle, the sides rounded in front, more retracted and straighter behind, sulcate throughout the middle, the sides obliquely impressed, coarsely and closely punctured and with numerous rugæ. Elytra

† 5th and 6th respectively in our numeration.

at the suture a little longer than the thorax, about as long as broad, coarsely, rugosely punctured. Abdomen narrowed from base to apex, the anterior segments transversely impressed at the base, very closely, coarsely, and rugosely punctured at the base of these segments, gradually more finely and sparingly behind. Apex with two short stout spines. Anterior tibiæ feebly sinuate internally.

♂: Middle and posterior tibiæ near the apex internally with minute yellow spur; 6th ventral segment with rather broad

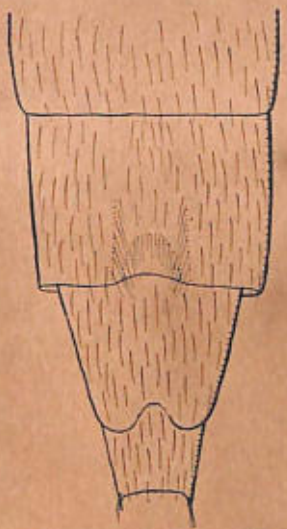


Fig. 106.—*Stenus* (*Mesostenus*) *virgula*, apex of abdomen of ♂; ventral surface.

rounded excision; 5th impressed nearly throughout the middle, the impression deeper behind and closely punctured and pubescent, scarcely emarginate.

Burma: Carin Cheba; Carin Ghécu; Carin Asciuii Ghécu, alt. 900 to 1500 metres (*L. Fea*). Bengal: Kurseong. Sikkim: Darjeeling (*Christie*). United Provinces: W. Almora, Gauramutri.

462. **Stenus (Mesostenus) maculifer**, sp. n. (Fig. 107.)

Black, shining, with slight metallic reflex on the abdomen; each elytron with a moderate oval orange spot posteriorly and nearer the lateral margin than the suture. Antennæ, palpi, and legs reddish-testaceous, the club of the first and the 3rd joint of the palpi infuscate. Length 4·5 mm.

Size and build of *S. virgula* Fauv., but much more shining, the elytral spot larger and broader, the fore-parts more coarsely punctured, the abdomen less closely punctured.

♂: Middle and posterior tibiæ with a minute spur internally near the apex; 6th ventral segment with arcuate excision; 5th impressed along the middle almost throughout, the impression deeper behind and thickly punctured and pubescent, the posterior border distinctly emarginate.

Assam: Naga Hills, Laimatak (*S. N. Chatterjee*).

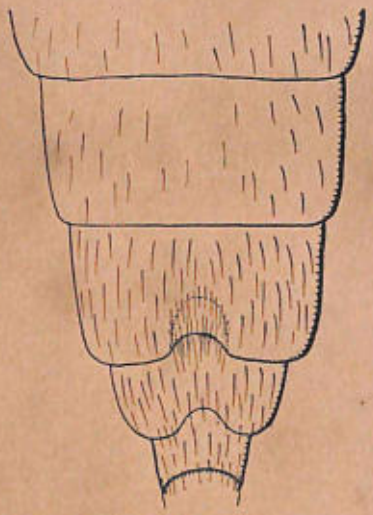


Fig. 107.—*Stenus* (*Mesostenus*) *maculifer*, apex of abdomen of ♂; ventral surface.

463. **Stenus (Mesostenus) belli.** (Fig. 108.)

Stenus belli Fauv.*, Rev. d'Ent. xxiii. 1904, p. 47.

Black, shining; each elytron with a rather obscure, narrow oval spot behind the middle, nearer the suture than the lateral margin and closely approaching the posterior margin. Antennæ, palpi, and legs reddish-testaceous, the distal half of the antennæ infuscate. Length 3·5 mm.

Very near *S. virgula* Fauv., but smaller, the head in the middle with a distinct shining plaque, the elytral spot more obscure and situated nearer the suture, sculpture of the fore-parts less coarse, 5th abdominal segment much less closely punctured. In other respects similar.

♂: Middle and posterior tibiæ with minute blackish spur internally near the apex; 6th ventral segment narrowly,

acutely excised ; 5th broadly and slightly impressed throughout the middle, the impression more thickly punctured and pubescent, the adjacent border feebly emarginate.

Nilgiri Hills (*H. L. Andrewes*).

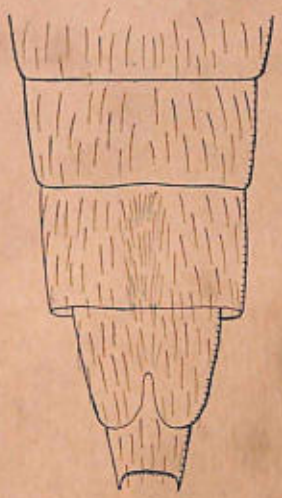


Fig. 108.—*Stenus* (*Mesostenus*) *belli*, apex of abdomen of ♂ : ventral surface.

464. **Stenus (Mesostenus) pilicornis.**

Stenus pilicornis Fauv.*, Rev. d'Ent. xiv, 1895, p. 208.

Unique amongst the Burmese species with immaculate elytra. Size of *S. erichsoni*, Rye, and but little different in facies, black, rather shining, with greenish reflex ; coxæ pitchy-red, palpi, antennæ, and legs reddish-testaceous, the club of the antennæ and the knees scarcely infuscate ; antennæ long, slender, pilose ; head broad, excavate, along the middle scarcely elevated or keeled, uniformly closely, rugosely punctured like the thorax ; thorax oval, the sides dilated, in the middle with short obsolete sulcus ; elytra somewhat shorter than the thorax, a little more strongly rugose, scarcely uneven ; abdomen cylindrical, the segments transversely impressed at the bases, scarcely crenulate, the 2nd to 5th rather closely and finely, 6th and 7th very finely punctured, all of them extremely finely bordered ; 4th tarsal joint narrowly bilobed. ♂ : Posterior tibiæ near the apex internally a little incurved and dilated ; 3rd to 6th† ventral segments longitudinally impressed, 6th more deeply behind with a little keel on each side, the impression very finely punctured and yellow

† 2nd to 5th in our numeration.

pubescent, the apex scarcely emarginate; 7th † rather deeply and broadly triangularly excised. Length 4⅓ to 4½ mm.

Burma: Carin Cheba, 900 to 1100 metres, vi.–xii.; Carin Asciuii Ghécu, 1400 to 1500 metres, iii., iv. (*L. Fea*).

The marginal keel of the abdominal segments is very distinct on their constricted part, but very fine elsewhere; the 4th tarsal joint is very narrowly bilobed (ex *Fauvel*).

The abdomen has the appearance seen in *Hypostenus*. The posterior tibiæ in the ♂ at the apex internally is furnished with a small black spur, which is not mentioned in the author's description.

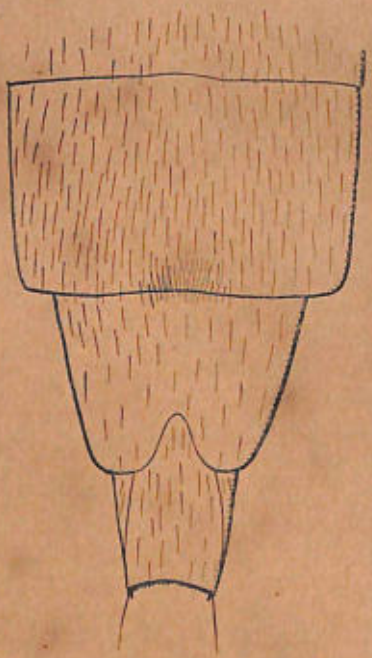


Fig. 109.—*Stenus* (*Mesostenus*) *viridanus*, apex of abdomen of ♂; ventral surface.

465. **Stenus (Mesostenus) viridanus.** (Fig. 109.)

Stenus (*Mesostenus*) *viridans* Champ., E. M. M. xli, 1925, p. 106 (præoc.).

Stenus (*Mesostenus*) *viridanus* Champ.*, id. p. 169.

Olive-green, not very shining; the elytra behind with vorticose rugæ. Antennæ, palpi, and legs reddish-testaceous, the club of the first, the 3rd joint of the palpi, and the apex of the femora rather broadly infuscate. Length 5·75 to 6 mm.

† 6th in our numeration.

Head a little narrower than the elytra at the greatest width, rather deeply bisulcate, along the middle elevated and convex with shining line, coarsely and closely punctured, more coarsely and less closely along the middle. Antennæ very long and slender, reaching beyond the base of the thorax. Thorax slightly longer than broad, the sides rounded in front, rather suddenly retracted before the base, in the middle with broad deep sulcus abbreviated in front and behind, at the posterior angles impressed, the sculpture coarse, rugose, close, with numerous confluent rugæ. Elytra at the suture a little longer than the thorax, as long as broad, very coarsely, closely, and rugosely punctured, behind with the rugæ vorticose. Abdomen narrowed from base to apex, moderately finely and closely punctured in front, gradually more finely and sparingly behind. Apex with two stout curved spines. Anterior tibiæ a little sinuate internally.

♂: 6th ventral segment with rather broad but acute triangular excision with rounded apex; 5th in the middle behind densely punctured and pubescent.

W. Almora. Naini Tal, alt. 8000 feet (*H. G. Champion*). Chakrata district: Chulli Khud, alt. 8000 feet (*Cameron*).

This insect is found in the moss on boulders in the running streams.

466. Stenus (Mesostenus) cordatus.

Stenus cordatus Gr., Col. Micr. Brunsv. 1802, p. 198; Er., Gen. Spec. Staph. 1839–40, p. 726; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 278; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 328; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 592.
Stenus æneus Luc., Expl. Alg. Ent. 1849, p. 123, t. 13, f. 4.
Stenus monticellii Costa, Atti Nap. iv, p. 59.
Stenus princeps Hampe, Stett. Ent. Zeit. xi, 1850, p. 349.

Robust, black, shining. Antennæ reddish-brown, the 1st or 1st and 2nd joints more or less pitchy; palpi reddish, the 3rd joint, except the base, brown. Legs reddish, the apical third of the femora and base of the tibiæ blackish. Length 6·5 to 7·5 mm.

Head a good deal narrower than the elytra at their widest part, not much broader than the thorax, broadly, superficially bisulcate, in the middle convex, very coarsely and closely punctured. Antennæ extending a little beyond the base of the thorax. Thorax broader than long, widest at the middle, the sides rather strongly rounded in front, straighter and more retracted behind, broadly, superficially sulcate along the middle, slightly impressed on each side behind the anterior margin and also before the base, the sides feebly impressed, the sculpture very similar to that of the head. Elytra at the

suture distinctly longer than the thorax, transverse, longitudinally impressed within the shoulders, at the suture and at the sides behind, the puncturation very similar. Abdomen narrowed from base to apex, finely and rather closely punctured at the sides of the anterior segments, much more finely and sparingly along the middle and behind.

♂: 6th ventral segment obtusely emarginate.

Chakrata district: Konain; Kanasar; Bodyar, alt. 7050 to 8300 feet. Also in Europe and Algeria.

467. **Stenus (Mesostenus) aceris.**

Stenus aceris Steph., Ill. Brit. Ent. v, 1832, p. 292; Fauv., Bull. Soc. Linn. Norm. x, 1866, p. 25; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 595.

Stenus aerosus Er., Gen. Spec. Staph. 1839–40, p. 727; Fauv., Faun. Gallo-Rhén. iii, 1872, p. 282; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 337.

Stenus annulatus, Crotch, Trans. Ent. Soc. Lond. (3) v, 1865–67, p. 442.

Stenus elegans Fairm., Ann. Soc. Ent. Fr. (3) viii, 1860, p. 163.

Shining bronze-black; head more or less impunctate in the middle. Antennæ and palpi reddish-testaceous, the club of the former scarcely infuscate. Legs reddish-testaceous, the apex of the posterior femora rather broadly infuscate. Length 4 to 4·5 mm.

Head a little narrower than the elytra at the widest part, broadly bisulcate, along the middle convex a little elevated and less closely punctured, the rest of the surface rather strongly and rather closely punctured. Antennæ rather long and slender, reaching the base of the thorax. Thorax a little longer than broad, widest in the middle, the sides moderately rounded in front, more retracted behind, in the middle sulcate, the sulcus abbreviated in front and behind, on each side lightly impressed before the base and behind the anterior margin, laterally with a feeble oblique impression, the puncturation very similar to that of the head. Elytra at the suture a little longer than the thorax, parallel, impressed at the base and along the suture in front, occasionally also before the posterior margin, the puncturation less close and scarcely as coarse. Abdomen narrowed from base to apex, closely and moderately coarsely punctured in front, gradually more finely and more sparingly behind.

♂: 6th ventral segment with a triangular excision.

Western Himalayas. Also in Europe.

468. **Stenus (Mesostenus) submetallicus,** sp. n. (Fig. 110.)

Moderately shining, leaden-black; thorax sulcate. Antennæ,

palpi, and legs reddish-testaceous, the club of antennæ and 3rd joint of palpi infuscate, the middle and posterior femora rather narrowly infuscate apically. Length 4·1 mm.

In size and build very similar to *S. aceris* Steph., but of more leaden hue, the central region of the head rather sharply carinate, with a small shining line behind, the thorax more deeply sulcate, the impressions more marked, more uneven,

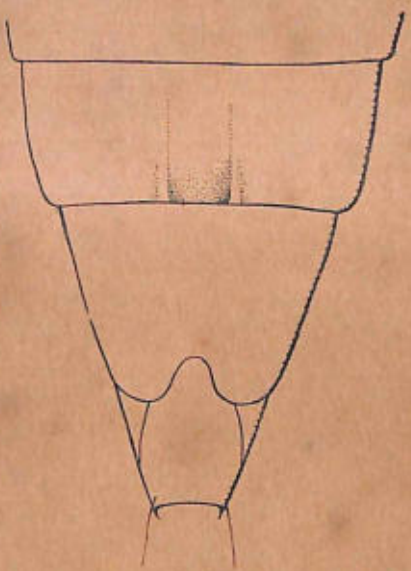


Fig. 110.—*Stenus* (*Mesostenus*) *submetallicus*, apex of abdomen of ♂; ventral surface.

sculpture of the fore-parts coarser and rugose, that of the abdomen a little coarser.

♂: 6th ventral segment with a moderately broad excision, the apex rounded; 5th impressed along the middle for the posterior two-thirds, more deeply behind, finely and densely pubescent in the impression.

Chakrata district: Konain, Simla Hills, alt. 7000 to 8000 feet.

469. **Stenus (Mesostenus) kempi.**

Stenus (*Hemistenus*) *kempi* Bernh.*, Ent. Mitt. xv, 1926, p. 132.

Black, shining; sides of the thorax denticulate. Antennæ reddish-testaceous, the club scarcely infuscate. Legs reddish-

testaceous, the apex of the femora slightly infuscate. Length 4 mm.

Head as broad as the elytra, rather broadly but not strongly elevated along the middle, very coarsely and strongly punctured. Antennæ short, reaching the middle of the thorax, the penultimate joints scarcely longer than broad. Thorax short, scarcely as long as broad, widest about the middle, the sides slightly rounded in front, more retracted and straighter behind, finely, sparingly denticulate, sulcate along the middle, with very coarse, close, confluent punctures. Elytra a little longer than the thorax, widened behind, with similar sculpture. Abdomen distinctly bordered, coarsely and closely punctured at the bases of the segments, less coarsely and less closely elsewhere, towards the apex gradually more finely and sparingly punctured.

Janamukh, alt. 600 feet, Abor Expedition (17. xii. 11), under bark (*Kemp*).

470. **Stenus (Mesostenus) brachypterus.** (Fig. 111.)

Stenus brachypterus Kr.*, Arch. Naturg. xxv, 1859, i, p. 164.

Black, shining. Elytra at the suture half as long as the thorax, dilated behind. Abdomen extremely finely bordered,

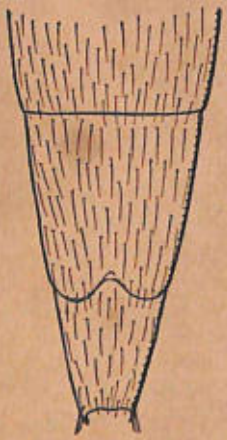


Fig. 111.—*Stenus* (*Mesostenus*) *brachypterus*, apex of abdomen of ♂; ventral surface.

cylindrical. Antennæ, palpi, and legs reddish-testaceous, the club of the first infuscate. Length 4 mm.

