N

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RELATING CHIEFLY TO THE YEAR

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Papers and Memoirs intended for this work should be addressed to "The Editor of the Zoological Record, Zoological Society, Regent's Park, London, N.W." It is earnestly requested that in the case of separately-printed copies of papers so forwarded, the *original pagination* may be indicated.

EXPLANATORY.

This Volume is printed in twenty Divisions, as enumerated on p. xii.

The pagination of each Division is separate, and is given at the left-hand top corner of the pages. The number and name of the Division is given as a heading on each left-hand page. The Registration Numbers are given at the right-hand top corner of the right-hand pages. The date 1912 corresponding to the bulk of the literature indexed is given at the right-hand top corner of the left-hand page.

In the Subject Index of each Division authors are quoted by name only. The full references will be found in the Title Section of the Division.

A List of Abbreviations of Titles of Journals is given at the end of the volume. This List includes not only journals actually indexed in this volume, but also journals that have been indexed in previous volumes. It should therefore be a fairly complete List of Journals that contain Zoological papers.

The Literature indexed is mainly that of 1912 but includes entries for 1901–1911 that have been received too late for inclusion in previous volumes of the International Catalogue.

The two title-pages show that Volume N (Zoology) of the Eleventh annual issue of the International Catalogue of Scientific Literature and Volume XLVIII of the Zoological Record are identical.

The proposal for an amalgamation of the Zoological Record with Volume N of the International Catalogue was approved by the International Convention which met in London in July, 1905. The agreement concluded with the Zoological Society of London provided that the amalgamation should be for a period of five years, covering the literature of 1906–1910; at the end of that period each party to the agreement might resume the independent issue of its annual volumes, preserving the continuity of its series.

Subscribers to the Zoological Record will receive the volumes bound uniformly with previous volumes of the Record, while subscribers to the International Catalogue will receive their volumes in covers uniform with other volumes of the Catalogue.

The Schedules of Classification are bound up with the volumes intended for subscribers to the International Catalogue, but are absent from the volumes bound uniform with the Zoological Record.

The volume is arranged in accordance with these Schedules, but in one or two instances, notably in the case of Section XII Insecta, the Editor has adopted a modified arrangement.

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I. COMPREHENSIVE AND GENERAL ZOOLOGY.

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III. PORIFERA OR SPONGIAE.

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VI. VERMIDEA: including GEPHYREA AND PTEROBRANCHIATA.

VII. BRACHIOPODA AND BRYOZOA OR POLYZOA.

VIII. MOLLUSCA.

IX. ARTHROPODA (GENERAL).

X. CRUSTACEA.

XI. ARACHNIDA AND MYRIOPODA: including also GIGANTOSTRACA, EURYPTERIDA, PROTOTRACHEATA.

XII. INSECTA.

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ALPHABETICAL INDEX OF NEW NAMES OF GENERA AND SUBGENERA.

LIST OF ABBREVIATIONS AND OF TITLES OF JOURNALS.

International Catalogue of Scientific Literature

SCHEDULE

OF

CLASSIFICATION

(N) ZOOLOGY

Accn. 825
dt. 26/12/06



(N) ZOOLOGY.

EXPLANATORY.

Owing to the great extent of Zoology, and the consequent specialisation that occurs amongst its workers, and because also of the desire that parts of the Zoological Catalogue shall be complete each one in itself, Zoology is divided into "Branches." These Branches, though primarily determined by the natural divisions of the animal kingdom, do not entirely correspond therewith, because of the great difference in the extent of the natural divisions. Some of these divisions (Phyla, or Classes) are consequently treated together, while others are divided into more than one Branch. When a division of this kind is adopted, there is also a Branch in which the divisions are still treated together as one whole, viz., Arthropoda, 2400-2431, and Vertebrata, 5200-5231. These two Branches will include only works of a wide scope. Thirty Branches are adopted, under the numbers 0100 to 6031, and there is also a comprehensive Branch numbered 0000-0231.

The subject matter of Zoology proper (as distinguished from the mode of arrangement of the animals alluded to above) is arranged under eight heads (or great Subjects). These eight Subjects all recur under each of the thirty Branches. Each Subject is indicated by a number, the terminal two digits of which are the same in every Branch. These great subjects will be found under 0207 to 0231.

Each great subject is divided into sub-divisions which are not numbered.

(N) ZOOLOGIE.

ERLÄUTERUNG.

Bei dem grossen Umfange der Zoologie und bei der hieraus sich ergebenden Specialisierung unter ihren Forschern, und ferner, weil der Wunsch besteht, dass einzelne Teile der zoologischen Bibliographie ein in sich geschlossenes Ganzes darstellen möchten, ist es als notwendig befunden, die Zoologie nach „Zweigen" abzuteilen.

Diese Zweige sind zwar in erster Linie nach den natürlichen Gruppen des Tierreichs bestimmt, entsprechen ihnen aber doch nicht völlig, da der Umfang der einzelnen natürlichen Gruppen zu verschieden ist.

Demgemäss sind einzelne dieser Gruppen (Phyla oder Klassen) mit einander zusammengefasst, während andere in mehrere Zweige geteilt sind. In den Fällen, wo eine solche Teilung vorgenommen ist, giebt es auch einen Zweig, in dem die betreffende Gruppe ungeteilt als Ganzes behandelt wird, nämlich Arthropoden, 2400-2431 und Vertebraten, 5200-5231. Diese beiden Zweige sollen nur Werke allgemeinerer Art enthalten. Im ganzen sind unter Nummer 0400 bis 6031 dreissig Zweige angenommen und dazu kommt noch ein alles umfassender, unter Nummer 0000 bis 0231.

Der sonstige Stoff der Zoologie (im Unterschied von der Art der Anordnung der Tiere, von der bisher die Rede war) ist auf acht Kapitel (oder Hauptgegenstände) verteilt. Diese acht Gegenstände kehren bei jedem der dreissig Zweige wieder. Jeder Gegenstand ist durch eine Nummer bezeichnet, deren letzte beide Ziffern in allen Zweigen die gleichen sind.

Diese Hauptgegenstände findet man unter 0207 bis 0231.

Jeder Hauptgegenstand ist in Unterabteilungen geteilt, die nicht numeriert sind.

(N) ZOOLOGIE.

EXPLICATION.

ETANT donnée d'une part la grande extension de la Zoologie, qui force les adeptes de cette science à se spécialiser, et d'autre part la nécessité de rendre les diverses parties du Catalogue zoologique indépendantes les unes des autres, et aussi complètes que possible, on a jugé nécessaire de diviser la Zoologie en un certain nombre de "branches." Ces branches ont été établies autant que possible d'après les divisions naturelles du règne animal; toutefois elles ne correspondent pas toujours exactement à ces divisions, en raison des grandes différences qui existent dans l'étendue de celles-ci. Il en résulte que certaines divisions (phyla, ou embranchements) sont traitées ensemble, tandis que d'autres sont partagées en plusieurs branches. Dans ce dernier cas il y a ordinairement une branche qui traite l'ensemble d'un embranchement, par exemple, Arthropodes, 2400–2431, et Vertébrés, 5200–5231. Ces deux branches ne comprennent que des ouvrages traitant un sujet assez vaste. On a adopté trente branches, portant les indices 0100 à 0031. Il y a en outre une branche de généralités portant l'indice 0000–0231.

La Zoologie considérée en elle-même, indépendamment des subdivisions en groupes auxquelles il vient d'être fait allusion, est partagée en huit chapitres (ou grandes catégories de sujets). Ces huit catégories se répètent dans chacune des trente branches, et sont indiquées chacune par des nombres dont les deux derniers chiffres sont les mêmes dans toutes les branches. Elles se trouvent sous les indices 0207 à 0231. Chacune d'elles se partage en subdivisions qui ne portent pas d'indices spéciaux.

(N) ZOOLOGIA.

SPIEGAZIONI.

IN causa della grande estensione della zoologia, e della conseguente specializzazione che esiste tra i suoi cultori, e perchè è desiderabile che le parti del Catalogo zoologico siano complete ciascuna per sè stessa, si è trovato necessario dividere la zoologia in "rami." Questi rami, quantunque principalmente determinati dalle naturali divisioni del regno animale, non corrispondono interamente ad esse in causa della grande differenza nella estensione delle divisioni naturali. Alcune di queste divisioni (phyla, oppure classi) sono conseguentemente trattate insieme, mentre che altre sono divise in più di un ramo. Quando una divisione di questo genere è adottata, vi è anche un ramo nel quale le divisioni sono tuttavia trattate insieme come un complesso, p. es. Arthropoda, 2100–2431, e Vertebrata, 5200–5231. Questi due rami includeranno soltanto opere di largo soggetto. Trenta rami sono adottati, sotto i numeri 0100 a 0031, e inoltre è incluso un ramo comprensivo col numero 0000–0231.

La materia della zoologia comprensiva (distinta da quella dei gruppi degli animali qui sopra accennati) è disposta sotto otto capitoli (o grandi soggetti). Questi otto soggetti tutti si ripetono in ognuno dei trenta rami. Ciascun soggetto è indicato da un numero, del quale le due ultime cifre sono le stesse in ciaschedun ramo. Questi grandi soggetti si trovano sotto i numeri da 0207 a 0231. Ciascun grande soggetto è diviso in sottodivisioni, che non sono numerate.

INSTRUCTIONS.

The registration numbers used in Zoology consist of four figures, of which the first two indicate the taxonomic position of the animal or animals dealt with and the last two the heading under which the paper is to be indexed.

Thus, in the registration number 2611 the figures 26 indicate *Crustacea*, while the figures 11 denote *Physiology*. All registration numbers beginning with 26 refer to Crustacea, and all registration numbers ending in 11 show that the paper indexed deals with a physiological subject.

The meaning to be assigned to the last two figures is always that given in the following list :—

..00 Title slip.
..03 Comprehensive and General Works. (For sub-divisions *see* Hyperzoology *p.* 18.)
..07 Structure. (For sub-divisions *see* 0207.)
..11 Physiology. (For sub-divisions *see* 0211.)
..15 Development. (For sub-divisions *see* 0215.)
..19 Ethology. (For sub-divisons *see* 0219.)
..23 Variation and Aetiology. (For sub-divisions *see* 0223.)
..27 Geography. (For sub-divisions *see* (J) Geography.)

..31 Taxonomy.

The meaning of the first two figures is as follows :—

02.. General papers, or papers dealing with several classes of animals.
04.. Protozoa.
06.. Porifera (or Spongida).
08.. Coelenterata (or Cnidaria).
10.. Echinodermata.
12.. Platyhelminthes. Mesozoa and Trichoplax.
14.. Nemathelminthes.
16.. Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (or Echinodera).
18.. Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.

INSTRUKTIONEN.

Die in der Zoologie gebrauchten Ordnungsnummern bestehen aus vier Ziffern, von denen die beiden ersten die taxonomische Stellung des oder der behandelten Tiere anzeigen, während die letzten die Art der Behandlung angeben. So bedeutet z. B. in der Ordnungsnummer 2611 die 26 Crustacea, die 11 aber Physiologie. Die mit 26 beginnenden Ordnungsnummern beziehen sich also auf Crustacea, und alle Ordnungsnummern auf 11 geben an, dass die katalogisierte Arbeit sich mit einem physiologischen Gegenstande befasst.

Die Bedeutung der letzten beiden Ziffern ergiebt sich aus folgender Liste :—

Titel-Zettel.
Umfassende und allgemeine Arbeiten. (Unterabteilungen *siehe* Hyperzoologie *p.* 18.)
Morphologie. (Unterabteilungen *siehe* 0207.)
Physiologie. (Unterabteilungen *siehe* 0211.)
Entwickelung. (Unterabteilungen *siehe* 0215.)
Ethologie. (Unterabteilungen *siehe* 0219.)
Variation und Ätiologie. (Unterabteilungen *siehe* 0223.)
Geographische Verbreitung. (Unterabteilungen *siehe* (J) Geographie.)

Taxonomie.

Die ersten beiden Ziffern bedeuten Folgendes :—

Allgemeine, oder auf mehrere Tierklassen bezügliche Arbeiten.
Protozoa.
Porifera (oder Spongida).
Coelenterata (oder Cnidaria).
Echinodermata.
Platyhelminthes. Mesozoa und Trichoplax.
Nemathelminthes.
Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (oder Echinodera).
Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.

INSTRUCTIONS.

Les numéros enregistreurs employés en zoologie comprennent quatre chiffres, dont les deux premiers indiquent la position taxonomique de l'animal ou des animaux en question, tandis que les deux derniers indiquent la rubrique sous laquelle le mémoire doit être classé.

Ainsi, dans le numéro enregistreur 2611 les chiffres 26 indiquent Crustacés, pendant que les chiffres 11 signifient Physiologie. Tout numéro enregistreur qui commence par 26 se rapporte aux Crustacés, de même que tout numéro enregistreur en 11 indique que le mémoire dont il est question s'occupe de physiologie.

La signification des deux derniers chiffres est toujours celle qui est donnée dans la liste suivante :—

..00 Fiche de titre.
..03 Ouvrages généraux ou d'une grande étendue. (Pour les subdivisions *voy.* Hyperzoologie *p.* 19.)
..07 Morphologie. (Pour les subdivisions *voy.* 0207.)
..11 Physiologie. (Pour les subdivisions *voy.* 0211.)
..15 Développement. (Pour les subdivisions *voy.* 0215.)
..19 Ethologie. (Pour les subdivisions *voy.* 0219.)
..23 Variation et étiologie. (Pour les subdivisions *voy.* 0223.)
..27 Distribution géographique. (Pour les subdivisions *voy.* (J) Géographie.)
..31 Taxonomie.

La signification des deux premiers chiffres est comme suit :—

02.. Mémoires généraux ou ayant trait à plusieurs classes d'animaux.
04.. Protozoaires.
06.. Porifères (ou Spongiaires).
08.. Cœlentérés (ou Cnidaria).
10.. Echinodermes.
12.. Platyhelminthes. Mésozoaires et le Trichoplax.
14.. Némathelminthes.
16.. Chætognathes. Rotifères. Gastrotriches. Kinorhynques (ou Echinodères).
18.. Archiannélides. Polychètes. Myzostomes. Oligochètes. Géphyriens. Phoronis. Hirudinées.

(ISTRUZION).

I numeri di registrazione adoperati nella zoologia consistono di quattro cifre, delle quali le due prime indicano la posizione tassonomica dell'animale o degli animali di cui si tratta, mentre che le due ultime indicano la rubrica sotto la quale si ha da catalogare la memoria. Così, nel numero di registrazione 2611 le cifre 26 indicano *Crustacea*, mentre che le cifre 11 si riferiscono alla *Fisiologia*. Ogni numero di registrazione che comincia con 26 si riferisce ai Crustacea, e da ogni numero che termina in 11 si può inferire che la memoria catalogata si occupa di fisiologia.

Le due ultime cifre hanno invariabilmente la significazione che si vede nell'elenco seguente :—

Scheda a titolo.
Opere generali e comprensive. (Per le suddivisioni *vedi* Iperzoologia *p.* 19.)
Struttura. (Per le suddivisioni *vedi* 0207.)
Fisiologia. (Per le suddivisioni *vedi* 0211.)
Sviluppo. (Per le suddivisioni *vedi* 0215.)
Etologia. (Per le suddivisioni *vedi* 0219.)
Variazione ed Etiologia. (Per le suddivisioni *vedi* 0223.)
Geografia. (Per le suddivisioni *vedi* (J) Geografia.)

Tassonomia.

Le due prime cifre hanno sempre la significazione seguente :—

Lavori generali o riferentisi a più classi di animali.
Protozoa.
Porifera (vel Spongida).
Cœlenterata (vel Cnidaria).
Echinodermata.
Platyhelminthes. Mesozoa e Trichoplax.
Nemathelminthes.
Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (vel Echinodera).
Archiannelida. Polychæta. Myzostomaria. Oligochæta. Gephyræa. Phoronis. Hirudinea.

20.. Brachiopoda. Bryozoa (or Polyzoa).
22.. Mollusca.
24.. Arthropoda.
26.. Crustacea.
28.. Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.
30.. Arachnida.
32.. Prototracheata (or Onychophora).
34.. Myriopoda.
35.. Insecta.
36.. Aptera (or Apterygogenea). Anoplura. Mallophaga. Thysanoptera (or Physopoda). Siphonaptera (or Aphaniptera).
38.. Orthoptera, Neuroptera and Trichoptera.
40.. Hemiptera (or Rhynchota), excluding Anoplura, which are placed in 36..
42.. Diptera, excluding Siphonaptera, which are placed in 36..
44.. Lepidoptera.
46.. Hymenoptera.
48.. Coleoptera, including Strepsiptera.
50.. Prochordata : Amphioxus (or Leptocardii), Enteropneusta, Tunicata.
52.. Vertebrata.
54.. Pisces, excluding Leptocardii (or Amphioxus), which are placed in 50..
56.. Amphibia and Reptilia.
58.. Aves.
60.. Mammalia.

In addition to the complete volume it is intended to issue as three separate parts sections 12.. to 18.. (Vermidea); 28.. to 34..; and 35.. to 48.. (Hexapoda). Each of the remaining sections will then be published as a separate part.

Slips or Cards used in preparing the Volume.

Four kinds of slips are to be provided :—(1) Title slips, (2) Subject slips, (3) Systematic (Taxonomic) slips, (4) New Genera or Species slips. The several slips relating to the same paper should be tied together, and should have a common (arbitrary) number. This number must not be used for any other paper until two years have

Brachiopoda. Bryozoa (oder Polyzoa).
Mollusca.
Arthropoda.
Crustacea.
Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.
Arachnida.
Prototracheata.
Myriopoda.
Insecta.
Aptera (oder Apterygogenea). Anoplura. Mallophaga. Thysanoptera (oder Physopoda). Siphonaptera (oder Aphaniptera).
Orthoptera, Neuroptera und Trichoptera.
Hemiptera (oder Rhynchota), excl. Anoplura, die unter 36 .. eingeordnet sind.
Diptera, excl. Siphonaptera, die unter 36.. eingeordnet sind.
Lepidoptera.
Hymenoptera.
Coleoptera, incl. Strepsiptera.
Prochordata : Amphioxus (oder Leptocardii), Enteropneusta, Tunicata.
Vertebrata.
Pisces, excl. Leptocardii (oder Amphioxus), die unter 50 .. eingeordnet sind).
Amphibia und Reptilia.
Aves.
Mammalia.

Es wird beabsichtigt, ausser dem Gesamtbande noch drei separate, aus folgenden Abschnitten bestehende Teile herauszugeben : 12.. bis 18.. (Vermidea) ; 28.. bis 34..; und 35..bis 48.. (Hexapoda). Jeder der übrigen Abschnitte wird dann auch separat herausgegeben.

Zettel zur Vorbereitung des Bandes.

Es müssen vier verschiedene Zettel hergestellt werden:—(1) Titel-Zettel, (2) Sach-Zettel, (3) System-(Taxonomie-) Zettel, (4) Zettel für neue Gattungen oder Arten. Die verschiedenen, auf dieselbe Arbeit bezüglichen Zettel sollen zusammengeheftet und mit einer gemeinsamen (willkürlichen) Nummer versehen werden. Vor Ablauf von zwei

20.. Brachiopodes. Bryozoaires (ou Polyzoaires).
22.. Mollusques.
24.. Arthropodes.
26.. Crustacés.
28.. Trilobites. Xiphosures. Eurypterides. Pantopodes. Tardigrades. Linguatulides.
30.. Arachnides.
32.. Prototrachéates (ou Onychophores).
34.. Myriapodes.
35.. Insectes.
36.. Aptères (ou Aptérygogénieus). Anoploures. Mallophages. Thisanoptères (ou Physopodes). Siphonaptères (ou Aphaniptères).
38.. Orthoptères, Névroptères et Trichoptères.
40.. Hémiptères (ou Rhynchotes), à l'exclusion des Anoploures, qui sont placés sous le numéro 36..
42.. Diptères, à l'exclusion des Siphonaptères, qui sont placés sous le numéro 36..
44.. Lépidoptères.
46.. Hyménoptères.
48.. Coléoptères, y compris les Strepsiptères.
50.. Prochordés : Amphioxus (ou Leptocardiens) Entéropneustes, Tuniciers.
52.. Vertébrés.
54.. Poissons, à l'exclusion des Leptocardiens (ou Amphioxus), qui sont placés sous le numéro 50..
56.. Batraciens et Reptiles.
58.. Oiseaux.
60.. Mammifères.

Outre le volume complet, l'on se propose de publier en trois volumes à part les sections 12.. à 18.. (Vermidés) ; 28.. à 34.. ; et 35.. à 48.. (Hexapodes). Puis chacune des sections suivantes sera aussi publiée à part.

Rédaction des Fiches.

Il doit y avoir quatre sortes de fiches, savoir :—(1) Fiches de titre, (2) Fiches de matière, (3) Fiches systématiques (taxonomiques), (4) Fiches pour les genres ou espèces nouvelles. Toutes les fiches qui se rapportent au même mémoire doivent être attachées ensemble et marquées d'un numéro en commun (arbitraire). Ce numéro ne

Brachiopoda. Bryozoa (vel Polyzoa).
Mollusca.
Arthropoda.
Crustacea.
Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.
Arachnida.
Prototracheata (vel Onychophora).
Myriopoda.
Insecta.
Aptera (vel Apterygogenea). Anoplura. Mallophaga. Thysanoptera (vel Physopoda). Siphonaptera (vel Aphaniptera).
Orthoptera, Neuroptera et Trichoptera.
Hemiptera (vel Rhynchota), esclusi Anoplura, che sono indicati col numero 36..
Diptera, esclusi Siphonaptera, che sono indicati col numero 36..

Lepidoptera.
Hymenoptera.
Coleoptera, incl. Strepsiptera.

Prochordata : Amphioxus (vel Leptocardii), Enteropneusta, Tunicata.
Vertebrata.
Pisces, escl. Leptocardii (vel Amphioxus), i quali sono indicati col numero 50..
Batrachia et Reptilia.
Aves.
Mammalia.

Oltre il tomo completo si ha l'intenzione di pubblicare in tre parti separate le sezioni 12.. a 18.. (Vermidea) ; 28.. a 34.. ; e 35.. a 48.. (Hexapoda). Ciascuna delle rimanenti sezioni verrà poi anche pubblicata separatamente.

Redazione delle Schede.

Devono farsi quattro specie di schede :—(1) Schede a titolo, (2) Schede a materia, (3) Schede sistematiche (tassonomiche), (4) Schede per i generi o le specie nuove. Tutte le schede riferentisi al medesimo lavoro devono essere attaccate insieme e segnate con un numero commune (arbitrario). Questo numero non è da usa si

elapsed. The slips should be prepared as follows:—

(1) *Title slips.*—The first entry on a title slip is the letter N, followed by a four-figure registration number, in which the first two figures indicate the Branch of zoology as given in the above list, while the two last figures are ..00. The remaining entries on the title slips are to be made as on the author slips for the other sciences.

At the foot of each title slip all the registration numbers corresponding to the subject and systematic slips prepared for the paper are to be given. If a paper is to be indexed under more than one Branch of zoology a separate title slip must be prepared for each Branch.

Example—

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4). **17**, 1902, (13–18). [6019 6031].

In order to economise space and to simplify entries, the full reference to a paper will be made only on the title and systematic slips. Each title slip will be printed in the Catalogue with a definite number attached. This number, together with the author's name, will be the reference to the paper in all other cases.

(2) *Subject Slips.*—The entries on the subject slips shall not, as a rule, be reproductions of the title, but such modifications thereof as shall serve to convey the necessary information in the clearest and most direct manner possible.

To prepare such slips properly it is essential that the papers shall have been read and indexed by those who are able to determine what are the several matters of importance to be brought under notice.

In the case of slips bearing the numbers 0000–0050, 0070 and 0090,

Jahren darf keine andere Arbeit mit derselben Nummer bezeichnet werden.

(1) *Titel-Zettel.*—Die erste Eintragung auf einem Titel-Zettel ist der Buchstabe N, worauf eine vierziffrige Ordnungsnummer folgt wovon die zwei ersten Ziffern den Zweig der Zoologie bezeichnen, wie in obiger Liste angegeben, während die zwei letzten Ziffern ..00 sind. Die übrigen Eintragungen auf dem Titel-Zettel sind in derselben Weise abzufassen wie bei den Autoren-Zetteln in den anderen Wissenschaften.

Am Fusse eines jeden Titel-Zettels müssen sämtliche, den für die betreffende Arbeit hergestellten Sach- und System-Zetteln entsprechende, Ordnungsnummern angegeben werden. Soll ein Aufsatz unter mehr als einem Zweige der Zoologie katalogisiert werden, so ist für jeden Zweig ein besonderer Titel-Zettel herzustellen.

Beispiel—

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4). **17**, 1902, (13–18). [6019 6031].

Um Raum zu ersparen und die Eintragungen zu vereinfachen kommt das vollständige Citat nur auf die Titel- und System-Zettel. Jedem im Kataloge gedruckten Titel-Zettel wird eine bestimmte Nummer zugeteilt. Diese Nummer, mit dem Verfassernamen, bildet in allen anderen Fällen das Citat.

(2) *Sach-Zettel.* — Die Eintragungen auf den Sach-Zetteln sollen in der Regel keine Wiederholungen des Titels sein, sondern solche Modifikationen desselben, dass sie die erforderliche Auskunft so kurz und bündig wie möglich erteilen.

Für die richtige Fassung solcher Zettel ist es von Wichtigkeit, dass die Aufsätze von Personen gelesen und katalogisiert werden, welche im stande sind das Wichtige darin zu erkennen und hervorzuheben.

Bei Zetteln, welche die Nummern 0000–0050, 0070 und 0090 tragen,

doit être employé pour aucun autre mémoire qu'au bout de deux ans. Voici comment il faut rédiger les fiches :—

(1) *Fiches de titre.*—La fiche de titre doit commencer par la lettre N, suivie d'un numéro enregistreur de quatre chiffres, dont les deux premiers indiquent la branche de zoologie d'accord avec la liste ci-dessus, tandis que les deux dernières sont 00. Ensuite la fiche de titre sera établie de la même façon ques les fiches d'auteur pour les autres sciences.

Chaque fiche de titre doit porter en bas tous les numéros enregistreurs qui correspondent aux fiches de matière et systématiques qui aient été rédigées pour le mémoire dont il s'agit. Si un mémoire doit être catalogué sous plus d'une branche de zoologie il faut une fiche séparée pour chaque branche.

Exemple—

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4), **17**, 1902, (13-18). [6019 6031].

Pour gagner de la place et simplifier les articles, la référence ne sera donnée en entier que sur les fiches de titre et les fiches systématiques. Chaque fiche de titre sera imprimée dans le Catalogue et désignée par un numéro. Ce numéro, avec le nom d'auteur, servira de renvoi à l'article partout ailleurs.

(2) *Fiches de matière.*—Règle générale, la fiche de matière doit porter non pas une reproduction du titre mais de telles modifications du titre qui suffisent à donner les renseignements nécessaires de la manière la plus précise.

Afin que de telles fiches soient bien établies il est essentiel que les mémoires aient été lus et catalogués par des personnes à même de déterminer quelles sont les choses d'importance à faire ressortir. Là où il s'agit de fiches portant les numéros 0000-0050, 0070 et 0090, le

per nessun altro lavoro prima che siano scorsi due anni. Le schede devono essere redatte come segue :—

(1) *Schede a titolo.*—La scheda a titolo deve cominciare colla lettera N, seguita da un numero di registrazione di quattro cifre di cui le due prime indicano il ramo di zoologia d'accordo coll'elenco dissopra, mentre che le due ultime sono ..00. Le altri annotazioni sulla scheda a titolo si fanno poi come sulle schede per autori nelle altre scienze.

La scheda a titolo deve portare in fondo tutti i numeri di registrazione corrispondenti colle schede sistematiche ed a materia che si siano preparate per il lavoro di cui si tratta. Se si vuol catalogare un lavoro sotto più d'un ramo di zoologia bisogna fare una scheda separata per ogni ramo.

Esempio—

N 6000.

Mansion, Arthur. La taupe commune. Rev. Sci., Paris, (sér. 4), **17**, 1902, (13-18). [6019 6031].

Per risparmiare lo spazio e ridurre al più semplice le annotazioni, la riferenza non verrà scritta per esteso che sulle schede a titolo e le schede sistematiche. Ogni scheda a titolo si stamperà nel Catalogo con un numero definito. Questo numero, assieme al nome dell'autore, costituirà la riferenza al lavoro in ogni altro caso.

(2) *Schede a materia.*—Le annotazioni sulle schede a materia non saranno, di regola, ripetizioni del titolo, ma saranno tali modificazioni di questo che bastino a dare le informazioni necessarie nel modo più perspicuo che sia possibile.

Perchè tali schede siano ben redatte è essenziale che le memorie siano state lette e catalogate da persone che possano determinare quali sono le cose importanti da far risaltare.

Trattandosi di schede portanti i numeri 0000-0050, 0070 e 0090, il

the author's name should immediately follow the registration number.

Example—

N 0040.
Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., **16,** 1901, (295-313).

This should be attached to the title slip and abbreviated thus :—

N 0040.
Ross, R. Malaria and mosquitoes. (295-313).