Head as broad as the elytra behind, feebly broadly bisulcate,

slightly, broadly elevated along the middle, rather coarsely and closely punctured, but less closely along the middle. Antennæ slender, rather long, reaching the base of the thorax. Thorax as long as broad, widest before the middle, the sides in front gently rounded, straight and more retracted behind, even, without sulcus, closely and rather strongly punctured. Elytra at the suture about half as long as the thorax, strongly widened behind, rather coarsely, rugosely punctured. Abdomen with the anterior segments transversely impressed at the base, finely and rather sparingly punctured, yet more finely and more sparingly behind.

♂: 6th ventral segment with rectangular excision; 5th more thickly punctured and pubescent in the middle behind.

Ceylon: Dikoya, alt. 3800 to 4200 feet; Nuwara Eliya, alt. 6200 to 8000 feet.

471. **Stenus (Mesostenus) nilgiriensis.**

Stenus (*Hypostenus*) *nilgiriensis* Cam., Trans. Ent. Soc. Lond. 1914, p. 532.

Black, shining; elytra much shorter than the thorax, fore-parts very coarsely and closely punctured; abdomen feebly margined at the sides, moderately strongly and closely punctured anteriorly. Antennæ, legs, and palpi yellow, the club of the former slightly infuscate. Fourth joint of tarsi bilobed. Length 4 mm.

In size and build almost exactly similar to *S. brachypterus* Kr., from which it is at once distinguished by the much stronger puncturation and the longer thorax.

Head large, nearly as broad as the elytra posteriorly, depressed between the eyes, without central raised space, closely and deeply punctured. Antennæ slender, not quite reaching the base of the thorax, 3rd joint much longer than 2nd, 4th to 8th gradually decreasing in length, 9th, 10th, and 11th oval, stouter than the preceding, forming a club. Thorax much narrower than the head, a little longer than the greatest breadth, which is just before the middle, narrowed gradually in front, more strongly behind, strongly and closely punctured like the head. Elytra (measured along the suture) one-fourth shorter than the thorax, narrower at the shoulders, widened behind and strongly emarginate, more strongly and deeply punctured than the thorax. Abdomen cylindrical, very narrowly margined, pretty coarsely and closely punctured (but less so than the fore-parts), the last two segments more finely and sparingly punctured; the last segment with two short, rather stout spines.

♂: 6th ventral segment with a shallow emargination.

S. India: Nilgiri Hills, Ouchterlony Valley, 5000 feet above sea-level, by sweeping (Mr. H. E. Andrewes' Collection) (*H. L. Andrewes*).

Genus **DIANOUS** Samouelle.

Dianous Samouelle, Ent. Comp. 1819, p. 173; Curtis, Brit. Ent. iii, 1826, p. 107; Er., Käf. Mark. Brand. i, 1837–39 (1839), p. 527; Gen. Spec. Staph. 1839–40, p. 688; Lacord., Gen. Col. ii, 1855, p. 102; Kraatz, Nat. Ins. Deutsch. ii, 1856–58, p. 738; Jacq. du Val, Gen. Col. d'Eur. 1858, p. 51; Thoms., Skand. Col. ii, 1860, p. 211; Fauv., Fn. Gallo-Rhén. iii, 1872, p. 224; Rey, Ann. Soc. Linn. Lyon, xxx, 1883, p. 175; Casey, Rev. Sten. Amer. North of Mexico, 1884, p. 8; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 548.

In general appearance similar to *Stenus*, but with smaller eyes and longer and more developed anal brushes. The structure of the mouth-parts is, however, very different, the mentum is short, much broader than long, elevated along the middle, the labium short and not capable of exsertion. The tongue is divided into two lobes separated by a wide emargination which is furnished with four rather long and strong setæ, paraglossæ distinct, not extending beyond the tip of the lobes of the tongue. The abdomen is always distinctly and completely bordered, the elytra in some species have a rosette of radiating or vorticose rugæ posteriorly as in some species of *Stenus*, and the fourth tarsal joint may be simple or bilobed.

The species are found in Europe and North America, and a large number have recently been discovered in India and two in China. They are all found in the neighbourhood of running water, often in the stream-moss attached to boulders.

Key to the Species of Dianous.

1	Elytra without rosette of radiating or vorticose rugæ about the middle	2.
	Elytra with a rosette of radiating or vorticose rugæ	20.
2.	Elytra with reddish-yellow spot on each..	3.
	Elytra without such marking	4.
3.	Shining black, the elytral spot large and round	*bimaculatus* Cam., [p. 423.
	Metallic, the elytral spot oblique, reniform	*obliquenotatus* Champ., [p. 414.
4.	Elytra uniformly coloured	5.
	Elytra more or less variegate.....	13.

5. Thorax extremely finely punctured or almost impunctate	6.
Thorax very distinctly punctured	8. [p. 408. *gracilipes* Champ.,
6. Thorax almost impunctate	7.
Thorax extremely finely and closely punctured	[p. 410. *assamensis* Cam.,
7. First joint of the posterior tarsi longer than the four following together; elytra very black	*robustus* Cam., p. 407.
First joint of the posterior tarsi shorter than the four following together; elytra obscure bronze-green	9.
8. Uniformly coloured blue species	10. [p. 422. *cribrarius* Champ.,
Otherwise coloured	[p. 424. *azureus* Champ.,
9. Elytra coarsely and not closely punctured.	
Elytra moderately finely, closely punctured	*consors* Cam., p. 413.
10. Legs very long and slender, the 1st joint of the posterior tarsi fully as long as the four following together	11.
Legs shorter, the 1st joint of the posterior tarsi shorter than the four following together	12. [p. 420. *punctiventris* Champ.,
11. Elytra black	[p. 417. *cyanogaster* Champ.,
Elytra blue	[p. 418. *sivalikensis* Cam.,
12. Thorax more finely, elytra less finely punctured	*cæruleonotatus* Champ.,
Thorax less finely, elytra more finely punctured	14. [p. 414.
13. Elytra coppery, with blue reniform spot	15.
Elytra otherwise coloured	17. [p. 413. *bifoveifrons* Champ.,
14. Thorax almost impunctate	16.
Thorax distinctly punctured	[p. 410. *annandalei* Bernh.,
15. Elytra coppery, variegated with green	*versicolor* Cam., p. 411.
Elytra otherwise coloured, larger	[p. 425. *scabricollis* Champ.,
16. Thorax distinctly coriaceous, the base punctured; elytra green, with obscure blue fascia	18.
Thorax scarcely perceptibly coriaceous, the base practically impunctate; elytra violaceous, variegated with green	[p. 421. *obscuroguttatus* Cam.,
17. Thorax closely and roughly punctured, scabrous	19.
Thorax less closely, not roughly punctured, not scabrous	[p. 417. *cæruleoguttatus* Cam.,
18. Puncturation of the head and thorax very similar	[p. 415. *inæqualis* Champ.,
Puncturation of thorax coarser and more sparing than that of the head	21.
19. Elytra brilliant greenish-bronze; thorax more finely punctured	26.
Elytra obscure greenish-bronze; thorax less finely punctured	
20. Elytra with reddish-yellow spot	
Elytra without such spot	

21. Base of the femora testaceous	*femoralis* Cam., p. 426.
Femora entirely black or blue-black	22.
22. Fourth tarsal joint simple	[p. 427.
Fourth tarsal joint bilobed	*luteoguttatus* Champ.,
23. Thorax with a short median sulcus; posterior tarsi short	23.
Thorax without median sulcus; posterior tarsi long	[p. 427.
24. Elytral spot larger and brighter	*distigma* Champ.,
Elytral spot smaller and duller	24.
25. Sculpture of fore-parts coarser	25.
Sculpture of fore-parts finer	[Cam., p. 429.
26. Fourth tarsal joint bilobed	*verticosus* v. *bisignatus*
Fourth tarsal joint at most a little emarginate	*verticosus* Epp., p. 429.
27. Rosette of elytra consisting of fine rugæ; the 4th tarsal joint with very long lobes	*ocellatus*, sp. n., p. 430.
Rosette of elytra consisting of coarse rugæ; the 4th tarsal joint with shorter lobes	27.
28. Rosette more or less purplish or coppery ..	33.
Rosette uniform with the rest of the surface	[p. 433.
29. Rosette purple	*lobigerus* Champ.,
Rosette coppery	28.
30. Nigro-æneous, coppery spot larger	29.
Black, coppery spot small	31. [Bernh., p. 431.
31. Green species	*purpureomaculatus*
Black species	30. [*tatus* Cam., p. 429.
32. Larger, 8 mm., less shining, here and there with bluish reflex, rugæ of rosette finer	*verticosus* v. *cupreonocameroni* Champ., p. 432.
Smaller, 5·2 mm., very shining, entirely black, rugæ of rosette very coarse, much coarser than in *cameroni*	*subtortuosus* Champ.,
33. First joint of the posterior tarsi obviously longer than the last	32. [p. 436.
First joint of the posterior tarsi scarcely longer than the last	*tortus* Cam., p. 440.
34. Dark bronze-green, less shining; head very closely punctured, rugæ of rosette much finer	*championi* Cam., p. 433.
Black, here and there with bluish or greenish reflex, shining; head less closely punctured, rugæ of rosette coarser	34.
35. Head broader than the base of the elytra, more finely and more closely punctured; elytra with greenish reflex behind	36.
Head as broad as the base of the elytra, less finely and less closely punctured; elytra black	*andrewesi* Cam., p. 434.
36. Species in greater part black	35.
Species in greater part green	*frater* Cam., p. 438.
	[p. 437.
	radiatus Champ.,
	37.
	38.

37.	Rosette distinctly blue; sculpture throughout finer	[p. 440. *subcorticosus* Champ.,
	Rosette at most with feeble steel-blue reflex; sculpture throughout coarser	[p. 439. *tortuosus* Champ.,
38.	Thorax with shining keel at middle of base	[p. 444. *viridipennis* Cam.,
	Thorax without keel at base	39.
39.	Elytra a good deal longer than the thorax.	*minor* Champ., p. 441.
	Elytra a little longer than the thorax	40.
40.	Thorax and elytra closely and more finely punctured	*æneus*, sp. n., p. 442.
	Thorax and elytra less closely and less finely punctured	*æreus* Champ., p. 442.

472. **Dianous robustus.** (Fig. 112.) (Pl. III, fig. 6.)

Dianous robustus Cam., Trans. Ent. Soc. Lond. 1924, p. 179.

Bronze-black, moderately shining, extremely finely punctured, with slight greenish and purpurescent reflex in certain lights; elytra uneven; antennæ, legs, and palpi black, slender, 4th tarsal joint simple. Length 10·5 mm.

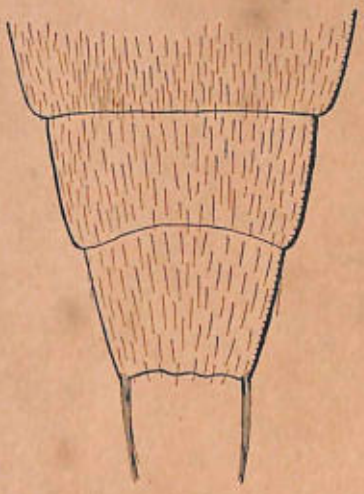


Fig. 112.—*Dianous robustus*, apex of abdomen of ♂: ventral surface.

Closely allied to *D. gracilipes* Champ., but larger and more robust, the antennæ much shorter, the head larger, the post-ocular space longer, the vertex more elevated in the middle,

the thorax longer, less shining, exceedingly finely and densely punctured, elytra and abdomen more finely and closely punctured. Head large, wider than the thorax, longitudinally impressed on either side between the eyes and elevated in the centre, extremely finely and very densely punctured; antennæ reaching just beyond the base of the elytra, all the joints longer than broad. Thorax a little longer than broad, widest just before the middle, the sides rounded and narrowed in front, nearly parallel behind, transversely impressed before the base, rather deeply foveate on either side and with a short longitudinal impression in the middle line in front of the transverse basal impression, the whole surface exceedingly finely and densely punctured. Elytra a little longer than the thorax, uneven, with puncturation as on the thorax. Abdomen with the first five visible segments transversely impressed at the base, the sculpture as on the fore-parts. Fourth tarsal joint simple. First joint of posterior tarsi a good deal longer than the last.

♂: 6th ventral segment broadly and slightly emarginate.

Found in company with *D. gracilipes* Champ., on boulders just above the water line at Kaligad near Dehra Dun. A very active species.

473. Dianous gracilipes. (Fig. 113.)

Dianous gracilipes Champ.*, E. M. M. xlviii, 1921, p. 183.

Bronze-black, often with greenish or greenish-blue reflex, the thorax shining, the rest rather dull. Antennæ, palpi, and legs black. Length 8·5 to 10 mm.

Near *D. annandalei* Bernh., but larger and with much longer antennæ and legs, less punctured, less uneven thorax, rather finer puncturation of the head and elytra. Head broadly excavate, the sulci shallow, a little elevated along the middle, finely, closely, uniformly punctured. Antennæ very long, reaching the posterior angles of the elytra. Thorax scarcely longer than broad, widest at the middle, the sides rather strongly rounded in front, rather strongly retracted and parallel behind, each side with a strong oblique sulcus converging towards the middle of the base, base with a slight transverse impression on each side and a distinct tuberosity; extremely finely and very sparingly punctured, in the basal impressions with a few larger punctures. Elytra longer than broad, uneven, impressed within the shoulders, along the suture in front, the middle of the sides, and towards the posterior angles; finely and closely punctured like the head.

Abdomen very finely and closely punctured above, the ventral surface along the middle glabrous and practically impunctate. Head, elytra, and abdomen above finely pubescent, the thorax glabrous. Fourth tarsal joint briefly bilobed. First joint of the posterior tarsi much longer than the last.

♂: 7th ventral segment narrowly impressed along the

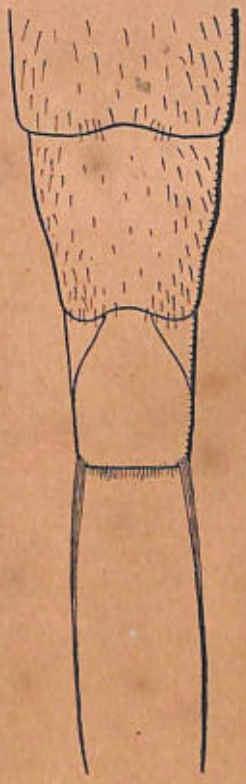


Fig. 113.—*Dianous gracilipes*, apex of abdomen of ♂: ventral surface.

middle; 6th broadly, shallowly arcuately excised; 5th broadly and slightly emarginate in the middle of the posterior border.

Ranikhet. Dehra Dun district: Kaligad. Assam: Naga Hills.

474. **Dianous assamensis.**

Dianous assamensis Cam., E. M. M. lxiii, 1927, p. 6.

Head, thorax, and abdomen greenish-black, shining; elytra black, shining, uneven. Antennæ, palpi, and legs black. Length 9 mm.

Closely allied to *D. gracilipes* Champ., but differing in the following respects: the head is broader, more shining, more finely and a little less closely punctured, the furrows deeper and the middle more elevated, the antennæ, although long and slender, are distinctly shorter, the thorax much more closely punctured, the basal nodes larger, the elytra more uneven, more finely and rather less closely punctured, and the abdomen rather more finely punctured. Head broader than the elytra at the base, deeply bisulcate and elevated in the middle, very finely and densely punctured throughout, finely, shortly pubescent. Antennæ long and slender, all the joints longer than broad. Thorax a little longer than broad, widest about middle, deeply impressed on either side, the impressions united across the median line, on either side before the base with a large nodule, finely, rather closely punctured throughout, the punctures finer than those of the head but not so close. Elytra a little longer than the thorax, very uneven, with a large intra-humeral callus and large deep impression posteriorly, very finely and rather closely punctured, finely pubescent. Abdomen moderately finely and closely punctured at the bases of the segments, the rest very finely and rather closely punctured like the elytra, the terminal segment with a few large punctures only, ground-sculpture extremely fine, coriaceous. Legs long and slender, the first joint of the posterior tarsi longer than the following together; 4th tarsal joints simple.

Assam: Naga Hills, alt. 9000 feet. A single ♀.

475. **Dianous annandalei.** (Fig. 114.)

Dianous annandalei Bernh., Ent. Blätt. vii, 1911, p. 57; Champ., E. M. M. lv, 1919, p. 44, p. 54, fig. 1.

Very near *D. versicolor*, and only differing in the following respects: the colour of the head and thorax is more blue-black, the elytra greenish, the thorax is much more distinctly coriaceous, and the basal impressions more punctured, the ventral surface of the abdomen is cyaneous. In the ♂ the excision of the 6th ventral segment is broader, more rounded, and with an impression in front of it, the postero-external angles of the 7th are distinctly produced and angulate, whereas in *versicolor* they are rounded and not at all produced. I am unable to satisfy myself as to the characters cited by Champion

in the 4th tarsal joints; in both this joint is excavated above and the 5th joint inserted near the base, so that viewed from below the joint appears lobed, and is furnished at the apex with a long brush of hairs. Length 7 to 8 mm.

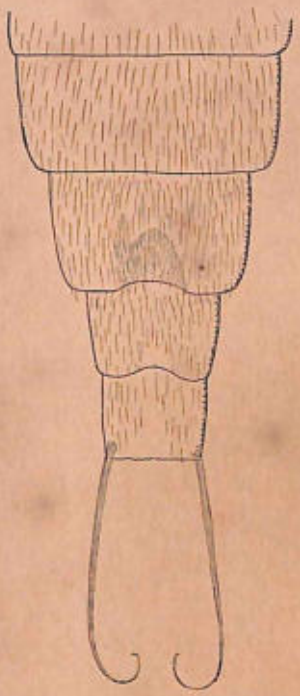


Fig. 114.—*Dianous annandalei*, apex of abdomen of ♂ : ventral surface.

Kurseong, alt. 5000 feet. W. Almora. Dehra Dun district : Kaligad. Mussoorie : Dhobi Ghat, alt. 5000 to 7000 feet.

476. **Dianous versicolor.** (Fig. 115.)

Dianous versicolor Cam., Trans. Ent. Soc. Lond. 1914, p. 533; Champ., E. M. M. Iv, 1919, p. 43.

Bronze-black, shining, with distinct greenish-violet iridescence, especially on the head and abdomen. Legs, palpi, and antennæ (except last three joints, which are dirty testaceous) black. Length 6 mm.

Head with the eyes broader than the thorax, not so broad as

the elytra; bronze-green with a sheen like satin, especially on the vertex, more opaque and blacker anteriorly, densely and finely punctured. Antennæ black, the last three joints dirty testaceous, 2nd joint shorter than the 1st and 3rd, the latter very long, the following gradually decreasing in length. Thorax shining bronze with distinct green reflex (but without the satiny gloss seen on the head), a little longer than broad, the sides dilated and rounded before the middle, narrowed and parallel behind, strongly impressed on either side at the

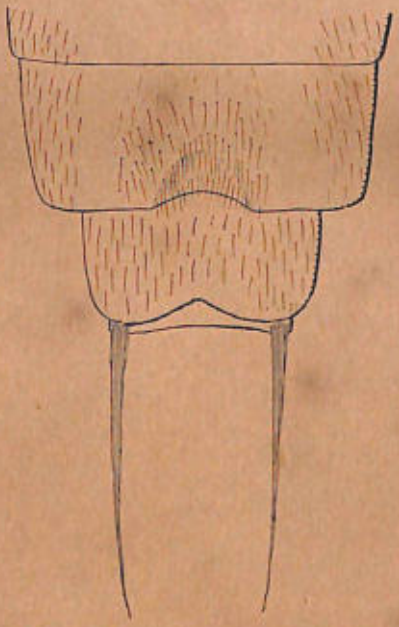


Fig. 115.—*Dianous versicolor*, apex of abdomen of ♂; ventral surface.

widest part and before the base in such a manner as to form on either side a distinct reniform callus with the concavity inwards; exceedingly sparingly, scarcely perceptibly punctured, but with a fine coriaceous ground-sculpture; glabrous. Elytra much longer than the thorax, uneven, strongly impressed behind the shoulders, on either side of the suture and less distinctly before the postero-external angles; bronze-green like the head, densely and finely punctured, finely pubescent. Abdomen iridescent, finely and much less densely punctured than the elytra, finely pubescent: 1st to 3rd ventral segments

impunctate in the middle. Anal brushes long and slender. The ventral surface black. First joint of the posterior tarsi much longer than the last. Fourth joint narrowly produced below and furnished with a long tuft of hairs.

♂: 6th ventral segment with a very shallow obtuse excision, the edges bevelled, in front with numerous small punctures; 5th rather broadly impressed along the middle, the adjacent border emarginate, the impression more thickly pubescent.

Lebong, alt. 5000 feet (*H. M. Lefroy*). W. Almora (*H. G. Champion*).

477. **Dianous bifoveifrons.**

Dianous bifoveifrons Champ., E. M. M. lvii, 1921, p. 201.

Near *D. annandalei* Bernh., but smaller and less robust, the antennæ more slender but of the same length, head and thorax narrower, the latter impunctate, elytra more finely punctured. The 4th joint of the tarsi is simple. Bronze-green, the thorax much more shining than the rest, head not sulcate, but with two large round foveæ; thorax with feeble transverse basal impression, scarcely carinate in the middle; elytra with an obscure steel-blue marking about the middle near the lateral margin. The first four ventral segments impunctate and glabrous along the middle. The 1st joint of the posterior tarsi longer than the last.

♂: 6th ventral segment with a very small arcuate excision, in front of this with a small triangular impression; 5th more thickly punctured and pubescent behind; 7th truncate, obscurely denticulate, the angles not produced. Length 6·2 mm.

Kumaon: Ranikhet (*H. G. Champion*).

478. **Dianous consors.**

Dianous consors Cam., E. M. M. lxiii, 1927, p. 7.

Black, the head and thorax occasionally with slight blue reflex, elytra with scarcely perceptible metallic violet reflex; abdomen slightly æneous. Head and elytra scarcely shining, thorax and abdomen shining. Antennæ, palpi, and legs black. Length 7·5 mm.

In build somewhat resembling *D. gracilipes* Champ., but smaller and more slender, the head a little narrower, the antennæ shorter, the thorax narrower and moderately coarsely and closely punctured, the elytra rather more uneven. Head broader than the base of the elytra, the frontal furrows broad

and shallow, the vertex but little raised in the middle, densely and finely punctured. Antennæ very long and slender (but shorter than in *D. gracilipes*). Thorax a little longer than broad, deeply impressed laterally and before the base, this in the middle with short shining keel, moderately coarsely and closely punctured, especially in the impressions. Elytra longer than the thorax, longer than broad, uneven, finely and closely punctured with fine greyish pubescence more visible in the post-medial impression. Abdomen closely and more finely punctured than the elytra. Legs long and slender, the 4th tarsal joints simple.

♂ unknown.

Assam: Naga Hills, alt. 6000 to 9000 feet.

479. **Dianous obliquenotatus.**

Dianous obliquenotatus Champ.*, E. M. M. lvii, 1921, p. 183.

Robust, shining, greenish-blue; each elytron near the middle with a small raised, reniform, orange-yellow spot, the immediate vicinity coppery. Antennæ and palpi black. Legs bluish-black. Length 8·5 to 9·5 mm.

Head distinctly bisulcate, elevated and convex along the middle, moderately finely, closely, uniformly punctured. Antennæ long, reaching the middle of the elytra. Thorax about as long as broad, the sides rounded in front, emarginate behind, on each side of the middle with a deep oblique impression converging towards the base and there separated by a feeble keel, the sides behind rather closely punctured, on the disc rather finely and sparingly punctured, in the impressions less finely. Elytra much longer than the thorax, impressed within the shoulders, along the suture and behind the middle of the disc, there with a reniform orange-yellow callus, finely and closely punctured except on the callus. Abdomen closely and finely punctured, the first four ventral segments with a broad glabrous impunctate space in the middle. The upper surface finely pubescent except the thorax, which is glabrous. Fourth tarsal joint simple. First joint of the posterior tarsi a good deal longer than the last.

♂ unknown.

Sikkim: Rungbong, Gopaldhara (*Stevens*).

480. **Dianous cæruleonotatus.**

Dianous cæruleonotatus Champ.*, E. M. M. lv, 1919, p. 45, p. 54, fig. 2.

Robust, shining; the head blue, thorax and elytra brassy

or brassy green, the latter with a reniform blue marking just behind the middle and a spot on the middle of the reflexed margin blue. Abdomen brassy, the last two segments blue. Antennæ, palpi, and legs black. Length 6·5 to 8·2 mm.

Near *D. inæqualis* Champ., but distinguished by the brassy colour and coarser puncturation of the thorax, elytra, and abdomen. Head a little wider than the base of the elytra, bisulcate, along the middle convex and a little elevated, closely, finely, uniformly punctured. Antennæ reaching a little beyond the base of the thorax. Thorax as long as broad, widest at the middle, the sides rounded in front, emarginate behind, uneven, on each side deeply, broadly obliquely sulcate, the sulci separated at the base by a slight median ridge, the posterior angles obliquely impressed, moderately finely and moderately closely punctured in front, more coarsely and closely in the sulci and behind, but without rugæ; ground-sculpture distinct, coriaceous. Elytra a good deal longer than the thorax, as long as broad, impressed within the shoulders, along the suture in front and at the middle, puncturation close and very similar to that of the head, coriaceous. Abdomen closely and finely punctured. Thorax glabrous, the rest finely pubescent, the pubescence thicker on the elytral spots and towards the sides of the abdomen; ventral surface of the first four segments and the 6th glabrous along the middle. Fourth joint of the tarsi simple; first joint of the posterior tarsi scarcely longer than the last.

♂: 6th ventral segment with a small arcuate emargination; 5th more thickly punctured and pubescent behind; 7th truncate.

Kumaon: W. Almora (*H. G. Champion*). Siwaliks: Lachiwala (*Cameron*).

481. **Dianous inæqualis.** (Fig. 116.)

Dianous inæqualis Champ.*, E. M. M. lv, 1919, p. 45.

Robust, shining, the head and abdomen black or blue-black, the latter with slight brassy reflex, the thorax and elytra bronze-green, the latter with a curved bluish spot behind the middle and another at the middle of the reflexed border. Antennæ and palpi black. Legs blue-black. Length 7 to 7·5 mm.

Near *D. cæruleonotatus* Champ., but with black head and dark bronze-green thorax and elytra, the spot on the latter less distinct; the puncturation of the head is finer, the nodes at the base of the thorax more prominent, elytra and abdomen more finely punctured, the ventral segments 1 to 4 and 6

are glabrous in the middle as in *cæruleonotatus*, and the tarsal structure is similar.

♂: 6th ventral segment with a very small arcuate emargination; 5th flattened and more densely pubescent behind, slightly emarginate.

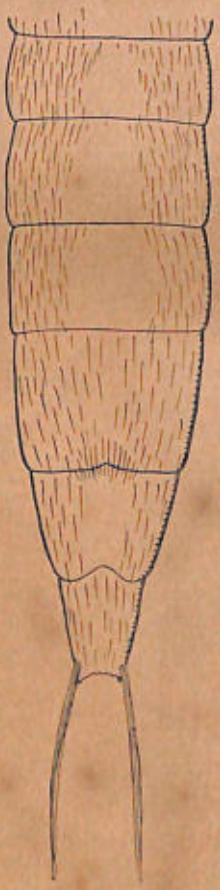


Fig. 116.—*Dianous inæqualis*, abdomen of ♂: ventral surface.

♀: 6th ventral segment contracted before the apex which has a small arcuate excision.

W. Almora: Ranikhet. Chakrata district: Sainj Khud: Chulli Khud, alt. 6500 to 8000 feet.

482. Dianous cæruleoguttatus.

Dianous cæruleoguttatus Cam., E. M. M. lxiii, 1927, p. 8.

Black, shining; the head and abdomen with bluish reflex; thorax black, shining, with an æneous nodule on either side before the base. Elytra bronze-green, uneven, the posterior impression bounded internally and in front by a curved blue spot and with a bluish reflex within the shoulders, the reflexed margin with an obscure blue spot about the middle. Antennæ, palpi, and legs black. Length 8 mm.

In build, colour, and structure of the antennæ and legs very similar to *D. inæqualis* Champ., but the thorax more dilated in front and more finely punctured, the elytra a little less closely punctured, at least in front. Head a little narrower than the elytra at the base, broadly and moderately deeply bisulcate, closely and finely punctured. Antennæ moderately long, all the joints longer than broad. Thorax about as long as broad, rather strongly rounded and widened in front, with an impression on either side which curves towards the middle of the base, this with short shining keel and on either side with a shining greenish nodule; puncturation fine and rather close on the disc, much closer and less fine at the sides and before the base, finely coriaceous. Elytra longer than broad, uneven, with a large intra-humeral callus and a large impression posteriorly, finely and closely punctured, the punctures more or less finely rugulose in the blue area and towards the postero-external angles. Abdomen very finely and rather closely punctured, pubescence silvery, denser towards the sides. Fourth tarsal joints simple. First joint of the posterior tarsi not much longer than the last.

♂ unknown.

Assam: Naga Hills.

483. Dianous cyanogaster.

Dianous cyanogaster Champ.*, E. M. M. lv, 1919, p. 47, p. 54, f. 3.

Robust, a little shining, leaden-black above, more shining and blue below. Elytra without rosette. Antennæ, palpi, and legs blue-black. Length 7 to 8 mm.

Head scarcely as broad as the elytra at the base, deeply, rather broadly bisulcate, a little elevated and convex along the middle, rather finely, closely, uniformly punctured. Antennæ rather short, not extending much beyond the shoulders. Thorax a little broader than long, the sides rounded in front and emarginate behind, on each side with a deep oblique sulcus converging towards the base, this binodular and with an obsolete keel in the middle, the puncturation very similar to

that of the head, but more sparing along the middle. Elytra about twice as long as the thorax, as long as broad, uneven, impressed within the shoulders and along the suture in front and behind the middle, puncturation close, rather coarser than on the thorax. Abdomen finely and rather closely punctured. The whole upper surface finely pubescent, thicker on the reflexed margin and discal impression of the elytra and at the sides of the abdomen. First four ventral segments glabrous and impunctate in the middle. Fourth tarsal joint simple. First joint of posterior tarsi not much longer than the last.

♂: 6th ventral segment with a rather small triangular excision; 5th flattened behind and thickly pubescent, scarcely emarginate.

♀: 6th ventral segment contracted before the apex, which has a small arcuate excision.

Kumaon: W. Almora (*H. G. Champion*). Siwaliks: Lachiwala (*Cameron*).

484. Dianous siwalikensis. (Fig. 117.)

Dianous siwalikensis Cam., E. M. M. lxiii, 1927, p. 7.

Head blue-black, slightly shining; thorax shining black, feebly æneous; elytra moderately shining, black; abdomen shining black, with greenish-violet reflex. Antennæ, palpi, and legs black, the posterior femora bluish. Length 7 mm.

Near *D. cyanogaster* Champ., but the antennæ and legs a little longer, the head more finely punctured, thorax narrower, less finely and less closely punctured. Head narrower than the base of the elytra, rather deeply bisulcate, closely and finely punctured. Antennæ slender, moderate, all the joints longer than broad. Thorax a little longer than broad, the disc on either side behind obliquely impressed, the impressions separated from each other by a shining keel at the middle of the base: puncturation moderately fine, much closer before the base and at the sides, and with a fine coriaceous ground-sculpture. Elytra longer than broad, very uneven, with a large intra-humeral callus and transverse depression behind the middle of each disc, puncturation simple, fine and close, finer in the posterior depression, pubescence silvery, more evident in the depression, at the shoulders and at the middle of the reflexed margin. Abdomen more finely punctured than the elytra, the reflexed margin more or less violaceous, very finely coriaceous: pubescence silvery, denser towards the sides of the segments; ventral surface blue, the first four and

the 6th segments medially impunctate and shining. Fourth tarsal joints simple.

♂: 5th and 6th ventral segments feebly emarginate.

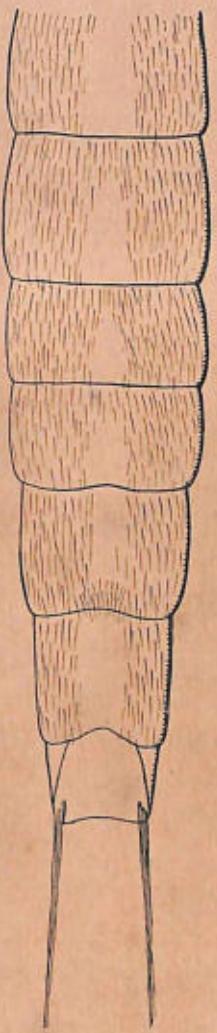


Fig. 117.—*Dianous siwalikensis*, abdomen of ♂; ventral surface.