In cases in which it is desirable, for other purposes which the Bureaus may have in contemplation, to enter the full reference on the slip, the shortened reference will be made at the Central Bureau by striking out unnecessary particulars.

On slips bearing a number ending in ..27 (Geographical Distribution) the registration number should be immediately followed by the geographical symbol. After this should come (*a*) the author's name, (*b*) the title of the paper.

Example—

N 2227 *he.*
Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., **15,** 1901, (34-35).

which, if the above directions are followed, will be reduced to—

N 2227 *he.*
Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

The remaining registration numbers, viz., 0060, and those ending in ..03, ..07, ..11, ..15, ..19, and ..23, are divided into numerous sub-headings. One of these sub-headings should follow the registration number.

A separate card must be provided for each entry that is to appear separately in the Catalogue.

In cases in which entries cannot be included under existing subdivisions, and for which a new sub-

muss der Verfassername unmittelbar auf die Ordnungsnummer folgen.

Beispiel—

N 0040.
Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., **16,** 1901, (295-313).

Dieser Zettel müsste an den Titel-Zettel geheftet und wie folgt abgekürzt werden :—

N 0040.
Ross, R. Malaria and mosquitoes. (295-313.)

Falls es den Bureaus, zu irgend einem von ihnen beabsichtigten Zwecke, wünschenswert erscheint, das vollständige Citat beizubehalten, so wird das Centralbureau durch Streichen des Überflüssigen dasselbe abkürzen.

Bei Zetteln, welche eine Nummer auf ..27 tragen (geographische Verbreitung) muss das geographische Symbol unmittelbar auf die Ordnungsnummer folgen. Dann kommt (*a*) der Verfassername, (*b*) der Titel des Aufsatzes.

Beispiel—

N 2227 *he.*
Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., **15,** 1901, (34-35).

was, obiger Vorschrift gemäss, abgekürzt so lautet :—

N 2227 *he.*
Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

Die übrigen Ordnungsnummern, namentlich 0060 und jene auf ..03, ..07, ..11, ..15, ..19 und ..23, sind in zahlreiche Unterabteilungen geteilt. Eine dieser Unterabteilungen muss auf die Ordnungsnummer folgen.

Jeder besonderen Eintragung im Kataloge muss ein besonderer Zettel entsprechen.

Falls die vorhandenen Unterabteilungen zur gehörigen Katalogisierung nicht hinreichen und

nom d'auteur doit suivre immédiatement le numéro enregistreur.

Exemple—

N 0040.
Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., **16**, 1901, (295-313).

Ceci doit être attaché à la fiche de titre et abrégé ainsi :—

N 0040.
Ross, R. Malaria and mosquitoes. (295-313).

Dans les cas où les bureaux régionaux, dans un but quelconque, désirent mettre la référence en entier sur la fiche, le Bureau Central en fera la référence abrégée en biffant les détails superflus.

Sur les fiches portant un numéro en ..27 (Distribution Géographique) le numéro enregistreur doit être suivi immédiatement du symbole géographique. Ensuite viendrait (*a*) le nom d'auteur, (*b*) le titre du mémoire.

Exemple—

N 2227 *hc.*
Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., **15**, 1901, (34-35).

Ce qui, conformément aux instructions ci-dessus, sera réduit à :—

N 2227 *hc.*
Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

Les autres numéros enregistreurs, c.à.d. 0060 et ceux en ..03, ..07, ..11, ..15, ..19 et ..23, sont divisés en de nombreuses subdivisions. Une de ces subdivisions doit suivre le numéro enregistreur.

Il faut une fiche séparée pour chaque article qui doit paraître séparément dans le catalogue.

S'il se trouve que les subdivisions actuelles ne suffisent pas et qu'une nouvelle subdivision serait à désirer,

nome dell'autore deve seguire immediatamente il numero di registrazione.

Esempio—

N 0040.
Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., **16**, 1901, (295-313).

Questo si deve attaccare alla scheda a titolo ed abbreviare così :—

N 0040.
Ross, R. Malaria and mosquitoes. (295-313).

Ove gli Uffici Regionali, a qualunque scopo, volessero annotare la riferenza sulla scheda per esteso, la riferenza abbreviata si farebbe dall'Ufficio Centrale col cancellare i dettagli soverchi.

Sulle schede portanti un numero in ..27 (Distribuzione Geografica) il numero di registrazione dev'essere seguito immediatamente dal simbolo geografico. Poi verrebbe (*a*) il nome dell' autore, (*b*) il titolo della memoria.

Esempio—

N 2227 *hc.*
Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., **15**, 1901, (34-35).

Giusto le suddette istruzioni questo si ridurebbe a :—

N 2227 *hc.*
Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

I rimanenti numeri di registrazione, cioè 0060 e quelli in ..03, ..07, ..11, ..15 e ..23 sono divisi in numerose suddivisioni. Una di queste suddivisioni deve seguire il numero di registrazione.

Ci vuol una scheda separata per ogni articolo che deve apparire separatamente nel Catalogo.

Nel caso di articoli che non si possono includere nelle suddivisioni attuali e per i quali si stima desidera-

division is thought to be desirable, such suggested new sub-division shall be recorded upon the card, in order that the matter may be dealt with by the Central Bureau. In no case must two differently numbered subjects be placed on one slip.

If the book or paper deals with so many of these sub-headings as to render it unnecessary to mention all of them, the word "general" should be used for the sub-heading. The sub-heading should be followed by (*a*) the author's name, (*b*) the title or modified title of the paper.

Example—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., **1899-1900**, 1901, (1-8).

If this card is sent to the Central Bureau tied to the corresponding title slip, it should be abbreviated, as explained above, to—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *Systematic slips.*—In these slips the name of the animal or animals should immediately follow the registration number. Where more than one genus is mentioned a separate slip must be prepared for each genus.

Every new genus must have a separate slip; the name of the new genus must be followed by the indication "n. gen.," a brief statement as to what it is allied to and some indication of the species it includes, followed by the author's name and reference.

New sub-genera are to be treated in a similar manner to genera, except that "n. subgen." will be used, and the name of the genus of which it is a division will follow.

eine neue Unterabteilung deshalb wünschenswert erscheint, so ist die vorgeschlagene neue Unterabteilung auf dem Zettel anzugeben, damit das Central-Bureau entscheide, wie dabei zu verfahren sei. Auf keinen Fall dürfen zwei verschieden numerierte Gegenstände auf einen Zettel gesetzt werden.

Bezieht sich das Buch, resp. der Aufsatz, auf so viele Unterabteilungen, dass es unzweckmässig ist, sie alle anzuführen, so gebraucht man das Wort „Allgemeines" für die Unterabteilung. Auf die Unterabteilung folgt (*a*) der Verfassername, (*b*) der Titel, resp. der modifizierte Titel der Arbeit.

Beispiel—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., **1899-1900**, 1901, (1-8).

Wird dieser Zettel mit dem entsprechenden Titel-Zettel zusammengeheftet an das Central-Bureau geschickt, so ist er, wie oben erklärt, folgendermassen abzukürzen:—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *System-Zettel.*—Bei diesen Zetteln soll der Name des Tieres oder der Tiere unmittelbar auf die Ordnungsnummer folgen. Wird mehr als eine Gattung erwähnt, so ist für jede Gattung ein besonderer Zettel herzustellen. Jede neue Gattung muss einen besonderen Zettel erhalten; auf den Namen der neuen Gattung folgt die Bemerkung „n. gen." eine kurze Notiz, wem sie verwandt ist, und irgend eine Angabe über die Species, die sie umfasst; hierauf Verfassername und Citat.

Neue Untergattungen sind ähnlich zu behandeln, wie Gattungen, nur dass die Bemerkung „n. subgen." gebraucht und der Name der Gattung, um deren Unterabteilung es handelt, hinzugefügt wird.

la nouvelle subdivision que l'on propose doit être indiquée sur la fiche afin que le Bureau Central décide comment il faut procéder. En aucun cas deux articles portant des numéros différents ne doivent être écrits sur la même fiche.

Dans le cas où le livre ou mémoire traite de tant de ces subdivisions qu'il est inutile de les citer toutes, il faut employer le mot "Généralités" pour la subdivision. La subdivision doit être suivie (*a*) du nom d'auteur, (*b*) du titre ou du titre modifié du mémoire.

Exemple—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

Si cette fiche est envoyée au Bureau Central attachée à la fiche de titre correspondante elle doit être abrégée, comme il est expliqué ci-dessus, à :—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *Fiches systématiques.*—Sur ces fiches le nom de l'animal ou des animaux doit suivre immédiatement le numéro enregistreur. Si mention est faite de plus d'un genre il faut une fiche distincte pour chaque genre.

Chaque genre nouveau doit avoir une fiche distincte ; le nom du genre nouveau doit être suivi de l'indication "n. gen.," puis d'une courte indication du genre ou des genres auxquels il est allié et de quelques indications relatives aux espèces qu'il renferme ; le tout sera suivi du nom d'auteur et de la référence.

Les sous-genres nouveaux seront traités de la même façon que les genres, mais l'indication "n. gen." sera remplacée par "n. subgen.," et l'on mettra ensuite le nom du genre auquel le sous-genre se rattache.

bile qualche nuova suddivisione, si deve annotare sulla scheda la nuova suddivisione proposta affinchè l'Ufficio Centrale decida come si debba comportare con essa. In nessun caso si devono porre sulla stessa scheda due soggetti portanti numeri diversi.

Se il libro o la memoria si riferisce a tante di queste suddivisioni che non fa d'uopo accennarle tutte, allora si pone per la suddivisione la parola "generale." La suddivisione dev' essere seguita (*a*) dal nome dell'autore, (*b*) dal titolo, ossia dal titolo modificato, del lavoro.

Esempio—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

Se questa scheda si manda all'Ufficio Centrale attaccata alla scheda a titolo corrispondente si deve abbreviare, come si è spiegato qui sopra, a :—

N 6015 [Regeneration].
Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *Schede sistematiche.*—Su queste schede il nome dell' animale o degli animali deve seguire immediatamente il numero di registrazione. Se si fa menzione di più di un genere bisogna far una scheda separata per ogni genere.

Ciascun nuovo genere deve avere una scheda separata ; il nome del nuovo genere dev' essere seguito dalla indicazione "n. gen.," poi viene una breve indicazione di quello cui esso si connette, e qualche indicazione delle specie che include, e segue infine il nome dell' autore e le riferenze.

I nuovi sottogeneri saranno trattati in modo simile ai nuovi generi, ma sarà adoperata la indicazione "n. subgen.," e seguirà il nome del genere del quale il sottogenere è divisione.

The author's name should *follow* the title or modified title on these slips.

Examples—

(I) N 2631.

Amblyops crozetii, bipolar occurrence. **Ohlin**, A. Ann. Mag. Nat. Hist., London, (Ser. 7), **7**, 1901, (371–374). [Schizopoda.]

(II) N 4431.

Heterephrya neximargo sp. n. Peru. **Warren**, W. Nov. Zool., Tring, **8**, 1901, (457). [Geometridae.]

When more than one new species is described from the same genus, all the new species should be mentioned on the slip and the respective page references given. Where only one new species is mentioned the slip should be arranged as in Example II. In any case the habitat should be given where possible.

At the end of each slip the name of the group of animals referred to should be given. When the work gives no indication of the group (*i.e.*, Family, Sub-family or Tribe) and the slip-maker cannot from his own knowledge supply the deficiency the sign [?] may be written at the end of the slip.

When it is undesirable to index each genus separately a general entry should be given.

Example—

N 4431.

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., **46**, 1901, (309–319, mit 1 Taf.). [Noctuidae.]

On systematic slips Christian names should be represented by initials only.

Slips relating to fossil forms are to be marked †, and slips relating to fossil and recent forms†*. (The latter condition occurs only rarely in this division.)

Bei diesen Zetteln sollte der Verfassername auf den Titel oder modifizierten Titel *folgen*.

Beispiele—

(I) N 2631.

Amblyops crozetii, bipolar occurrence. **Ohlin**, A. Ann. Mag. Nat. Hist., London, (Ser. 7), **7**, 1901, (371–374). [Schizopoda.]

(II) N 4431.

Heterephrya neximargo sp. n. Peru. **Warren**, W. Nov. Zool., Tring, **8**, 1901, (457). [Geometridae.]

Wird mehr als eine neue Art derselben Gattung beschrieben, so sollen sämtliche neue Arten, mit Angabe der betreffenden Seiten-Zahlen, auf dem Zettel erwähnt werden. Wo es sich blos um eine neue Art handelt, ist der Zettel wie in Beispiel II herzustellen. Das Habitat ist auf jeden Fall wenn möglich anzugeben.

Am Ende eines jeden System-Zettels ist der Name der betreffenden Tiergruppe anzuführen. Enthält die Arbeit keine Angabe der Gruppe (d.h. Familie, Unterfamilie oder Tribus) und ist der Zettelschreiber nicht im stande, aus eigener Kentniss die Lücke auszufüllen, so kann das Zeichen [?] an das Ende des Zettels gesetzt werden. Ist die gesonderte Angabe einer jeden Gattung nicht wünschenswert, so ist eine allgemeine Bezeichnung zu geben.

Beispiel—

N 4431

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., **46**, 1901, (309–319, mit 1 Taf.). [Noctuidae.]

Auf den System-Zetteln sollen die Vornamen nur durch Anfangsbuchstaben wiedergegeben werden.

Zettel, die sich auf fossile Formen beziehen, sind durch ein† zu bezeichnen; solche, die sich sowohl auf fossile als auf recente Formen beziehen, durch ein†*. (Der letzte Fall kommt in diesem Abschnitt nur selten vor.)

Le nom d'auteur doit *suivre* le titre ou le titre modifié sur ces fiches.

Exemples—

(I) N 2631.
Amblyops crozetii, bipolar occurrence. **Ohlin**, A. Ann. Mag. Nat. Hist., London, (Ser. 7), **7**, 1901, (371-374).
[Schizopoda.]

(II) N 4431.
Heterephrya neximargo sp. n. Peru. **Warren**, W. Nov. Zool., Tring, **8**, 1901, (457).
[Geometridae.]

Quand il y a description de plus d'une espèce du même genre, toutes les espèces nouvelles doivent être portées sur la fiche avec le renvoi aux pages respectives. S'il ne s'agit que d'une seule espèce nouvelle la fiche doit être établie conformément à exemple II. L'habitat doit être indiqué en tout cas si possible. L'on devra placer à la fin de chaque fiche systématique le nom du groupe d'animaux auquel la fiche se rapporte. Quand l'ouvrage ne fournit aucune indication de groupe (famille, sous-famille ou tribu) et lorsque le rédacteur de la fiche ne peut, d'après ses propres connaissances, suppléer à ce défaut d'indications, l'on pourra mettre le signe [?] à la fin de la fiche.

S'il n'est pas à désirer que chaque genre soit catalogué séparément il faut établir un article général.

Exemple—

N 4431.
Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., **46**, 1901, (309-319, mit 1 Taf.).
[Noctuidae.]

Sur les fiches systématiques les noms de baptême doivent être représentés par des initiales seulement.

Les fiches relatives aux formes fossiles doivent être marquées †, et celles qui se rapportent aux formes fossiles récentes †*. (Cette dernière condition ne se présente que rarement dans cette division.)

Su queste schede il nome dell'autore deve venire *dopo* il titolo o titolo modificato.

Esempi—

(I) N 2631.
Amblyops crozetii, bipolar occurrence. **Ohlin**, A. Ann. Mag. Nat. Hist., London, (Ser. 7), **7**, 1901, (371-374).
[Schizopoda.]

(II) N 4431.
Heterephrya neximargo sp. n. Peru. **Warren**, W. Nov. Zool., Tring, **8**, 1901, (457).
[Geometridae.]

Quando si descrive più di una specie nuova del medesimo genere, tutte le specie nuove devono venire accennate sulla scheda colla riferenza alle pagine rispettive. Trattandosi di una sola specie nuova, la scheda dev' essere redatta come in esempio II. In ogni caso, per quanto sia possibile, si deve menzionare il habitat.

Al fine di ciascuna scheda sistematica si deve porre il nome del gruppo di animali cui la scheda si riferisce. Quando il lavoro non porta indicazione del gruppo (cioè famiglia, sottofamiglia, tribù) e il redattore della scheda non può di suo supplire alla deficienza, si può mettere al fine della scheda il segno [?].

Quando non si vuole catalogare separatamente ogni genere, si farà un' annotazione generale.

Esempio—

N 4431.
Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., **46**, 1901, (309-319, mit 1 Taf.).
[Noctuidae.]

I nomi di battesimo devono essere rappresentati sulle schede sistematiche colle sole iniziali

Le schede relative a forme estinte saranno segnate †, e le schede relative a forme estinte e viventi†*. (L'ultima condizione occorre soltanto raramente in questa divisione.)

(4) *Lists of New Genera and Species.*—For the preparation of these lists, the Regional Bureaus should give the names of genera and sub-genera (*a*) which are new, (*b*) the significance of which has been changed, (*c*) which contain new species. These may be written at the foot of the systematic slips, but it would greatly facilitate an earlier production of the volume if the Regional Bureaus would write each new genus on a separate card and attach it to the systematic slip.

(4) *Listen neuer Gattungen und Arten.*—Zur Herstellung dieser Listen sollten die Regionalbureaus die Namen der Gattungen und Untergattungen angeben, (*a*) die neu sind, (*b*) deren Bedeutung sich geändert hat, (*c*) die neue Arten enthalten. Diese können am Fusse der System-Zettel angeführt werden, es würde jedoch zur schnelleren Erscheinung des Bandes wesentlich beitragen, wenn die Regionalbureaus jede neue Gattung auf einem besonderen Zettel schrieben und diesen an den System-Zettel hefteten.

Date of Receiving Slips.

The period during which the material for any one year will be received at the Central Bureau will not extend beyond June of the following year. Regional Bureaus are therefore earnestly requested to complete the indexing of their zoological literature within the time named.

The period covered by the literature indexed in any one of the annual volumes shall be from January 1st to December 31st of the particular year, but any matter which had not been received in time for insertion in the previous volume shall also be included therein.

Termin des Empfangs der Zettel.

Das Material für irgend ein Jahr darf nicht später als Ende Juni des folgenden Jahres in den Besitz des Centralbureaus gelangen. Die Regionalbureaus werden daher dringend ersucht, mit dem Katalogisieren ihrer zoologischen Literatur bis zu dem genannten Termin fertig zu werden.

Die in irgend einem der jährlichen Bände veröffentlichte Litteratur soll die Periode vom 1. Januar bis zum 31 December des betreffenden Jahres decken, etwaige Artikel aber, die für den vorigen Band zu spät eintrafen, werden darin mit aufgenommen.

Distinctive Character of cards.

The editorial work will be greatly facilitated by ruling a red line near the left-hand edge of the title slips, a green line near the left-hand edge of the subject slips, and no line at all on the taxonomy and new species slips. Or the slips may be printed on thin card of three colours, viz., red for the title slips, green for the subject slips, and white for the systematic slips. The size of the slips must be 16 cm. by 8 cm.

Markierung der Zettel.

Die Herausgabe wird bedeutend erleichtert werden, wenn auf den Titel-Zetteln nahe dem linken Rande eine rothe Linie, auf den Sach-Zetteln entsprechend eine grüne Linie gezogen wird, während die Taxonomie- und Arten-Zettel ohne Linie bleiben. Man kann auch die Zettel auf drei verschiedenfarbige Sorten Cartou drucken, nämlich die Titel-Zettel auf roten, die Sach-Zettel auf grünen und die System-Zettel auf weissen.

Die Zettel müssen 16 × 8 cm. gross sein.

(1) *Listes des genres et espèces nouvelles.*—Pour la rédaction de ces listes les Bureaux Régionaux doivent donner les noms des genres et sous-genres (*a*) qui sont nouveaux, (*b*) dont la signification est changée, (*c*) qui contiennent des espèces nouvelles. Ils peuvent être écrits au pied des fiches systématiques, pourtant si les Bureaux Régionaux voulaient écrire chaque genre nouveau sur une fiche séparée et l'attacher à la fiche systématique, cela contribuerait beaucoup à accélérer la publication du volume.

(1) *Elenchi di Generi e Specie nuove.*—Per la redazione di questi elenchi gli Uffici Regionali devono dare i nomi dei generi e sottogeneri, (*a*) che sono nuovi, (*b*) il cui significato si è cambiato, (*c*) che contengono delle specie nuove. Questi possono essere scritti in fondo alle schede sistematiche, ma contribuirebbe molto ad accelerare la publicazione del tomo se gli Uffici Regionali scrivessero ogni genere nuovo sopra una scheda separata e attaccassero questa alla scheda sistematica.

Date de la réception des fiches.

La période pendant laquelle les matières pour une année quelconque seront admises par le Bureau Central ne s'étendra pas au-delà du mois de juin de l'année suivante. Aussi les Bureaux Régionaux sont-ils instamment priés de compléter l'index de leur littérature zoologique avant l'expiration de ce terme.

La littérature indexée dans un volume annuel quelconque comprendra la période du 1er janvier au 31 décembre de l'année en question, ainsi que les articles qui étaient arrivés trop tard pour être incorporés dans le volume précédent.

Data di ricezione delle schede.

Il periodo durante il quale il materiale per un anno qualunque sarà ammesso dall' Ufficio Centrale non si stenderà in là di Giugno dell'anno seguente. Gli Uffici Regionali sono perciò pregati con istanza di completare il catalogo della loro letteratura zoologica dentro del detto termine.

La letteratura catalogata in un tomo annuale qualunque comprenderà il periodo dal 1° Gennaio al 31 Dicembre dell' anno di cui si tratta, coll' aggiunto di quegli articoli che fossero ricevuti troppo tardi per essere inclusi nel tomo precedente.

Caractère distinctif des fiches.

Le travail du Directeur sera grandement facilité si l'on trace une ligne rouge près du bord gauche des fiches de titre, une ligne verte près du bord gauche des fiches de matière, et si l'on ne trace aucune ligne sur les fiches systématiques et sur les fiches pour les espèces nouvelles. On peut aussi imprimer les fiches sur des cartons minces de trois couleurs, savoir, une carte rouge pour les fiches de titre, une carte verte pour les fiches de matière, et une carte blanche pour les fiches systématiques.

Les dimensions des fiches doivent être de 16 cm. sur 8 cm.

Carattere distintivo delle schede.

Il lavoro dell' Ufficio Centrale sarà grandemente facilitato dal segnare il margine sinistro delle schede a titolo con una linea rossa, quello delle schede a soggetto con una verde, e dal lasciare senza linea le schede tassonomiche e quelle per le specie nuove. Oppure le schede potranno essere scritte su carta di tre colori, rosso, verde, e bianco, il primo per le schede a titolo, il secondo per quelle a soggetto, il terzo per quelle sistematiche.

Il formato delle schede devlessere di 16 per 8 centimetri di lato.

0000-0231. Comprehensive Zoology.

N.B.—The subjects enumerated under numbers 0000 to 0231 may recur in any one of the subsequent Branches. In the Catalogue only works that deal with several Branches will be registered under numbers 0000 to 0231; hence the term "Comprehensive Zoology."

HYPERZOOLOGY.

0000 Philosophy.

0010 History. Biography.

0020 Periodicals. Reports of Institutions, Societies, Congresses, Explorations.

0030 General Treatises, Text-books, Dictionaries, Collected Works, Tables.

0032 Bibliographies.

0040 Addresses, Lectures, etc., of a general character.

0050 Pedagogy.

0060 Institutions, Museums, Collections, Aquaria, Gardens, Utility and Harmfulness, Zoology in relation to Medicine, etc. (*See also* the general sections of Special Zoology.)

0070 Nomenclature (principles of).

0090 Technique. Methods of research, instruments and apparatus.

0207 STRUCTURE (OR MORPHOLOGY). [In general or of more than one of the classes of animals.] (*See also* (L) General Biology (O) Anatomy and (Q) Physiology.)

General; Comparative Anatomy; Special Anatomy and Histology: Tegument and its Organs; Nervous System and Organs of Sense; Myology; Skeleton (including Osteology and Dentition); Skeletal Structures of Invertebrates; Alimentary System; Circulatory and Respiratory Organs; Water Vascular System, Blood, Lymph, Cœlomic Fluid, Chyle. Special Glands; Excretory Organs; Reproductive Organs; Special External Characters; Colour. Rudimentary or Vestigial Organs, and Organs of uncertain nature.

0000-0231. Allgemeine Zoologie.

N.B.—Die unter Nr. 0000 bis 0231 aufgeführten Gegenstände können in jedem der nachfolgenden Zweige wiederkehren. Unter Nr. 0000-0231 bringt der Katalog nur solche Arbeiten, die mehrere Zweige behandeln. Daher der Ausdruck „Allgemeine Zoologie."

HYPERZOOLOGIE.

Philosophie.

Geschichte. Biographien.

Periodica. Berichte von Instituten, Gesellschaften, Kongressen, Forschungsreisen etc.

Allgemeine Abhandlungen, Lehrbücher, Wörterbücher, Sammelwerke, Tabellen.

Bibliographien.

Festreden, Vorträge u.s.w., allgemeiner Art.

Pädagogik.

Institute, Museen, Sammlungen, Aquarien, Gärten, Nützlichkeit und Schädlichkeit, Zoologie in Beziehung zur Medizin etc. (*Siehe auch* die allgemeinen Abteilungen der speciellen Zoologie.)

Nomenklatur (Prinzipien).

Technik. Untersuchungsmethoden. Instrumente and Apparate.

STRUKTUR (ODER MORPHOLOGIE). [Im allgemeinen oder von mehreren Tierklassen.] (*Siehe auch* (L) Allgemeine Biologie, (O) Anatomie und (Q) Physiologie.)

Allgemeines; Vergleichende Anatomie; Specielle Anatomie und Histologie: Tegument und seine Organe; Nervensystem und Sinnesorgane; Myologie; Skelett (einschl. Osteologie und Zahnbildung); Inneres Skelett bei Wirbellosen; Ernährungssystem; Circulations- und Respirationsorgane; Wassergefässsystem, Blut, Lymphe, Cœlomflüssigkeit, Chylus. Specielle Drüsen; Excretions-Organe; Reproduktive Organe; Specielle äussere Charactere; Farbe. Rudimentäre oder unentwickelte Organe und Organe ungewisser Natur.

0000-0231. Zoologie générale.

N.B.—Les sujets énumérés sous les indices 0000 à 0231 peuvent être représentés dans chacune des "branches" suivantes; mais c'est seulement les ouvrages ayant trait à plusieurs "branches" qui doivent être catalogués sous les numéros 0000 à 0231; de là le terme de "Zoologie générale."

HYPERZOOLOGIE.

0000 Philosophie.
0010 Histoire. Biographie.
0020 Périodiques. Rapports d'Institutions, de Sociétés, de Congrès, d'Explorations, etc.
0030 Traités généraux, Manuels, Dictionnaires, Recueils, Tables.

0032 Bibliographies.
0040 Discours, Cours, etc., d'un caractère général.
0050 Enseignement.
0060 Institutions, Musées, Collections, Aquaria, Jardins. Utilité et Nocuité. Zoologie en rapport avec la Médecine, etc. (*Voy aussi* les sections générales de la Zoologie spéciale.)
0070 Nomenclature (principes de).
0090 Technique. Méthodes de recherche, instruments et appareils.
0207 STRUCTURE (OU MORPHOLOGIE). [En général ou dans plusieurs classes d'animaux.] (*Voy. aussi* (L) Biologie Générale, (O) Anatomie et (Q) Physiologie.)

Généralités; Anatomie comparée; Anatomie spéciale et Histologie (*ex.* organes tégumentaires); Système nerveux et organes des sens; Myologie; Squelette (y compris Ostéologie et Dentition); Structure des Invertébrés; Système digestif; Appareils de la circulation et de la respiration; Système aquifère vasculaire, sang, lymphe, liquide de la cavité générale, chyle. Glandes spéciales; Organes d'excrétion; Organes de reproduction; Organes externes spéciaux; Couleur. Organes rudimentaires ou vestiges d'organes anciens; Organes de nature incertaine.

0000-0231. Zoologia comprensiva.

I soggetti designati coi numeri 0000 a 0231 possono ricorrere in ognuno dei seguenti rami. Nel catalogo, tuttavia, soltanto i lavori che trattano di diversi rami saranno registrati sotto i numeri 0000 a 0231; di qui il termine "Zoologia comprensiva."

IPERZOOLOGIA.

Filosofia.
Storia. Biografia.
Periodici. Resoconti di Istituti Società, Congressi, Esplorazioni.

Trattati generali, Libri di testo, Dizionari, Raccolte, Tavole.

Bibliografie.
Discorsi, Letture, etc., aventi un carattere generale.
Pedagogia.
Istituti, Musei, Collezioni, Aquaria, Giardini, Utilità e Nocività. Zoologia in rapporto alla medicina. (*Vedi anche* le sezioni generali della Zoologia speciale.)

Principî di Nomenclatura.
Tecnica. Metodi di ricerca, istrumenti ed apparati.
STRUTTURA (O MORFOLOGIA). [In generale oppure di più di una classe di animali.] (*Vedi anche* (L) Biologia Generale, (O) Anatomia e (Q) Fisiologia).

Generalità; Anatomia comparata; Anatomia speciale e Istologia; Tegumento e suoi organi; Sistema nervoso e organi di senso; Miologia; Scheletro (incl. Osteologia e Dentizione); Strutture interne scheletriche degli invertebrati; Apparecchio alimentare; Organi della circolazione e della respiriazione; Sistema acquifero vascolare, Sangue, Linfa, Liquido celomatico, Chilo; Glandule speciali; Organi escretori; Organi riproduttivi. Caratteri speciali esterni; Colore. Organi rudimentali e in vestigio e organi di natura incerta.

0211 PHYSIOLOGY [of the Animal Kingdom, or of more than one of its Branches]. (*See also* (Q) Physiology.)

[Physiology will be treated as a separate science. In zoology it is therefore only necessary to collect those physiological memoirs that specially interest zoologists; hence a detailed division is superfluous, but the following may be cited as examples to come under this heading.]

General; Production of Sex; Production of Caste; Function of Sense Organs; Function of Special Organs and Structures, *e.g.*, of Glands; Assimilation; Respiration; Environmental Effects; Change of Function; Adaptation. Duration of Life; Senescence; Death.

0215 DEVELOPMENT. [General works on more than one of the Branches.] (*See also* L 2000-5900; O 1500-1940.)

General; Budding and Asexual Reproduction; Oogenesis and Ovum; Spermatogenesis and Spermatozoon; Phenomena of Fertilization; Parthenogenesis; Embryology, Organogeny and Histogeny; Metamorphosis and Larval Forms; Post-embryonic Ontogeny; Alternation of Generations; Pædogenesis; Dissogony; Cycles of Generations; Changes during Life; Regeneration; Hermaphroditism.

For cell-structure and processes *see* (L) General Biology—Cytology.

0219 ETHOLOGY. [Works dealing with one or more of the following subjects, and relating to more than one Branch of the Animal Kingdom.]

General; Habits; Phenology; Migration and Nonmigration; Hibernation; Parental Relations; Sexual Relations; Sexual Dimorphism; Ovipois-

PHYSIOLOGIE [des Tierreichs oder mehrerer seiner Zweige]. (*Siehe auch* (Q) Physiologie.)

[Physiologie wird als besondere Wissenschaft behandelt werden. In „Zoologie" brauchen daher nur solche physiologische Abhandlungen aufgeführt zu werden, die speciell den Zoologen interessieren. Darum ist eine detaillierte Einteilung hier überflüssig, doch mag das Folgende als Beispiel dienen.]

Allgemeines; Hervorbringung des Geschlechtes, der Rasse; Funktion der Sinnesorgane; Funktion besonderer Bildungen, z. B. Drüsen; Assimilation; Atmung; Wirkung der Umgebung; Funktionswechsel; Anpassung. Lebensdauer; Altern; Tod.

ENTWICKELUNG. [Allgemeine Werke über mehr als einen der Zweige.] (*Siehe auch* L 2000-5900; O 1500-1940.)

Allgemeines; Knospenbildung und ungeschlechtliche Fortpflanzung; Oogenesis und Ovum; Spermatogenesis und Spermatozoon; Befruchtungs-Phänomene; Parthenogenesis; Embryologie, Organogenie und Histogenie; Metamorphose und Larvenformen; postembryonale Ontogenie; Generationswechsel; Pædogenesis; Dissogonie; Generations-Cyklen; Veränderungen während des Lebens; Regeneration; Hermaphroditismus.

Zell-Struktur und -Processe *siehe* (L) Allgemeine Biologie—Cytologie.

ETHOLOGIE. [Arbeiten, die eine oder mehrere der folgenden Gegenstände behandeln und sich auf mehr als einen Zweig des Tierreichs beziehen.]

Allgemeines; Lebensgewohnheiten; Phänologie; Wanderung und Nichtwanderung; Winterschlaf; Beziehungen zwischen Eltern und Nachkommenschaft

0214 Physiologie [du règne animal ou de plusieurs branches du règne animal]. (*Voy. aussi* (Q) Physiologie.)

[La Physiologie doit être traitée comme une science distincte; en conséquence, en Zoologie il ne sera nécessaire de relever que les mémoires de physiologie qui intéressent spécialement les zoologistes; une division détaillée est donc superflue, néanmoins on peut citer la suivante comme exemple.]

Généralités; Production des sexes; Formation des genres; Fonctions des organes des sens; Fonctions des organes de structure spéciale (*ex.* des glandes); Assimilation; Respiration; Influence du milieu; Changement de fonction; Adaptation; Durée de la vie; Sénescence; Mort.

0215 Développement. [Ouvrages généraux ayant trait à plusieurs "branches."] (*Voy. aussi* L 2000-5900; O 1500-1940.)

Généralités; Bourgeonnement et reproduction asexuée; Ovogenèse et œuf; Spermatogenèse et Spermatozoïdes; Phénomènes de fécondation; Parthénogenèse; Embryologie, organogénie et histogénie; Métamorphose et formes larvaires; Ontogénie postembryonnaire; Générations alternantes; Pædogenèse; Dissogonie; Cycles de générations; Changements pendant la vie; Régénération; Hermaphrodisme.

Pour la structure et les processus cellulaires *voir* (L) Biologie générale—Cytologie.

0219 Ethologie. [Ouvrages traitant d'un ou de plusieurs des sujets suivants et se rapportant à un ou à plusieurs embranchements du règne animal].

Généralités; Habitudes; Phénologie; Migration et non-migration; Hibernation; Relations de parenté; Relations sexuelles; Dimorphisme sexuel; Ponte;

Fisiologia [del Regno animale o di più di uno dei suoi rami]. (*Vedi anche* (Q) Fisiologia).

[La fisiologia sarà trattata come una scienza separata. Nella zoologia è perciò soltanto necessario raccogliere quelle memorie di fisiologia che più specialmente possono interessare lo zoologo; quindi una divisione particolareggiata è superflua, ma ciò che segue può rappresentare la divisione di questo capitolo.]

Generalità; Produzione dei sessi; Produzione di caste; Funzione degli organi di senso; Funzione di speciali organi, *p. es.* le glandule; Assimilazione; Respirazione; Effetti dell' ambiente; Cambiamento di funzione; Adattamento. Durata della vita; Senescenza; Morte.

Sviluppo. [Lavori generali su più di uno dei rami.] (*Vedi anche* L 2000-5900; O 1500-1940.)

Generalità; Gemmazione e riproduzione asessuale; Oogenesi e Uovo; Spermatogenesi e Spermatozoide; Fenomeni di Fecondazione; Partenogenesi; Embriologia, organogenia ed istogenia; Metamorfosi e forme larvali; Ontogenia postembrionale; Alternanza delle generazioni; Pedogenesi; Dissogonia; Cicli delle generazioni; Cambiamenti durante la vita; Rigenerazione; Ermafroditismo.

Per la struttura cellulare e i processi di sviluppo *vedi* (L) Biologia generale—Citologia.

Etologia. [Lavori aventi a che fare con uno o più dei soggetti seguenti e relativi ad uno o più rami del regno animale.]

Generalità; Abitudini; Fenologia; migrazione e non migrazione; ibernazione; rapporti parentali; rapporti sessuali; dimorfismo sessuale;

tion; Voice; Sound Production; (*see also* Q 4145). Luminosity; (*see also* Q 0260). Habitat with sub-divisions, *e.g.*, Cavernicolous Animals, Pelagic and Deep-sea Animals (plankton), etc.; Instinct and Psychology; Social Relations; Gregariousness; Symbiosis; (*see also* L 5550; Q 0285; R 1640); Parasitism; Defensive Processes (including Protective Coloration, Mimicry and Protective Resemblance); Ornament and Colour; Breeding and Acclimatisation.

Sexuelle Beziehungen; Sexueller Dimorphismus; Eiablage; Stimme; Hervorbringung von Lauten (*siehe auch* Q 4145); Leuchtvermögen (*siehe auch* Q 0260); Habitat mit Unterabteilungen, z. B. Höhlentiere, pelagische und Tiefsee-Tiere (Plankton) u. s. w.; Instinkt und Psychologie; Soziale Beziehungen; Heerdenleben; Symbiose (*siehe auch* L 5550; Q 0285; R 1640); Parasitismus; Verteidigungs-Processe (einschl. Schutzfärbung, Mimicry und schützende Aehnlichkeiten); Schmuck und Farbe; Züchtung und Akklimatisation.

0223 Variation and Ætiology. [Works dealing with one or more of the following subjects and relating to more than one Branch of the Animal Kingdom.] (*See also* (L) General Biology, and (Q) Physiology.)

General; Substantive variation; size, proportions, form, colour, etc. Meristic variations; numerical [meristic proper]; homoeotic; teratological. Bionomic variation; of fertility; of time of appearance; of maturity; of development; of habits. Phylogeny.

Or indexed alternatively or supplementally, with reference to treatment—descriptive, statistical, mathematical; geographical or stational.

Heredity. Grafts. Crosses and Hybrids. In-breeding. Telegony. Evolution. (*See also* K 0200; L 4300.)

Variation und Aetiologie. [Arbeiten, die einen oder mehrere der folgenden Gegenstände behandeln und sich auf mehr als einen Zweig des Tierreichs beziehen.] (*Siehe auch* (L) Allgemeine Biologie und (Q) Physiologie.)

Allgemeines; Substantielle Variation; Grösse, Proportionen, Form, Farbe etc. Meristische Variationen; numerische (meristische im eigentlichen Sinne); homoeotische; teratologische. Bionomische Variation; in Hinsicht auf Fruchtbarkeit, auf Erscheinungszeit; auf Zeit der Reife; auf Entwickelung; auf Lebensgewohnheiten. Phylogenie.

Hierneben oder als Ergänzung eine Einteilung mit Rücksicht auf die Art der Behandlung—ob descriptiv, statistisch, mathematisch; geographisch oder nach Standort.

Vererbung. Pfropfen. Kreuzungen und Bastardbildungen. Inzucht. Telegonie. Evolution. (*Siehe auch* K 0200; L 4300.)

0227 Geographical Zoology.

Geographical Distribution. [Works relating to the principles and modes of distribution.]

Topographical Zoology. [Works relating to the Fauna of one or more of the sub-divisions used in (J) Geography, and dealing

Geographische Zoologie.

Geographische Verbreitung. [Arbeiten, die sich auf die Prinzipien und die Arten der Verbreitung beziehen.]

Topographische Zoologie. [Arbeiten, die sich auf die Fauna einer oder mehrerer der Unterabteilungen in (J) Geographi

Voix ; Productions des sons ; (*Voy aussi* Q 4145.) Production de la lumière ; (*Voy. aussi* Q 0260.) Habitat avec subdivisions, *ex.* Animaux cavernicoles ; Animaux pélagiques et des zones abyssales (plankton), etc. ; Instinct et Psychologie ; Relations sociales ; Instincts sociaux ; Symbiose ; (*Voy. aussi* L 5550 ; Q 0285 ; R 1640); Parasitisme ; Procédés de défense ; Ressemblance (y compris la coloration protectrice, le mimétisme et la ressemblance protectrice) ; Ornements et couleur ; Elevage et acclimatation.

0223 Variation et Etiologie. [Ouvrages traitant d'un ou de plusieurs des sujets suivants, et ayant trait à plus d'une branche du règne animal.] (*Voy. aussi* (L) Biologie Générale et (Q) Physiologie.)

Généralités ; Variations traitées en elles-mêmes ; Taille, proportions, forme, couleur, etc. Variations méristiques ; variations numériques (méristiques proprement dites) ; homéotiques ; tératologiques. Variations bionomiques, variations de fécondité ; variations dans l'époque d'apparition, la maturité, le développement, les habitudes. Phylogénie.

Variations traitées d'une façon supplémentaire dans les ouvrages descriptifs, statistiques, mathématiques, géographiques.

Hérédité. Greffes. Croisements et Hybrides. Unions consanguines. Télégonie. Évolution. (*Voy. aussi* K 0200 ; L 4300.)

0227 Zoologie géographique.

Distribution géographique des animaux. [Ouvrages ayant trait aux principes et aux modes de distribution géographique.]

Zoologie topographique. [Ouvrages ayant trait à la faune d'une ou de plusieurs des subdivisions employées en (J)

oviposizione ; voce ; produzione di suoni (*v. anche* Q 4145); luminosità (*v. anche* Q 0260) ; Habitat con suddivisioni, *p. es.* animali cavernicoli, animali pelagici e delle zone abissali (plankton), etc. ; istinto e psicologia ; rapporti sociali ; istinti gregarii ; simbiosi (*v. anche* L 5550 ; Q 0285 ; R 1640); parasitismo ; processi difensivi (compresovi la colorazione protettiva, il mimetismo e la rassomiglianza protettiva) ; ornamenti e colore ; Allevamento ed acclimatazione.

Variazione ed Etiologia. [Lavori aventi a che fare con uno o più dei soggetti seguenti e relativi ad uno o più rami del regno animale.] (*Vedi anche* (L) Biologia Generale e (Q) Fisiologia).

Generalità ; Variazione sostantivamente considerata ; dimensioni, proporzioni, forma, colore, etc. Variazioni meristiche ; numeriche (meristiche vere o proprie) ; omeotiche ; per teratologia. Variazioni bionomiche ; di fecondità ; di epoca di apparizione ; di maturità ; di sviluppo ; di abitudini. Filogenia.

Oppure considerata alternativamente e supplementariamente sotto il punto di vista descrittivo, statistico, matematico, geografico o stazionale.

Eredità. Innesti. Incrociamenti e ibridismi. Consanguineità. Telegonia. Evoluzione. (*Vedi anche* K 0200 ; L 4300).

Zoologia geografica.

Distribuzione geografica. [Lavori relativi ai principî e ai modi di distribuzione.]

Zoologia topografica. [Lavori relativi alla Fauna di una o più delle suddivisioni adottate in (J) Geografia, e riferentisi a

with more than one of the Branches of Zoology.]

beziehen und mehr als einen Zweig der Zoologie umfassen.]

0231 Taxonomy or Classification in general.

[In this are to be placed works dealing with the principles of zoological classification; works discussing the classification of more than one of the Branches; works dealing with the relations of the great groups of existing animals; phylogenetic classification, i.e., the relations in time of the great groups of animals. Works relating to the classification of only one of the Branches are to be dealt with in that Branch.]

Taxonomie oder Klassifikation im Allgemeinen.

[Hierher sind Arbeiten zu stellen, welche die Prinzipien der zoologischen Klassifikation behandeln; ferner Arbeiten, welche die Klassifikation von mehr als einem der Zweige diseutieren; Arbeiten, welche die Beziehungen der grossen Gruppen der lebenden Tierwelt behandeln; phylogenetische Klassifikation, d. h. die zeitlichen Beziehungen der grossen Tiergruppen. Dagegen sind Arbeiten, die sich auf die Klassifikation eines einzelnen Zweiges beziehen, bei diesem zu erledigen.]

0400-6031 Special Zoology.

0400-6031 Specielle Zoologie.

0400-0431 **Protozoa.** (*See also* R 1200.)

The principal divisions are:— Mycetozoa; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaea, Proteomyxa); Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia); Mastigophora (Flagellata, Dinoflagellata); Infusoria (Acinetaria, Ciliata).

Protozoa. (*Siehe auch* R 1200.)

Hauptabteilungen sind:— Mycetozoa; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaea, Proteomyxa); Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia); Mastigophora (Flagellata, Dinoflagellata); Infusoria (Acinetaria, Ciliata).

0600-0631 **Porifera** (or **Spongida**).

The principal divisions are:— Calcarea; Hexactinellida; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongida).

Porifera (oder **Spongida**).

Hauptabteilungen sind:— Calcarea; Hexactinellida; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongida).

0800-0831 **Coelenterata** (or **Cnidaria**).

The principal divisions are:— Graptolites; Hydromedusae; Scyphomedusae; Monticuliporidae; Stromatoporidae; Alcyonaria; Zoantharia; Ctenophora.

Cœlenterata (oder **Cnidaria**).

Hauptabteilungen sind:— Graptolites; Hydromedusæ; Scyphomedusæ; Monticuliporidæ; Stromatoporidæ; Alcyonaria; Zoantharia; Ctenophora.

1000-1031 **Echinodermata.**

The principal divisions are:— Cystoidea; Crinoidea; Blastoidea; Asteroidea; Ophiuroidea; Echinoidea; Holothurioidea.

Echinodermata.

Hauptabteilungen sind:— Cystoidea; Crinoidea; Blastoidea; Asteroidea; Ophiuroidea; Echinoidea; Holothurioidea.

Géographie et ayant trait à plus d'une branche de la Zoologie.]

0231 Taxonomie ou Classification en général.

[Dans cette division doivent être placés les ouvrages traitant des principes de la classification zoologique ; les ouvrages discutant la classification de plus d'une "branche" ; les ouvrages traitant des relations des grands groupes d'animaux de la faune actuelle ; la classification phylogénétique, c'est à dire les relations anciennes entre les grands groupes d'animaux. Les ouvrages ayant trait à la classification d'une branche isolée seront traités à propos de cette branche.]

più di uno dei rami della zoologia.]

Tassonomia e Classificazione in generale.

[Qui saranno posti i lavori che trattano dei principî della classificazione zoologica ; i lavori discutenti la classificazione di più di un ramo ; i lavori riguardanti le relazioni tassonomiche dei grandi gruppi degli animali esistenti ; la classificazione filogenetica, ossia le relazioni nel tempo dei grandi gruppi di animali. I lavori relativi alla classificazione di uno solo dei rami sono trattati in quel ramo.]

0400-6031. Zoologie spéciale.

0400-0431 **Protozoaires.** (*Voy. aussi* R 1200.)

Voici les divisions principales :— Mycétozoaires ; Rhizopodes (Radiolaires, Héliozoaires, Foraminifères, Amœbiens, Protéomyxes) ; Sporozoaires (Grégarinides, Coccidiides, Haemosporidies, Myxosporidies, Sarcosporidies) ; Mastigophores (Flagellés, Dinoflagellés) ; Infusoires (Acinétiens, Ciliés.)

0600-0631 **Porifères (ou Spongiaires).**

Voici les divisions principales :— Calcaires ; Hexactinellides ; Démospongiaires (Carnosa, Tetractinellides, Monaxonides, Kératosa, Myxospongiaires).

0800-0831 **Cœlentérés (ou Cnidaria).**

Voici les divisions principales :— Graptolites ; Hydroméduses ; Scyphoméduses ; Monticuliporides ; Stromatoporides ; Alcyonaires ; Zoanthaires ; Cténophores.

1000-1031 **Échinodermes.**

Voici les divisions principales :— Cystoides ; Crinoides ; Blastoides ; Asteroides ; Ophiuroides ; Echinoides ; Helothurioides.

0400-6031. Zoologia Speciale.

Protozoa. (*Vedi anche* R 1200.)

Le divisioni principali sono :— Mycetozoa ; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaca, Proteomyxa) ; Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia) ; Mastigophora (Flagellata, Dinoflagellata) ; Infusoria (Acinetaria, Ciliata).

Porifera (vel Spongida).

Le divisioni principali sono :— Calcarea ; Hexactinellida ; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongida).

Cœlenterata (vel Cnidaria).

Le divisioni principali sono :— Graptolites ; Hydromedusae ; Scyphomedusae ; Monticuliporidae ; Stromatoporidae ; Alcyonaria ; Zoantharia ; Ctenophora.

Echinodermata.

Le divisioni principali sono :— Cystoidea ; Crinoidea ; Blastoidea ; Asteroidea ; Ophiuroidea ; Echinoidea ; Holothurioidea.

1200–1231 **Platyhelminthes. Mesozoa and Trichoplax.**

The principal divisions are :—
Platyhelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea); Mesozoa (Dicyemidae, Orthonectidae); *Trichoplax*.

1400–1431 **Nemathelminthes.**

The principal divisions are :—
Nematoda; Nematomorpha (or Gordiidae); Acanthocephala.

1600–1631 **Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (or Echinodera.)**

1800–1831 **Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.**

2000–2031 **Brachiopoda. Bryozoa (or Polyzoa).**

The principal divisions are :—
Brachiopoda.
Bryozoa : Entoprocta; Ectoprocta (Gymnolaema: Cyclostomata, Trepostomata, Cryptostomata, Cheilostomata, Ctenostomata; Phylactolaema).

2200–2231 **Mollusca.**

The principal divisions are :—
Lamellibranchiata (or Pelecypoda) (Order should be given); Scaphopoda; Amphineura.
Gastropoda includes Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Rachiglossa, Toxoglossa); Heteropoda; Opisthobranchiata (Tectibranchiata, Nudibranchiata); Pteropoda; Pulmonata (Bassomatophora, Stylommatophora). Families of Prosobranchiata and Pulmonata should be mentioned. *See* Cambridge Natural History.
Cephalopoda includes Nautiloidea, Ammonoidea, Dibranchiata.

2400–2431 **Arthropoda.**

2431 will not include a systematic arrangement of genera and species.

Platyhelminthes. Mesozoa und Trichoplax.

Hauptabteilungen sind :—
Platyhelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea); Mesozoa (Dicyemidæ, Orthonectidæ); *Trichoplax*.

Nemathelminthes.

Hauptabteilungen sind :—
Nematoda; Nematomorpha (oder Gordiidæ); Acanthocephala.

Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (oder Echinodera).

Archiannelida. Polychæta. Myzostomaria. Oligochæta. Gephyrea Phoronis. Hirudinea.

Brachiopoda. Bryozoa (oder Polyzoa).

Hauptabteilungen sind :—
Brachiopoda.
Bryozoa : Endoprocta; Ectoprocta (Gymnolaema : Cyclostomata, Trepostomata, Cryptostomata, Cheilostomata, Ctenostomata; Phylactolaema).

Mollusca.

Hauptabteilungen sind :—
Lamellibranchiata (oder Pelecypoda) (Ordnung angeben); Scaphopoda; Amphineura.
Gastropoda umfasst Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Rachiglossa, Toxoglossa; Heteropoda; Opisthobranchiata (Tectibranchiata, Nudibranchiata); Pteropoda; Pulmonata (Bassomatophora, Stylommatophora). Familien der Prosobranchiata und Pulmonata angeben. *Siehe* Cambridge Natural History.

Cephalopoda umfasst Nautiloidea, Ammonoidea, Dibranchiata.

Arthropoda.

2431 wird eine systematische Anordnung der Gattungen und Arten nicht enthalten.

1200-1231 **Platyhelminthes. Mésozoaires et le Trichoplax.**

Voici les divisions principales :— Platyhelminthes (Turbellariés, Trématodes, Cestodes, Némertiens) ; Mésozoaires (Dicyemidæ, Orthonectidæ) ; *Trichoplax*.

Platyhelminthes. Mesozoa et Trichoplax.

Le divisioni principali sono :— Platyhelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea) ; Mesozoa (Dicyemidæ, Orthonectidæ) ; *Trichoplax*.

1400-1431 **Némathelminthes.**

Voici les divisions principales :— Nématodes ; Nématomorphes (ou Gordiens) ; Acanthocéphales.

Nemathelminthes.

Le divsioni principali sono :— Nematoda ; Nematomorpha (vel Gordiidæ) ; Acanthocephala.

1600-1631 **Chætognathes. Rotifères. Gastrotriches. Kinorhynques (ou Echinodères).**

Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (vel Echinodera).

1800-1831 **Archiannélides. Polychètes. Myzostomes. Oligochètes. Géphyriens. Phoronis. Hirudinées.**

Archiannelida. Polychæta. Myzostomaria. Oligochæta. Gephyrea. Phoronis. Hirudinea.

2000-2031 **Brachiopodes. Bryozoaires (ou Polyzoaires).**

Voici les divisions principales :— Brachiopodes.

Bryozoaires : Entoproctes ; Ectoproctes (Gymnolèmes : Cyclostomes, Trepostomes, Cryptostomes, Cheilostomes, Cténostomes ; Phylactolèmes).

Brachiopoda. Bryozoa (vel Polyzoa).

Le divisioni principali sono :— Brachiopoda.

Bryozoa : Entoprocta ; Ectoprocta (Gymnolaema : Cyclostomata, Trepostomata, Cryptostomata, Cheilostomata, Ctenostomata ; Phylactolaema).

2200-2231 **Mollusques.**

Voici les divisions principales :— Lamellibranches (ou Pélécypodes) (indiquer l'ordre) ; Scaphopodes ; Amphineures.

Les Gastropodes comprennent les Prosobranches (Rhipidoglosses, Pténoglosses, Taenioglosses, Rachiglosses, Toxoglosses) ; Hétéropodes ; Opisthobranches (Tectibranches, Nudibranches) ; Ptéropodes ; Pulmonés (Basomatophores, Stylommatophores). Indiquer les familles des Prosobranches et des Pulmonés. *Voy.* la Cambridge Natural History.

Les Céphalopodes comprennent les Nautiles, Ammonites, Dibranches.

Mollusca.

Le divisioni principali sono :— Lamellibranchiata (vel Pelecypoda) (indicare l'ordine) ; Scaphopoda ; Amphineura.

Gastropoda includono Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Rachiglossa, Toxoglossa) ; Heteropoda ; Opisthobranchiata (Tectibranchiata, Nudibranchiata) ; Pteropoda ; Pulmonata (Basomatophora, Stylommatophora). Indicare le famiglie dei Prosobranchiata e Pulmonata. *Vedi* Cambridge Natural History.

Cephalopoda includono Nautiloidea, Ammonoidea, Dibranchiata.

2400-2431 **Arthropodes.**

2431 ne comprendra pas un arrangement systématique des genres et des espèces.

Arthropoda.

2431 non deve includere la disposizione sistematica dei generi e delle specie.

2600–2631 **Crustacea.**

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).
Leptostraca.
Arthrostraca (or Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).
[Malacostraca (= Thoracostraca + Arthrostraca).]
Thoracostraca (or Podophthalma) includes Decapoda, Schizopoda, Stomatopoda, Cumacea.

2800–2831 **Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.**

3000–3031 **Arachnida.**

Arachnida consists of Scorpionida, Pedipalpi, Palpigradi, Araneida, Solifugae, Chernetida (or Pseudoscorpiones), Phalangida (or Opiliones), Acarida (or Acari).

3200–3231 **Prototracheata (or Onychophora).**

Prototracheata includes only *Peripatus* and its divisions.

3400–3431 **Myriopoda.**

Myriopoda consists of Chilopoda, Diplopoda (= Pselaphognatha and Chilognatha), Symphyla (or Scolopendrella), Pauropoda.

3500–3531 **Insecta.**

3531 will not include a systematic arrangement of genera and species.

3600–3631 **Aptera (or Apterygogenea). Anoplura. Mallophaga. Thysanoptera (or Physopoda). Siphonaptera (or Aphaniptera).**

Aptera, proper, consists of Thysanura and Collembola.

3800–3831 **Orthoptera. Neuroptera. Trichoptera.**

The principal divisions are:—
Orthoptera (Forticulidae or Dermaptera, Hemimeridae, Blattidae, Mantidae, Phasmidae, Gryllidae, Locustidae, Acridiidae).

Crustacea.

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).
Leptostraca.
Arthrostraca (oder Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).
[Malacostraca (= Thoracostraca + Arthrostraca).]
Thoracostraca (oder Podophthalma) umfasst Decapoda, Schizopoda, Stomatopoda, Cumacea.

Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.

Arachnida.

Arachnida umfasst Scorpionida, Pedipalpi, Palpigradi, Araneida, Solifugae, Chernetida (oder Pseudoscorpiones), Phalangida (oder Opiliones), Acarida (oder Acari).

Prototracheata (oder Onychophora).

Prototracheata umfasst nur *Peripatus* und dessen Abteilungen.

Myriopoda.

Myriopoda umfasst Chilopoda, Diplopoda (= Pselaphognatha und Chilognatha), Symphyla (oder Scolopendrella), Pauropoda.

Insecta.

3531 wird eine systematische Anordnung der Gattungen und Arten nicht enthalten.

Aptera (oder Apterygogenea). Anoplura. Mallophaga. Thysanoptera (oder Physopoda). Siphonaptera (oder Aphaniptera).

Aptera, im eigentlichen Sinne, umfasst Thysanura und Collembola.

Orthoptera. Neuroptera. Trichoptera.

Hauptabteilungen sind:—
Orthoptera (Forticulidæ oder Dermaptera, Hemimeridæ, Blattidæ, Mantidæ, Phasmidæ, Gryllidæ, Locustidæ, Acridiidæ).

2600–2631 **Crustacés.**

Entomostracés (= Cirripèdes, Ostracodes, Copépodes, Phyllopodes).
Leptostracés.
Arthrostracés (ou Edriophthalmes) (= Amphipodes, Isopodes, Anisopodes).
[Malacostracés (= Thoracostracés + Arthrostracés).]
Les Thoracostracés (ou Podophthalmaires), comprennent les Décapodes, Schizopodes, Stomatopodes, Cumacés).

Crustacea.

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).
Leptostraca.
Arthrostraca (vel Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).
[Malacostraca (= Thoracostraca + Arthrostraca).]
Thoracostraca (vel Podophthalma) includono Decapoda, Schizopoda, Stomatopoda, Cumacea.

2800–2831 **Trilobites. Xiphosures. Eurypterides. Pantopodes. Tardigrades. Linguatulides.**

Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.