Siwaliks: Lachiwala. Chakrata: Bangar. Mussoorie: Mossy Falls.

that of the head, but more sparing along the middle. Elytra about twice as long as the thorax, as long as broad, uneven, impressed within the shoulders and along the suture in front and behind the middle, puncturation close, rather coarser than on the thorax. Abdomen finely and rather closely punctured. The whole upper surface finely pubescent, thicker on the reflexed margin and discal impression of the elytra and at the sides of the abdomen. First four ventral segments glabrous and impunctate in the middle. Fourth tarsal joint simple. First joint of posterior tarsi not much longer than the last.

♂: 6th ventral segment with a rather small triangular excision; 5th flattened behind and thickly pubescent, scarcely emarginate.

♀: 6th ventral segment contracted before the apex, which has a small arcuate excision.

Kumaon: W. Almora (*H. G. Champion*). Siwaliks: Lachiwala (*Cameron*).

484. **Dianous siwalikensis.** (Fig. 117.)

Dianous sivalikensis Cam., E. M. M. lxiii, 1927, p. 7.

Head blue-black, slightly shining; thorax shining black, feebly æneous; elytra moderately shining, black; abdomen shining black, with greenish-violet reflex. Antennæ, palpi, and legs black, the posterior femora bluish. Length 7 mm.

Near *D. cyanogaster* Champ., but the antennæ and legs a little longer, the head more finely punctured, thorax narrower, less finely and less closely punctured. Head narrower than the base of the elytra, rather deeply bisulcate, closely and finely punctured. Antennæ slender, moderate, all the joints longer than broad. Thorax a little longer than broad, the disc on either side behind obliquely impressed, the impressions separated from each other by a shining keel at the middle of the base; puncturation moderately fine, much closer before the base and at the sides, and with a fine coriaceous ground-sculpture. Elytra longer than broad, very uneven, with a large intra-humeral callus and transverse depression behind the middle of each disc, puncturation simple, fine and close, finer in the posterior depression, pubescence silvery, more evident in the depression, at the shoulders and at the middle of the reflexed margin. Abdomen more finely punctured than the elytra, the reflexed margin more or less violaceous, very finely coriaceous; pubescence silvery, denser towards the sides of the segments; ventral surface blue, the first four and

the 6th segments medially impunctate and shining. Fourth tarsal joints simple.

♂: 5th and 6th ventral segments feebly emarginate.

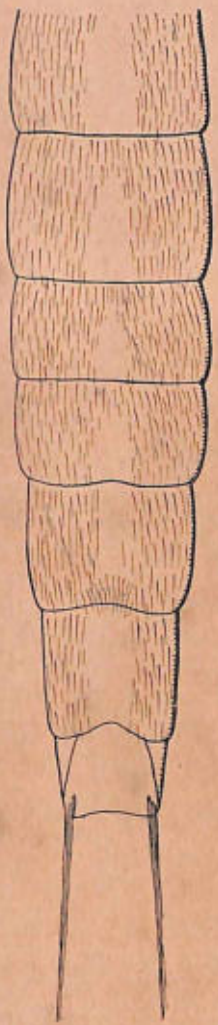


Fig. 117.—*Dianous sivalikensis*, abdomen of ♂: ventral surface.

Siwaliks: Lachiwala. Chakrata: Bangar. Mussoorie: Mossy Falls.

485. **Dianous punctiventris.** (Fig. 118.)

Dianous punctiventris Champ.*, E. M. M. Iy, 1919, p. 48.

Robust, moderately shining, blue-black. Antennæ, palpi, and legs blue-black. Length 6·5 to 7·5 mm.

Near *D. cyanogaster* Champ., but more blue in colour, the head a little broader, the sculpture of the thorax less fine, the median basal keel sharper, the puncturation of the elytra finer and with a more distinct curved fascia of grey pubescence limiting the median impression. The ventral surface of the abdomen is uniformly punctured throughout, without trace

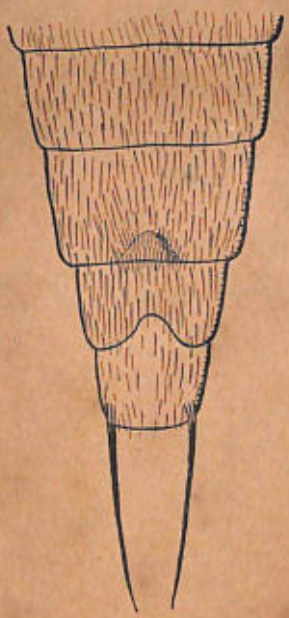


Fig. 118.—*Dianous punctiventris*, apex of abdomen of ♂; ventral surface.

of the impunctate spaces seen in *cyanogaster*. Fourth tarsal joint simple. First joint of the posterior tarsi scarcely longer than the last.

♂: 7th ventral segment truncate; 6th with a rather broad, deep, obtuse excision; 5th depressed in the middle behind and feebly emarginate, the depression thickly punctured and pubescent.

W. Almora. Chakrata district: Bangar, alt. 6000 feet. Manipur: Shugun, alt. 3000 feet.

486. **Dianous obscuroguttatus.** (Fig. 119.)

Dianous obscuroguttatus Cam., E. M. M. lxiii, 1927, p. 8.

Blue-black, shining, elytra feebly æneous, with an obscure greenish-gold spot behind the middle. Abdomen greenish. Antennæ and palpi black. Legs blue-black. Length 6·75 mm.

Build of *D. cyanogaster* Champ., but less robust, differently coloured, the head, thorax, and elytra more finely punctured. Head narrower than the elytra at the base, deeply bisulcate,

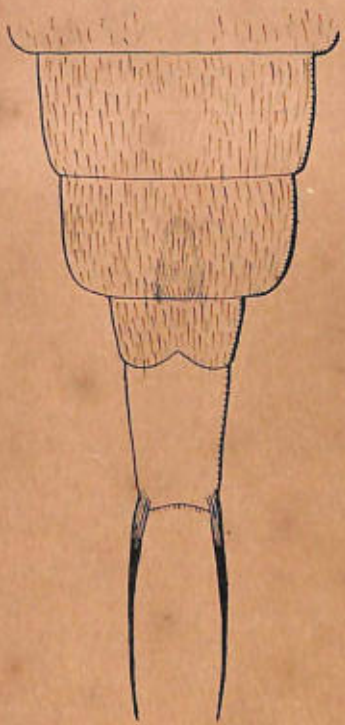


Fig. 119.—*Dianous obscuroguttatus*, apex of abdomen of ♂: ventral surface.

closely and finely punctured. Antennæ as in *D. cyanogaster*, slender, not long. Thorax scarcely longer than broad, rather strongly rounded and dilated in front and narrowed behind, on either side posteriorly with an arcuate impression reaching the base, and limited externally by a nodule and separated in the middle line by a broad raised space, puncturation very

similar to that of the head, ground-sculpture very fine, coriaceous. Elytra longer than broad, uneven, finely and closely punctured, finely, sparingly, silvery pubescent. Abdomen very finely, closely punctured, with a silvery pubescence which is much thicker at the sides. First four ventral segments glabrous and impunctate medially. Legs rather short; 4th tarsal joint simple.

♂: 6th ventral segment feebly, broadly emarginate; 5th impressed in the middle behind and more thickly pubescent there.

Assam: Naga Hills, Laimatak.



Fig. 120.—*Dianous cribrarius*, apex of abdomen of ♂; ventral surface.

487. **Dianous cribrarius.** (Fig. 120.)

Dianous cribrarius Champ.*, E. M. M. lv, 1919, p. 98.

Robust, shining blue-black, the elytra coarsely punctured and without rosette. Antennæ, palpi, and legs black. Length 8 mm.

Head about as broad as the base of the elytra, deeply, rather narrowly bisulcate, elevated and convex along the middle, moderately coarsely and moderately closely punctured, impunctate along the middle. Antennæ slender, rather long. Thorax about as long as broad, widest at the middle, the sides rounded in front, emarginate and more retracted behind, on either side with a rather broad, oblique sulcus converging behind, coarsely punctured, the punctures coarser at the base and more or less transversely confluent. Elytra much longer than the thorax, about as long as broad, uneven, impressed within the shoulders, along the suture in front and transversely at the middle, coarsely irregularly punctured, the punctures here and there confluent, but without trace of rosette. Abdomen very finely, rather sparingly punctured, in the basal impressions less finely and more closely. Head pubescent, thorax glabrous, elytra sparingly, the abdomen more closely pubescent, especially at the sides. Tarsi short, the 4th joint strongly bilobed: 1st joint of the posterior tarsi not much longer than the last.

♂: 6th ventral segment with broad, shallow, obtuse excision; 5th more densely pubescent at the posterior margin; 7th with short spine at each angle, between finely, sparingly denticulate.

Tanakpur (*H. G. Champion*). Siwaliks (*Cameron*).

488. **Dianous bimaculatus.** (Fig. 121.)

Dianous bimaculatus Cam., E. M. M. lxiii, 1927, p. 8.

Black, the fore-parts shining, abdomen less shining, the elytra with a large oval yellow spot behind the middle. Antennæ, palpi, and legs black. Length 7 mm.

Near *D. cribrarius* Champ., but smaller and much narrower, differently coloured, the elytra less uneven, the abdominal puncturation denser, but the sculpture elsewhere very similar, the antennæ and legs similarly constructed. Head a little broader than the base of the elytra, bisulcate, rather finely and very closely punctured in front, less closely on the disc and at the sides. Antennæ slender, moderate, all the joints longer than broad. Thorax longer than broad, widest about the middle, equally narrowed in front and behind, with a curved oblique impression extending from before the base laterally, before the middle of the base with flat impunctate keel, puncturation rather coarse and close as in *D. cribrarius*, glabrous. Elytra distinctly longer than the thorax, much longer than broad, rather uneven, with a puncturation very similar to that of the thorax and not at all confluent, behind

the middle with an oval yellow spot, not extending to the reflexed margin. Abdomen very finely and densely punctured, finely and closely grey pubescent; uniformly punctured below. Legs moderate; 4th tarsal joint deeply and narrowly bilobed.

♂: 6th ventral segment crescentically excised posteriorly.

Assam: Naga Hills, alt. 9000 feet.

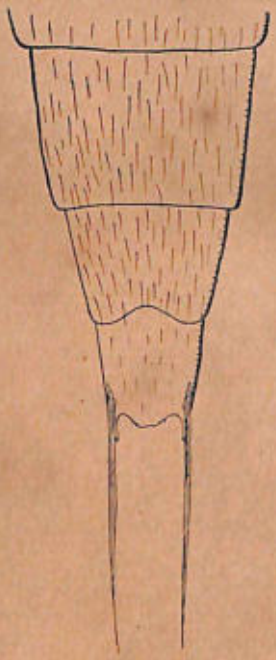


Fig. 121.—*Dianous bimaculatus*, apex of abdomen of ♂: ventral surface.

489. Dianous azureus.

Dianous azureus Champ.*, E. M. M. lv, 1919, p. 97.

Robust, blue, shining. Elytra without rosette. Antennæ and palpi black. Legs blue-black. Length 7 to 8 mm.

Head a good deal narrower than the elytra at their widest, rather feebly bisulcate, along the middle convex, broad, and but slightly raised, rather coarsely and rather closely uniformly punctured. Antennæ reaching the middle of the elytra. Thorax about as long as broad, widest at the middle,

the sides gently rounded in front, emarginate behind, broadly, obliquely impressed on each side, feebly bi-impressed before the base, more coarsely punctured than the head, the punctures here and there confluent, especially before the base, forming transverse rugæ. Elytra much longer and broader than the thorax, about as long as broad, impressed within the shoulders, the puncturation very similar to that of the head. Abdomen finely, moderately closely punctured, the whole insect finely and sparingly pubescent. Abdomen below uniformly punctured. Fourth tarsal joint with two long lobes. First joint of the posterior tarsi not much longer than the last.

♂: 6th ventral segment with broad, moderately deep, crescentic excision; 5th more densely punctured and pubescent behind in the middle; 7th with a stout spine at each postero-external angle.

Tanakpur, Sarda River (*H. G. Champion*).

490. **Dianous scabricollis.** (Fig. 122.)

Dianous scabricollis Champ.*, E. M. M. lv, 1919, p. 46.

Moderately shining, bronze-green; the elytra with very obscure, sinuate, bluish-green fascia behind the middle. Antennæ, palpi, and legs black. Length 5 to 6 mm.

Readily recognised by the rough, moderately fine puncturation of the thorax and elytra. Head about as broad as the base of the elytra, superficially and broadly bisulcate, the middle convex and slightly raised, puncturation moderately fine, very close, uniform. Antennæ rather long. Thorax scarcely as long as broad, the sides rounded in front, emarginate before the base, on each side with an oblique sulcus converging towards the base, the puncturation a little coarser and distinctly rougher than that of the head, transversely confluent before the base. Elytra about twice as long as the thorax, depressed within the shoulders and along the suture in front and about the middle, the puncturation finer than that of the thorax, but rough. Abdomen closely and finely punctured above, below with the first four segments with a narrow almost impunctate space along the middle. Fore-parts practically glabrous; elytra with a patch of grey pubescence at the middle of the reflexed margin and on the sinuate bluish spot. Fourth joint of tarsi simple. First joint of posterior tarsi distinctly longer than the last.

♂: 7th ventral segment truncate; 6th with a broad, shallow, arcuate excision; 5th a little flattened behind and more densely punctured and pubescent, very feebly emarginate. Anal brushes longer and thicker.

♀: 7th ventral segment with two dentiform processes near the middle of the posterior border.

W. Almora. Chakrata district: Sainj Khud, alt. 6500 feet.

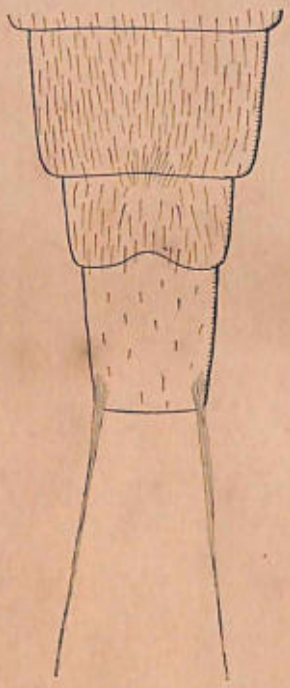


Fig. 122.—*Dianous scabricollis*, apex of abdomen of ♂: ventral surface.

491. **Dianous femoralis.**

Dianous femoralis Cam., E. M. M. lxiii, 1927, p. 9.

Black, shining. Elytra with a round orange spot behind the middle of each. Antennæ, palpi, and legs black, the bases of the femora testaceous. Length 6·5 mm.

At once distinguished from all the known species of the genus by the yellow bases of the femora. Superficially somewhat resembling *D. distigma* Champ., but the colour is black, the head wider, the sides of the thorax more dilated in front, the legs longer and more slender, the 4th tarsal joints more deeply bilobed. Head a little broader than the elytra at the base, broadly bisulcate, with smoother raised median keel,

otherwise moderately finely and closely punctured. Antennæ slender, moderately long, all the joints longer than broad. Thorax a little longer than broad, rounded and dilated in front, sulcate in the middle in front, deeply impressed at the sides, before the base on either side with a small nodule, not keeled in the middle, less finely punctured than the head, more coarsely in the impressions and before the base, where it is more or less rugulose. Elytra longer than the thorax, a little longer than broad, rather coarsely, closely punctured, in and around the orange spot the sculpture confluent and more or less vorticose, glabrous. Abdomen very finely, closely punctured with silvery pubescence closer at the sides. Fourth tarsal joint bilobed.

♂ unknown.

Assam: Naga Hills, alt. 9000 feet.

492. **Dianous luteoguttatus.**

Dianous luteoguttatus Champ.*, E. M. M. Iv, 1919, p. 98.

Black, rather shining, with slight metallic reflex, elytra with a small, round, bright yellow spot behind the middle, a little nearer the lateral margin than the suture, further from the posterior margin than from the suture. Antennæ, palpi, and legs black. Length 7·2 mm.

Build of *D. andrewesi* Cam., with similar antennæ, the thorax less dilated in front, the tarsi shorter. Head narrower than the elytra, broadly excavate, along the middle a little elevated, closely, moderately finely punctured. Antennæ extending beyond the base of the thorax. Thorax slightly longer than broad, the sides only slightly dilated and rounded in front, narrowed behind, uneven, on each side of the middle with a deep oblique impression, before the base with two large superficial impressions separated by a narrow crest, the whole surface coarsely and closely punctured and with close rugæ, transverse before the base. Elytra about a fourth longer than the thorax, impressed within the shoulders and along the suture in front, coarsely punctured and rugose, the rugæ vorticose behind the middle. Abdomen very finely, closely punctured, finely pubescent, the fore-parts glabrous. Fourth tarsal joint simple. First joint of the posterior tarsi not longer than the last.

♂ unknown.

W. Almora (*H. G. Champion*).

493. **Dianous distigma.** (Fig. 123.)

Dianous distigma Champ.*, E. M. M. Iv, 1919, p. 49, p. 54, f. 5.

Shining bronze-black, the elytra and abdomen greenish, the

former with a small, round, orange-yellow spot posteriorly, about equidistant from the suture and lateral borders, more remote from the posterior margin. Under surface steel-blue. Antennæ, palpi, and legs black. Length 5·5 to 6·25 mm.

Head a good deal narrower than the elytra, distinctly bisulcate, convex and elevated along the middle, moderately coarsely and rather closely punctured, a little less closely along the middle. Antennæ reaching the middle of the elytra. Thorax as long as broad, the sides rounded in front, slightly



Fig. 123.—*Dianous distigma*, apex of abdomen of ♂; ventral surface.

emarginate behind, briefly sulcate in the middle, on each side deeply, obliquely impressed, the posterior angles impressed, the sculpture close, coarse and confluent except in the middle of the disc, before the base with transverse rugæ. Elytra a good deal longer than the thorax, about as long as broad, impressed within the shoulders and along the suture in front, puncturation coarse, close, more or less confluent, around the

spot with vorticose rugæ, abdomen closely and finely punctured. Fore-parts sparingly pubescent, abdomen more thickly at the sides. Fourth joint of the tarsi narrowly bilobed. First joint of the posterior tarsi a little longer than the last.

♂: 6th ventral segment with broad, semi-elliptical excision; 5th impressed behind and slightly emarginate, the impression more thickly pubescent; 7th truncate, denticulate, the postero-external angles not produced.

Kumaon: W. Almora (*H. G. Champion*). Mussoorie: Mossy Falls (*Cameron*).

494. **Dianous verticosus.** (Fig. 124.) (Pl. III, fig. 7.)

Dianous verticosus Epp., D. E. Z. 1895, p. 404.
Dianous verticosus var. *bisignatus* Cam., E. M. M. lvii., 1921, p. 270.
Dianous verticosus var. *cupreomaculatus* Cam., id. lxiii, 1927, p. 9.

Black, shining, the head and thorax with slight violet reflex; elytra with a round yellow spot behind the middle, equidistant from the suture and lateral margin, more remote from the posterior margin; at the base with bronze-green reflex, posteriorly more or less violaceous. Abdomen with very slight metallic reflex. Antennæ slender, black. Legs black. Length 6 mm.

Closely allied to *D. distigma* Champ., but the head is broader and less closely punctured, the antennæ longer, the thorax a little longer, more coarsely sculptured, the elytral spot is less bright and the surrounding sculpture coarser, the colour more blue or violaceous; legs, especially the tarsi, longer, the abdomen more finely punctured. Head about half as broad again as the thorax, deeply bisulcate, medially elevated and convex, moderately finely and closely punctured. Antennæ extending beyond the base of the thorax. Thorax a little longer than broad, rounded and dilated in front, narrowed behind, on each side with a deep oblique impression converging and united at the base, in the middle without sulcus, coarsely, closely, rugosely punctured, with oblique rugæ in front and transverse ones before the base. Elytra at the suture a good deal longer than the thorax (10 : 7), a little longer than broad, impressed within the shoulders and along the suture in front, puncturation coarse and more or less confluent at the base, posteriorly with a rosette of vorticose rugæ around the spot. Abdomen very finely and closely punctured with a fine whitish pubescence, thicker at the sides. Fourth tarsal joint deeply and narrowly bilobed. First joint of the posterior tarsi a good deal longer than the last.

♂: 6th ventral segment with a deep, broad, subtriangular

excision, the apex rounded, the sides bevelled; 5th deeply impressed posteriorly, the margins carinate, the adjacent border emarginate, the impression more closely pubescent; 7th with the postero-external angles triangularly produced, the posterior border lightly emarginate.

Pegu. Assam: Naga Hills, alt. 3000 to 9000 feet (*S. N. Chatterjee*).

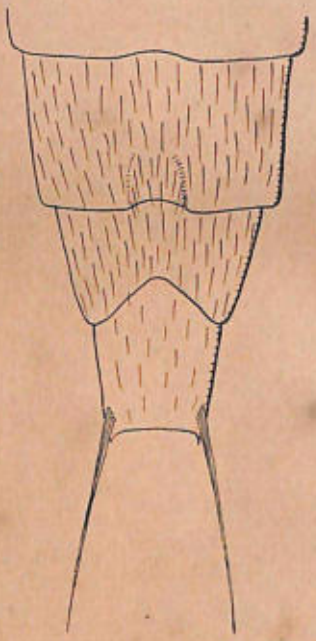


Fig. 124.—*Dianous verticosus*, apex of abdomen of ♂; ventral surface.

The variety *bisignatus* Cam. differs from the type-form in the smaller and duller elytral spot.

Bengal: Lebong, alt. 5000 feet.

The variety *cupreonotatus* Cam. has the orange replaced by a coppery spot.

Siwaliks: Lachiwala; Nakraunda. Chakrata district: Bangar. Kumaon: Jagthana.

495. **Dianous ocellatus**, sp. n. (Fig. 125.)

Only differs from *verticosus* in the smaller head and the less coarsely rugose thorax and elytra. Length 6 mm.

The ♂ characters scarcely differ from those of *verticosus*,

except that the sides of the impression of the 5th segment are less strongly carinate.

Assam : Naga Hills, alt. 9000 feet.

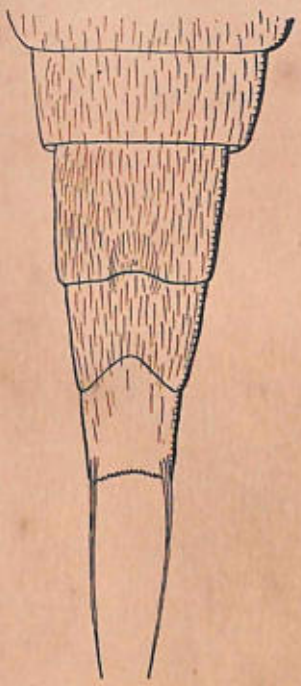


Fig. 125.—*Dianous ocellatus*, apex of abdomen of ♂ ; ventral surface.

496. **Dianous purpureomaculatus.**

Dianous purpureomaculatus Bernh., W. E. Z. xliii, 1926, p. 25.

About the build of *D. andrewesi* Cam., but easily distinguished by the more sparing puncturation and the colour. Black, little shining, with a slight, dark blue reflex, the elytra behind the middle with a moderately large dark purplish spot. Head much broader than the thorax, as broad as the elytra, with two broad, deep sulci, moderately coarsely and not very closely punctured. Antennæ long, the penultimate joints twice as long as broad. Thorax much narrower than the elytra, longer than broad, widest before the middle, behind narrowed and emarginate, rather parallel ; very uneven, coarsely, not very closely punctured, with shining rugæ between the punctures. Elytra longer than the thorax,

about as long as broad, impressed within the shoulders, in front coarsely and not very closely punctured, posteriorly with close, coarse, raised curved rugæ. Abdomen extremely finely and extremely thickly punctured, dull, thickly pubescent. Fourth joint of the tarsi distinctly bilobed, the lobes narrow. Length 5·5 mm.

Kobo, alt. 400 feet, 3. xii. 1911 (Abor Expedition), under fallen timber (*Kemp*) (ex *Bernhauer*).

497. **Dianous cameroni.** (Fig. 126.)

Dianous cameroni Champ.*, E. M. M. lv, 1919, p. 50.

Shining bronze-black, the elytra with slight coppery reflex on the rosette and here and there with steel-blue reflex. Antennæ, palpi, and legs black. Length 6·2 to 7 mm.



Fig. 126.—*Dianous cameroni*, apex of abdomen of ♂; ventral surface.

Very similar to *D. radiatus* Champ., but differs as follows: the rosette is coppery, the upper surface generally blacker, the thorax more coarsely punctured with more numerous

transverse rugæ, whereas in *radiatus* these are less marked and restricted to the base, the elytra are more finely punctured, the rugæ finer; the 4th tarsal joint is narrowly bilobed, whilst in *radiatus* (at least in the posterior tarsi) it is scarcely lobed; the 1st joint of the posterior tarsi is much longer than the last, whilst in *radiatus* it is but slightly longer. In the ♂ the 6th ventral segment is more broadly excised.

♂: 6th ventral segment with a broad, deep, semi-elliptical excision; 5th broadly impressed in the middle, more deeply behind, with the sides subcarinate, the posterior border feebly emarginate, the impression more densely pubescent; 4th flattened behind and feebly emarginate.

Bengal: Lebong, alt. 5000 feet (*H. M. Lefroy*). Assam: Manipur; Naga Hills (*S. N. Chatterjee*).

498. **Dianous championi.**

Dianous championi Cam., E. M. M. lvi, 1920, p. 145.

Deep black, shining, without metallic reflex. Antennæ, palpi, and legs black. Length 5·2 mm.

Near *D. cameroni* Champ., but more shining and without bluish or greenish reflex, the antennæ a little shorter, the head and thorax narrower, puncturation of the head and thorax less close, elytra with coarser, more confluent punctures at the base, the rugæ of the rosette coarser and less numerous. First joint of the posterior tarsi not longer than the two following together, not much longer than the last.

♂ unknown.

Bengal: Lebong, alt. 5000 feet (*H. M. Lefroy*).

499. **Dianous lobigerus.** (Fig. 127.)

Dianous lobigerus Champ.*, E. M. M. lv, 1919, p. 48.

Shining, head blue-black, thorax and elytra bronze-green, abdomen black, occasionally with bluish reflex. Antennæ, palpi, and legs black. Length 6·5 to 7·5 mm.

Var. *cyaneus*, with the elytra brassy.

Head narrower than the elytra, rather deeply bisulcate, convex and elevated along the middle, moderately finely, closely, uniformly punctured. Antennæ long and slender, reaching the middle of the elytra. Thorax as long as broad, widest at the middle, the sides rounded in front, emarginate behind, in the middle with a short sulcus, on each side with a deep oblique impression converging to the base, the whole surface coarsely, irregularly punctured, the punctures mostly confluent, so forming oblique or transverse rugæ. Elytra a good deal longer than the thorax, longer than broad, slightly impressed within the shoulders and along the suture in front, with rather close and coarse punctures in front, more or less

confluent, behind with a rosette of fine vorticose rugæ. Abdomen finely, rather closely punctured, the first three ventral segments glabrous and impunctate along the middle. Fore-parts very finely and very sparingly pubescent, the abdomen, especially towards the sides, more thickly. Fourth tarsal joint bilobed, the lobes long and narrow. First joint of posterior tarsi a good deal longer than the last.

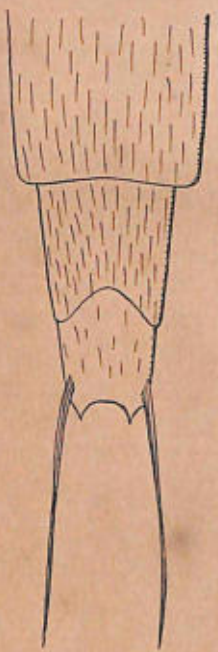


Fig. 127.—*Dianous lobigerus*, apex of abdomen of ♂; ventral surface.

♂: 6th ventral segment broadly, crescentically emarginate; 5th densely pubescent behind in the middle; 7th with a pair of short diverging spines on the posterior border, which is broadly emarginate between.

Kumaon: Tanakpur. Chakrata district: Sainj Khud, alt. 6500 feet. Assam: Naga Hills, alt. 6000 to 9000 feet (*S. N. Chatterjee*).

500. **Dianous andrewesi.** (Fig. 128.)

Dianous andrewesi Cam., Trans. Ent. Soc. Lond. 1914, p. 534; Champ., E. M. M. lv, 1919, p. 50, p. 54, f. 6.

Shining dark metallic green or black, with green reflex;

elytra with a rosette behind. Antennæ, palpi, and legs black. Length 6 mm.

Head as broad as the elytra at the base, bisulcate, elevated and convex along the middle, moderately coarsely, closely, uniformly punctured. Antennæ long and slender, reaching beyond the base of the thorax. Thorax a little longer than broad, widest just before the middle, the sides rounded in front and emarginate behind, in the middle obsoletely, briefly sulcate, on either side deeply and obliquely impressed, before the base bi-nodose, transversely impressed behind the anterior margin, with coarse, confluent, rugose sculpture. Elytra much longer than the thorax, uneven, more coarsely sculptured,

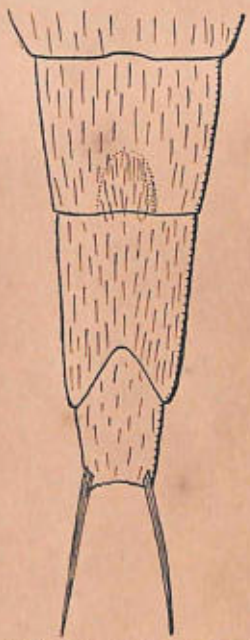


Fig. 128.—*Dianous andrewesi*, apex of abdomen of ♂; ventral surface.

behind with numerous radiating rugæ. Abdomen very finely and closely punctured, the pubescence thicker at the sides, the ventral surface without impunctate, glabrous, median zone. Fourth tarsal joint simple. First joint of the posterior tarsi much longer than the last.

♂: 6th ventral segment with rather deep, broad, semi-elliptical excision, with bevelled margin; 5th impressed behind in the middle, the adjacent border emarginate, the impression more thickly pubescent; 7th truncate and finely denticulate.

Bengal: Lebong, alt. 5000 feet (*H. M. Lefroy*). Kumaon: W. Almora. Assam: Naga Hills, alt. 9000 feet (*S. N. Chatterjee*).

501. **Dianous subtortuosus.** (Fig. 129.)

Dianous subtortuosus Champ.*, E. M. M. xlviii, 1921, p. 201.
Dianous imitator Cam., E. M. M. lxiii, 1927, p. 9.

In build, colour, and sculpture scarcely differing from *D. andrewesi* Cam., but distinct by the following structural characters: the thorax is more broadly sulcate, the tarsi are distinctly shorter, with the 4th joints bilobed, the lobes being slender and moderately long, the antennæ less slender.



Fig. 129.—*Dianous subtortuosus*, apex of abdomen of ♂; ventral surface.

In the ♂ the excision of the 6th ventral segment is not so deep, and the impression on the 5th is deeper and its sides elevated into distinct shining keels.

Kumaon: Jagthana (*H. G. Champion*). Chakrata district: Sainj Khud, alt. 6500 feet.

502. **Dianous radiatus.** (Fig. 130.)

Dianous radiatus Champ.*, E. M. M. lv, 1919, p. 51, p. 54, fig. 7.

Shining bronze-black, with occasionally a well-marked bronze green reflex. Elytra with well-developed rosette. Antennæ, palpi, and legs black. Length 6 to 7 mm.

Head about as broad as the base of the elytra, rather deeply, narrowly bisulcate, rather narrowly elevated and convex along the middle, moderately coarsely, rather closely, uniformly punctured. Antennæ reaching beyond the base of the thorax.

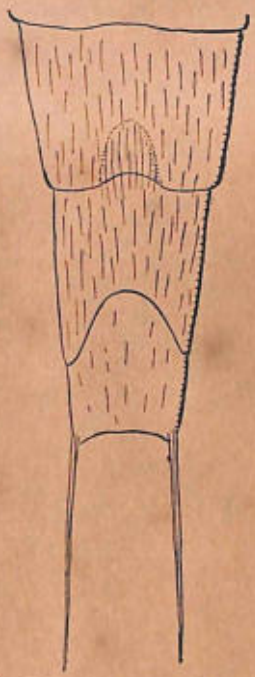


Fig. 130.—*Dianous radiatus.*

Thorax a little longer than broad, the sides rounded in front, parallel behind, in the middle sulcate, on either side deeply, obliquely impressed, the impressions converging towards the base and externally with a tuberosity, the whole surface irregularly, moderately coarsely punctured, the punctures here and there confluent, especially before the base. Elytra a good deal longer than the thorax, about as long as broad, impressed within the shoulders, along the suture in front, and about the middle, puncturation coarse and confluent about the

base, in the middle with rosette of radiating and vorticose rugæ. Abdomen very finely, moderately closely punctured above, and below without impunctate spaces. Fourth joint of the anterior tarsi distinctly bilobed, the middle and posterior excavate above, not definitely lobed. First joint of the posterior tarsi a little longer than the last.