3000–3031 **Arachnides.**

Les Arachnides comprennent les Scorpionides, Pédipalpes, Palpigrades, Aranéides, Solifuges, Chernétides (ou Pseudoscorpions), Phalangides (ou Opilions), Acariens.

Arachnida.

Arachnida includono Scorpionida, Pedipalpi, Palpigradi, Aranceida, Solifuge, Chernetida (vel Pseudoscorpiones), Phalangida (vel Opiliones), Acarida (vel Acari).

3200–3231 **Prototrachéates (ou Onychophores).**

Les Prototrachéates comprennent seulement le genre *Peripatus* et ses divisions.

Prototracheata (vel Onychophora).

Nei Prototracheata è incluso il solo *Peripatus* e le sue divisioni.

3400–3431 **Myriapodes.**

Les Myriapodes comprennent les Chilopodes, Diplopodes (Pséla-phognathes et Chilognathes), Symphyliens (ou Scolopendrelles), Pauropodes.

Myriopoda.

Chilopoda, Diplopoda (= Pselaphognatha e Chilognatha), Symphyla (vel Scolopendrella), Pauropoda.

3500–3531 **Insectes.**

3531 ne comprendra pas un arrangement systématique des genres et des espèces.

Insecta.

3531 non deve includere la disposizione sistematica dei generi e delle specie.

3600–3631 **Aptères (ou Aptérygogéniens). Anoploures. Mallophages. Thisanoptères (ou Physopodes). Siphonaptères (ou Aphaniptères).**

Les Aptères proprement dits comprennent les Thysanoures et les Collemboles.

Aptera (vel Apterygogenea). Anoplura. Mallophaga. Thysanoptera (vel Physopoda). Siphonaptera (vel Aphaniptera).

Gli Aptera propriamente detti consistono nei Thysanura e Collembola.

3800–3831 **Orthoptères. Névroptères. Trichoptères.**

Voici les divisions principales :—
Orthoptères (Forficulides ou Dermaptères, Hémimérides, Blattides, Mantides, Phasmides, Gryllides, Locustides, Acridides).

Orthoptera. Neuroptera. Trichoptera.

Le divisioni principali sono :—
Orthoptera (Forficulidæ vel Dermaptera, Hemimeridæ, Blattidæ, Mantidæ, Phasmidæ, Grylli-dæ Locustidæ, Acridiidæ).

Neuroptera (Planipennia, Embiidae, Termitidae, Psocidae, Perlidae, Ephemeridae, Odonata).

Each slip relating to Neuroptera should also state to which of these divisions it refers.

Most of the Palaeozoic Insects are to be dealt with in this branch.

Neuroptera (Planipennia, Embiidæ, Termitidæ, Psocidæ, Perlidæ, Ephemeridæ, Odonata).

Jeder Zettel für Neuroptera soll auch angeben, auf welche dieser Abteilungen er sich bezieht.

Die meisten der paläozoischen Insekten werden bei diesem Zweige zu behandeln sein.

4000–4031 **Hemiptera (or Rhynchota) excl. Anoplura, which are placed in 3600.**

The principal divisions are :—

Hemiptera Heteroptera and Hemiptera Homoptera. [Phytophthires (Aphidae, Psyllidae, Aleurodidae, Coccidae) are included in Hemiptera Homoptera.]

Families to be mentioned in all cases.

See Cambridge Natural History.

Hemiptera (oder Rhynchota), excl. Anoplura, welche unter 3600 eingeordnet sind.

Hauptabteilungen sind :—

Hemiptera Heteroptera und Hemiptera Homoptera. [Phytophthires (Aphidæ, Psyllidæ, Aleurodidæ, Coccidæ) sind in Hemiptera Homoptera enthalten.]

Familien immer angeben. *Siehe* Cambridge Natural History

4200–4231 **Diptera (excl. Siphonaptera, which are placed in 3600–3631).**

The slips should be marked with the name of the family of Diptera. *See* Cambridge Natural History.

Diptera (excl. Siphonaptera, welche unter 3600–3631 eingeordnet sind).

Bei den Diptera sind auf den Zetteln die Namen der Familien zu vermerken. *Siehe* Cambridge Natural History.

4400–4431 **Lepidoptera.**

The principal divisions are :—

Rhopalocera ; Heterocera.

The family to be mentioned in all cases. *See* Cambridge Natural History.

Lepidoptera.

Hauptabteilungen sind :—

Rhopalocera ; Heterocera.

Familien immer angeben. *Siehe* Cambridge Natural History.

4600–4631 **Hymenoptera.**

The principal divisions are :—

Aculeata = Anthophila (Apidae Andrenidae), Vespidae (Diploptera), Sphegidae s.l. (Fossoria). Formicidae (Heterogyna). Tubulifera = Chrysididae. Parasitica = Trigonalidae, Proctotrupidae, Pelecinidae, Chalcididae, Ichneumonidae, Braconidae, Megalyridae, Evaniidae, Stephanidae, Cynipidae. Sessiliventres (or Chalastogastra) = Cephidae, Siricidae, Oryssidae, Tenthredinidae.

Hymenoptera.

Hauptabteilungen sind :—

Aculeata = Anthophila (Apidæ Andrenidæ), Vespidæ (Diploptera), Sphegidæ s.l. (Fossoria). Formicidæ (Heterogyna). Tubulifera = Chrysididæ. Parasitica = Trigonalidæ, Proctotrupidæ, Pelecinidæ, Chalcididæ, Ichneumonidæ Braconidæ, Megalyridæ, Evaniidæ, Stephanidæ, Cynipidæ. Sessiliventres (oder Chalastogastra) = Cephidæ, Siricidæ, Oryssidæ, Tenthredinidæ.

Névroptères (Planipennes, Embiides, Termitides, Psocides, Perlides, Ephémérides, Odonates).

Chaque fiche relative aux Névroptères doit aussi indiquer à laquelle de ces divisions elle se rapporte.

La plupart des Insectes paléozoïques devront être traités dans cette branche.

Neuroptera (Planipennia, Embiidae, Termitidæ, Psocidæ, Perlidæ, Ephemeridæ, Odonata.)

Ciascuna scheda relativa a Neuroptera deve stabilire a quale di queste divisioni del gruppo si riferisce.

La maggior parte degli insetti paleozoici riferisconsi a questo ramo.

4000–4031 **Hémiptères (ou Rhynchotes) à l'exclusion des Anoploures, qui sont placés sous le numéro 3600.**

Voici les divisions principales :—

Hémiptères Hétéroptères et Hémiptères Homoptères. [Les Phytophthires (Aphides, Psyllides, Aleurodides, Coccides) sont compris dans les Hémiptères Homoptères.]

Indiquer les familles en tout cas. *Voy.* Cambridge Natural History.

Hemiptera (vel Rhynchota), esclusi Anoplura, che sono indicati col numero 3600.

Le divisioni principali sono :—

Hemiptera Heteroptera e Hemiptera Homoptera. [Phytophthires (Aphidæ, Psyllidæ, Aleurodidæ, Coccidæ) sono inclusi in Hemiptera Homoptera.]

Indicare le famiglie in ogni caso. *Vedi* Cambridge Natural History.

4200–4231 **Diptères (sauf les Siphonaptères, qui sont placés sous les numéros 3600–3631).**

Les fiches doivent porter le nom de la famille des Diptères. *Voy.* Cambridge Natural History.

Diptera (esclusi Siphonaptera, che sono indicati dai numeri 3600–3631).

Le schede dovranno portare il nome della famiglia dei Diptera cui si riferiscono. *Vedi* Cambridge Natural History.

4400–4431 **Lépidoptères.**

Voici les divisions principales :—

Rhopalocères ; Hétérocères.

Indiquer la famille en tout cas. *Voy.* Cambridge Natural History.

Lepidoptera.

Le divisioni principali sono :—

Rhopalocera ; Heterocera.

Indicare la famiglia in ogni caso. *Vedi* Cambridge Natural History.

4600–4631 **Hyménoptères.**

Voici les divisions principales :—

Aculeata (ou Porte-aiguillons) = Antophiles (Apides, Andrénides), Vespides (Diploptères) Sphégides s.l. (Fouisseurs) Formicides (Hétérogynes). Tubulifères = Chrysidides. Parasites = Trigonalides, Proctotrupides, Pélécinides, Chalcidides, Ichneumonides, Braconides, Mégalyrides, Evaniides, Stéphanides, Cynipides. Sessiliventres (ou Chalastogastres) = Céphides, Siricides, Oryssides, Tenthrédinides.

Hymenoptera.

Le divisioni principali sono :—

Aculeata = Anthophila (Apidæ, Andrenidæ), Vespidæ (Diploptera), Sphegidæ s.l. (Fossoria). Formicidæ (Heterogyna. Tubulifera = Chrysididæ. Parasitica = Trigonalidæ, Proctotrupidæ, Pelecinidæ, Chalcididæ, Ichneumonidæ, Braconidæ, Megalyridæ, Evanidæ, Stephanidæ, Cynipidæ. Sessiliventres (vel Chalastogastra) = Cephidæ, Siricidæ, Oryssidæ, Tenthredinidæ.

4800–4831 **Coleoptera (incl. Strepsiptera).**

The name of the family referred to should be given on each slip.

The families are numerous. They are included in the Munich Catalogue of the Coleoptera (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) and (the subsequent additions) in "Cambridge Natural History," vol. vi.

Coleoptera (incl. Strepsiptera).

Auf jedem Zettel ist der Name der betr. Familie anzugeben.

Die Zahl der Familien ist gross. Sie sind aufgeführt in dem Münchener Coleopteren-Katalog (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) und (soweit es sich um spätere Zusätze handelt) in „Cambridge Natural History," vol. vi.

5000–5031 **Prochordata, viz., Leptocardii, Enteropneusta, Tunicata.**

Prochordata, d.h., Leptocardii, Enteropneusta, Tunicata.

5200–5231 **Vertebrata.**

No systematic enumeration is to be placed under 5231.

Vertebrata.

5231 wird keine systematische Aufzählung enthalten.

5400–5431 **Pisces [excl. Leptocardii (or Amphioxus), for which see 5000-5031].**

The principal divisions are :—
Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (or Teleostei and Ganoidei, with the exception of Arthrodira and Ostracodermi).

The family should be mentioned. *See* Cambridge Natural History.

Pisces [mit Ausschluss der Leptocardii (oder Amphioxus), siehe 5003-5031].

Hauptabteilungen sind :—
Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (oder Teleostei und Ganoidei, mit Ausnahme von Arthrodira und Ostracodermi).

Familie angeben. *Siehe* Cambridge Natural History.

5600–5631 **Amphibia and Reptilia.**

The principal divisions are :—
Batrachia or Amphibia (Stegocephala or Labyrinthodontia, Apoda, Caudata or Urodela, Ecaudata or Anura).
Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Parciasauria, Diaptosauria, Protorosauria, Rhynchosauria, Procolophonia, Proganosauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria or Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa Lacertilia).

Amphibia und Reptilia.

Hauptabteilungen sind :—
Batrachia oder Amphibia (Stegocephala oder Labyrinthodontia, Apoda, Caudata oder Urodela, Ecaudata oder Anura).
Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Parciasauria, Diaptosauria, Protorosauria, Rhynchosauria, Procolophonia, Proganosauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria oder Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa, Lacterilia).

4800–4831 Coléoptères (y compris les Strepsiptères).

Le nom de la famille dont il est question doit être donné sur chaque fiche.

Les familles sont nombreuses. Elles sont indiquées dans le Catalogue des Coléoptères de Munich (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) et (pour les additions subséquentes) dans "Cambridge Natural History," vol. vi.

Coleoptera (incl. Strepsiptera).

Il nome della famiglia dev'essere indicato su ciascuna scheda.

Le famiglie sono numerose. Si trovano indicate nel Catalogo dei Coleoptera di Monaco (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) e (le susseguenti aggiunte) in "Cambridge Natural History," vol. vi.

5000–5031 Prochordés, c'est à dire, Leptocardiens, Entéropneustes, Tuniciers.

Prochordata, cioè Leptocardii, Enteropneusta, Tunicata.

5200–5231 Vertébrés.

Aucune énumération systématique n'est placée sous le numéro 5231.

Vertebrata.

Non deve porsi alcuna enumerazione sistematica sotto 5231.

5400–5431 Poissons [à l'exception des Leptocardiens (ou Amphioxus), qui se trouvent sous les numéros 5000–5031].

Voici les divisions principales :—

Cyclostomes, Ostracodermes, Plagiostomes, Holocéphales, Arthrodires, Dipnoïques, Téléostomes (ou Téléostéens et Ganoïdes, à l'exception des Arthrodires et des Ostracodermes).

La famille doit être mentionnée. *Voy.* Cambridge Natural History.

Pisces [excl. Leptocardii (vel Amphioxus), per i quali vedi 5000–5031].

Le divisioni principali sono :—

Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (o Teleostei e Ganoidei, con esclusione di Arthrodira e Ostracodermi).

Indicare la famiglia. *Vedi* Cambridge Natural History.

5600–5631 Batraciens et Reptiles.

Voici les divisions principales :—

Batraciens ou Amphibies (Stégocéphales ou Labyrinthodontes, Apodes, Caudés ou Urodèles, Ecaudés ou Anoures).

Reptiles (Anomodontes, Rhynchocéphales, Plésiosauriens, Ichthyosauriens, Cotylosauriens, Paréiasauriens, Diaptosauriens, Protorosauriens, Rhynchosauriens, Procolophoniens, Proganosauriens, Choristodères, Chéloniens, Crocodiliens, Dinosauriens, Ornithosauriens ou Ptérosauriens, Ophidiens, Pythonomorphes, Rhiptoglosses, Lacertiliens)

Batrachia et Reptilia.

Le divisioni principali sono : —

Batrachia vel Amphibia (Stegocephala vel Labyrinthodontia, Apoda, Caudata vel Urodela, Ecaudata vel Anura).

Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Pareiasauria, Diaptosauria, Protorosauria, Rhynchosauria, Procolophonia, Proganosauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria vel Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa, Lacertilia).

5800–5831 Aves.

The principal divisions are :—
Accipitres, Aepyornithes, Alcae, Alectorides (including *Cariama*), Anisodactylae (including Podargidae and *Steatornis*), Anseres (including Phoenicopteri and Palamediidae), Apteryges, Casuarii, Coccyges, Columbae, Coraciae, Crypturi, Cypseli, Dinornithes, Fulicariae, Gallinae, Gaviae, Herodiones, Heterodactylae, Impennes, Limicolae, Odontolcae, Odontormae, Opisthocomi, Passeres (mention families), Pici, Psittaci, Pterocletes, Pygopodes, Rheae, Saururae, Steganopodes, Stereornithes, Striges, Struthiones, Tubinares, Zygodactylae.

Aves.

Hauptabteilungen sind :—
Accipitres, Æpyornithes, Alcæ, Alectorides (einschl. *Cariama*), Anisodactylæ (einschl. Podargidæ und *Steatornis*), Anseres (einschl. Phœnicopteri und Palamediidæ), Apteryges, Casuarii, Coccyges, Columbæ, Coraciæ, Crypturi, Cypseli, Dinornithes, Fulicariæ, Gallinæ, Gaviæ, Herodiones, Heterodactylæ, Impennes, Limicolæ, Odontolcæ, Odontormæ, Opisthocomi, Passeres (Familien angeben), Pici, Psittaci, Pterocletes, Pygopodes, Rheæ, Saururæ, Steganopodes, Stereornithes, Striges, Struthiones, Tubinares, Zygodactylæ.

6000–6031 Mammalia.

The principal divisions are :—
Carnivora, Cetacea, Chiroptera, Edentata, Insectivora, Marsupialia, Monotremata, Multituberculata, Primates, Rodentia, Sirenia, Tillodontia, Ungulata (Artiodactyla, Perissodactyla, Subungulata).

Mammalia.

Hauptabteilungen sind :—
Carnivora, Cetacea, Chiroptera, Edentata, Insectivora, Marsupialia, Monotremata, Multituberculata, Primates, Rodentia, Sirenia, Tillodontia, Ungulata (Artiodactyla, Perissodactyla, Subungulata).

5803-5831 Oiseaux.

Voici les divisions principales :—
Accipitres, Æpyornithéens, Alciens, Alectoriens (y compris les *Cariama*), Anisodactyles (y compris les Podargides et les *Steatornis*), Ansériens (y compris les Phœnicoptères et les Palamédiidés), Apterygiens, Casuariens, Coccygiens, Colombins, Coraciens, Crypturiens, Cypséliens, Dinornithiens, Fulicariens, Gallinacés, Gaviens, Hérodiens, Hétérodactyles, Impennes, Limicoliens, Odontolciens, Odontormiens, Opisthocomes, Passereaux (indiquer les familles), Pics, Perroquets, Ptérocliens, Pygopodes, Rhéens, Saururiens, Stéganopodes, Stéréonithiens, Strigiens, Struthioniens, Tubinariens, Zygodactyles.

Aves.

Le divisioni principali sono :—
Accipitres, Aepyornithes, Alcæ, Alectorides (incl. *Cariama*), Anisodactylae (incl. Podargidæ et *Steatornis*), Anseres (incl. Phœnicopteri et Palamediidæ), Apteryges, Casuarii, Coccyges, Columbæ, Coraciæ, Crypturi, Cypseli, Dinornithes, Fulicariæ, Gallinæ, Gaviæ, Herodiones, Heterodactylæ, Impennes, Limicolæ, Odontolcæ, Odontormæ, Opisthocomi, Passeres (indicare le famiglie), Pici, Psittaci, Pterocletes, Pygopodes, Rheæ, Saururæ, Steganopodes, Stereornithes, Striges, Struthiones, Tubinares, Zygodactylæ.

6000-6031 Mammifères.

Voici les divisions principales :—
Carnivores, Cétacés, Chiroptères, Édentés, Insectivores, Marsupiaux, Monotrèmes ; Multituberculés, Primates, Rongeurs, Siréniens, Tillodontes, Ongulés [Ungulata] (Artiodactyles, Périssodactyles, Subongulés).

Mammalia.

Le divisioni principali sono :—
Carnivora, Cetacea, Chiroptera, Edentata, Insectivora, Marsupialia, Monotremata, Multituberculata, Primates, Rodentia, Sirenia, Tillodontia, Ungulata (Artiodactyla, Perissodactyla, Subungulata).

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I. COMPREHENSIVE ZOOLOGY

ARRANGED BY

D. SHARP

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ARRANGED BY

H. M. WOODCOCK, D.Sc. (Lond.)

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Protozoa: comprehensive account of the class; Minchin London (Arnold) 1912 517 pp. 194 text-figs.

Protozoan parasites of domestic animals, general account: Neveu-Lemaire Paris (Lamarre et Cie) 1912 pp. 185-150 text-figs. 100-250.

Protozoa, various parasitic forms, Sumatra, notes on; Prowazek Arch. Protistenk. **26** pp. 251-272 pls. xix-xxi.

Protozoa, Seliger See, Gouv. Iver (Russ.); Kornakoff St. Peterburg Ber. Süsswasserst. Naturf.-Ges. **3** pp. 154-163 3 text-figs.

(Provisionally included as Protozoa).—The fossil organisms *Traquaria*, *Sporocarpon*, *Oidospora* and *Zygosporites*, usually considered to be parts of plants, regarded as Protozoa allied to the Radiolaria; McLean Proc. phil. Soc. Cambridge **16** pp. 493-513 6 figs.

1. MYCETOZOA.

Mycetozoa; Schinz in: L. Rabenhorsts Kryptogamen-Flora von Deutschland. 2. Aufl. Bd. **1**. Abt. 10 pp. 1-64.

Labyrinthula zopfii **sp. n.** diagnosed; Dangeard le Botaniste **11** p. 59 pl. vi figs. 1-11.

Sappinia, Dangeard, *Amoeba diploidea* placed in this genus and regarded as allied to *S. pedata*; Alexeieff Bul. Soc. Zool. **37** pp. 63 & 157-168 3 text-figs. [*Vide* also under *Amoeba*].

2. SARCODINA (=GYMNOMYXA).

Rhizopoda Amoebaea, comparative systematic account of numerous forms with special reference to the consideration of the nuclear structure and division; Dangeard Le Botaniste **11** pp. 4-112 pls. i-xvi.

Rhizopoda, descriptive notes on certain forms; Penard Rev. Suisse Zool. **20** pp. 1-29 pls. i & ii.

Fresh-water Rhizopoda and Heliozoa from States of New York, New Jersey and Georgia U.S.A., also from Seychelles, notes on; Wailes J. Linn. Soc. Zool. **32** No. 214 pp. 121-161. pl. xii.

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Xenophyophora, remarks on morphology, systematic position, regarded as a special order of Sarcodina; Schulze Zool. Anz. **39** pp. 38-43.

(a) **Amœbaea (Reticulosa + Lobosa).**

Amoebae of the *limax*-type, cytological characters particularly with regard to the nucleus and its modes of division, as a basis for sub-classification; ALEXEIEFF Bul. soc. zool. **37** pp. 55–74 7 text-figs.—Further notes on: ib. T.c. pp. 149–157. —*A. diploidea*, Hartm. & Nägl., this form regarded as quite distinct from *Sappinia* Dang.; CHATTON Bul. Soc. Zool. **37** p. 113. —On the other hand it is maintained that it is a *Sappinia*; cytology compared; ALEXEIEFF T.c. pp. 157–168 3 text-figs.—*A. mira* **sp. n.**, Kernteilung Encystierung und Reifung; GLÄSER Arch. Protistenkunde **27** pp. 172–194 pls. vii & viii.—*A. proteus*, experimentelle Untersuchungen; GRUBER Munchen SitzBer. Ges. Morph. **27** pp. 1–15.—*A. punctata* p. 33 text-fig. 5, *chattoni* p. 45 pl. iv figs. 1–19, *paradoxa* p. 46 pl. iv figs. 20–30 **spp. n.**, account of; DANGEARD le Botaniste **11**.—*A. punctata* Dangeard, stade flagellé; ALEXEIEFF C. R. soc. biol. **72** pp. 126–128.—*A. quadrilineata* Carter, excretory system, systematic distinction from *verrucosa*; HOFENEDER Arch. Protistenkunde **27** pp. 255–259 7 text-figs.—*A. tachypodia* p. 64 pl. v, *lamellipodia* p. 76 pls. vi & vii, *platypodia* p. 91 pl. viii **spp. n.**, description with special reference to the cytology of division; GLÄSER Arch. Protistenk. **25**.—*A. terricola* (incl. *similis* and *papyracea*), *fibrillosa*, *alba* and *sphaeronucleolus*, morphology and biology compared; PENARD Arch. Protistenkunde **28** pp. 78–140 59 text-figs.

Chlamydamoeba **gen. n.** perhaps allied to *Trichosphaerium*, *tentaculifera* **sp. n.** remarkable morphological characters described; COLLIN Arch. Zool. (sér. 5) **10** N. et R. pl. lxxxviii–xcv 2 text-figs.

Corycia radiata **sp. n.**, occurrence and diagnosis; BROWN Scottish Nat. **1912** p. 109 pl. v. figs. 1–4.

Dactylosphaerium vorax **sp. n.** from *Nicoria trijuga*, notes on morphology; ALEXEIEFF Zool. Anz. **40** p. 102 text-figs. 2 (p. p.) & 3.

Dictamyxa trinchesei Montic., a Reticulose Rhizopod, structure and development; SCHEPOTIEFF Zool. Jahrb. Suppl. **15** i pp. 218–224 pl. x figs. 1–30.

Difflugia leidyi **sp. n.**, *New Jersey*; WAILES J. Linn. Soc. Zool. **32** p. 132 pl. xii figs. 4 & 5.—*D. torquata* **sp. n.**, neighbourhood of Geneva p. 22 pl. ii figs. 18 & 19, *pyriformis* var. *crassa* (=*D crassa* Cash) notes on, p. 14 pl. i figs. 9–15; PENARD Rev. suisse Zool. **20**.

Di- and *Trimastigamoeba*, these types regarded as probably only phases in the life-cycle of Amoebae of the *limax*-group; ALEXEIEFF Bul. Soc. Zool. **37** pp. 152–156 1 text-fig.

Entamoebae from dysentery, cultivation, morphology, different phases; WELLS Sci. Mem. Med. Ind. *No.* **52** pp. 29–44 pls. i–iii.—*E. anlastomi* **sp. n.**, occurrence and description; NÖLLER Arch. Protistenk. **24** pp. 195–200 pl. xix.—*E. coli* (including *nipponica*), non-pathogenic and *E. histolytica* (including *tetragena* and perhaps *minuta*), pathogenic, occurrence, detailed morphological comparison; WALKER Philippine J. Sci. Manila **B 6** pp. 259–279 pls. i–v.—*E. coli* Lösch em. Schaudinn, nucleus, multiplication, cyst-formation; HARTMANN & WHITMORE Arch. Protistenkunde **24** pp. 182–194 pls. xvii & xviii. —*E. hartmanni*, *bütschlii* in *Homo*, *pitheci* in *Pithecus satyrus*; **spp. n.**, notes on; PROWAZEK Arch. Protistenk. **26** pp. 243–247 pl. xviii and text-figs.—*E. muris* **sp. n.**, habitat, morphology and movement; RAFF Proc. R. Soc. Vict. N.S. **24** pp. 346–351 pl. lxxi & 2 text-figs.—*E. tetragena* Viereck, cytology, phases in life-cycle; HARTMANN Arch. Protistenkunde **24** pp. 163–181 pls. xv & xvi.—*E. williamsi*, *polecki* **spp. n.** in *Homo*, *Sus*; PROWAZEK Arch. Protistenk. **25** pp. 273–274 text-figs. 1–6.

Euglypha alveolata Duj., gametogony and conjugation; POPOFF Arch. Protistenkunde **25** pp. 8–26 pls. i & ii.—*E. alveolata* var. n. *cirrata* p. 145 pl. xii figs. 25–27, *E. brachiata* var. n. *librata* p. 146 figs. 29 & 30, *E. cristata* var. n. *aciculoris* p. 147 figs. 32 & 33 *E. crenulata* **sp. n.** p. 147 figs. 34–37, var. n. *minor* p. 148 fig. 38, *E. filifera* var. n. *spinosa* p. 149 fig. 39, occurrence and notes; WAILES J. Linn. Soc. Zool. **32**.—*E. denticulata* **sp. n.** occurrence and diagnosis; BROWN Scottish Nat. **1912** p. 111 pl. v figs. 5–11.

Hartmanella **gen. n.** *pro Hartmannia* Alexeieff 1912 praeocc; ALEXEIEFF Bul. Soc. Zool. **37** p. 156.

Hartmannia **gen. n.** type *Amoeba gleichenі* Duj., based on nuclear characters and mode of division; ALEXEIEFF Bul. Soc. Zool. **37** p. 62.—*Hartmannia*,

this generic name praeoce; Chatton T.c. p. 113.

Heleopera nodosa **sp. n.**, p. 142 pl. xii figs. 22–24, *sphagni* var. n. *laevis* p. 143, occurrence and note; Wailes J. Linn. Soc. Zool. **32**.

Hyalodiscus sp., small form parasitic in a *Saprolegnia*, note on; Penard Arch. Protistenk. **28** p. 128 text-figs. 47–50.

Hyalosphenia ovalis **sp. n.**, Dumfries Scotland; Wailes Scottish Nat. **1912** p. 64 1 text-fig.

Lecythium **gen. n.** (near *Lecythium* and *Platoum*) *stercorea* **sp. n.**, described; Dangeard le Botaniste **11** pp. 109–112 pl. xvi figs. 1–35.

Löschia **gen. n.** proposed for the Entamoeba of dysentery (*E. histolytica* = *tetragena*) and those of other Vertebrates, based on nuclear characters; Chatton & Lalung-Bonnaire Bul. Soc. path. exot. **5** p. 142 pl. ix figs. 11. [This name is ante-dated by *Poneramoeba* Lühe, with which it becomes synonymous.]—*Löschia* sp. et Mycétozoaire (*Dictyostelium mucoroïdes* Brefeld) d'un singe; Chatton Bul. soc. path. exot. **5** pp. 180–183 pl. x figs. 1–5.

Malpighiella sps. n. from *Hirudo*, note on nuclear characters; Alexeieff Bul. Soc. Zool. **37** p. 68.

Mitrarium **gen. n.**, *dangeardi* **sp. n.** parasitic in "*Blastocystis*" cysts, regarded as a Proteomyxan, description; Alexeieff Zool. Anz. **40** p. 100 text-fig. 2 ii–iv.

Naegleria **gen. n.** type *Amoeba limax* Duj. emend Vahlkampf based on nuclear characters and mode of division; Alexeieff Bul. Soc. Zool. **37** p. 59 text-figs. 1 & 2.—*Naegleria* ante-dated by *Vahlkampfia*, of which, therefore, it becomes a synonym; Chatton T.c. p. 111.

Nebela americana var. n. *falcata* p. 135, *N. costata* **sp. n.** p. 136 pl. xii figs. 8 & 9, *dentistoma* var. n. *lacustris* p. 137 fig. 10, *N. scwellata* pp. 139, 158 figs. 11 12 & 13, *tropica* pp. 140, 158 figs. 13 14 & 11 **spp. n.**, *gracilis* var. n. *stomata* p. 157 figs. 41 & 42, *lageniformis* var. n. *minor* p. 157, occurrence and notes; Wailes J. Linn. Soc. Zool. **32**.