♂: 6th ventral segment with rather broad, deep, elliptical excision, the edges bevelled; 5th impressed in the middle behind, the border slightly emarginate, the impression more densely punctured and pubescent.

Kumaon: W. Almora. Dehra Dun district: Lachiwala. Chakrata district: Sainj Khud; Manjgaon; Chulli Khud; Bangar. Assam: Naga Hills, alt. 3000 to 9000 feet.

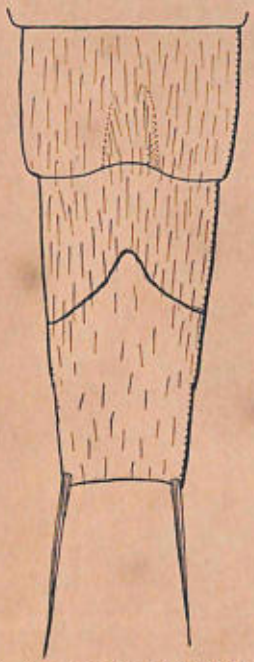


Fig. 131.—*Dianous frater*, apex of abdomen of ♂; ventral surface.

503. Dianous frater. (Fig. 131.)

Dianous frater Cam., E. M. M. lxiii, 1927, p. 10.

Very like *D. radiatus* Champ., but with black abdomen and with stronger greenish and bluish reflex of the elytra, the head broader and more finely punctured, the antennæ a little longer, the thorax more transversely rugose in front, the

abdomen more finely and more densely punctured. The 4th tarsal joints of the anterior and middle legs are shortly bilobed, whilst those of the posterior are simply excavated at apex and scarcely lobed. In the ♂ the excision of the 6th ventral segment is rather narrower and more acute, and the impression on the 5th is deeper.

Assam : Naga Hills, alt. 9000 feet.

504. **Dianous tortuosus.** (Fig. 132.)

Dianous tortuosus Champ.*, E. M. M. lv, 1919, p. 52, p. 54, fig. 8.

Shining bronze-black, with brassy reflex. Antennæ, palpi, and legs black. Length 6 to 6·5 mm.

Near *D. radiatus* Champ. but the head narrower, the rugæ

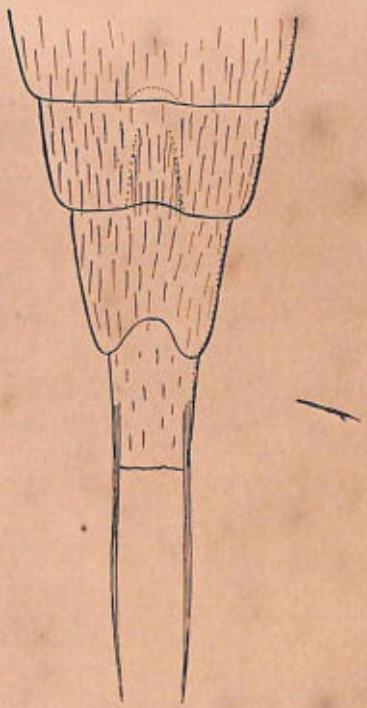


Fig. 132.—*Dianous tortuosus*, apex of abdomen of ♂ ; ventral surface.

of the rosette finer and closer, the thorax more closely punctured, the elytra more finely and closely. From *D. cameroni* Champ. it is distinguished by the narrower head, shorter antennæ (only reaching the base of the thorax), shorter, broader thorax,

shorter, stouter tarsi, the 1st joint of the posterior ones not much longer than the last.

♂: 6th ventral segment deeply, semi-elliptically excised; 5th impressed behind, slightly emarginate, the impression more thickly punctured and pubescent.

W. Almora. Chakrata district. Assam: Shugun, alt. 3000 to 6500 feet.

505. **Dianous tortus.**

Dianous tortus Cam., E. M. M. lxiii, 1927, p. 10.

Near *D. tortuosus* Champ., but larger (8 mm.) and more robust, less shining, and with slight cyaneous reflex on the head, thorax, and sides of the elytra, head broader, antennæ and legs longer, the 4th tarsal joints bilobed, thorax rather less coarsely but more closely punctured, the base without a shining keel. Abdomen more finely and closely punctured, pubescence thicker, especially at the sides, where it forms oblique spots.

♂ unknown.

Chakrata district: Sainj Khud, alt. 6500 feet.

506. **Dianous subvorticosus.** (Fig. 133.)

Dianous subvorticosus Champ.*, E. M. M. lv, 1919, p. 52, p. 54, fig. 9.

Shining black, with here and there a bluish reflex, the rosette blue. Antennæ and palpi black. Legs blue-black. Length 6 to 6·5 mm.

Differs from *D. tortuosus* Champ., with which it agrees in colour, in the less shining appearance, much finer sculpture of the fore-parts, and broader thorax. Head rather deeply bisulcate, in the middle rather broad, convex, and elevated, moderately coarsely, closely, uniformly punctured. Antennæ reaching beyond the base of the thorax. Thorax a little broader than long, widest before the middle, the sides rounded in front, parallel behind, in the middle with a short sulcus, on each side with broad oblique sulcus converging towards the base, closely, moderately coarsely punctured like the head, before the base with some transversely confluent punctures. Elytra about twice as long as the thorax, about as long as broad, impressed within the shoulders, along the suture in front, and about the middle, with coarse, more or less confluent punctures in front, about the middle with a rosette of vorticose rugæ, finer and less radiating than in *tortuosus*. Abdomen finely and closely punctured above and below. Fore-parts with coriaceous ground-sculpture. Fourth tarsal joint excavate

above, scarcely bilobed. First joint of posterior tarsi about as long as the last.

♂: 7th ventral segment truncate, obscurely denticulate; 6th deeply, semi-elliptically excised; 5th impressed behind

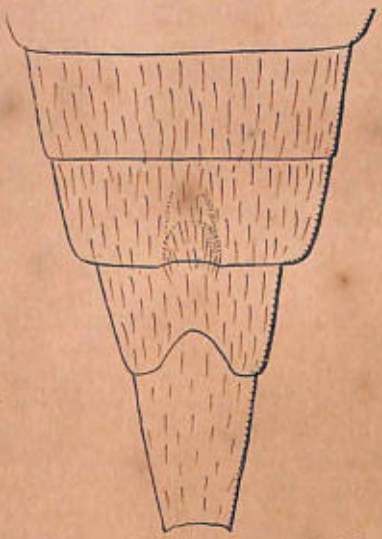


Fig. 133.—*Dianous subvorticosus*, apex of abdomen of ♂; ventral surface.

and slightly emarginate, more thickly punctured and pubescent.

W. Almora. Siwaliks: Lachiwala. Chakrata district. Assam: Manipur.

507. Dianous minor.

Dianous minor Champ.*, E. M. M. lv, 1919, p. 53.

Shining bronze-green, here and there with bluish reflex. Antennæ and palpi black. Legs blue-black. Length 4 to 4·5 mm.

Head narrower than the base of the elytra, rather broadly bisulcate, a little elevated and convex along the middle, moderately coarsely and rather closely, uniformly punctured. Antennæ short and rather stout. Thorax as broad as long, the sides rounded in front, emarginate behind, on each side with a deep oblique sulcus converging towards the base, coarsely, closely punctured, the punctures before the base more or less transversely confluent, transversely rugose. Elytra much longer than the thorax (8 : 5), slightly impressed within

the shoulders, along the suture in front, and about the middle, with a coarse, close, more or less confluent puncturation, near the middle with a rosette of radiating rugæ. Abdomen finely and closely punctured. Thorax and elytra glabrous, abdomen finely pubescent. Fourth tarsal joint simple. First joint of the posterior tarsi shorter than the last.

♂: 6th ventral segment triangularly emarginate, according to Champion.

W. Almora: Ranikhet.

508. **Dianous aereus.**

Dianous aereus Champ.*, E. M. M. lv, 1919, p. 53.

Shining, dark bronze-green; elytra with rosette behind. Antennæ and palpi black. Legs blue-black. Length 4·5 mm.

Near *D. minor* Champ., but usually a little larger, the antennæ and legs longer, the puncturation at the base of the elytra less close. Head a little wider than the thorax (7 : 6), rather broadly bisulcate, a little elevated and convex along the middle, which is more or less smooth. Antennæ moderate, reaching beyond the base of the thorax. Thorax as broad as long, widest a little before the middle, the sides rounded in front, slightly emarginate behind, deeply obliquely impressed on each side, sulcate in front in the middle, with close, more or less confluent punctures, before the base more confluent, and with transverse rugæ. Elytra at the suture one-third longer and much broader than the thorax, slightly impressed within the shoulders, along the suture in front and about the middle, rather coarsely and closely punctured and with numerous close rugæ radiating from about the middle. Abdomen very finely and closely punctured, finely pubescent, the pubescence thicker at the sides, the apex with two long, slender brushes. Fourth joint of the tarsi simple. First joint of the posterior tarsi as long as the last.

♂: 7th ventral segment truncate and finely denticulate; 6th deeply, broadly, semicircularly excised; 5th more thickly pubescent in the middle behind.

W. Almora. Chakrata district: Sainj Khud; Korawa Khud, alt. 6500 to 9000 feet. Assam: Naga Hills, alt. 9000 feet.

509. **Dianous æneus**, sp. n. (Fig. 134.)

Rather shining, the fore-parts metallic green, the abdomen black with greenish reflex. Antennæ, palpi, and legs black. Length 4·5 mm.

Somewhat resembling *D. minor* Champ. but greener, the

elytra shorter, the rosette less developed, antennæ longer, thorax less uneven, the puncturation finer and closer. Head rather feebly, broadly bisulcate, broadly and slightly elevated along the middle, moderately coarsely and closely punctured, less closely along the middle. Antennæ extending beyond the base of the elytra. Thorax as long as broad, the sides slightly rounded in front, emarginate behind, on either side with a feeble oblique sulcus, closely and rather coarsely punctured, the punctures here and there confluent. Elytra



Fig. 134.—*Dianous æneus*, apex of abdomen of ♂; ventral surface.

longer than the thorax (7 : 5), impressed within the shoulders, along the suture in front, and at the middle, puncturation coarse, close and more or less confluent in front, the rosette not well developed, and only represented by a group of somewhat irregular, rather fine rugæ. Abdomen very finely and closely punctured. Fore-parts practically glabrous, abdomen finely pubescent. Tarsi slender, the 4th joint simple, first joint of the posterior longer than the last.

♂: 6th ventral segment deeply semi-elliptically excised; 5th impressed behind and distinctly emarginate, more thickly punctured and pubescent.

Assam: Naga Hills (*S. N. Chatterjee*).

510. **Dianous viridipennis.**

Dianous viridipennis Cam., E. M. M. lxiii, 1927, p. 10.

Shining black, the head and thorax with green metallic reflex, the elytra bright metallic green, abdomen green, less shining. Antennæ, palpi, and legs black. Length 5 mm.

Near *D. minor* Champ., but a little larger, the antennæ a little longer, more shining, thorax less closely punctured, less rugose, with a small, shining, impunctate space on the disc and shining keel before the middle of the base, elytra more brilliant, much more coarsely sculptured and a little shorter. Head narrower than the base of the elytra, bisulcate, in the middle broadly, slightly raised, moderately finely and closely punctured. Antennæ rather short, the 9th and 10th joints only slightly longer than broad. Thorax widest before the middle, the sides rounded and converging in front, more strongly contracted behind, deeply obliquely impressed at the sides, before the base with central keel, puncturation coarser than that of the head, more or less confluent at the base and sides, less close on the disc. Elytra with coarse, more or less confluent puncturation in front and behind, in the middle with strong radiating rugæ. Abdomen finely and rather closely punctured. Legs rather short, 4th tarsal joints notched, scarcely bilobed.

♂: 6th ventral segment with moderate semi-elliptical excision; 5th very feebly notched and impressed, the impression more thickly pubescent.

Assam: Naga Hills, alt. 9000 feet.

Subfamily VI. EUÆSTHETINÆ.

Euæsthetinæ, Sharp, B. C.-A. i, 2, 1882–87 (1886), p. 639; Ganglb., Käf. Mitt. Eur. ii, 1895, p. 542; Reitter, Faun. Germ. ii, 1909, p. 153.

Euæsthetina Thoms., Skand. Col. iii, 1861, p. 114.

Euæsthetí J. Leconte (*Stenini*, Group ii), Class. Col. N. Amer. i, 1, 1861–62, p. 67; Fauv. (*Stenini*, Sect. i), Faun. Gallo-Rhén. iii, 1872, p. 218; Suppl. 1875, p. 36 (excl. *Leptotyphli*); Leconte & Horn (*Pæderini*, Group i), Class. Col. N. Amer. 1883, p. 98.

Evesthétiens Muls. et Rey, Ann. Soc. Linn. Lyon, xxiv, 1877, p. 299.

Euæsthetini Casey, Trans. Amer. Ent. Soc. 1884, p. 18.

Small or very small species with porrect head, slightly constricted behind the prominent eyes, the neck thick. Antennæ

freely inserted a little distance in front of the eyes above the base of the mandibles, 11-jointed. Labrum short and broad. Mandibles long, slender, curved. Inner border of the internal and apical border of the external lobe of the maxilla densely ciliate. Maxillary palpi with the 1st joint rather long, sometimes but little shorter than the 2nd, 3rd long, oval, 4th minute, subulate. Labial palpi 3-jointed, the 1st joint rather short, 2nd stout, oval, 3rd slender, subulate. Prosternum well developed, its process short. Epimera large, the coxal cavities small. Abdomen keeled below at the base. Tibiæ ciliate.

Key to the Genera.

Tarsi 5, 5, 4. Antennæ slender, the last three joints a little thicker. Abdomen with the 1st and 5th dorsal segments finely bordered. Facies somewhat resembling *Stenus*	[p. 445. STENÆSTHETUS Shp.,
Tarsi 4, 4, 4. Antennæ with the last two joints much stouter than the preceding, forming a club. Abdomen completely bordered. Facies of the Pselaphid genus *Euplectus*	EDAPHUS Lec., p. 447.

Genus **STENÆSTHETUS** Sharp †.

Stenæsthetus Sharp, Trans. Ent. Soc. Lond. 1874, p. 79.

Facies somewhat resembling the subgenus *Hypostenus* and with the characters of the subfamily, to which may be added: antennæ slender, the last three joints a little thicker than the preceding, the first two joints rather stout. Labrum simply rounded in front. Mandibles each with a long slender tooth in the middle. Mentum subquadrate, the antero-external angles thickened and a little produced. Labium subquadrate, truncate in front, the tongue consisting of two widely-separated, cylindrical, membranous lobes; paraglossæ well developed, not extending beyond the base of the tongue. Gular sutures fused and obliterated behind, the submentum short, transverse. Thorax finely bordered laterally. Prosternum well developed, extensively fused with the large epimera, its process pointed, the coxal cavities small. Mesosternum with narrow process between the coxæ for about half their length, and meeting the short rounded process of the metasternum, which is slightly emarginate before the posterior coxæ, the process between them short and with a small notch. Abdomen with the 1st and 5th dorsal segments finely bordered. Anterior coxæ small, cylindrical, not prominent, middle small,

† It may be noted here that all the species of *Dimerus* Fivri described by Broun from New Zealand belong to this genus.

emarginate in front, the anterior angles prominent. Paraglossæ distinct, not extending beyond the anterior angles of the labioglossal plate. Labial palpi with the 1st joint very short, the 2nd elongate, gradually thickened towards the apex, the 3rd long, slender, subulate. Gular sutures distinct, diverging behind. Prosternum very similar to that of *Stenæsthetus*, but the epimera are separated from the pronotal epipleura by a suture. Mesosternum and its process carinate, the apex of the latter narrowly truncate, extending for about half the length of the intermediate coxæ and meeting the rounded apex of the metasternal process. Intermediate coxæ narrowly separated. Metasternum a little emarginate before the posterior coxæ, truncate and impressed between them. Abdomen keeled in the middle of the base below, the sides completely bordered above, the 1st visible segment much longer than the following. Anterior coxæ conical, somewhat prominent, the middle globular, the posterior short, conical. Tibiæ finely ciliate. Tarsi four-jointed, the first three joints short and subequal, the 4th longer, somewhat dilated; claws simple, sharply angulate near the base. The genus occurs throughout the world, and is found in damp places in vegetable débris; some species live among tobacco leaves.

Key to the Species.

Size larger, almost impunctate	*major* Fauv., p. 448.
Size smaller, strongly punctured	*punctatus* Fauv., p. 449.

513. **Edaphus major.**

Edaphus major Fauv., Rev. d'Ent. xiv, 1895, p. 205.

A fourth larger than *E. dissimilis* Aubé, broader, robust, shining, with long and close yellow pubescence, smooth, the abdomen sparingly and obsoletely punctured, reddish-testaceous, the mouth-parts and legs testaceous; antennæ longer, the 9th joint scarcely broader than the 8th, 10th and 11th the largest, the 10th a little transverse; eyes large, prominent; the front with a transverse, impressed, curved line between the eyes, in front somewhat triangularly elevated and produced, antennal tubercles not very stout. Thorax rather broader than the head, longer than broad, strongly cordate and constricted behind, the base with four large, equal foveæ, the margins before the posterior angles elevated as a little black keel. Elytra ample, convex, much broader but scarcely shorter than the thorax, the apex wider than the base, the sides rounded. Abdomen obconical, the 1st segment a little longer than the 2nd. Tibiæ straight. Length $2\frac{1}{3}$ mm.

Burma: Bhamo, viii. (*L. Fea*) (ex *Fauvel*).

514. **Edaphus punctatus.** (Pl. III, fig. 9.)

Edaphus punctatus Fauv., Rev. d'Ent. xiv, 1895, p. 206.

Shining ferruginous red. Antennæ, palpi, and legs testaceous the last two joints of the first infuscate. Length 2 mm.

Head a good deal narrower than the thorax, eyes rather large, prominent, temples wanting; vertex bisulcate, before the base with transverse impressed line, at the sides with a few punctures. Antennæ moderate, the first two joints stouter than the following, 3rd to 6th a little longer than broad, gradually decreasing in length, 7th moniliform, 8th and 9th small, transverse, 10th much larger, square, 11th as broad as, but longer than, the 10th. Thorax distinctly transverse, the sides feebly rounded, before the base strongly retracted, the base with six obsolete impressions, the median separated from each other by a fine keel, the outer bounded externally by a distinct black keel; along the middle narrowly smooth, the rest of the surface coarsely and closely punctured. Elytra a little longer and a good deal broader than the thorax, less coarsely but closely punctured. Abdomen narrowed before the apex, extremely finely, sparingly punctured. Tibiæ straight.

Burma: Bhamo, viii. (*L. Fea*). Also in Penang (*Raffray, Bryant, Cameron*).

CORRIGENDA.

P. 39, line 22, *for* temples much less rectangular *read* temples smaller, rectangular.

P. 294, line 16, *for* superficially *read* rather deeply.

ADDENDA.

P. 36 :—

14. **Eupiestus spinifer** Fauv. var. **unicolor**, nov.

A ♀ of this species from Rangirum, alt. 6000 feet, Darjeeling (2. ix. 29), has the elytra uniformly black (*J. C. M. Gardner*).

P. 40 :—

20. **Eupiestus jacobsoni** Cam.

Differs from *sikkimi* in the smaller average size, the antennæ less thickened, the thorax a little more transverse, the punctures coarser, the elytra with the punctures coarser and deeper.

P. 53. Amend the Key as follows :—

12. Larger (3 to 4 mm.), blackish species	13.
Smaller etc. as on p. 53	*subopacus* Kr., p. 62.
13. Elytra each with a row of three larger punctures on disc; more shining, less depressed species. Length 3 mm.....	[p. 452. *dipterocarpi*, sp. n.,
Elytra without such punctures; less shining, more depressed species	13 *a*.
13 *a*. Depressed, strongly coriaceous species, like *subopacus*	*assamensis*, sp. n., p. 452.
Less depressed, less coriaceous	13 *b*.
13 *b*. Larger (3·4 to 4 mm.), more robust, more shining, blacker, more finely punctured, thorax more dilated in front; antennæ longer, the penultimate joints less transverse	[p. 59. *intermedius* Cam.,
Smaller (3·2 mm.), less robust, less shining, more pitchy, less finely punctured, thorax less dilated in front; antennæ shorter, the penultimate joints more transverse ..	[p. 59. *maderensis* Bernh.,

P. 65 :—

Lispinus dipterocarpi, sp. n.

Near *L. intermedius* Cam., but smaller, less robust, less strongly coriaceous, and more shining, the thorax narrower and less transverse, less widened in front, the lateral impression shorter and shallower, the elytra each with a row of three fine punctures and a fourth nearer the suture behind, which are distinct from the general puncturation, the latter being very fine and moderately close. The antennæ are a little longer and less stout. Length 3 mm.

Middle Andamans (*B. M. Bhatia*), 9. i. 29 (ex *Dipterocarpus turbinatus*).

Lispinus assamensis, sp. n.

Very closely allied to *L. similis* Cam. from Penang, and perhaps only a race of that species; it differs in the darker colour and less finely punctured elytra. Head and abdomen black, the last segment reddish, thorax and elytra pitchy-black and the antennæ brown. Length 3 mm.

Assam: Naga Hills, alt. 6000 feet. Unique.

P. 75. Amend the Key as follows :—

4. Larger species (6 to 7 mm.). Head large, quadrate	4 *a*.
Small species (3 to 4 mm.)	5.
4 *a*. Ground-sculpture of head and thorax uniform; puncturation of head extremely fine; thorax cupuliform	4 *b*.
Ground-sculpture of head and thorax absent except at the extreme sides; puncturation of head comparatively coarse between the antennal tubercles; thorax conical	*birmana*, sp. n., p. 453.
4 *b*. Posterior third of elytra blackish; 8th to 10th joints of antennæ transverse	*fecæ* Fauv., p. 78.
Posterior half of elytra blackish; 8th to 10th joints of antennæ as long as broad	*simulans*, sp. n., p. 452.

P. 88 :—

Eleusis simulans, sp. n.

Very near *E. fecæ* Fauv. Similar in build and almost the same in colour, but differing as follows: the head is more extensively infuscate, the thorax on the disc is somewhat infuscate, the posterior half of the elytra is blackish, this coloration extending along the suture to the base; the antennæ have the first four or five joints reddish, the following brown, the 3rd joint almost twice as long as the 2nd, 4th to 7th a

little longer than broad, 8th to 10th as long as broad, the 11th as long as the two preceding together. The head is punctured as in *feæ*, the thorax rather more punctured than in that species, the ground-sculpture in both species is similar. Length 7·5 mm.

Burma: Ruby Mines (*Doherty*). Unique (*Brit. Mus.*).

Eleusis birmana, sp. n.

Shining; head red, extensively infuscate; thorax red; elytra yellow, the posterior third and the sutural region indeterminately blackish; abdomen brownish-yellow, along the middle more or less infuscate. Antennæ reddish. Legs yellow. Length 6 mm.

From the Indian species of similar colour readily distinguished by the strongly punctured head, which is devoid of ground-sculpture except at the extreme sides, the antennal structure, and the absence of ground-sculpture on the disc of the thorax. Head as long as broad, the post-ocular region a little dilated, about twice as long as the eye, intra-ocular sulcus not reaching the base; front margin scarcely produced in the middle, feebly rounded, the disc flat, without impressions, between the antennal tubercles rather coarsely and rather closely punctured, much more finely elsewhere, without ground-sculpture except adjacent to the intra-ocular sulcus, where some fine longitudinal striæ are perceptible. Antennæ with the 3rd joint longer than the 2nd, 4th to 10th all strongly narrowed at the base, the 4th to 6th clavate, 7th to 10th conical, the 7th slightly longer than broad, the 8th to 10th as long as broad, 11th oval, a little longer than the preceding. Thorax a little broader than long, conical, the sides edentate, along the middle with a fine impressed line abbreviated in front, the anterior margin on each side with a short oblique sulcus and a single puncture; extremely finely punctured, very sparingly on the disc but closer at the sides; ground-sculpture quite absent on the disc, at the sides with a few short, scarcely visible striæ. Elytra scarcely broader but longer ($4\frac{1}{2} : 3\frac{1}{2}$) than the thorax, extremely finely punctured but with normal ground-sculpture, behind the middle with a setiferous puncture. Abdomen with the usual setiferous punctures, along the middle without ground-sculpture, the sides with fine transverse striæ.

Burma: Ruby Mines (*Doherty*). Unique (*Brit. Mus.*).

P. 112. Amend the Key as follows:—

5. Head deeply excavated in front, the frontal horns large and prominent, the frontal margin concave	5 *a*.
As on p. 112	*taprobanus* Cam., p. 116.

5 *a*. Larger species (11 mm.).	6.
Smaller species (7 to 8·5 mm.).	6 *a*.
6 *a*. Free inner inner edge of frontal horn longer, infra-cornual denticle larger and further from the apex. Length 8·5 mm. ..	[p. 454. *sikkimensis*, sp. n.,
Free inner edge of frontal horn very short, infra-cornual denticle very small and placed immediately behind the apex. Length 7 mm.	*gardneri*, sp. n., p. 454.

P. 116 :—

Priochirus (Plastus) sikkimensis, sp. n.

Near *P. brachycerus* Kr., but smaller (8·5 mm.), the antennæ a little longer, the penultimate joints less transverse, the 11th longer ; free inner edge of the frontal horn a little shorter, the infra-cornual denticle smaller and nearer the apex, the space between the horns more semicircular, the frontal impression much shorter ; thorax shorter, the angles more rounded ; abdominal puncturation more obsolete.

Bengal : Darjeeling, Debrepanni, alt. 6000 feet, 15. ix. 29 (*J. C. M. Gardner*).

Priochirus (Plastus) gardneri, sp. n.

Very near *P. sikkimensis*, but smaller (7 mm.), the penultimate joints of the antennæ less transverse, the free inner edge of the frontal horn much shorter, infra-cornual denticle very small and placed immediately behind the apex, the space between the horns less deep, crescentic, the frontal impression a little shorter.

Bengal : Darjeeling, Rangirum, alt. 6000 feet, 8. ix. 29 (*J. C. M. Gardner*).

P. 161. Amend the Key as follows :—

4. Thorax with median sulcus	4 *a*.
Thorax without median sulcus.....	5.
4 *a*. Larger (7·75 mm.). Thorax much more strongly contracted behind ; elytra twice as long as the thorax. Legs reddish-yellow. Anterior tibiæ straight	[p. 455. *kashmirensis*, sp. n.,
Smaller (5·3 mm.). Thorax much less strongly contracted behind ; elytra a half longer than the thorax. Legs black. Anterior tibiæ curved.....	*curvipes* Cam., p. 164.
5. Thorax cordiform	5 *a*.
Thorax trapezoidal	6.
5 *a*. Larger (7·5 mm.). Antennæ and femora dark	*championi* Cam., p. 163.
Smaller (5 mm.). Antennæ and femora red .	*similis*, sp. n., p. 455.

P. 165 :—

Geodromicus kashmirensis, sp. n.

Black, moderately shining, the elytra pitchy black, the base and suture very narrowly and obscurely reddish. Antennæ ferruginous. Legs reddish-yellow. Length 7·75 mm.

Near *G. convexicollis* Luze, but larger, more parallel, the antennæ a little longer and more slender, the thorax with the sides more dilated and rounded in front. Rather parallel ; head with large eyes, the post-ocular region shorter than their curvature, the ocelli a little farther apart from each other than from the eyes, in front of each with a narrow sulcus, middle of the front with an impression ; rather closely and moderately finely punctured. Antennæ reaching the middle of the elytra. Thorax slightly transverse, cordiform, superficially sulcate along the middle, rather closely punctured, but less finely than the head. Elytra almost parallel, twice as long as the thorax, more finely punctured. Abdomen very finely, rather closely punctured ; coriaceous. Tibiæ straight.

Kashmir : Gulmarg, Ferozepur Nala, alt. 6500 feet, 2. vi. 28 (*B. M. Bhatia*).

Geodromicus similis, sp. n.

Very near *G. championi*, but smaller (5 mm.) and less robust ; head smaller, thorax less transverse, less dilated in front, elytra more finely, less deeply punctured, less closely and more obsoletely behind, abdomen more finely and indistinctly punctured. Antennæ reddish, femora and tarsi reddish, tibiæ blackish. The elytra are twice the length of the thorax, as in *championi*. From the concolorous form of the European *plagiatus* F. it differs in the less shining and more pubescent surface, narrower head, longer antennæ, more closely and more finely punctured elytra.

Kashmir : Gulmarg, Ferozepur Nala, alt. 6500 feet, 2. vi. 28 (*B. M. Bhatia*).

P. 238. Amend the Key as follows :—

17. Thoracic ridges indistinct, not more shining than the rest of the surface	17 *a*.
As on p. 238	18.
17 *a*. Larger (2·75 mm.). Clypeus opaque, like the rest of the surface	*gardneri*, sp. n., p. 456.
Smaller (2 mm.). Clypeus shining, finely striate	*simlaensis* Cam., p. 247.

P. 262 :—

Oxytelus (Anotylus) gardneri, sp. n.

♀: Closely allied to *O. tetracarinatus* Block (♀), of similar build, colour, opacity, and antennal structure, but a little larger (2·75 mm.), the clypeus not separated from the front by a shining line, the thorax with the keels less marked; from *simlaensis* Cam. it differs in the larger size, the quite opaque clypeus, more strongly transverse penultimate antennal joints, and less marked thoracic keels; from *occultus* Cam. (♀) by the larger size, simple anterior tibiæ, longer temples, more slender antennæ, less transverse thorax, and less deep median sulcus.

Darjeeling: Rangirum, alt. 6000 feet, 4. ix. 29 (*J. C. M. Gardner*), ex *Evodia fraxinifolia*.

P. 291. Amend the Key as follows :—

7. Head between the eyes uniformly striate, the vertex smooth	7 *a*.
Head finely striate near the eyes only, behind the antennal tubercles punctured, the vertex smooth	*gardneri*, sp. n., p. 456.
7 *a*. Thorax more closely and more regularly punctured, less constricted behind. Larger (9 to 13 mm.).	[p. 295. *stricticollis* Fauv.,
Thorax less closely and more irregularly punctured, more strongly constricted behind. Smaller (over 7 mm.)	[p. 294. *sikkimensis* Bernh.,
12. As on p. 291.....	13.
Smaller (6·5 to 6·75 mm.).....	12 *a*.
12 *a*. Clypeus not emarginate; thorax less closely punctured	[p. 298. *peguanus* Bernh.,
Clypeus emarginate; thorax more closely punctured	[p. 457. *lopchuensis*, sp. n.,

P. 304 :—

Osorius gardneri, sp. n.

Black, shining; clypeus truncate and crenulate; thorax cupuliform, suddenly constricted at the base. Antennæ and legs reddish-brown. Length 9 mm.

Declivous part of the front smooth in the middle and impressed, at the sides with a few fine granules, internal to the eyes with fine, short striæ and a few granules, behind the smooth antennal tubercles with a few fine, rather close punctures, middle of vertex smooth, the smooth part continuous with that of the front, base smooth. Penultimate joints of antennæ as long as broad. Thorax transverse (7 : 5), the sides slightly rounded and gradually retracted to just before the base and then suddenly constricted, the

posterior angles rounded, adjacent to the constricted part with a shallow impression, along the middle with an impunctate space, elsewhere rather closely covered with small asperate punctures which are a little more sparing towards the anterior angles. Elytra longer than the thorax (8 : 5), superficially, moderately closely and moderately finely punctured. Abdomen coriaceous, moderately finely and moderately closely punctured.

Darjeeling: Ghum, alt. 7400 feet, 19–20. ix. 29 (*J. C. M. Gardner*).

Osorius lepchuensis, sp. n.

Very near *O. pectinifrons* Fauv., and only differing in the following respects: a little smaller (6·75 mm.), the thorax shorter, more transverse and more cupuliform, the impression at the posterior angle shorter and less marked, the puncturation a little coarser and distinctly closer, the smooth median lin more sharply defined, the puncturation of the abdomen coarser but equally close.

Darjeeling: Lopchu, alt. 5,000 feet; Debrepanni; Simkona; Ranjirum, alt. 6000 feet, 21. ix. 29 (*J. C. M. Gardner*)

P. 305 :—

Mimogonus niger, sp. n.

From all the Indian species distinct by the entirely black colour and larger size (4·5 mm.).

Black, moderately shining. Antennæ and legs dark brown. Head narrower than the thorax, moderately finely and rather closely punctured, the punctures umbilicate. Antennæ with the 4th and 5th joints orbicular, the 6th to 10th transverse. Thorax transverse, the sides for the anterior three-fourths straight, slightly converging in front, strongly constricted before the base, along the middle with narrow, smooth, shining space, the rest of the surface with puncturation similar to but coarser than that of the head. Elytra as broad as but longer than the thorax ($3\frac{1}{2} : 2\frac{1}{2}$), a little more closely punctured. Abdomen more finely, rather closely punctured, finely coriaceous. The whole insect covered with moderately long yellow pubescence.