Paramoeba ("*Amoeba*") *pigmentifera* and *chaetognathi* (Grassi), nuclear character of "Nebenkern," life-cycle; Janicki Zs. wiss. Zool. **103** pp. 449–518 pls. vi–ix, also in Verh. Natf. Ges. Basel **23** pp. 6–21 7 figs.

Parmulina bracei **sp. n.**, Gough Island South Atlantic, diagnosed; Penard Proc. R. Physic. Soc. Edinburgh **18** pp. 245–247 1 text-figs; also in Rep. Sci. Res. Voyage "Scotia" Vol. **6** Zool. Pt. 10 pp. 268 & 269 1 text-figs.

Pelomyxa corax **sp. n.**, diagnosed; Dangeard le Botaniste **11** p. 51 pl. v figs. 1–5.

Placocysta spinosa var. n. *setigera*, New Jersey; Wailes J. Linn. Soc. Zool. **32** p. 150 pl. xii fig. 40.

[*Poneramoeba* Lühe 1908, *vide* Zool. Rec. 1909 *Protozoa* No. 312, *non Proteamoeba* Alex., *non Löschia* Chatt. is the correct generic name for the dysenteric Amoeba, if removed from *Entamoeba*. Rec.]

Pontomyxa flava Tops., a Reticulose form, notes on; Schepotieff Zool. Jahrb. Suppl. **15** i p. 233 pl. xi figs. 37–61.

Proctamoeba **gen. n.** type *Entamoeba muris* rGassi for the *Entamoebae* of Vertebrates (leaving *E. blattae* as the type sp. of *E.*), based on nuclear characters and mode of division p. 70 figs. 5–7, *P. salpae* **sp. n.**, note on p. 66 fig. 5 iii–v; Alexeieff Bul. Soc. Zool. **37**.—*Proctamoeba* antedated by *Löschia* (q.v.), of which it becomes a synonym; Chatton T.c. p. iii.

Quadrula symmetrica var. n. *curvata*, occurrence and note; Wailes J. Linn. Soc. Zool. **32** p. 142 pl. xii fig. 21.

Rhizoplasma kaiseri Verw., Reticulosa, general account; Schepotieff Zool. Jahrb. Suppl. **15** i pp. 224–227 pl. x figs. 31–41.

Urbanella **gen. n.** *napolitana* **sp. n.** Rhizopoda, allied to *Chlamydomyxa* and perhaps to Mycetozoa described; Schepotieff T.c. pp. 227–233 pl. xi figs. 1–36.

Vahlkampfia **gen. n.** type *Amoeba punctata* for *Amoebae* of the *limax*-type; nuclear characteristics; Chatton & Lalung-Bonnaire Bul. Soc. path. exot. **5** pp. 135–141 pl. ix figs. 1–13.—*V. limax* (Duj. emend. Vahlk.) *non V. vahlkampfi* retained as the correct name for the "*limax*-Amoeba" type species [this is certainly the correct view];

ALEXEIEFF Bul. Soc. Zool. **37** p. 150.—*V.* as a genus perhaps only a synonym of *Dimastigamoeba* (q.v.); its T.c. pp. 152–156 1 fig.

Vampyrellidium vagans, Organismus und Lebensweise; ENTZ. Math. és Termt. Ert. **30** pp. 130–140 Taf. IV.

(b) Foraminifera.

†Foraminifera, Pliocene and Pleistocene, southern California; BAGG Washington Dept. Int. Bull. U. S. Geol. Surv. No. **513** pp. 1–153 pls. i–xxviii.

†Foraminifera, Tertiary Limestones, King Island (Bass Straits); CHAPMAN Mem. Nat. Mus. Melbourne No. **4** pp. 42 and 43 with figs.

†Foraminifera Eocene and Miocene, I'le Nias (Sumatra); DOUVILLÉ Samml. geol. Reichsmus (Ser. 1) **8** pp. 253–278 pls. xix–xxi.

†Foraminifera der roten Tone von Barwinek und Komarnók; NOTH Beitr. Pal. Geol. OestUng. **25** pp. 1–24 1 pl.

Foraminifera des Cyrenenmergels und des Hydrobientones des Mainzer Beckens; PAALZOW Offenbach Ber. Ver. Natk. **51–53** pp. 59–74 2 Taf.

†Foraminifera, Cretaceous, contrada Calcasacco (Termini-Imerese); SILVESTRI Palaeontogr. ital. **18** pp. 29–56 pls. vi & vii & 8 text-figs.

Zur Systematik adriatischer Nubeculariden, Spiroloculinen, Miliolinen und Biloculinen; WIESNER Arch. Protistenkunde **25** pp. 201–239.

†*Ammodiscus karpathicus* **sp. n.** rote Ton Galizien; NOTH Beitr. Pal. geol. OestUng. **25** p. 12 pl. i fig. 11.

Ammosphaerulina **gen. n.** (near *Psammosphaera*) p. 228, *adhaerens* **sp. n.** p. 229, pl. 28, figs. 11–12, Philippine Is. etc.; CUSHMAN Proc. U. S. Nation. Mus. **42.**

†*Assilina orientalis* **sp. n.** Eocene Nias, Sumatra; DOUVILLÉ Samml. Geol. Reichsmus. (Ser. 1) **8** p. 263 pl. xix figs. 6–9.

†*Cornuspira conica* **sp. n.** Cerithiensand, Deutschl.; PAALZOW Ber. Ver. Natk. Offenbach **51–53** p. 64 figs.

†*Coskinolina liburnica* Stache, Beschreibung und Beziehungen zu den *Dictyoconinae*; SCHUBERT Jahrb. geol. Reichsanst. **62** pp. 195–208 pl. x figs. 1–9.

†*Cristellaria galea* (prob. syn. *C. cornucopia*) Pliocene, notes on; FORNASINI Riv. ital. pal. **17** pp. 78–80 1 text-fig.

Dendrophyra ramosa **sp. n.** p. 227, pl. 28, figs. 7 & 8, Philippine Is. etc.; CUSHMAN Proc. U. S. Nation. Mus. **42.**

†*Dictyoconinae* **nom. n.** for *Lituonella*. *Coskinolina-Dictyoconus* forms; SCHUBERT Jahrb. geol. Reichsanst. **62** p. 207.

†*Endothyra barwinekensis* **sp. n.** rote Ton Galizien; NOTH Beitr. Pal. geol. OestUng. **25** p. 16 pl. i fig 2.

†*Eozoon canadense* regarded as a Perforate colonial Foraminiferan, allied to *Nummulitidae*, morphology described and compared with *Stromatopora*, *E. vesuvii* **sp. n.** p. 452; KIRKPATRICK Ann. Mag. Nat. Hist. Ser. 8 **10** pls. viii, ix & xii.

Folliculina spirorbis **sp. n.** Norwegian coast, description, pp. 73–79 pl. v; F. spp. varr. notes on, pp. 81–91, 4 text-figs; DONS Arch. Protistenkunde **27.**

†*Fusulinae*, monograph of: Pt. III *F.* from N. America; STAFF Palaeontographica **59** pp. 157–191 6 pls.—*F. secalis* varr. n. *medialis* p. 175 Kansas, *irregularis* p. 178 Texas, *F. exigua* p. 179 *ellipsoidalis* p. 181 Iowa **spp. n.**, *F. verneuili* var. n. *sapperi* p. 181 Guatemala, *F. extensa* var. n. *californica* p. 183 California; STAFF T.c.

†*Girtyina schellwieni* **sp. n.** Donetzrevier; STAFF Palaeontogr. **59** p. 165.

Haliphysema catenulata **sp. n.** p. 228, pl. 28, figs. 5 & 6, Philippine Is. etc.; CUSHMAN Proc. U. S. Nation. Mus. **42.**

Hormosina monile **sp. n.** p. 229, pl. 28, figs. 9 & 10, Philippine Is. etc.; CUSHMAN, T.c.

Lagenae, S.W. Pacific, notes and figures, pp. 379–428 pls. xiv–xxi; *L. globosa* varr. n. *maculata* pl. xiv figs. 10, 11, *annulata* fig. 12, p. 380, *apiculata* var. n. *punctulata* p. 382 pl. xiv figs. 21–23, *botelliformis* (?) var. n. *rugosa* p. 383 pl. xiv fig. 30, *hispida* var. n. *tubulata* p. 385 pl. xv figs. 3–5, *striata* var. n. *striatotubulata* p. 387 pl. xv figs. 11 & 12, *thornhilli* **sp. n.** p. 390 pl. xv fig. 26, *stelligera* var. n. *eccentrica* p.

392 pl. xvi figs. 5, 6, *striatopunctata* varr. n. *complexa* pl. xvi fig. 11, *inaequalis* fig. 12 p. 393, *fusiformis* fig. 13, *spiralis* fig. 14 p. 394, *foveolata* varr. n. *spinipes* pl. xvi figs. 18–21, *paradoxa* figs. 22, 23 p. 395, *lamellata* **sp. n.** p. 396 pl. xvi figs. 24, 25, *hertwigiana* var. n. *undulata* p. 397 pl. xvi figs. 26–28, *pacifica* p. 398 pl. xvi fig. 29, *intermedia* p. 399 pl. xvii figs. 1–3, **spp. n.**, *laevigata*, var. n. *virgulata* p. 400 pl. xvii fig. 8, *acuta* var. n. *virgulata* p. 401 pl. xvii fig. 10, *fasciata* varr. n. *spinosa* p. 402 pl. xvii figs. 16, 17, *carinata* p. 403 fig. 18, *staphyllearia* var. n. *quadricarinata* p. 404 pl. xxi fig. 16, *marginata* varr. n. *umbonata* p. 407 pl. xviii fig. 7, *ravicostata* figs. 8, 9, *striolata* p. 408 figs. 10, 11, *elegans* fig. 12, *armata* fig. 14, *homunculus* fig. 15 p. 409, *orbignyana* varr. n. *coronata* p. 416 pl. vi fig. 15, *stellata* p. 417 pl. xix fig. 19 *curvicostata* fig. 20, *unicostata* fig. 22 *concentrica* fig. 23 p. 417, *bicarinata* var. n. *horrida* p. 419 pl. xx fig. 3, *auriculata* varr. n. *arcuata* p. 421 pl. xx figs. 19, 20, *duplicata* p. 422 pl. xx fig. 23, *fimbriata* var. n. *occlusa* p. 423 pl. xx figs. 27, 28, *alveolata* varr. n. *carinata* p. 424 pl. xxi fig. 3, *separans* p. 425 pl. xxi fig. 5, *clypeato-marginata* var. n. *crassa* p. 425 pl. xxi fig. 7, *magnifica* p. 425 pl. xxi fig. 8, *soleaformis* p. 426 fig. 10, *galeaformis* p. 426 pl. xxi figs. 11, 12, *semicostata* fig. 13, *sacculiformis* fig. 14 p. 427, **spp. n.**, diagnosed; Siddbottom J. Quek. Microsc. Cl. (Ser. 2) **11**.

†*Lagena dentaliformis* p. 45, pl. xiii figs. 1 & 2, *sesquistriata* p. 50, figs. 12–14, **spp. n.**, California, Pliocene; Bagg Bull. U. S. Geol. Surv. **513**.

†*Lepidocyclina formosa* var. *irregularis* var. n. Miocene Borneo; Rutten Samml. Geol. Reichsmus. (Ser. 1) **9** p. 215 pl. xiii figs. 1–4.

†*Lituonella libarnica* **sp. n.**, Eocän Melada, Beschreibung und Beziehungen zu den *Dictyoconinae*; Schubert Jahrb. geol. Reichsanst. **62** pp. 195–208 pl. x figs. 10–13.

Marsipella gigantea **sp. n.** p. 228 pl. 28, figs. 1 & 2, Philippine Is. etc.; Cushman Proc. U. S. Nation. Mus. **42**.— *M. spiralis* **sp. n.**, p. 387 pl. v fig. 7 pl. vi figs. 6 & 7, North Sea, etc., shell-structure, amplification of generic diagnosis; Heron-Allen & Earland J. R. Microsc. Soc. **1912**.

Miliolina milletti p. 220, var. n. *carinata* text-fig. 2, *carinatostriata* p. 221, *rhodiensis* p. 231, *compressa* p. 232 **spp. n.**, *M. seminulum* var. n. *angusteoralis*, *M. peregrina* var. n. *striata* p. 233 Adriatic; Wiesner Arch. Protistenk. **25**.

†*Miogypsina thecideaeformis* syn. *Lepidosemicyclina th.*) p. 204 pl. xii figs. 1–5, *polymorpha* (syn. *L. p.*) p. 207 figs. 6–9, description, *bifida* **sp. n.** p. 209 figs. 10, 11, Tertiary Borneo; Rutten Samml. Geol. Reichsmus. (Ser. 1) **9**.

†*Neofusulinella* **gen. n.** (near *Schwagerina*), Carbonif. East Asia, a new type diagnosed; Deprat C. R. Acad. Sci. **154** p. 1549.

†*Nodosaria decepta* p. 55 pl. xvi fig. 1, *sagrinensis* p. 58 fig. 4, **spp. n.**, California, Pliocene; Bagg Bull. U. S. Geol. Surv. **513**.

†*Nummulites curvispira* Menegh. var. n. *major*, Eocene, Cyrenaica; Chapman Q. J. Geol. Soc. **67** p. 659.— *N.* and *Orthophragmina* spp., Eocene, Java, descriptive notes; Douvillé Samml. geol. Reichsmus. (Ser. 1) **8** pp. 279–294 pls. xxii–xxiv.

†*Orbitoides stella* pp. 670, 682 pl. xv fig. 1, cf. *radians* pp. 671, 682, *taramellii* pp. 672, 682 fig. 2, *multiplicata* pp. 673, 682, *prima* pp. 673, 682 figs. 3–4, *socialis* pp. 675, 682 fig. 5, *caucasica* pp 677, 683 pl. xvi fig. 2, *media* pp. 678, 683 figs. 2–3, *apiculata* pp. 679, 683 pl. xv fig. 7, cf. *schuberti* pp. 680, 683 fig. 8, Beschreibung, *cogdanovici* **sp. n.** pp. 676, 682 pl. xv fig. 6, Mittlerer Eocän von Kachetien (Russ. + rés. franç.); Riabinin (328) Bull. Com. géol. **30**.

†*Orbitolinae* spp. varr., connection between the megalospheric and microspheric forms; Douvillé C. R. Acad. sci. **155** pp. 567–572.

†*Orthophragmina fritschi* **sp. n.** Eocene, Java; Douvillé Samml. Geol. Reichsmus. (Ser. 1) **8** p. 288 pl. xxiv fig. 2.—*O. javana* Sumba, notes on megalospheric and microspheric forms; Rutten Proc. Sci. K. Akad. Wet. **15** pp. 463 & 464.

†*Palaeofusulina* **gen. n.**, Lower Carboniferous, Eastern Asia, a new type between *Fusulina* & *Fusulinella*; Deprat C. R. Acad. Sci. **154** p. 1548.

†*Polymorphina trilocularis* **sp. n.** p. 75 pl. xx figs. 15–18, California, Pliocene; BAGG BULL. U. S. Geol. Surv. **513.**

Psammosphaera rustica p. 383 pl. v figs. 3 & 4 pl. vi figs. 2–4, *bowmanni* p. 385 pl. v figs. 5 & 6 pl. vi fig. 5, **spp. n.**, North Sea, description of shell; HERON-ALLEN & EARLAND J. R. Microsc. Soc. **1912**.—*P. rustica* **sp. n.**, H.-A. & E., North Sea, note only; EARLAND J. Quek. Microsc. Cl. (Ser. 2) **11** p. 539.

Reophax horrida **sp. n.** p. 229 pl. 28 figs. 3 & 4, Philippine Is. etc.; CUSHMAN Proc. U. S. Nation. Mus. **42.**

†*R. textularioides* **sp. n.** rote Ton, Galizien; NOTH Beitr. Pal. Geol. Oest-Ung. **25** p. 7 pl. i fig. 5.

†*Rhabdammina scalaria* **sp. n.** rote Ton, Galizien; NOTH T.c. p. 3 pl. i fig. **13.**

Saccammina (spez. *eparata*) Entwickelungsgeschichte; HIRSCH Arch. Protistenkunde **27** pp. 219–254 pls. xii–xiv.

†*Schellwienia* **subgen. n.** for *Fusulina secalis*; STAFF Palaeontograph. **59** p. 165.

Spiroloculina milletti p. 207, *krumbachi* p. 207 text-fig. 1 **spp. n.** Adriatic; WIESNER Arch. Protistenk. **25.**

†*Stromatopora*, regarded as a colonial, Perforate Foraminiferan; structure described and compared with that of *Labechia*, *Eozoon*, etc.; KIRKPATRICK Ann. Mag. Nat. Hist. Ser. 8 **10** pls. viii, ix & xi.

Tinoporus baculatus Carp., Faica, Wallis Isles, note on; GRAVIER Bul. Museum **1912** pp. 33 & 34.

†*Trochammina deflexiformis* **sp. n.** rote Ton, Galizien; NOTH Beitr. Pal. Geol. OestUng. **25** p. 14 pl. i fig. 10.

†*Truncatulina spandeliana* **sp. n.** Cyrenenmergel, Deutschl.; PAALZOW Ber. Ver. Natk. Offenbach **51–53** p. 70 figs.

(c) Heliozoa (Vacant).

(d) Radiolaria.

Sphaerellaria. D. Südpolar-Exped. (Warmwassergebiet), Systematik, Phylogenie, Diagnosen von Formen; POPOFSKY D. Südpolar-Exped. 1901–1903 Bd. **13** Zool. 5 pp. 73–159 pls. i–viii 77 text-figs.

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Zur Entwicklungsgeschichte der Thalassicollen; HUTH Diss. München 1912 37 pp.

Acanthosphaera pentagonalis text-fig 8, *marginata* pl. i fig. 2 p. 96, *circopora* p. 97 text-fig. 9 **spp. n.**; POPOFSKY D. Südpolar Exped. 1901–1903 Bd **13** Zool. **5.**

Actinomma gigantea p. 102 pl. v fig. 1, *brevispiculum* p. 103 pl. ii fig. 3 **spp. n.**; POPOFSKY T.c.

Amphibrachium monstrosum **sp. n.**; POPOFSKY T.c. p. 135 pl. iv fig. 2.

Amphicraspedum anomalum **sp. n.**; POPOFSKY T.c. p. 136 pl. iii fig. 4.

Amphipyle aspera p. 148 text-figs. 67, 68, *horrida* p. 149 fig. 69 **spp. n.**; POPOFSKY T.c.

Arachnosphaera hexasphaera **sp. n.**; POPOFSKY T.c. p. 108 text-figs. 19–21.

Astrosphaera arborescens **sp. n.**; POPOFSKY T.c. p. 106 text-figs. 17 & 18.

Centracontium **gen. n.** (*Cubosphaeridae* near *Hexacontarium*), *hexacontarium* **sp. n.**; POPOFSKY T.c. pp. 89, 90 text-fig. 4.

Centroloncha **gen. n.** (*Cubosphaeridae* near *Hexaloncha*), *hexaloncha* **sp. n.**; POPOFSKY T.c. p. 89 pl. i fig. 1.

Cladococcus irregularis p. 99 pl. iii fig. 2, *erinaceus* p. 100 text-fig. 12 **spp. n.** Indian, Atlantic, *C. pinetum* var. n. *octacantha* p. 99 text-fig. 11; POPOFSKY T.c.

Cristallosphaera **gen. n.** (*Cristallosphaeridae*), *cristalloides* **sp. n.**; POPOFSKY T.c. p. 155 text-fig. 77.

Cristallosphaeridae **fam. n.** (allied to Spumellaria), diagnosed; POPOFSKY T.c. pp. 154–155.

Cyrtesis cingulata **sp. n.**; POPOFSKY T.c. p. 121 pl. vii fig. 1.

Cyphonium monozonium **sp. n.**; POPOFSKY T.c. p. 118 text-fig. 29.

Disponga **gen. n.** (*Astrosphaeridae*), *ovata* **sp. n.**; POPOFSKY T.c. p. 113 pl. i figs. 4 & 5.

Druppatractus irregularis **sp. n.**; POPOFSKY T.c. p. 114 text-figs. 24–26.

Drymosphaera denticulata **sp. n.**; POPOFSKY T.c. p. 105 text-fig. 15.

Elaphococcus gaussi **sp. n.**; POPOFSKY T.c. p. 100 pl. vi fig. 1.

b 1—2

Euchitonia acquipondata **sp. n.**; Popofsky T.c. p. 139 pl. vii figs. 3 & 4.

Haliomma acanthophora **sp. n.**; Popofsky T.c. p. 101 text-fig. 13.

Heliosphaera radiata **sp. n.**; Popofsky T.c. p. 98 text-fig. 10.

Hexaloncha heteracantha **sp. n.**; Popofsky D. Südpol.-Exp. Bd **13** Zool. 5 p. 88 text-fig. 3.

Histiastrum quadratum **sp. n.**; Popofsky T.c. p. 141 pl. vi fig. 4 text-fig. 59.

Leptosphaera minuta **sp. n.**; Popofsky T.c. p. 104 text-fig. 14.

Monazonium **gen. n.** (*Zygartidae*) p. 125, *perforatum* **sp. n.** p. 126 pl. vi fig. 3; Popofsky T.c.

Monozonium pachystylum **sp. n.**; Popofsky T.c. p. 146 text-figs. 65 & 66.

Ommatodiscus anacanthus **sp. n.**; Popofsky T.c. p. 128 pl. v fig. 2.

Peripanartus irregularis p. 121 text-fig. 38, *pachystylus* p. 123 pl. viii fig. 1 **spp. n.**; Popofsky T.c.

Rhizosphaera paradoxa **sp. n.**; Popofsky T.c. p. 111 pl. viii fig. 3.

"*Sethocephalus cuccoryphalus*" of Haeckel, not a Radiolarian at all, but a Tintinnid (*Cyttarocylis*); Kofoid Univ. Cal. Publ. Zool. **9** pp. 353–357.

Sethostaurus parvulus **sp. n.**; Popofsky D. Südpolar Exped. 1901–1903 Bd **13** Zool. **5** p. 127 text-fig. 42.

Spironium cochlearium **sp. n.**; Popofsky T.c. p. 153 text-fig. 74.

Spongocore polyacantha **sp. n.**; Popofsky T.c. p. 116 text-fig. 27.

Spongolira ellipsoides **sp. n.**; Popofsky T.c. p. 117 text-fig. 28.

Stylacontarium **gen. n.** (*Cubosphaeridae*, near *Hexacontarium*) *bispiculum* **sp. n.**; Popofsky T.c. p. 91 pl. ii fig. 2.

Stylodictya polygonia **sp. n.**; Popofsky T.c. p. 132 pl. v fig. 3.

Tetrasphaera **gen. n.** (*Astrosphaeridae*, near *Rhizosphaera*) p. 111 *ejongiosa* **sp. n.** p. 112 text-fig. 23; Popofsky T.c.

Trilobatum **gen. n.** (*Porodiscidae*), *acuferum* p. 132 text-fig. 48, *tribracchium* p. 133 fig. 49 **spp. n.**; Popofsky T.c.

3. SPOROZOA.

(a) Gregarinidea.

The Gregarines, general account; Schellack *In*: Handbuch der pathogenen Protozoen hrsg. v. S. v. Prowazek Lfg. **4** 1912 pp. 487–516 2 pls.

Gregarinida, Einfluss von Induktionsströmen auf die Bewegung (Russ.-deutsch. Rés.); Sokoloff St. Peterburg Trav. Soc. nat. C.r. **43** 1 pp. 28–39, 41 text-figs. 1–2.

Agrippina **gen. n.** (*Agrippinidae* **fam. n.**) *bona* sp. n., occurrence, phases in life-history, classification; Strickland Parasitol. **5** pp. 97–108 pl. iv & 33 text-figs. also (prel. note) in Proc. phil. Soc. Cambridge **16** p. 460.

Cephaloidophora talitri **sp. n.**, note on young, intracellular phase; Mercier C. R. soc. biol. **72** pp. 38 & 39 1 text-fig.

Diplocystis phryganeae **sp. n.**, occurrence and details of nuclear structure; Berg-von-Embt Arch. Protistenkunde **28** pp. 43–51 pl. v.

Gregarina guatemalensis **sp. n.**, occurrence and diagnosis; Ellis Zool. Anz. **39** p. 687 text-fig. 6.

Gonospora mercieri **sp. n.** (*Lithocystis milleri* nom. nud.), notes on adults and sporocysts; Cuénot Bull. station biol. Arcachon **14** pp. 88–90 text-figs. 15–17.

Lithocystis schneideri Giard, note on; Cuénot T.c. p. 52.

Porospora naraisi p. 399 text-fig. 1, *pisas* p. 403 fig. 2 **spp. n.** from Decapods; Léger & Duboscq Ann. Univ. Grenoble **23**.

Pyxinioides **gen. n.** (perhaps allied to *Actinocephalidae*), *balani* **sp. n.** young trophic phases described, pp. lvi–lvii text-fig. 2, *P.* (*Frenzelina*) *ethamali* compared pp. lvii–lx; Trégouboff Arch. Zool. (Sér. 5) **10** N. et R.

Rhytidocystis henneguyi **sp. n.**, account of life-cycle with apparently agamic spore-formation; de Beauchamp C. R. Acad. Sci. **154** pp. 1381 & 1385.

Steinina rotundata **sp. n.**, from bird-fleas, trophic phases and spores described; Ashworth & Rettie Proc. R. Soc. B **86** pp. 31–38 pl. i.

Stenophora cockerellae p. 681 text-figs 1–3, *elongata* p. 685 fig. 4 **spp. n.**, occurrence and diagnosis; Ellis Zool.

Anz. **39**.—*S. robusta* **sp. n.**, in Diplopoda, characters of adult; ELLIS Zool. Anz. **40** pp. 8–10 2 text-figs.

Stephanophora (?) *crassa* **sp. n.**, occurrence and diagnosis; ELLIS Zool. Anz. **39** p. 688 text-fig 7.

Stylocephalidae **fam. n.**, for *Stylorhynchidae* A. Schn.); ELLIS T.c. p. 25.

Stylocephalus **gen. n.** (for *Stylorhynchus* Stein praecoce,) *gigantaus* **sp. n.** occurrence and diagnosis; ELLIS T.c. pp. 25–27 2 text-figs.—*S. ensiferus* **sp. n.** occurrence and diagnosis; ELLIS T.c. p. 686 text-fig. 5.

Uradiophora **gen. n.** for *Cephaloidophora cuenoti* Mercier 1911 characterized; MERCIER Arch. Zool. (Ser. 5) **9** N. et R. pp. xli–xlvi.—*U.* c. full account of life-cycle; MERCIER Arch. zool. (sér. 5) **10** pp. 177–202 pls. xiii & xiv.

Urospora synaptae, notes on life-history; CRÉNOT Bull. station biol. Arcachon **14** pp. 85–88 text-fig. 14.

(b) Coccidiidea.

Coccidia spp. var. (*Barrouxia, Adelea Coccidium*), comparative notes on; SCHELLACK, Verh. D. zool. Ges. **22** pp. 163–179 16 text-figs.

Adelina sp. (similar to *dimidiata*), oocysts and sporocysts in intestine of *Scincus* (entomophagous); CHATTON Bul. Soc. Zool. **37** p. 9 text-figs. 2 & 3.

Chagasella **nom. nov.** *pro Chagasia* Léger 1911 praecoce. MACHADO Bul. soc. path. exot. **4** p. 616.

Coccidium cerastis **sp. n.** note on oocysts and spores; CHATTON Bul. Soc. Zool. **37** p. 8 fig. 1. *C. cuniculi* ("*Eimeria*" *stiedae*), historical synonymy, life-cycle; REICH Arch. Protistenk. **28** pp. 1–42 pls. i–iv 18 text-figs.

Cryptosporidium parvum **sp. n.** occurrence and life-cycle; distinctions from *C. muris*; TYZZER Arch. Protistenk. **26** pp. 394–404 pls. xxii & xxiii.

Pfeifferinella **gen. n.** *ellipsoides* **sp. n.** WASIELEWSKI 1901 [Vide Zool. Rec. 1905 *Protozoa* (500)], from *Planorbis* with single octozoic spore, *P. impudica* **sp. n.** remarkable peculiarity in sexual cycle described, placed in fam. *Cargosporidae*; LÉGER & HOLLANDE Arch. Zool. (ser. 5) **9** N. et R. pp. i–viii 7 text-figs.

Allied to Coccidia:—*Pneumocystis* **gen. n.**, *carinii* **sp. n.** for the "cysts of Carini," regarded as a parasite of Coccidian type; DELANOË C. R. Acad. Sci. **155** pp. 658–660.

(c) Haemosporidia.

Blood-parasites of the mole, notes on; WERBLEWSKI Centralbl. Bakt. Abth. 1 **62** Orig. pp. 140–143 1 pl.

Dounia **nom. nov.** proposed for *Smithia* França 1909, praecoce; STRAND Centralbl. Bakt. Abt. 1 **62** Orig. p. 471.

Elleipsisoma **gen. n.** *thomsoni* **sp. n.** intracorpuscular in moles, morphology; FRANÇA Arch. R. Inst. Bact. **3** pp. 273–276 pl. vii figs. 4–15.

Haemogregarina ameivae **sp. n.** p. 592 text figs. 1–4; CARINI & RUDOLFI Bull. Soc path. exot. **5**.—*H. amethystina, morceliae, shattocki & pococki* regarded as identical and synonymous with *H. pythonis* (Billet); JOHNSTON Proc. R. Soc. Queensland **23** p. 235.—*H. anarrhichadis* **sp. n.** morphology of different forms, comparision with *H. rovignensis*; HENRY Parasitol. **5** pp. 190–196 pl. viii.—*H. drymobii* **sp. n.** different forms and stages of multiplication; MARULLAZ C. R. soc. biol. **73** pp. 518–520 6 text-figs.—*H. iguanae* **sp. n.** habitat and notes; LAVERAN & NATTAN-LARRIER C. R. soc. biol. **72** pp. 104–107 1 text-fig.—*H. serpentium* Nicolle, from *Gongylus ocellatus* observations; VIQUIER & WEBER, Alger Bul. soc. sci. nat. **4** pp. 170–171 with text-figs.—*H. simondi* "infective granules" in connection with life-cycle; HENRY Brit. Med. J. **1912** ii (1654 & 1655) 8 text-figs.—*H. terzii* Samb. & Selig., different forms and multiplicative phases; MARULLAZ C. R. soc. biol **72** pp. 102–104.—*H. testudinis* **sp. n.** morphology and schizogonic forms; LAVERAN & NATTAN-LARRIER, C. R. soc. biol. **72** pp. 134–136 10 figs.—*H. tiliquae* p. 484 pl. xv figs. 6–15, *H.* (*Karyolysus*) *lancrofti* p. 486 figs. 16–24, *H.* (*K.*) *gouldii* p. 488 pl. xvi figs. 1–10, hosts and descriptive notes; JOHNSTON & CLELAND Proc. Linn. Soc. N.S.W. **36**.—*H. trionyxis* **sp. n.** note on, and multiplication; THIROUX Bul. Soc. path. exot. **4** pp. 522 & 523 6 text-figs.—*H.* [*Karyolysus*] *weissi* **sp. n.**, from *Naja haje*, described; CONOR C. R. soc. biol. **72** pp. 374–376 7 text figs.—*H.* sp. n. aus *Gobius capito* pp. 15–21 pl. i figs. 1–5,

vladimirovi aus *Gobius cruentatus* pp. 21–23 pl. ii figs. 1–5, *bartschi* aus *Gobius auratus* pp. 23–24 pl. ii figs. 6–8, *marzinowski* aus *Gobio lozo* pp. 24–26 pl. ii figs. 9–10, *lo bianci* aus *Torpedo marmoratus* p. 26 pl. ii fig. 16, *londoni* aus *Blennius trigloides* pp. 26–27 pl. i figs. 16–18 **spp. nn.**, *clavata* aus *Solea lutea* pp. 27–28 pl. ii f. 11–15, Neapler Bucht, Morphologie, Entwicklung (Russ.); YAKIMOFF & KOHL-YAKIMOFF Jurjev Zeitschr. wiss. u. prakt. Veter. med. **6**.

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Hepatozoon (*Haemogregarina*) [*non Leucocytogregarina*, antedated] *canis*, *muris* Tunis, Bau &c. (Russ.); YAKIMOFF & KOHL-YAKIMOFF Arch. vet. nauk **41** pp. 1401–1412 pl. i figs. 1–7.—*H.* (*Hg.*) *chattoni* **sp. n.**, in mononuclears of *Hyaena crocuta*; LÉGER C. R. Soc. biol. **72** pp. 1062–1064.—*H. ericeti* **sp. n.**, occurrence and phases of life-cycle; NÖLLER Arch. Protistenk. **25** pp. 382–384 text-figs. 2–4.—*H. muscoli*, life-cycle described; SANGIORGI Centralbl. Bakt. Abt. 1 **36** Orig. pp. 287–293 1 pl.; also in Giorn. Acc. Med. Torino **75** pp. 121–130.

Halteridium fringillinarum and *noctuae*, elucidation of nuclear structure; explanation of apparent binucleate condition; WOODCOCK Q. J. Microsc. Sci. **58** pp. 215–231 pl. x *p.p.*—*H.* (*Haemoproteus*) *cajali* **sp. n.**, morphology of a parasite from an African tortoise, considered to belong to this Avian genus; PITTALUGA Centralbl. Bakt. Abt. 1 **63** Orig. pp. 211–213 1 pl.—*H.* ("*Haemamoeba*") *queleae* **sp. n.** note on peculiar phase regarded as binary fission; MARULLAZ C. R. soc. biol. **72** pp. 324–326 13 figs.—*H.* and *Haemoproteus*, general account; PROWAZEK In: Handbuch der pathogenen Protozoen, hrsg. v. Prowazek Lfg. **1** pp. 568–588 1 pl.

Karyolysus lacertae, life-cycle including conjugation and oökinete formation in a Gamasid mite; REICHENOW Berlin SitzBer. Ges. natf. Freunde **1912** pp. 468–476 pl. xix.—*K. lacertae*, nuclear structure described and compared with that of other Haemogregarines; the question of the true distinctness of the other alleged species of *K.* described from *Lacerta* spp.; WOODCOCK Q. J. Microsc. Sci. **58** pp. 171–214 pl. ix.—*K.* spp. (Haemogregarines) of *Lacerta* spp. question of independence or otherwise, *vide* also MANCEAUX Bul. Soc. path. exot. **5** pp. 347–349 and FRANÇA Bul. Soc. Portug. Sci. nat. **6** pp. 48–55.

Lankesterella minima Chauss. (= *L. ranarum* Lank), new type of schizogony described; NÖLLER Arch. Protistenkunde **24** pp. 201–208 pl. xx.

Leucocytozoon bouffardi **sp. n.**, occurrence and note; LÉGER & BLANCHARD Bul. soc. path. exot **4** p. 527.—*L. canis*, phases of life-cycle in the tick; CHRISTOPHERS Parasitol. **5** pp. 37–44 1 diagram.—*L. cambouraci* p. 86, *mirandae* p. 175, *scabrae* p. 176 **spp. n.**, hosts and notes on; FRANÇA Bul. soc. path. exot. **5**. [It is very doubtful how far these are distinct species; *mirandae*, for instance, most probably = *fringillinarum mihi*, from the same host. Rec.]—*L. lavierani* p. 18, *mathisi* p. 19, *legeri* p. 20 **spp. n.** from various Portuguese birds, notes on; FRANÇA Bul. soc. path. exot. **5**.—*L. schüffneri*, prov. n. sp. for a form from fowls (Sumatra); PROWAZEK Arch. Protistenk **26** p. 263.—*L. struthionis* **sp. n.**; WALKER Zs. infekt. Krankh. Hausthiere **12** pp. 373–375 pl. xii.—*L. ziemanni*, account of the nuclear structure and comparison with that of certain Coccidia; WOODCOCK Q. J. Microsc. Sci. **58** pp. 215–231 pl. x *p.p.*—*L.* (of fowls) regarded as connected with *Trypanosoma*; PROWAZEK Centralbl. Bakt. Abt. 1 Orig. pp. 269–283 2 pls.—*Lx.*, sp. different forms (or species ?) in rounded and elongated host-cells respectively, of *Melierax*, notes on; LÉGER & HUSNOT Bul. soc. path. exot. **5** pp. 74–77.—*Lx.*, should different types (genera ?) be distinguished according to kind of host-cell invaded? MATHIS & LÉGER Bul. soc. path. exot. **5** pp. 77–82.

Malariaparasiten. a) Die menschlichen Malariaparasiten; RUGE In: Handbuch der pathogenen Mikroorganismen, hrsg. v. Kolle und Wassermann. Bd **7** pp. 167–320 3 pls.—Malaria Parasiten; Parthenogenese von Makrogameten und geisseltragenden Parasiten im Blut bei Malaria

tertiana (Holländisch); NEER Geneesk. Tijdschr. Ned. Ind. **52** pp. 1-10 1 pl.

Nuttallia equi, behaviour, multiplication, etc., in blood, comparison with *Piroplasma caballi*; NUTTALL & STRICKLAND Parasitol. **5** pp. 67-76 pl. iii diagr. 1-6.

Plasmodium achromaticum **sp. n.** from bats, described [doubtful whether really distinct from *Achromaticus vesperuginis*]; YAKIMOFF, STOLNIKOFF & KOHL-YAKIMOFF Centralbl. Bakt. Abt. I **62** Orig. pp. 283-287 1 pl.—*P.* (?) *columbae* **sp. n.**, a new form of intracellular parasite, not showing the sexual differentiation of *Halteridium*; CARINI C. R. Soc. biol. **73** pp. 396-398 5 text-figs.—*P.* sp. in *Cercopithecus*, described; MARTOGLIO, STELLA & CARPANO Ann. Igiene Roma N.S. **20** pp. 288-300 1 pl.—"*Plasmodium*" *minasense* **sp. n.** from a lizard, p. 593, 5 text-figs., CARINI & RUDOLPHI Bul. soc. path. exot. 5.

Proteosoma (*Plasmodium*) *praecox*, of Avian malaria, description of different phases, behaviour of "Binnenkörper"; ALTEN Centralbl. Bakt. Abt. I **63** Orig. pp. 228-241 1 pl.—*Proteosoma* (*Plasmodium*) *praecox*, general account; PROWAZEK [In: Handbuch der pathogenen Protozoen hrsg. v. Prowazek Bd **2** Lfg 1 pp. 589-601.—*P.* spp. [probably new] ("*Haemamoeba relictae*"), occurrence and note; MARULLAZ C. R. soc. biol. pp. 526-528.

Piroplasmata, general account; OLLWIG & MANTEUFEL [In: Handbuch der pathogenen Protozoen hrsg. v. S. v. Prowazek. Lfg 1 pp. 517-567 5 Taf.—*Piroplasma canis*, phases of development in the tick; CHRISTOPHERS Parasitol. **5** pp. 44-48 1 diagram.—*P.* e., Bau und Vermehrung; SCHUBERG & REICHENOW; Arb. Gesundhtsamt **38** pp. 415-434 pl. ii.—*P. caballi*, behaviour and multiplication in blood; NUTTALL & STRICKLAND Parasitol. **5** pp. 77-80 diagr. 7 & 8.—*P. motans* bei javanischen Büffeln (Holländisch); DE BLIECK & KALIS Vecarts. Med. **5** No. 5 pp. 1-21.—*P.* der Giraffen, Teilung, Kern (Russ.); AVERINTZEFF Bull. Ac. sc. **1912** pp. 237-241 text-figs. 1-23.

Rossiella **gen. n.** *rossi* (Nuttall 1910) an intracorpuscular parasite allied to *Piroplasma*; NUTTALL Parasitol. **5** pp. 61-64.

Theileria diagnosis of the genus, comparison with *Nuttallia* pp. 171 & 172, *T. stordi* **sp. n.** in *Gazella*, notes on, pp. 172 & 173; FRANCA Centralbl. Bakt. Abth. I **67** Orig.

(d) Myxosporidia (including Microsporidia).

Cnidosporidia (Myxo- and Microsporidia). General account; In: Handbuch der pathogenen Protozoen hrsg. v. S. v. Prowazek Lfg 3 pp. 321-344.

Myxosporidia of Italian fish, hosts and notes on; PARISI Milano Atti Soc. ital. sc. nat. **50** pp. 283-299 11 figs.

Chloromyxum thymalli **sp. n.**, occurrence and description; LEBZELTER Zool. Anz. **40** p. 295.

Coccomyxoides **gen. n.** *tincae* **sp. n.** sulle branchie della *Tinca*, descrizione; LO-GIUDICE Rivista mens. Pesca **7** (14) pp. 174-177 1 tav.

Hennegnya gasterostei reni di *Gasterosteus aculeatus*; PARISI Atti Soc. Ital. Sc. nat. **50** p. 296 fig. 10.—*H. neapolitana* **sp. n.** reni di *Box salpa*, PARISI T.c. p. 297 fig. 11.—*H. psorospermica* Thél., account of; AUERBACH Karlsruhe Verh. natw. Ver. **24** pp. 3-28 pls. i & ii.

Lentospora asymmetrica **sp. n.** reni di *Crenilabrus pavo*; PARISI Atti Soc. Ital. Sc. nat. **50** p. 292 text-fig. 7.

Mitraspora **gen. n.** near *Sphaerospora*, *cyprini* **sp. n.**, occurrence and characters of spore; FUJITA Zool. Anz. **39** p. 259 text-fig. 1.

Myxidium bergense, account of life-cycle, comparison with other Myxosporidia; AUERBACH Zool. Jahrb. Abt. f. Syst. **34** pp. 1-50 pls. i-v.—*M. depressum*, **sp. n.** vescica biliare di *Citharus linguatula*, p. 287, fig. 2; *M. oviforme*, **sp. n.** vescica biliare di *Apogon rex-mullorum* e di *Coris julis* p. 287 fig. 3; PARISI Atti Soc. ital. sc. nat. **50**.

Myxobolus ellipsoides, morfologia, biologia; LO-GIUDICE Rivista mens. Pesca **7** 1912 pp. 57-72, 113-128.

Nosema apis, life-cycle, methods of transmission; FANTHAM & PORTER Ann. trop. Med. **6** pp. 163-214 pls. xiv-xvi.—*N. bombycis* Näg., life-cycle, development of spores; OHNORI Arb. Kais. Gesundhtsa. **40** pp. 108-122 pl. ii.—*N. bombycis* di *Sericaria mori*; VERSON Padova

Annuario Staz. bac. **39** 40 pp. 112–143 1 tav.

Sphaerospora acuta p. 260 text-fig. 2, *angulata* p. 261 text-fig. 3, **spp. n.** occurrence and characters of spores; Fujita Zool. Anz. **39**.

Thelohania ovata **sp. n.**, [possibly syn. *T. (Octosporea) muscae-domesticae*] from *Homalomyia*, note on; Dunkerly Centralbl.Bakt. Abth. I **62** pp. 136 & 137 figs. 1–8.

(e) Actinomyxidia.

Tetractinomyxon **gen. n.**, *intermedium* **sp. n.**, occurrence and life-cycle pp. 240–264, pl. x, *T. irregulare* **sp. n.** spores p. 270; Ikeda Arch. Protistenk. **25**.

(f) Sarcosporidia.

Sarcosporidia, general account; Teichmann In: Handbuch der pathogenen Protozoen hrsg. v. S. v. Prowazek. Lfg. 3 pp. 345–360 with text-figs.

Studien über Sarcosporidien; Betegh & Dorcich Centralbl. Bakt. Abt. I 63 Orig. pp. 387–390 1 pl.

Sarcocystis gongyli, **sp. n.** from *Gongylus ocellatus*, described; Trinci Monit. zool. ital. **22** pp. 309–326 3 text-figs.—*S. tenella*, structure of spore, probable connection of the cysts of Gilruth (*Gastrocystis*) with this form of parasite, which is regarded as allied to the Gregarine-Coccidia group and not as an Endosporan; Alexeieff Arch. Zool. Paris (sér. 5) **10** Notes et Rev. pp. lxxxi–lxxxiv text-fig. 3.

(g) Haplosporidia.

Bertramia asperospora Fritsch, from *Eosphora*, life-history, distinctions from other forms; Konsuloff Arch. Protistenkunde **27** pp. 48–60 pl. iv.

INCERTAE SEDIS.

[Various and doubtful.]

Cyst-forming Protozoa, from the intestine of certain Australian Mammals (probably connected with a *Gastrocystis*-type or *Sarcocystis*), described; Gilruth & Bull Proc. R. Soc. Vict. **24** pp. 432–450 pls. lxxii–lxxxi.

Chamydozoa: regarded as more allied to the *Chytridineae* than to Protozoa: "*Chlamydozoon*" *batschlii* n. sp. from Protozoa and "*C.*" *perniciosum*, the alleged cancer parasite, described; Alexeieff Arch. Zool. (sér. 5) **10** N. et R. pp. ci–cix 3 text-figs.

"*Anaplasma*" ("marginal points"), two distinct forms distinguished "*A. marginale*" and "*A. m.* var. *centrale*," modes of transmission, regarded as distinct from *Piroplasma*; Theiler Zs. Infektionskrankht. Hausthiere **11** pp. 193–207 pl. i and *op. cit.* **12** pp. 105–116.—"Marginal points" of cattle, some forms at all events regarded as connected with *Piroplasma bigeminum*; Kohzumi Centralbl. Bakt. Abth. I **65** Orig. pp. 337–340 1 pl.

Grahamella **gen. n.** *talpae* **sp. n.**, proposed for peculiar bacillary parasite of red blood-cells [it may perhaps be really vegetative]; Brumpt Bul. Soc. path. exot. **4** pp. 514–517 text-fig.

"*Paraplasma*" *subtilarigenum* **sp. n.**, intracorpuscular in Man, associated with fever; Seidelin Ann. trop. Med. **5** pp. 503 & 504 pl. xxiv figs. 1–5.

"*Leucocytozoon*" *piroplasmoides* Thiroux and Teppaz, the cause of equine lymphangitis, regarded as a yeast and not as a Protozoan; Bridré, Nègre & Teppaz Ann. Inst. Pasteur **26** pp. 701–726 pl. xvii.—*L. p.* and also *Histoplasma capsulatum* of Darling, regarded as Blastomycetic and not Protozoan; da Rocha-Lima Centralbl. Bakt. Abth. I **67** Orig. pp. 233–249 1 pl.

Kurloff's bodies in the guinea-pig, regarded as true parasites, termed *Lymphocytozoon cobayae*, life-cycle described; Ross. Proc. R. Soc. **B 85** pp. 67–72 pl. i.—Kurloffkörper in mononucleären Blutzellen von *Cavia cobaya*; Fl. Genecsk. Tijdschr. Ned. Ind. **52** pp. 679–702; Med. Genecsk. Lab. (Sér. 2) A. No. **13** pp. 27–50.

"*Spirochaeta lumbrici*," the name given to a peculiar parasite of the coelomic epithelial cells of the seminal vesicle, resembling "Kurloff's bodies"; Crofper Proc. R. Soc. **B 85** pp. 525–527 pl. xiv.

Toxoplasma canis Mello, morphology, division, regarded as a Haemogregarine pp. 199–204 pls. ix & x; *T. columbae* **sp. n.** p. 198; Yakimoff & Kohl-Yakimoff Arch. Protistenkunde **27**.—*T. cuniculi*, notes on; Bourret Bul. soc. path. exot. **4** pp. 373–376.—*T. cuniculi*, transmissible apparently both to pigeon

and dog, but considered a distinct species; CARINI Bul. soc. path. exot. **4** pp. 518–519.

4. MASTIGOPHORA.

(a) Flagellata.

Flagellata, systematic account of several forms among the principal groups, chiefly based on a consideration of the nuclear structure and mode of division; DANGEARD le Botaniste **11** pp. 113–227 pls. xvii–xxxiii.

Flagellates, various from *Tipula*-larvae, notes on morphology; MACKINNON Parasitol. **5** pp. 179–188 text-figs. 6–20.

Leishmanien; MAYER in: Handbuch der pathogenen Mikroorganismen, hrsg. v. Kolle und Wassermann Bd **7** pp. 419–466 1 pl.

Biologische Untersuchungen an Trypanosomen; DOFLEIN München Sitz-Ber Ges. Morph. **27** pp. 73–78.

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Aglos **gen. n.** (*Chlamydomonadina*) *bicilinta* **sp. n.**; PASCHER Hedwigia **52** p. 274 et folg.

Astasia mobilis (Rehb.); parasitic in Copepods, notes on; ALEXEIEFF Arch. Zool. (ser. 5) **10** N. et R. p. lxxiv 2 text-figs.

Bodo, the relationship of this genus to other forms; synonymity; *B. saltans* probably the type-species; question of the occurrence of a kinetonucleus; ALEXEIEFF Arch. Protistenkunde **26** pp. 113–119.

Callimastix **gen. n.** (perhaps near *Lophomonadinae*), *cyclopis* **sp. n.**, occurrence and morphology; WEISSENBERG SitzBer. Ges. natf. Freunde **1912** pp. 299–305 1 text-fig.

Cercomonas gallinae producente forma cruciale in *Columba domestica*; BARILE Torino Giorn. Acc. med. **74** pp. 270–273 3 fig.

Cercoplasma drosophilae **sp. n.**, habitat and phases of life-history; ROUBAUD C. R. soc. biol. **72** pp. 554–556 14 text-figs.—*Cercoplasma* Roubaud, regarded as synonymous with *Herpetomonas* [*Leptomonas*]; ALEXEIEFF Zool. Anz. **39** p. 676.

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Chromomonadina; classification, based upon a consideration of the Rhizopod and "Palmella" phases; PASCHER Arch. Protistenkunde **25** pp. 153–200 pl. ix 7 text-figs.

Copromonas Dobell regarded as synonymous with *Scytomonas* Stein; ALEXEIEFF Zool. Anz. **39** p. 678.

"*Crithidia*" *cleti* **sp. n.** (apparently a true *Crithidia*, from a non-blood-sucking host), occurrence and description; HINDLE & LEWIS Parasitol. **5** pp. 109–113 17 text-figs.—"*C.*" *melophagi* Flu, hereditary transmission regarded as extremely doubtful or non-existent; CAUCHEMEZ C. R. soc. biol. **72** pp. 1062–1064. Also CHATTON & DELANOË T.c. pp. 942–944.—"Crithidiae" and Leptomonads from various insects, (Tabanids, Reduviids), some forms at any rate being regarded as probably phases of a Trypanosome; ROUBAIN BEQUAERT PONS & VANDENBRANDEN Bul. Soc. path. exot. **4** pp. 528–531.

(*Cryptochrysis commutata*, **gen.** et **sp. n.**, diagnosed; PASCHER *vide* Zool. Rec. 1911 *Protozoa* No. 357.)

Cystotrypanosoma grayi, de *Gl. palpalis*. Polymorphisme, affinités. Intérêt phylogénétique; ROUBAUD C. R. soc. biol. **72** pp. 440–443 19 text-figs.

Dimorpha gracilis Leidy, life-cycle described; COMES Arch. Protistenkunde **25** pp. 275–294 pl. xi 6 text-figs.

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Endotrypanum Mesnil and Brimont, possibly only a *Trypanosoma*; ALEXEIEFF Zool. Anz. **39** p. 676.

Euglena gracilis, Morphologie und Physiologie; TERNETZ Jahrb. wiss. Bot. **51** pp. 435–514 1 pl.

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Herpetomonas (*Leptomonas*) *culicis* N., MeN. & T. in *Culex fatigans*, life-cycle; PATTON Sci. Mem. Med. Ind. No. **57** 21 pp. 1 pl.—*H.* (*L.*) *etenocephali* prov. n. sp., mention only; FANTHAM Brit. Med. J. **1912** ii p. 1196.—*H.* (*L.*) *emphyti* **sp. n.** occurrence and description; HOLLANDE C. R. soc. biol. **72** pp. 940-942 1 (11) text-fig.—*H.* (*L.*) *pediculi* **sp. n.**, occurrence and life-cycle in louse; FANTHAM Proc. Roy. Soc. B **84** pp. 505-517 pl. xiv.—[*Herpetomonas vide* also *Leptomonas*.]

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Leishmania Ross, this generic name regarded as synonymous with *Herpetomonas*; ALEXEIEFF Zool. Anz. **39** p. 675.—*Leishmania donovani*, development in bed-bugs; PATTON Sci. Mem. Med. Ind. No. **53** 38 pp. 1 pl.—*L. infantum*, cytological details of flagellate form described; VISENTINI Q. J. Micr. Sci. **58** pp. 353-371 pls. xix & xx.—*L.* sp., perhaps distinct from *L. tropica*, in "espundia" Peru; LAVERAN & NATTAN-LARRIER Bul. soc. path. exot. **5** pp. 176-179 4 text-figs.—*L.* of Italian Kala-Azar, phases in *Anopheles*, and possibility of this being a transmissive agent; FRANCHINI Ann. trop. Med. **6** pp. 41-52 pls. ii-iv.—*L. infantum* Uebertrager. Infection, Verwandlung (Russ.); YAKIMOFF & KOHL-YAKIMOFF Kharkoff Med. žurn. **14** pp. 140-170 1 pl.

Leptomonad and Crithidial parasites, unspec., occurrence in certain Uganda Hemiptera, notes on morphology; ROBERTSON Proc. R. Soc. B **85** pp. 234-240 33 text-figs.

Leptomonas Kent, the type of this genus (*L. batschlii*), if really unflagellate should be included under *Herpetomonas*; ALEXEIEFF Zool. Anz. **39** p. 675. [This should certainly be the other way round; in such a case *Herpetomonas* becomes a synonym of *Leptomonas*. Rec.]—*Leptomonas*, Kent, discussion of this genus and *Herpetomonas*; HINDLE Parasitol. **5** pp. 128-134.—*L. drosophilae*, *rubro-striatae* and *Trypanosoma drosophilae*, developmental phases; CHATTON & LÉGER C. R. soc. biol. **72** pp. 20-23 5 text-figs.—*L. drosophilae*, mode particulier d'agglomération et de cytolyse simulant un enkystement; CHATTON & LÉGER C. R. soc. biol. **72** pp. 171-174 15 text-figs.—*L. legeri rum* **sp. n.** occurrence and phases in life-history; CHATTON C. R. soc. biol. **73** pp. 286-289 14 text-figs.—*L. paugoniae* **sp. n.**, now regarded as a distinct Insectan parasite; ROUBAUD Poss VANDENBRANDEN & BEQUAERT Bul. Soc. path. exot. **5** pp. 604-608.—*L. pattoni* Swingle, of *Ceratophyllus fasciatus* apparently a true flea Herpetomonad and distinct from *T. lewisi*; CHATTON & DELANOË C. R. soc. biol. **73** pp. 291-294 17 text-figs.—*L. roubaudi* **sp. n.** occurrence and description; CHATTON C. R. soc. biol. **73** pp. 289-291 11 text-figs.—*L.* de la *Musca domestica*; identité de la Leptomonade et de l'Herpétomonade. Nouveau mode de multiplication; CARDAMATIS Centralbl. Bakt. Jena Abt. I **65** Orig. pp. 66-77 4 pls.—*L.* spp. var., phénomènes autogamiques et formes trypanosomiennes; ROUBAUD C. R. soc. biol. **72** pp. 552-554 29 text-figs.

Macrostoma Alex., regarded as synonymous with *Chilomastix*; ALEXEIEFF Zool. Anz. **39** p. 678.

Monas gelatinosa **sp. n.** Kernteilung und Fortpflanzung; NÄGLER Arch. Protistenkunde pp. 315-324 pl. xv.

Monocercomonas cetoniae, notes on; HAMBURGER Verh. nathist. Ver. Heidelberg **11** p. 213 figs. 14-19.

Monomastix [as a **gen. n.** but this name is already in use for a well-known Mastigociliate!] *opisthostigma* **sp. n.**, a new unillagellate Polyblepharidean, with trichocyst-like organellae, description and affinities; SCHERFFEL Arch. Protistenk. **27** pp. 94-110 figs. 1-16 & 59.

Nephroselmis olivacea St., notes on, affinities to the *Cryptomonadina*; PASCHER Zs. wiss. Zool. **100** pp. 178, 182 text-fig. 1.

Ochromonas sp., note on nuclear division; NÄGLER Arch. Protistenk. **27** p. 324 text-figs.

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Oicomonas echinorum, note on; CUÉNOT Bull. station biol. Arcachon **14** p. 53 text-fig. 5.—*O. termo*, phases in life-cycle, including conjugation, encystation; MARTIN Proc. R. Soc. **B 85** pp. 396–398 pl. x.

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Pleuromastix **gen. n.** (*Chrysomonadina*), *bacillifera* **sp. n.**, description, trichocyst-like organellae, relationships; SCHERFFEL Arch. Protistenk. **27** pp. 111–120 figs. 47–56 & 60.

Polymastix, regarded as a transitional form between *Polymastigina* and *Lophomonadina*; ALEXEIEFF Zool. Anz. **39** p. 679.—*P. melolonthae* (Grassi), notes on; HAMBURGER Heidelberg Verh. nathist. Ver. (N. F.) **11** p. 211 figs. 1–6.

Protochrysis phaeophycearum **gen.** et **sp. n.**, Pascher (Zool. Rec. 1911 *Protozoa* No. 357), notes on lateral flagella, affinities to *Cryptomonadina*; PASCHER Zs. wiss. Zool. **100** pp. 180–182 text-fig. 3.

Prowazekella, **nom. nov.** proposed for *Bodo lacertae* Grassi; ALEXEIEFF Zool. Anz. **39** p. 678.

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Pyrsonympha sp. fenomeni nucleari e fasi riproduttive; COMES Boll. Acc. Gioenia fasc. 20–21 **1912** pp. 6–15 7 figs.

Scherffelia **gen. n.** (*Chlamydomonadina*) *pharus* **sp. n.**; PASCHER Hedwigia **52** pp. 274–287 *p. p.*

Schizotrypanum Chagas, this genus should be incorporated with *Trypanosoma*; ALEXEIEFF Zool. Anz. **39** p. 677.—*S. cruzi*, developmental forms in the muscles; DELANOË Bul. soc. path. exot. **5** pp. 599–602 27 text-figs.—*S. c.* developmental phases in different bugs; BRUMPT Bul. soc. path. exot. **5** pp. 360–367 13 text-figs.