Darjeeling: Debrepanni, alt. 6000 feet, 15. ix. 29 (*J. C. M. Gardner*). On *Alnus nepalensis*.

P. 321. Amend the Key as follows :—

20. As on p. 321 ..... *musicola* Cam., p. 339.
Smaller (3 to 3·3 mm.). Elytra as long as the thorax ..... 20 *a*.

20 *a*. Larger (3·3 mm.). Head feebly bisulcate; antennæ reaching the base of the thorax..	*morosus* Cam., p. 339.
Smaller (3 mm.). Head deeply bisulcate; antennæ not reaching the base of the thorax.....	[p. 458 *almoranus*, sp. n.,

P. 347 :—

Stenus almoranus, sp. n.

Black, shining, coarsely punctured. Antennæ short, reddish-testaceous, the club infuscate ; palpi testaceous. Legs reddish-testaceous, the knees scarcely infuscate. Length 3 mm.

Somewhat resembling *S. peratus* in build and size, but more shining, more coarsely punctured, the antennæ shorter, the head deeply sulcate, the thorax sulcate, the elytra shorter and broader. Head as broad as the base of the elytra, elevated along the middle, deeply, narrowly sulcate on each side, very coarsely and closely punctured all over. Antennæ very short. Thorax a little longer than broad, widest just before the middle, the sides rounded in front, straighter and narrowed behind, deeply sulcate along the middle, rather more coarsely punctured than the head, rugose. Elytra (measured from the base) as long as the thorax but considerably wider, a little broader than long, yet more coarsely and rugosely punctured. Abdomen narrowed from base to apex, the anterior segments more or less crenulate at base, coarsely and closely punctured, the last two segments not quite so closely and distinctly less coarsely punctured, finely, sparingly pubescent. Posterior tarsi rather slender, the 1st joint as long as the last.

♂ unknown.

Almora : Dhaub China, alt. 6000 feet. Unique.

P. 348. Amend the Key as follows :—

14. As on p. 348.....	*signifer* Fauv., p. 359.
Elytra otherwise marked	14 *a*.
14 *a*. Each elytron with a submarginal fascia extending backwards from the shoulder. Thorax without tubercles; more robust species	15.
Each elytron behind near the lateral margin with a very obscure, indeterminate orange marking	[p. 458. *obliteratus*, sp. n.,

Stenus (Hypostenus) obliteratus, sp. n.

Black, shining ; the elytra each with an obscure, small, orange mark behind the middle near the lateral margin. Antennæ, palpi, and legs yellow, the club of the former infuscate. Length 5 mm.

In build near *cylindricollis* Boh., but in all other respects different. From *S. flexuosus* it differs in the narrower head, longer, narrower thorax, longer, differently marked elytra, and less close puncturation. Head as broad as the base of the elytra, broadly excavated, along the middle with a smooth, narrow keel evanescent in front, closely and coarsely punctured. Antennæ long and slender. Thorax much longer than broad, cylindrical, in the middle behind with trace of shining keel, the puncturation a little coarser than that of the head. Elytra a little longer and distinctly wider than the thorax, rather coarsely and closely but not rugosely punctured, longitudinally impressed within the shoulders. Abdomen cylindrical, narrowed behind, rather coarsely and closely punctured in front, gradually more finely and more sparingly behind; pubescence fine and white.

♂ unknown.

Darjeeling: Lepchajagat, alt. 7000 feet, 13. ix. 29 (*J. C. M. Gardner*). Unique.

P. 384. Amend the Key as follows:—

8.	As on p. 384	*circumflexus* Fauv., [p. 386.
	As on p. 384	8 *a*.
8 *a*.	More robust; thorax sulcate, less cylindrical; fore-parts less coarsely punctured	*masurianus* Cam., [p. 388.
	Narrower; thorax not sulcate, cylindrical; fore-parts more coarsely punctured	*tenuimargo*, sp. n., [p. 459.
10.	As on p. 384	10 *a*. [p. 389.
	As on p. 384	*stigmaticus* Fauv.,
10 *a*.	Elytral spot smaller; puncturation throughout coarser	*obliquenotatus* Cam., [p. 390.
	Elytral spot larger; puncturation throughout less coarse	*lopchuensis*, sp. n., [p. 460.

P. 385. Amend the Key as follows:—

24.	More robust, more shining, bronze-black	*aceris* Steph., p. 400.
	Narrower, less shining, leaden-black	24 *a*.
24 *a*.	Thorax sulcate in the middle; knees and 3rd joint of palpi blackish	*submetallicus* Cam., [p. 400.
	Thorax not sulcate; legs and palpi entirely testaceous	*gardneri*, sp.n., p. 460.

P. 404:—

Stenus (Mesostenus) tenuimargo, sp. n.

Near *S. masurianus* and resembling it in the build of the abdomen, which is cylindrical, with the base of the segments constricted as in *Hypostenus*, but the sides have a very fine but complete border as in *masurianus*; its build, however, is much narrower, the antennæ much longer and more slender, testaceous, with the club infuscate; palpi testaceous; head

narrower than in *masurianus*, more coarsely punctured, thorax narrower, cylindrical, without median sulcus or lateral impressions, rugosely punctured ; elytra as long as the thorax, a little longer than broad, with a roundish orange spot behind the middle about equidistant from the sutural, lateral, and posterior margins, coarsely and closely punctured ; abdomen closely and rather coarsely punctured on the first three segments, gradually more finely and less closely on the following ; legs testaceous, the apex of the femora slightly infuscate ; posterior tarsi with the 1st joint much longer than the last. Length 5·75 mm.

♂ : 6th ventral segment with acute triangular excision with rounded apex.

Darjeeling : Tista Valley, alt. 700 feet, 26. ix. 29 (*J. C. M. Gardner*).

Stenus (Mesostenus) lopchuensis, sp. n.

Closely allied to *S. obliquenotatus*, similar in build, the elytral marking a little larger, but the puncturation of the fore-parts a little less coarse, that of the abdomen distinctly finer and closer. From *S. stigmaticus* it is distinguished by the less robust build, narrower elytral spot, and obviously more coarsely and more closely punctured penultimate abdominal segments.

♂ unknown.

Darjeeling : Lopchu, alt. 5000 feet, 24. ix. 29 (*J. C. M. Gardner*).

Stenus (Mesostenus) gardneri, sp. n.

Very near *S. submetallicus*, almost exactly similar in build, but a little smaller (3·75 mm.), the thorax less widened in front and so narrower, not sulcate along the middle ; the puncturation of the fore-parts is not quite so coarse and the palpi and legs are entirely testaceous.

♂ : Middle and posterior tibiæ with minute black spine at the apex internally ; 6th ventral segment with broad, almost rectangular emargination.

Darjeeling : Lepchajagat, alt. 7000 feet, 13. xi. 29 ; Debrepanni, alt. 6000 feet (*J. C. M. Gardner*).

Additional Localities.

Eupiestus sikkimi Fauv., p. 39.	Darjeeling : Rangirum, alt. 6000 feet.	
Siagonium indicum Fauv., p. 41.	Darjeeling : Rangirum, alt. 6000 feet.	

Lispinus beesoni Cam., p. 61.	Assam: Naga Hills, alt. 6000 feet.
Eleusis plagiata Fauv., p. 81.	Darjeeling: Rangirum, alt. 6000 feet; Lepchajagat, alt. 7000 feet.
Eleusis viridans Fauv., p. 82.	Darjeeling: Lopchu, alt. 6000 feet.
Leptochirus lævis Cast., p. 91.	Sikkim: Tista Valley, alt. 700 feet.
Borolinus sikkimensis Bernh., p. 94.	Darjeeling: Rangirum, alt. 6000 feet.
Borolinus minutus Cast., p. 94.	Darjeeling: Rangirum, alt. 6000 feet; Lopchu, alt. 5000 feet.
Priochirus bifoveatus Epp., p. 102.	Darjeeling: Rangirum; Debrepanni, alt. 6000 feet.
Priochirus hoplites Fauv., p. 107.	Darjeeling: Lopchu, alt. 5000 feet
Priochirus longicornis Fauv., p. 110.	Darjeeling: Rangirum; Debrepanni, alt. 6000 feet; Lepchajagat, alt. 7000 feet.
Priochirus micrognathus Fauv., p. 111.	Darjeeling: Debrepanni, alt. 6000 feet.
Priochirus eucerus Fauv., p. 114.	Darjeeling: Lopchu, alt. 5,000 feet.
Megarthrus basicornis Fauv., p. 129.	Darjeeling: Lepchajagat, alt. 7000 feet.
Trogophlœus vagans Cam., p. 185.	Almora: Dwaraket, alt. 5000 feet.

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[All names printed in italics are synonyms.]

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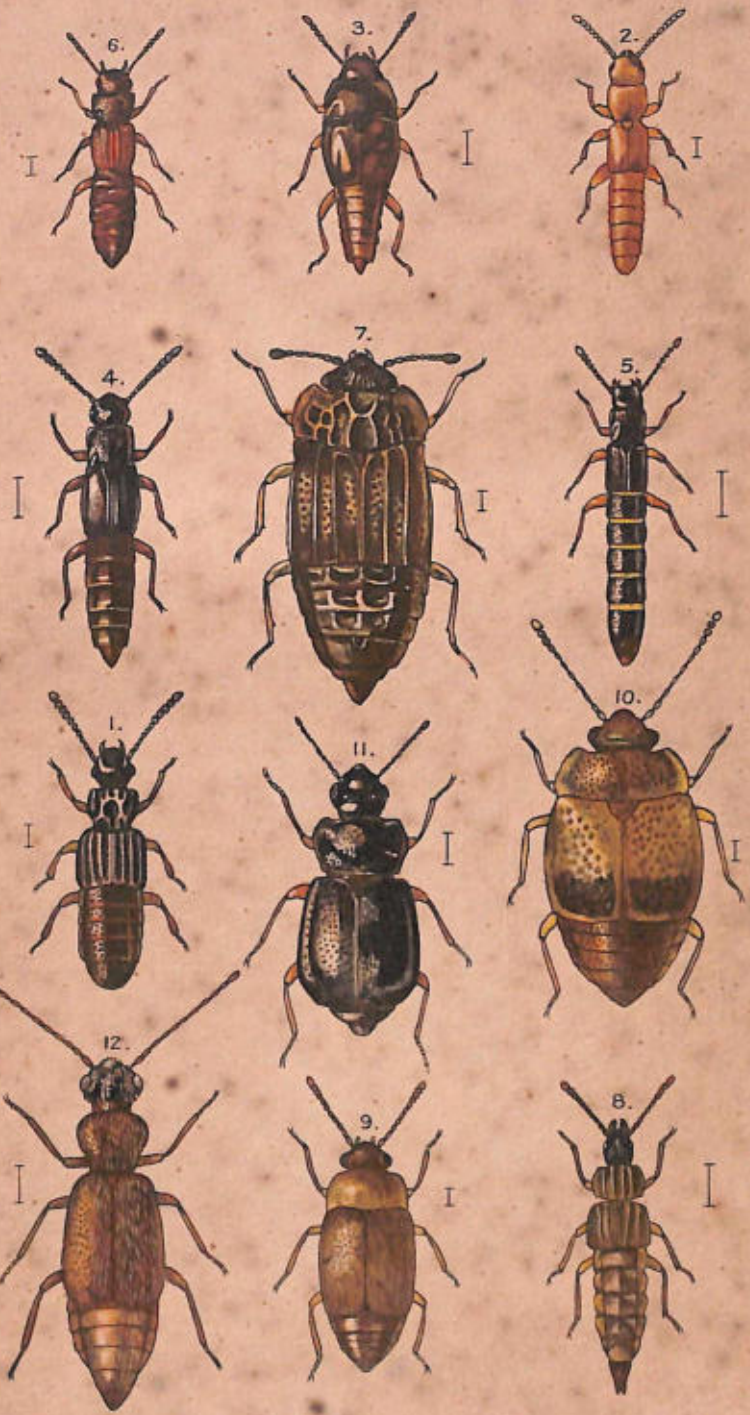
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PLATE I.

Fig. 1. *Eupiestus sculpticollis* Kr.
2. *Paralispinus exiguus* Er.
3. *Holosus tachiniformis* Motsch.
4. „ *longipennis* Cam.
5. *Lispinus quadricollis* Cam.
6. *Pseudolispinodes bistriatus* Fauv.
7. *Micropeplus fulvus* var. *japonicus* Shp.
8. *Pseudopsis sulcata* Newm.
9. *Proteinus fusco-testaceus* Cam.
10. *Megarthrus bimaculatus* Fauv.
11. *Lathrimæum nigrum* Cam.
12. *Lesteva torrentum* Cam.



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PLATE II.

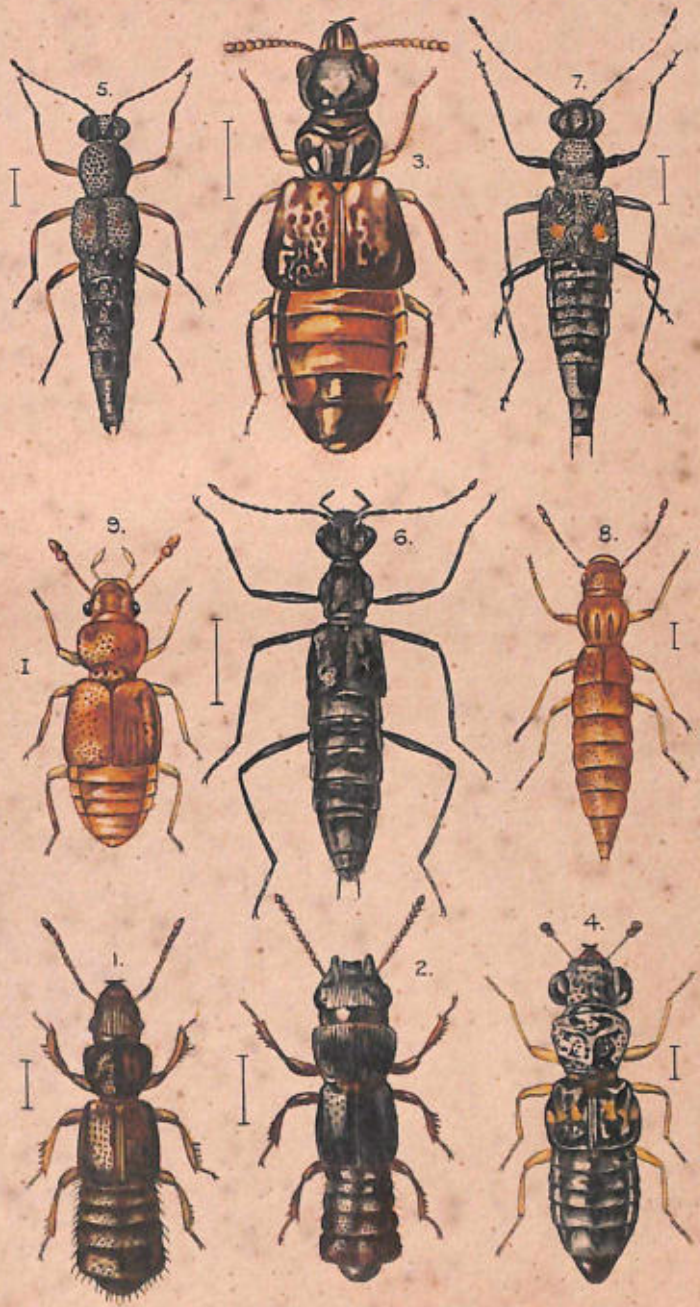
Fig. 1. *Geodromicus curvipes* Cam.
2. *Paraleaster longipennis* Cam.
3. *Planeustomus longiceps* Champ.
4. *Trogophlœus assamensis* Cam.
5. „ *indicus* Kr.
6. *Apocellagria indica* Cam.
7. *Oxytelus lætus* Cam.
8. *Platystethus crassicornis* Motsch.
9. *Bledius dilutipennis* Motsch.



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PLATE III.

Fig. 1. *Osorius strangulatus* Fauv.
2. „ *rugicollis* Kr.
3. *Oxyporus apicalis* Cam.
4. *Megalops subfasciatus* Champ.
5. *Stenus kraatzi* Bernh.
6. *Dianous robustus* Cam.
7. „ *verticosus* Epp.
8. *Stenæsthetus quadrisulcatus* Cam.
9. *Edaphus punctatus* Fauv.



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