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Tetramitus Alexeieff regarded as synonymous with *Chilomastix*; ALEXEIEFF Zool. Anz. **39** p. 678.—*T. mesnili*, human infection, notes on morphology; NATTAN-LARRIER Bul. soc. path. exot. **5** pp. 495–499 pl. xvii.

Trachelomonas treubi **sp. n.** p. 694, text-fig. 19A, var. n. *javanica* p. 696 fig. 19B, *T. affinis* Lemm. var. n. *planctonica* p. 694 fig. 19C, *T. raciborskii* fig. 19F, *lemmermanni* fig. 19D, *bernardi* fig. 19K, *scrati* fig. 19S, p. 696, **spp. n.** occurrence and diagnoses; WOŁOSZYŃSKA Bull. Acad. Sci. Cracovie **1912**.

Trichomonas (*Tetratrichomonas*) *brumpti* **sp. n.** in *Nicoria trijuga*, diagnosed; ALEXEIEFF Zool. Anz. **40** p. 98 text-fig. 1 i & ii.

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Trypanosoma americanum, biology, cultural forms; CRAWLEY U. S. Dept. Agric. Bur. Anim. Ind. Bull. No. **145** pp. 1–39 15 text-figs.—*T. aconchii* Brimont, from *Myoprocta* (*non Dasyprocta*), compared with *T. lewisi*; also *T.* sp. from *Alouata*, note; BRIMONT C. R. soc. biol. **72** pp. 415–416 2 text-figs.—*T. anellobiae* **sp. n.** (Clel. & Johnst. 1909), notes on, regarded as possessing an intracellular (Leucocytozoan) phase [this is doubtless really an independent *Leucocytozoon*]; CLELAND & JOHNSTON J. Proc. Roy. Soc. Sydney N.S.W. **45** pp. 120–122 pls. xxx & xxxi *p. p.*—*T. bouffardi* **sp. n.**, occurrence and note; LÉGER & BLANCHARD Bul. Soc. path. exot. **4** pp. 526 & 527.—*T. boylei* **sp. n.** occurrence, morphology of different forms and behaviour in rats and mice [this form should perhaps be regarded rather as a Leptomonad]; LAFONT C. R. Soc. biol. **72** pp. 380–382.—*T. brucii*, in rats and guinea-pigs, enumerative studies, comparison with *T. gambiense*

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T. ceratitionis, *lewisi*, Tunis, Rau etc. (Russ.); YAKIMOFF & KOHL-YAKIMOFF Arch. vet. nauk **41** pp. 1412–1418 pl. i figs. 8–11.—*T. rivosi* (including *T. cazalboui*), monomorphic size-measurements; BLACKLOCK Ann. trop. Med. **5** pp. 521–530 charts & 537–538.—*T.* spp. var., from various animals, notes on morphology; KLEINE & FISCHER Zs. Hyg. **70** pp. 16–20 pl. i.—*T.* spp. varr., immunization of sera against; *brucii*, *equiperdum* and *equinum* regarded on this ground as identical (*i.e.* not distinct species); TEICHMANN Verh. D. Zool. Ges. **22** pp. 109–115.—*T.* sp. of camel (probably *evansi*), notes on, refined biometric measurements regarded as unnecessary and useless; DUKE Proc. R. Soc. **B 85** pp. 563–568.

Trypanosomes of cattle and the Flagellates developing in cultures of ox-blood, the question of their connection or independence; BEIN Zs. Hyg. **70** pp. 371–408 pls. vii & viii.—Trypanosomes of game and domestic stock in N.E. Rhodesia; KINGHORN & YORKE Ann. trop. Med. **6** pp. 301–315, 483–493.—Trypanosome from the bison (similar to *T. transcaucasicum*), notes on; WRUBLEWSKI Zs. Infekt-Krankht. Hausthiere **12** pp. 376–384 pl. xiii.—Trypanosomes and Trypanoplasms of Bohemian fish, notes on; BREINDL Věstn. Král. České Spol. Nauk. 1911 No. 33 34 pp. 2 pls.

Volvox, general account; JANET Limoges (Ducourtioux) 1912 151 pp. with figs.

(b) Silicoflagellata (vacant).

(c) Dinoflagellata.

Flagellate and Algal Peridinida, account of, including many new forms [N.B. The Algal forms are not included here, as they are obviously not Protozoa]; KLEBS Verh. Nathist. Ver. Heidelberg (N.F.) **11** pp. 369–451 pl. x.

Apodinium rhizophorum **sp. n.**, occurrence and diagnosis; CHATTON Bul. Soc. Zool. **37** p. 88 text-fig. 3.

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Chytriodinium **gen. n.**, type *Gymnodinium roseum* Dogiel 1906, note on; CHATTON Bul. Soc. Zool. **37** p. 91.

Cystodinium **gen. n.** *batavicum* p. 377 text-fig. 2, *steini* p. 381 text-fig. 3 pl. x fig. 2, **spp. n.** occurrence, description and affinities; KLEBS Verh. Nathist. Ver. Heidelberg (N.F.) **11**.

Dinosphaera **gen. n.** for *Gonyaulax palustris* Lemm. described; KOFOID & MICHENER Univ. Cal. Pub. Zool. **11** pp. 21–28 8 figs.

Diplodinium **gen. n.** for *Gymnodinium lunula*, type, and other spp., remarks; KLEBS Verh. Nathist. Ver. Heidelberg (N.F.) **11** p. 389 et folg. text-fig. 4.

Diplopsalis lenticula Bergh, skeletal structure, relation to other forms (*D. sphærica*), doubtful whether this genus has any validity; PAVILLARD C. R. Acad. sci. **155** pp. 175–177 3 text-figs.

Glenodinium emarginatum **sp. n.**; KLEBS Verh. Nathist. Ver. Heidelberg (N. F.) **11** p. 439 text-fig. 6.

Gonyaulax series **sp. n.**, Mexico, west coast, peculiar form of schizogony; KOFOID & RIGDEN Bull. Mus. Comp. Zool. Harvard Coll. **54** pp. 333–348 pls. i & ii.

Gymnodinium rotundatum p. 392 text-fig. 5, *minimum* p. 396 fig. 7 A & B, *bogoriense* p. 397 fig. 7 C & D, **spp. n.**, occurrence, description and affinities; KLEBS Verh Nathist. Ver. Heidelberg (N.F.) **11**.

Haplodinium antjolense **sp. n.**, Buitenzorg; KLEBS Verh. Nathist. Ver. Heidelberg (N.F.) **11** p. 370 text-fig. 1 A–C.

Hypnodinium **gen. n.**, *sphaericum* **sp. n.**, occurrence, morphology and affinities; KLEBS T.c. p. 399 text-fig. 8 pl. x fig. 1.

Oodinium **gen. n.** type *O. poucheti* Lemmermann 1899 (= *Gymnodinium pulviculum* Pouchet 1885) p. 85, *O. fritillariae* **sp. n.** p. 87, text-fig. 2, occurrence and note; CHATTON Bul. Soc. Zool. **37**.

Peridinium meunierii **nom. nov.** proposed for *P. paulseni* and *P. (Diplopsalis) sphaericum*; PAVILLARD C. R. Acad. Sci. **155** p. 177.—*P. raciborskii* p. 700 text fig. 21, *gutwinskii* p. 701 fig. 22, *P. (Peridiniopsis) traubi* p. 702 fig. 24, **spp. n.**, occurrence and diagnoses; WOŁOSZYŃSKA Bull. Acad. Sci. Cracovie **1912**.

Schizodinium **gen. n.**, *sparsum* **sp. n.**, p. 90 fig. 7, occurrence and note; CHATTON Bul. Soc. Zool. **37**.

Trypanodinium **gen. n.**, *ovicola* **sp. n.**, p. 91 fig. 8; CHATTON T.c.

(d) Rhynchoflagellata (vacant).

5. CILIOPHORA.

(a) Ciliata.

Infusoires des marais salants du Croisic, étude cytologique; FAURÉ-FREMIET Arch. anat. microsc. **13** pp. 402–480 av. pls

Infusoria, Switzerland, catalogue of, diagnosed: ANDRÉ Mus. Hist. nat. Genève fasc. **6** 1912 227 pp.

Astylozoon pyriforme occurrence, Bologna and note; ENRIQUES Monitore zool. ital. **23** p. 240.

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III. PORIFERA OR SPONGIDA

ARRANGED BY

I. B. J. SOLLAS

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ARRANGED BY

C. L. BOULENGER.

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V. ECHINODERMA

ARRANGED BY

HERBERT L. HAWKINS, M.Sc., F.G.S.

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†*Archaeocidaris* pp. 206 256, †*A. acanthifera* p. 272 pl. xiv figs. 7 & 8, †*A. aculeata* p. 268 pl. xiii fig. 9, †*A. agassizi* p. 266 pl. xiii figs. 1–4, †*A. biangulata* p. 273 pl. xiv fig. 9, †*A. clavata* p. 282 pl. xv fig. 8, †*A. cratis* p. 272 pl. xiv fig. 6, †*A. diminuta* p. 271 pl. xiv fig. 5, †*A. elgarensis* p. 269 pl. xiii figs. 11–14, †*A. forbesiana* p. 280 pl. xv fig. 6, †*A. glabrispina* p. 261 pl. x figs. 2 8 & 9, †*A. gracilis* p. 267 pl. xiii fig. 8, †*A. hallana* p. 279 pl. xv fig. 1, †*A. illinoisensis* p. 266 pl. xiii fig. 5, †*A. keokuk* p. 267 pl. xiii fig. 7, †*A. koninckii* p. 146 pl. xv fig. 13, †*A. ludlana* p. 146 pl. xv fig. 15, †*A. legrandensis* p. 260 pl. viii figs. 7 & 8 pl. ix figs. 12 & 13 pl. x figs. 3 & 4, †*A. longispina* p. 261 pl. x fig. 1, †*A. megastyla* p. 273 pl. xiv fig. 13, †*A. punctata* p. 271 pl. xiv figs. 3 & 4, †*A. punctatissima* p. 280 pl. xv, fig. 5, †*A. serri* p. 262 pl. x figs. 5–7, †*A. newberryi* p. 269 pl. viii fig. 9 pl. xiii fig. 15, †*A. norwoodi* p. 270 pl. xiv fig. 1, †*A. ornata* p. 274 pl. xiv fig. 10, †*A. ouraynensis* p. 274 pl. xiv fig. 11, †*A. paradoxa* p. 270 pl. xiv fig. 2 †*A. pizzutiana* p. 272 pl. x fig. 12, †*A. priscа* p. 276, †*A. vanhini* p. 276, †*A. rossica* p. 263 pl. x fig. 10 pl. xi figs. 1–5 pl. xii figs. 1–13 text figs., †*A. scotica* p. 147, †*A. selagni* p. 147 pl. xv figs. 9 & 10, †*A. shumardana* p. 268 pl. xiii fig. 10, †*A. sixi* p. 147 pl. x fig. 11, †*A.* spp. pp. 448 499, †*A.* sp. *b* p. 281, †*A. spinoclavata* p. 281 pl. xv fig. 7, †*A. tirolensis* p. 456, (nom. nud.), †*A. trautscholdi* p. 148 pl. xv fig. 14, †*A. triplex* p. 274 pl. xiv fig. 12, †*A. triscialis* p. 275 pl. viii fig. 10 pl. xiv fig. 14, †*A. triservata* p. 275 pl. xiv fig. 15, †*A. trudifer* p. 269 pl. xiii fig. 16, †*A. urii* p. 276 pl. xix figs. 16 18–20 pl. xv figs. 1–3, †*A. vercekei* p. 276 pl. xiv fig. 17, †*A. wortheni* p. 259 pl. viii figs. 5 & 6 pl. ix figs. 6–11 text figs., Jackson Phylogeny of Echini.

†*A. coloradensis* **nom. n.** for *A. ornatus* Newberry, Jackson T.c p. 267 pl. xiii fig. 6.

†*Archiacia saudalina*, Fourtau Mém. Inst. Egypt. **7** p. 50 pl. xiii fig. 1.

†*A. aegyptiaca* **sp. n.** Cénomanien, Égypte, Fourtau Bull. Inst. Égypt. **5** p. 162 pl. ii fig. 6.

Aspidodiadema meijerei, nicobaricum, Jackson Phylogeny of Echini.

Aspidodiadematidae diagnosed, Jackson T.c. p. 202.

†*Asterocidaris minor*, Jackson T.c.

Asthenosoma hystrix, ijimai, owstoni, Jackson T.c.

Astropyga patrinata, exuliata, JACKSON T.c.

Aulodonta, new suborder of Centrechinoida, incl. families *Hemicidaridae, Aspidodiadematidae, Centrechinidae, Echinothuriidae*, JACKSON T.c. pp. 183 202

†*Bothriocidaridae* diagnosed, JACKSON T.c. pp. 201 238.

†*Bothriocidaris* pp. 201 238, †*B. globulus* p. 243 pl. i figs. 7–9, †*B. pahleni* p. 242 pl. i figs. 3 6 pl. viii fig. 1, JACKSON T.c.

†*B. archaica* **sp. n.** Ordovician, Island of Dago, Russia, JACKSON T.c. p. 239 pl. i figs. 1 & 2 textfigs.

Bothriocidaroida diagnosed, includes only *Bothriocidaridae*, JACKSON T.c. pp. 201 238.

Brissaster fragilis, GREIG Arch. Math. Naturw. Kristiania **32** p. 9; JACKSON Phylogeny of Echini.

†*Brissoides jacquoti*, COTTEAU Paris Bul. Soc. géol. (4) **11** p. 441.—†*B. croizieri* p. 102, †*B. degrangei* p. 103, LAMBERT Bordeaux Actes Soc. linn. **66**.—†*B. savini*, LAMBERT Ann. Univ. Lyon **1** p. 195 pl. xvi figs. 28 & 29.

†*B. rozieri* **sp. n.**, Lutétien, Blaye, LAMBERT Bordeaux Actes soc. linn. **66** p. 104.

†*Brissopsis corbaricum* **sp. n.**, Lutétien, Rabet, LAMBERT Ann. Univ. Lyon **1** p. 190 pl. xvi figs. 16 & 17.

†*Brissomorpha fuchsi*, SCHAFFER Wien Abh. geol. ReichsAnst. **22** p. 192 pl. lviii figs. 20 & 21 text fig. 4.

Brissopsis lyrifera, GREIG Arch. Math. Naturw. Kristiania **32** p. 10.

†*B. elegans*, LAMBERT Bordeaux Actes soc. linn. **66** p. 99.

†*Busarti*s section of *Clypeaster*, type *C. scillae* Desmoulins, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 90.

Caenopedina p. 216, *C. mirabilis* p. 221 pls., *C. pulchella* p. 223 pls., CLARK, H L. Mem. Mus. Comp. Zool. **34**.

C. hawaiiensis **nom. n.** for *Hemipedina indica* Agassiz & Clark 1907, CLARK, H. L. T.c. p. 217 pls.

Camarodonta, new suborder of Centrechinoida, including families *Temnopleuridae, Echinidae, Strongylocentrotidae, Echinometridae*, JACKSON Phylogeny of Echini pp. 183 203.

†*Carinechinus* discussed, HAWKINS Proc. Zool. Soc. p. 102.

†*Cassidulus mauleri*, COTTEAU Paris Bul. Soc. géol. (4) **11** p. 439 pl. v. figs. 6–11.—†*C. subquadratus*, JACKSON Phylogeny of Echini.—†*C. benedicti*, LAMBERT Bordeaux Actes soc. linn. **66** p. 77.

†*C. dublangei* **sp. n.**, Lutétien, Blaye, LAMBERT T.c. p. 77 pl. ii figs. 3 & 4.—†*C.* "n. sp.," Eocene, Friuli, DAINELLI Pisa Atti Soc. tosc. sc. nat. **28** p. 96.

Centrechinidae **nom. n.** for *Diadematidae*, JACKSON Phylogeny of Echini pp. 28 202.

Centrechinoida, **nom. n.** for Diadematoida; with new subordders Aulodonta, Stirodonta and Camarodonta, JACKSON T.c. pp. 28 202

Centrechinus **nom. n.** for *Diadema* auct. with type *C. setosus*, JACKSON T.c. p. 28.

Centrostephanus asteriscus, longispinus, rodgersi, JACKSON T.c.

†*Cestolirsus* **gen. n.** near *Prenaster* p. 100, type *C. lorioli* **sp. n.**, Lutétien, Blaye, p. 101 pl. iii figs. 8–10, LAMBERT Bordeaux Actes soc. linn. **66**.

Chaetodiadema pallidum, JACKSON Phylogeny of Echini.

Cidaridae diagnosed, JACKSON T.c. pp. 201 245.

Cidaris affinis, cidaris, panamensis, JACKSON T.c.

†*Cidaris* (*Leiocidaris*) *australiae*, CHAPMAN Melbourne Mem. Nat. Mus. **4** p. 44.—†*C. farnogdonensis*, HAWKINS Geol. Mag. London **9** p. 529 pl. xxv.—†*C. coronata, florigemma, exceptifera* [*sic*], JACKSON Phylogeny of Echini.—†*C. cervicornis*, †*C. interlineata*, †*C. oosteri*, p. 713, †*C. spinigera*, †*C. subularis* p. 712, KRANZ N. Jahrb. Min. Beil. Bd **32**.—†*C. lorioli*, †*C. pomeli*, LAMBERT Bordeaux Actes soc. linn. **66** p. 50.—†*C. striatogranosa*, LAMBERT Ann. Univ. Lyon **1** p. 166. –†*C. boucharvli*, PARIS York Proc. Geol. Polyt. Soc. **17** p. 214. –†*C. subularis*, VOGL Foldt. Évk. **20** p. 77.

†*C. poculiformis* **sp. n.**, Upper Trias, Bulgaria, BAKALOW Godina 1908 9 p. 7 pl. i figs. 7–10 pl. ii figs. 8 & 9.—†*C.* "n. sp." Eocene, Friuli, DAINELLI Pisa

Atti soc. tosc. sc. nat. **28** p. 92. †*C. excellensis* **sp. n.** Aptian, Faringdon p. 536 pl. xxvi; †*C. textiplana* **nom. nov.** p. 531, Hawkins Geol. Mag. London **9**.—†*C. bellerudi* **sp. n.** Lutétien, Biaye, Lambert Actes soc. linn. **66** p. 52 pl. i figs. 1-3.—†*C. ceronandicensis* **sp. n.**, Craie Phosphatée, Picardie, Lebesconte Bruxelles Bul. Soc. geol. **25** p. 307.

Cidaroida diagnosed, Jackson Phylogeny of Echini pp. 201-244.

†*Circopeltis bouillei*, †*C. coquandi*, Lambert Ann. Univ. Lyon **1** p. 176.

Clypeaster rosaceus, subdepressus, Jackson Phylogeny of Echini.—*C. humilis*, Southwell Ceylon biological rep. **5** p. 208.

†*Clypeaster* discussed, Hawkins Proc. Zool. Soc. p. 192.—subdivided—subgenera *Rhaphidoclypus, Stolonoclypus*—sections *Palæanthus, Plesianthus, Dactylanthus, Ramacis, Phiophyma, Eurypleura, Platypleura, Lagandea*—subsections *Eurycoila, Oxypleura*, q.v., Lambert Abh. Schweiz. Pal. Ges. **38** pp. 86-91.

†*C. cf. martinianus* p. xlv, †*C.* sp. p. xlvi, Brolli Geol. pal. Res. Grothe expedition.—†*C. altus* p. 446, *C. marginatus* p. 444, †*C. cf. melitensis* p. 446, †*C. latirostris* p. 444, Di Stefani Boll. soc. geol. ital. **27**.—†*C. fortentosus* p. 53, †*C. scillai* p. 53, varr. *crassicostata* and *intermedia* p. 54, Joksimowitsch Zs. D. Geol. Ges. **62**.—†*C. breunigi* p. 717, †*C. ? briscus* p. 716, Kranz N. Jahrb. Min. Beil. Bd **32**.—†*C. altus* p. 100, †*C. crassus* p. 94 pl. vii fig. 6, †*C. grandiflorus* p. 95, †*C. oppenheimi* p. 100, †*C. pentadactylus* p. 96, †*C. scillae* p. 93, †*C. rentlieneis* p. 97, Lambert Abh. Schweiz. Pal. Ges. **38**.—†*C. profundus*, Lovisato Palaeontogr. Ital. **18** p. 136.—†*C. latirostris*, Schaffer Wien Abh. Geol. ReichsAnst. **22** p. 187 pl. ix figs. 1 & 2.

†*C. microstoma* **sp. n.** Helvétien, Bouches-du-Rhône, Lambert Abh. Schweiz. Pal. Ges. **38** p. 91 pl. vii fig. 7.—†*C. bolillai* p. 39 pl. v fig. 1, †*C. contirecchii* p. 40 pl. v fig. 4, †*C. gauthieri* p. 37 pl. iv fig. 1 **spp. n.** Miocene, Sardegna, Lovisato Palaeontogr. ital. **17**.—†*C. bandierai* p. 134 pl. xxi fig. 1; †*C. morei* p. 137 pl. xxii fig. 1, †*C. oberlani* p. 135 pl. xxi fig. 2, †*C. pisaeanei* p. 132 pl. xx fig. 1, †*C. sciesai* p. 137 pl. xxii fig. 2, **spp. n.**, Miocene, Cagliari, Lovisato Palaeontogr. Italica **18**.—†*C. cuvillotii* p. 170 pl. xvii fig. 1 a-d, †*C. imbriani* p. 164 pl. xvii fig. 3 a-d, †*C. micca* p. 160 pl. xvi fig. 1a b d pl. xvii fig. 1c; †*C. riccidii* p. 162 pl. xvi fig. 2a b d pl. xvii fig. 2e, **spp. n.** Miocene medio, Sardegna, Lovisato Boll. Soc. geol. Ital. **30**.—†*C. subperdachi* **sp. n.** Miocene, Eggenburg, Schaffer Wien Abh. geol. ReichsAnst. **22** p. 188 pl. ix fig. 3 textfig. 4.

Clypeastrina, Jackson Phylogeny of Echini p. 204.

Clypeastroida, discussed, Hawkins Proc. Zool. Soc. p. 192.

†*Clypeus* discussed, Hawkins T.c. p. 189.

†*C. major* sp. n. Rauracien, Bombs, Rollier Abh. Schweiz. Pal. Ges. **37** p. 9 pl. i figs. 1-5.

†*Collyrites meridionalis* sp. n. Eocene, Bourdasse, Lambert Ann. Univ. Lyon **1** p. 176 pl. xvi figs. 10-12.

Coelopleurus floridanus, Jackson Phylogeny of Echini.

†*C. delboei* p. 66, †*C. tournoueri* p. 67 pl. i fig. 7, Lambert Bordeaux Actes soc. linn. **66**.

†*Coenholectypus* revived as subgen. of *Holectypus*, †*C. cenomanensis*, Hawkins Geol. Mag. **9** p. 13 pl. ii fig. 6.—†*H. macropygus* is type, Hawkins Proc. Zool. Soc. p. 150.

Coenocentrotus **gen. n.** of *Strongylocentrotidae*, type *Echinus gibbosus* Ag. & Des., Clark, H. L. Mem. Mus. Comp. Zool. **34** p. 348.

†*Collyrites bicordatus*, Bodin Geol. u. pal. Abh. Jena **10** p. 74 pl. xxvii figs. 15 & 16.—†*C. fribourgensis, C. vernueili*, De Stefani Roma Boll. soc. geol. Ital. **30** p. 112.

Coloboccntrotus, C. mertensii, C. stimpsoni, Clark, H. L. Mem. Mus. Comp. Zool. **34** p. 377.—*C. atratus*, Jackson Phylogeny of Echini.

†*Conoclypeus* discussed, Hawkins Proc. Zool. Soc. p. 155.—*C. cf. conoideus*, Brolli Geol. pal. Res. Grothe expedition p. 1.

†*C.* "sp. n.," Eocene, Friuli, Dainelli Pisa Atti Soc. tosc. sc. nat. **28** p. 94.

Conolampas sigsbei, Jackson Phylogeny of Echini.

†*Conulidae*, redefined, containing only *Conulus*, HAWKINS Proc. Zool. Soc. p. 451.

†*Conulopsis* **gen. n.** near *Caratomus*, type *Galerites rosmeri* d'Orb., includes also *Echinoconus abbreviatus*, HAWKINS T.c. pp. 453 & 491.

†*Conulus* diagnosed, *C. albogalerus* is type, HAWKINS T.c. p. 451.—†*C. albogalerus*, DIXEY London Proc. Geol. Ass. **23** p. 106.—†*C. albogalerus* p. 14 pl. ii fig. 8, †*C. subrotundus* p. 14, HAWKINS Geol. Mag. **9**.—†*C. subrotundus*, HAWKINS Proc. Geol. Ass. **23** p. 253.

†*Coptechinus* "n. sp." Eocene, Friuli, DAINELLI Pisa Atti Soc. tosc. sc. nat. **28** p. 93.

†*Coptodiscus* diagnosed, *C. noemite* is type, HAWKINS Proc. Zool. Soc. p. 450.

†*Coptosoma cribrum*, LAMBERT Bordeaux Actes soc. linn. **66** p. 68.—†*C. blanggianum* p. 175, †*C. rousseli* p. 174, LAMBERT Ann. Univ. Lyon **1**.

†*C. boriesi* **sp. n.** Lutétien, Montlaur, LAMBERT T.c. p. 171 pl. xvi figs. 13–15.

†*Cottaldia granulosa*, JACKSON Phylogeny of Echini.

Ctenocidaris perrieri **sp. n.** Antarctic, KOEHLER C. R. Acad. Sci. **155** p. 323; Zool. Anz. Leipzig **39** p. 161; Charcot exped. p. 159 pl. xii figs. 4–8 pl. xiii figs. 2–8 pl. xiv figs. 9–14 pl. xv figs. 1–10.

†*Cyathocidaris arenionensis*, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 51 pl. iv fig. 1.

†*Cyclaster* (*Brissopneustes*) *dabalensi* **sp. n.** Lutétien inf. Coulures (Landes), COTTREAU Paris Bul. soc. géol. (4) **11** p. 153 pl. v figs. 1–5.

†*Cyphosoma cribrum*, KRANZ N. Jahrb. Min. Beil. Bd. **32** p. 715.

†*C. deserti* Sénonien p. 144 pl. i fig. 2, †*C. ieldis* Campanien p. 145 pl. i fig. 3, **spp. n.** Egypt, FOURTAU Bull. Inst. Egypt **5**.—†*C. libanoticum* **sp. n.** Turonien, Amchit, Syrie, p. 44 pl. xii fig. 3 with **var. n.** *maxima* p. 45 pl. xii fig. 4, FOURTAU Mem. Inst. Egypt. **7**.

†*Dactylanthus* section of *Clypeaster*, type *C. declivis* Pomel, LAMBERT Abh. Schweiz Pal. Ges. p. 89.

Dermatodiadema antillarum horridum, JACKSON Phylogeny of Echini.

†*Dictyaster* **gen. n.** near *Pericosmus* p. 173, †*D. loriolı* **sp. n.** Miocene, Malta, p. 172 pl. xvii fig. 8, also includes †*Pericosmus malatinus* Mayetti and †*D. excentricus* **nom. n.** for *Pericosmus dilatatus* Mayetti pars p. 175, DI STEFANI Boll. Soc. geol. ital. **27**.

†*Diplocidaris desori*, *gigantea*, JACKSON Phylogeny of Echini.

†*Diplopodia deshayesi* p. 142, †*D. variolaris* p. 143, FOURTAU Bull. Inst. Egypt **5**.—†*D. hermonensis* p. 13 pl. xii fig. 2, †*D. variolaris*, with var. *roissyi* p. 13, FOURTAU Mem. Inst. Egypt. **7**.

†*Discholetypus* diagnosed, *D. meslei* is type, HAWKINS Proc. Zool. Soc. p. 451.

†*Discoidea* rediagnosed, *D. subucula* is type, HAWKINS T.c. p. 451.—†*D. cylindrica*, HAWKINS Geol. Mag. **9** p. 13 pl. ii fig. 7; JACKSON Phylogeny of Echini.

†*D. palmata major* **var. n.** Cretaceous, Camaries, COTTREAU & LEMOINE Paris Bul. soc. géol. (4) **10** p. 269 fig. 2.

†*Discoidiidae*, redefined, with subfamilies *Holectypinae* and *Discoidiinae*, HAWKINS Proc. Zool. Soc. p. 449.

†*Discoidiinae*, subfam. of *Discoidiidae*, containing only *Discoidea*, HAWKINS T.c. p. 450.

†*Dorocidaris melitensis*, DI STEFANI Boll. soc. geol. ital. **27** p. 138 pl. xvii fig. 1.

†*Echinanthus desmoulinsi* p. 78, †*E. elegans* p. 79, LAMBERT Bordeaux Actes soc. linn. **66**.—†*E. subrotundus*, LAMBERT Ann. Univ. Lyon **1** p. 179.

†*E.* "n. sp." Eocene, Friuli, DAINELLI Pisa Atti Soc. tosc. sc. nat. **28** p. 97.

Echinarachnius parma, GREGORY Proc. 7th intern. Zool. Congr. p. 291; JACKSON Phylogeny of Echini.

Echinidae, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 231; JACKSON Phylogeny of Echini p. 203.

†*Echinites* Duncan rejected as syn. of *Discoidea*, HAWKINS Proc. Zool. Soc. p. 452.

†*Echinobrissus* discussed, HAWKINS T.c. p. 489.

†*E. baltieus* **sp. n.** Unter Oxford, Popilany, BODEN Geol. u. Pal. Abh. Jena **10** p. 75 pl. xxvii fig. 11.—†*E. corax* **sp. n.** Santonien, Égypte, FOURTAU Bull. Inst. Egypt **5** p. 163 pl.

ii fig. 7.—†*E. lasloeiei* Cénomanien, Amelon, p. 19 pl. xii fig. 11, †*E. monteclarense* Turonien, Gebail, p. 18 pl. xii figs. 8-10, †*E. syriacus* Aptien, Niha, Syrie, p. 47 pl. xii fig. 7, **spp. n.**, Fourtau Mém. Inst. Egypt. **7**.

Echinocardium cordatum, Caullery Paris C. R. ass. anatomistes **13** p. 287; Caullery Rep. Brit. Ass. 1912 p. 419; Cuénot Archachon Bul. soc. sci. stat. zool. **14** p. 47 fig. 4.—*E. cordatum*, *E. flaccescens*, Grieg Arch. Math. Naturw. Kristiania **32** p. 9.—*E. flaccescens*, Hawkins Geol. Mag. **9** p. 224, fig. 2; Jackson Phylogeny of Echini.—*E. cordatum*, *E. flaccescens*, Nicholls Proc. R. Irish Acad. **31** No. 57 p. 9.—*E. cordatum*, Thél. Stockholm Vet.-Ak. Handl. **49** No. 4 p. 1.

†*Echinocorys scutatus pyramidatus*, Dibley London Proc. Geol. Ass. **23** p. 196.—†*E. vulgaris pyramidatus*, Hawkins Geol. Mag. **9** p. 222 fig. 1.

†*E. scutatus* **var.** *cinctus* pl. i figs. 3 & 4, *ciceratus* pl. i fig. 2, *tectiformis* pl. iii fig. 29, **var. nov.**, Brydone Stratigraphy of Chalk of Hants p. 109.

†*Echinocorinus* maintained, but syn. of *Archaeocidaris* by preference, p. 236, †*E. anceps* p. 149, †*E. cidariformis* p. 156, †*E. pomum* p. 156, †*E.* sp. p. 150, *E. spinosus* p. 149, †*E. striatus* p. 150, Jackson Phylogeny of Echini.

Echinocyamus discussed, Hawkins Proc. Zool. Soc. p. 491.—*E. pusillus*, Grieg Arch. Math. Naturw., Kristiania **32** p. 9; Jackson Phylogeny of Echini; Nicholls Proc. R. Irish Acad. **31** No. 57 p. 9.

†*E. pyriformis*, Krasz N. Jahrb. Min. Beil. Bd. **32** p. 715.

†*Echinocystidae* diagnosed, Jackson Phylogeny of Echini pp. 205 252.

†*Echinocystites* p. 252, †*E. pomum* p. 252 pl. xvi fig. 4 pl. xviii figs. 6-8 pl. xx figs. 1-4 Jackson T.c.

Echinocystoida **nom. n.** for *Cystocidaroida*, Jackson T.c. pp. 205 250.

Echinodiscus auritus, Southwell Ceylon biological rep. **5** p. 208.

†*Echinodiscus* p. 72, †*E. marginalis* p. 75, Lambert Bordeaux Actes soc. linn. **66**.

Echinolampas oviformis, Southwell Ceylon biological rep. **5** p. 208.

†*E. sp. heinzi*, Bronn Geol. pal. Res. Grothe expedition p. xliv pl. i fig. 8.—†*E. legmerici*, Cotteau Paris Bul. Soc. géol. (4) **11** p. 140 pl. vi figs. 12-13.—†*E. acquizonatus* p. 150 pl. xvii fig. 4, †*E. angulatus* p. 151, †*E. pignatarii* p. 156, †*E. wrighti* p. 153 pl. xvii fig. 5, Di Stefani Boll. soc. geol. ital. **27**.—†*E. blainvillei* p. 719, †*E. montecitulensis* p. 718, Krasz N. Jahrb. Min. Beil. Bd. **32**.—†*E. archiaci* p. 80, †*E. leymeriei*, †*E. higadanensis* p. 91, †*E. blavieusis* p. 85, †*E. cotteaui* p. 82, †*E. dorealis* p. 80, †*E. linderi* p. 83, †*E. nucleus* p. 91, †*E. ovalis* p. 89, †*E. similis* p. 87 pl. ii fig. 1, †*E. stelliferus* p. 84, †*E. touzini* p. 90 Lambert Bordeaux Actes soc. linn. **66**.—†*E. ivaccaidae*, Lambert Ann. Univ. Lyon **1** p. 180.—†*E. laurillardi*, Schaffer Wien Abh. geol. ReichsAnst. **22** p. 189 pl. lx figs. 4 & 6 text-fig. 2.

†*Echinolampas laurillardi acuminata* **var. n.**, Schaffer T.c. p. 190 pl. lx fig. 5.

Echinolampidae discussed, Hawkins Proc. Zool. Soc. p. 491.

Echinometra p. 370, *E. lucunter* p. 372, *E. mathaei* p. 371, *E. oblonga* p. 373 pl., *E. picta* p. 373 pls., *E. van brunti* p. 375, *E. viridis* p. 372, Clark, H. L. Mem. Mus. Comp. Zool. **34**.—*E. vanbrunti*, Clark, H. L. Bull. Mus. Comp. Zool. **52** p. 346 pl. xi fig. 1.—*E. lucunter*, *mathaei*, *oblonga*, *vanbrunti*, *viridis*, Jackson Phylogeny of Echini.—*E. lucunter* (?) larva, Mortensen Zool. Jahrb. Jena Suppl. **15** p. 275.

E. insularis **sp. n.** Mexico, Clark, H. L. Mem. Mus. Comp. Zool. **34** p. 374 pls.

Echinometridae, Clark, H. L. T.c. p. 365; Jackson Phylogeny of Echini p. 204.

Echinometridae discussed, Hawkins Proc. Zool. Soc. p. 489.

Echinonēus, Hawkins T.c. p. 490.

†*Echinopsis* p. 55, †*E. elegans* p. 58 pl. i figs. 10 & 11, †*E. meridionensis* p. 58, Lambert Bordeaux Actes soc. linn. **66**.

Echinoscigra paradoxa, Jackson Phylogeny of Echini.

Echinosoma hispidum, Jackson T.c.

Echinostrephus p. 342, *E. aciculatus* p. 342 pls., *E. molaris* p. 342, Clark,

H. L. Mem. Mus Comp. Zool. **34**.—*E. molare*, JACKSON Phylogeny of Echini

Echinocheirx calamaris, diadema, JACKSON T.c.

Echinothuriidae diagnosed, JACKSON T.c. p. 202.

Echinus p. 260, *E. acutus* p. 264, *E. acutus norvegicus* p. 263, *E. alexandri* p. 263, *E. arcuatus* p. 265, *E. atlanticus* p. 269, *E. elegans* p. 263, *E. esculentus* p. 261, *E. gilchristi* p. 264, *E. gracilis* p. 263, *E. horridus* p. 264, *E. lucidus* p. 267, *E. margaritaceus* p. 265, *E. melo* p. 264, *E. tenuispinus* p. 265, *E. wallisii* p. 265 pls., CLARK, H. L. Mem. Mus. Comp. Zool. **34**.—*E. acutus, E. elegans, E. esculentus*, GRIEG Arch. Math. Naturw. Kristiania **32** p. 9.—*E. acutus, affinis, angulosus, elegans, esculentus, gracilis, magellanicus, margaritaceus, melo, microtuberculatus, miliaris, verruculatus* JACKSON Phylogeny of Echini.—*E. miliaris*, MOREY Nat. Hist. I. of Wight p. 221.—*E. esculentus, E. miliaris*, NICHOLS Proc. R. Irish Acad. **31** No. 57 p. 8.

E. anchistus p. 271 pls. Chile, *E. euryporus* p. 266 pls., Chile, *E. tylodes* p. 269 pls., S. Carolina, **spp. n.**, CLARK, H. L. Mem. Mus. Comp. Zool. **34**.

†*Eolampas* Duncan & Sladen, discussed, p. 181, †*E. trigeri* p. 184, LAMBERT Ann. Univ. Lyon **1**.

†*Enallaster delgadoi* p. 51, †*E. syriacus* p. 51 pl. xiii fig. 3, FOURTAU Mém. Inst. Égypt. **7**.

†*E. intermedius* **sp. n.** Aptien, Baïdar, Syrie, FOURTAU T.c. p. 52 pl. xiii fig. 4.

Encope micropora, CLARK, H. L. Bull. Mus. Comp. Zool. **52** p. 348 pl. xiii fig. 1.

†*Eocidaris* pp. 206, 251, †*E. laevispina* p. 255 pl. xv figs. 11 & 12, JACKSON Phylogeny of Echini.

† *Epiaster aegyptiacus* **sp. n.** Cénomanien or Turonien, Égypte, FOURTAU Bull. Inst. Égypt. **5** p. 164 pl. iii fig. 1.—†*E. cedrorum* **sp. n.** Cénomanien, Amchit, Syrie FOURTAU Mém. Inst. Égypt. **7** p. 59 pl. xiv fig. 3.

Eucidaris p. 46, *E. metularia, thouarsi, tribuloides*, JACKSON Phylogeny of Echini.

†*Eupatagus melitensis*, DI STEFANI Boll. Soc. geol. ital. **27** p. 464 pl. xvii fig. 6.

†*Eurhodia* Haime, discussed, p. 180, [*E. barroisi* p. 181, LAMBERT Ann. Univ. Lyon **1**.

Eurocidaris gelibertí **sp. n.** Antarctic, KOEHLER Charcot exped. p. 146 pl. xiv figs. 1–8; Zool. Anz. Leipzig **39** p. 161.

†*Eurycidaris* subsection of *Clypeaster*, type *C. intermedius* Desmoulins, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 90.

†*Eurypleura* section of *Clypeaster*, type *C. duchassaigni* Michelin, LAMBERT T.c. p. 90.

†*Eupatagus miuutus*, KRANZ N. Jahrb. Min. Beil. Bd. **32** p. 722.

Evechinus, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 281.—*E. chloroticus*, JACKSON Phylogeny of Echini.

†*Fibularia gregata*, BROWN Geol. S. E. of Murray River p. 1.—*F. affinis*, †*F. lorioli*, †*F. pomeli*, LAMBERT Bordeaux Actes soc. linn. **66** p. 70.—†*F. peliati* p. 51, †*F. pusilla* p. 55 pl. iv figs. 6–9, LAMBERT Abh. Schweiz. Pal. Ges. **38**.

†*F. nigeriae* **sp. n.** ?Eocene, S. Nigeria, HAWKINS Geol. Mag. **9** p. 297 pl. xvi.—†*F. macrophyma* **sp. n.**, LAMBERT Abh. Schweiz. Pal. Ges. **38** pl. iv figs. 18–21.

†*Galeropygus* discussed, HAWKINS Proc. Zool. Soc. p. 452.

Genocidaris p. 206, *G. apoda* p. 297 pls., *G. decipiens, G. maculata* p. 297, CLARK, H. L. Mem. Mus. Comp. Zool. **34**.

†*Glyphocyphus radiatus*, JACKSON Phylogeny of Echini.

†*Glypicus hieroglyphicus*, JACKSON T.c.

Glyptocidaris, G. crenularis, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 228 pls.—*G. crenulare*, JACKSON Phylogeny of Echini.

Goniocidaris biserialis, canaliculata, nutrix, tubaria, JACKSON T.c.

Goniopanstes, G. pentagonus, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 336 pl.

†*Goniopygus brossardi* p. 158, †*G. cojuandi* p. 158 pl. ii fig. 3, †*G. peroni* p. 158, FOURTAU Bull. Inst. Égypt **5**.—†*G. major*, FOURTAU Mém. Inst. Égypt. **7** p. 46 pl. xii fig. 5.—†*G. peltatus*, JACKSON Phylogeny of Echini.—†*G. pelagiensis*, LAMBERT Bordeaux Actes soc. linn. **66** p. 67.

†*Rhabdocidaris orbigny*i, Lambert T.c. p. 165 pl. iii figs. 4 & 5.

Gymnechinus p. 286, *G. pulchellus*, *G. robillardi*, *G. cervicolor* p. 287, Clark, H. L. Mem. Mus. Comp. Zool. **34**.—*G. pulchellus*, *robillardi*, Jackson Phylogeny of Echini.

G. epistichus p. 289 pls., Philippine Is., *G. megaloplax* p. 287 pl., Persian gulf, **spp. n.**, Clark, H. L. Mem. Mus. Comp. Zool. **34**.—*G. grarieri* **sp. n.** [*nom. nud.*], Somaliland, Koehler in Gravier Bul. Muséum Paris **1911** p. 424.

Habrocidaris scutata, Jackson Phylogeny of Echini.

†*Herbertia* p. 60, †*H. gacheti* p. 65 pl. i figs. 5-6, 8-9 Lambert Bordeaux Actes soc. linn. **66**.

Heliocidaris p. 350, *H. crassispina*, *H. erythrogramma*, *H. tuberculata* p. 351, Clark, H. L. Mem. Mus. Comp. Zool. **34**.

H. stenopora **nom. n.** for *Toxocidaris mexicana* A. Agassiz, Clark, H. L. T.c. p. 351 pls.

†*Hemiaster artini* p. 169, †*H. fourneli* p. 168, †*H. pseudofourneli* p. 168 pl. iii fig. 5, Fourtau Bull. Inst. Égypt. **5**.—†*H. cf. gabrielis* p. 62, †*H. saulcyanus* p. 62 pl. xiv fig. 6, †*H.* sp. p. 62, Fourtau Mém. Inst. Égypt. **7**.

†*H. aly*, Turonien, p. 166 pl. iii fig. 2, †*H. hamei*, Turonien, p. 167 pl. iii figs. 3 & 4, †*H. toxasteristoma*, Cenomanien, p. 169 pl. iv fig. 1 **spp. n.** Égypte, Fourtau Bull. Inst. Égypt. **5**.—†*H. nodulosus* **sp. n.** Cénomanien, Lahfed, Syrie, Fourtau Mém. Inst. Égypt. **7** p. 60 pl. xiv figs. 4 & 5.

†*Hemicidaridae* diagnosed, Jackson Phylogeny of Echini p. 202.

†*Hemicidaris cartieri*, *crenularis*, *hofmanni*, *intermedia*, *langranensis*, *luciensis*, Jackson T.c.

†*Hemidiadema stratonima*, Jackson T.c.

Heterocentrotus p. 377, *H. mammillatus* p. 378 pls., *H. trigonarius* p. 379 pls., Clark, H. L. Mem. Mus. Comp. Zool. **34**.—*H. mammillatus*, *trigonarius*, Jackson Phylogeny of Echini.

†*Heterocidaris*, †*H. keokuk*, †*H. laevispina*, Hall; (nomina nuda) generic name preoccupied, †*H. laevispina* probably syn. of †*Pholidocidaris irregularis* Meek & Worthen, Jackson T.c. p. 456.

†*Heterodiadema libycum*, Fourtau Bull. Inst. Égypt. **5** p. 143.

†*Heteropeltacyus* (*sic*) *lefebvrei* var. *charrensis* **var. n.**, Éocène inférieure, Égypte, Fourtau T.c. p. 175 pl. iv fig. 5.

†Holectypina diagnosed, Jackson Phylogeny of Echini p. 201.

†*Holectypinae*, subfam. of *Discoidiidae*, containing *Holectypus*, *Coptodiscus* and *Lanieria*, Hawkins Proc. Zool. Soc. p. 150.

Holectypoida re-defined, contains three families, *Pygasteridae*, *Discoidiidae*, *Conulidae*, Hawkins T.c. p. 147.

†*Holectypus* subdivided into *Holectypus* s. str., and *Coenholectypus* q. v., Hawkins Geol. Mag. **9** p. 13.—†*Holectypus* Desor, re-diagnosed, with subgenera, *Holectypus* sens. str., and *Coenholectypus*; †*H. depressus* is type of *Holectypus* sens. str., Hawkins Proc. Zool. Soc. p. 150.—†*H. crassus* p. 160, †*H. serialis* p. 161, †*H. turonensis* p. 162, Fourtau Bull. Inst. Égypt. **5**.—†*H. cenomanensis*, p. 47, †*H. portentosus* p. 46 pl. xii fig. 6, Fourtau Mém. Inst. Égypt. **7**.—†*H. depressus* p. 13 pl. ii fig. 5, †*H. hemisphaericus* p. 13, Hawkins Geol. Mag. **9**.—†*H. hemisphericus*, Jackson Phylogeny of Echini.—†*H. giganteus*, Rollier Abh. Schweiz. Pal. Ges. **37** p. 7 pl. ii figs. 6-8.

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H. pycnotylus **sp. n.**, N. S. Wales, Clark, H. L. Mem. Mus. Comp. Zool. **34** p. 334 pls.

†*Hygatechinus* **gen. n.** of *Lepidocentridae* pp. 206 291, genotype †*H. beecheri* p. 297 pl. xxiv figs. 5-8 pl. xxv fig. 5 pl. xxvi, †*H. pentagonus* p. 295 pl. xix fig. 8 pl. xxiv figs. 1-4 pl. xxv figs. 1-4, **spp. n.**, Waverley group, Pennsylvania, †*H. rarispinus* (Hall)

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†*Hypeaster laridi* ? Albien, Hakel, p. 55 pl. xiv fig. 1, †*H. ludovici* Cénomanien, Gebail, p. 56 pl. xiv fig. 2, †*H. zumoffeni*, Turonien, Abellineh, Syrie, p. 58 pl. xiii fig. 6, **spp. n.**, FOURTAU Mém. Inst. Égypt. **7**.

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†*Hypsopatagus nonclauxi* **sp. n.** Lutétien, Caustonge, LAMBERT Ann. Univ. Lyon **1** p. 198 pl. xvi figs 30 & 31.

†*Hypsoplacunga ammon* FOURTAU Bull. Inst. Égypt. **5** p. 175.

Kaupisoma indistinctum, JACKSON Phylogeny of Echini.

†*Koninckocidaris* pp. 206 284, †*K. cotteaui* p. 285, JACKSON T.c.

†*K. silurica* **sp. n.**, Niagara Limestone, Rochester, New York, JACKSON T.c. p. 285 pl. xix fig. 1 pl. xx figs. 5 & 6.

†*Laganidea* section of *Clypeaster*, type *C. scutelliformis* Ponzi, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 90.

Laganum diploporum, JACKSON Phylogeny of Echini.—*L. depressum*, SOUTHWELL Ceylon biological rep. **5** p. 208.

Lamprechinus, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 302.

†*Lanieria* diagnosed, *L. lanieri* is type, HAWKINS Proc. Zool. Soc. p. 150.

†*Leiocidaris sismondai*, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 52 pl. vii figs. 1 & 2.

†*L. ludovici* **sp. n.** Cénomanien, Hakel, Syrie, FOURTAU Mem. Inst. Égypt. **7** p. 42 pl. xii fig. 1.—†*L. oppeliceini* **sp. n.**, Lutétien, Plassac, LAMBERT Bordeaux Actes soc. linn. **66** p. 53 pl. i fig. 4.

†*Leioplacus orbignyi*, LAMBERT T.c. p. 69.

†*Lepidechinoides* **gen. n.** p. 442, †*L. ithacensis* **sp. n.** New York, Devonian p. 443 figs. 1–3, OLSSON Amer. J. Sci. **33**.

†*Lepidechinus* pp. 207 394, †*L. imbricatus* p. 399 pl. lxii fig. 5 pl. lxiv fig. 1, †*L. irregularis* p. 396 pl. lxiii figs. 1 & 2, JACKSON Phylogeny of Echini.

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†*Lepidesthes* pp. 208 412, †*L. colletti* p. 425 pl. lxix figs. 1–8 pl. lxx figs. 1–5 pl. lxxi fig. 1, text figs., †*L. corcyi* p. 423 pl. lxvi figs. 8–10 pl. lxviii figs. 18–22, †*L. dewalquana* p. 420 pl. lxviii figs. 13–17, †*L. formosa* p. 418 pl. lxvi figs. 4–7 pl. lxviii figs. 3–14, †*L. laevis* p. 418 pl. lxvii figs. 13–18 pl. lxviii figs. 1 & 2, †*L. spectabilis* p. 421 text figs., †*L. westfieni* p. 416 pl. lxvi figs. 1–3 pl. lxvii figs. 8–14, JACKSON T.c.

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†*Lepidesthidae* diagnosed, JACKSON T.c. pp. 207 393.

†*Lepidocentridae* diagnosed, JACKSON T.c. pp. 206 284.

†*Lepidocentrus* pp. 208 286, †*L. desori* p. 457 (nom. nud), †*L. degdenensis* p. 288 pl. xvi fig. 5, pl. xxi figs. 1–3, †*L. duponti* p. 457 (nom. nud.), †*L. eifelianus* p. 291 pl. xx fig. 14, †*L. gaudryi* p. 457 (nom. nud.), †*L. mulleri* p. 289 pl. xix figs. 2–5, pl. xx figs. 8–13, †*L. rhenanus* p. 288 pl. xx fig. 7, JACKSON T.c.

†*L. whitfieldi* **sp. n.** Waverly Group, Ohio, JACKSON T.c. p. 290 pl. xix figs. 6 & 7 pl. xxi figs. 1 & 5.

†*Lepidocidaris* pp. 206, 282, †*L. squamosus* p. 282 pl. xvi figs. 1–3 pl. xvii figs. 1–14, JACKSON T.c.

†*Linthia deianaïci*, FOURTAU Bull. Inst. Égypt. **5** p. 174.—†*L. carentonensis* p. 92 pl. ii figs. 8 & 9, †*L. ducrocqi*, †*L. pomeli* p. 92, †*L. raulini* p. 93 pl. ii fig. 5, LAMBERT Bordeaux Actes Soc. linn. **66**.—†*L. sudanensis*, LEMOINE Bul. Muséum Paris **1910** p. 231.—†*L. verticalis*, VOGL Földt. Évk. **20** p. 76 pl. iv fig. 2.

†*L. syriaca* **sp. n.** Turonien, Nahr Fedar, Syrie, FOURTAU Mém Inst. Égypt. **7** p. 63 pl. xiv. figs. 7–9.—†*L.*

labrici p. 93 pl. ii figs. 6 & 7, †*L. neuvillei* p. 92 pl. ii fig. 10, **spp. n.** Lutétien, Blaye, Lambert Bordeaux Actes soc. linn. **66**.—†*L. loricsi* **sp. n.** Éocène moyen, Ralst, Lambert Ann. Univ. Lyon **1** p. 188 pl. xvi figs. 18 & 19.

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Lovenia cordiformis, Clark, H. L. Bull. Mus. Comp. Zool. **52** p. 349 pl. xiii fig. 3.

†*L. forbesi*, Brown, Géol. S.E. of Murray River p. 4; Jackson Phylogeny of Echini.

Loxechinus, Clark. H. L. Mem. Mus. Comp. Zool. **34** p. 347.—*L. albus*, Koehler Charcot exped. p. 162.

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L. amamesus p. 254 pls., California, *L. callipeplus* p. 251 pl., Barbados, *L. dyscritus* p. 249 pls., ?Florida, *L. euercus* p. 247 pls., Barbados, **spp. n.**, Clark, H. L. T.c.

†*Marcoya* pp. 207, 311, †*M. burlingtonensis* p. 312 pl. xxxii figs. 1–3, pl. xxxiii figs. 1–5, text figs., †*M. gigas* p. 321 pl. xlvi figs. 1–3, pl. xlvii figs. 1 & 2, †*M. gracilis* p. 323 pl. xxxiv. figs. 11 & 12, pl. xxxv figs. 1–3, †*M. intermedia* p. 314 pl. xxxiii figs. 6–12, pl. xxxiv figs. 1–3, †*M. phillipsiae* p. 316 pl. xxxiii figs. 13 & 14, †*M. sphaerica* p. 317 pl. xxxii figs. 4 & 5, pl. xxxiv figs. 4–10, Jackson Phylogeny of Echini.

†*Macropneustes monoferaccensis* **sp. n.**, Miocene, Italy, Lovano Milano Atti. Soc. ital. sc. nat. **51** p. 177 figs. 1–3.

†*Macropygus* subgen. of *Pygaster*, †*M. truncatus*, Hawkins Geol. Mag. **9** p. 11; Hawkins Proc. Zool. Soc. p. 449.

†*Magnosia punctata*, Jackson Phylogeny of Echini

†*Meekechinus* **gen. n.** of *Lepidesthidae* pp. 208, 442, genotype †*M. elegans* **sp. n.** Permian, Kansas, p. 443 pl. lxxv figs. 6–8, pl. lxxvi figs. 1–9, Jackson T.c.

†*Megapygus* **subgen. n.** of *Pygaster*, *P. umbrella* is type, Hawkins Proc. Zool. Soc. p. 449.

Mellita pacifica, *M. stokesii* pl. xiii fig. 2, Clark, H. L. Bull. Mus. Comp. Zool. **52** p. 348.—*M. sexiesperforatus*, Jackson Phylogeny of Echini.

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†*Melonites youngi* (nom. nud.), Jackson T.c. p. 457.

Mespilia, Clark, H. L. Mem. Mus. Comp. Zool. **34** p. 322.

†*M. globula*, Jackson Phylogeny of Echini.

Metalia pectoralis, JACKSON T.c.

†*Metaporhinus convexus*: DE STEFANI Roma Boll. Soc. geol. Ital. **30** p. 442.

†*Micraster fortini*, FORTIN Rouen Bul. soc. amis sci. nat. **36** p. 291.—†*M. coranguinum*, HAWKINS Proc. Geol. Ass. **23** p. 253.—†*M. coranguineum* [*sic*], JACKSON Phylogeny of Echini.—†*M. carbaricus*, †*M. matheroni*, LAMBERT Paris Bul. soc. géol. (4) **10** p. 814.

Microcyphus p. 322, *M. annulatus*, *M. compus*, *M. ericacanthus*, *M. maculatus*, *M. zigzag* p. 323, CLARK, H. L. Mem. Mus. Comp. Zool **34**.—*M. annulatus*, *maculatus*, JACKSON Phylogeny of Echini.

†*Micropedina* p. 157, †*M. oliaiponcausia* p. 156 pl. ii fig. 2, FOURTAU Bull. Inst. Égypt. **5**.

†*M. conica* **sp. n.** Cénomanien Égypte, FOURTAU T.c. p. 154 pl. ii fig. 1.

†*Miocidaris* pp. 201, 215, †*M. cassiana* p. 215, †*M. keyserlingi* p. 215 pl. ix figs. 1-5, text figs., JACKSON Phylogeny of Echini.

†*M. cannoni* **sp. n.**, Lower Carboniferous, Colorado, JACKSON T.c. p. 217 text figs.

†*Miotoxaster lamberti* **sp. n.** Albien, Deir-el-Kamar, Syrie, FOURTAU Mém. Inst. Égypt. **7** p. 51 pl. xiii fig. 5.

†*Nucleolitidae* discussed, HAWKINS Proc. Zool. Soc. p. 489.

†*Nucleolus dalcani*, LAMBERT Bordeaux Actes Soc. linn. **66** p. 76.

Nudechinus **gen. n.** of *Echinidae* p. 276, type *N. sectiporosus* **sp. n.** p. 277 pl., *N. stictus* p. 279 pls., **sp. n.** Sulu Archipelago, CLARK, H. L. Mem. Mus. Comp. Zool. **34**.

N. dardeyensis, *N. gravieri*, *N. inexpectus*, *N. multicolor*, CLARK, H. L. T.c. p. 277.

†*Offaster pilula*, BRYDONE Stratigraphy of Chalk of Hants p. 100 pl. ii figs. 5-18.

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†*O. halli* **sp. n.**, Keokuk group, Missouri, JACKSON T.c. p. 355 pl. xlvii figs 11 & 12, pl. xlviii fig. 5.

Opechinus p. 310, *O. spectabilis* p. 310, *O. variabilis* p. 311, CLARK, H. L. Mem. Mus. Comp. Zool. **34**.

†*Opiaster* [*sic*] *lamberti* **sp. n.** Éocène moyen Égypte, FOURTAU Bull. Inst. Égypt. **5** p. 173 pl. iv fig. 4.

†*Opissaster scillae*, DE STEFANI Boll. soc. geol. ital. **27** p. 170 pl. xvii fig. 7.—†*O. nice*, LAMBERT Ann. Univ. Lyon **1** p. 186.

†*O. minor* **sp. n.**, Latétien, près Fabrézan, LAMBERT T.c. p. 187 pl. xvi figs. 22-24.

†*Oppenheimia*, **nom. nov.** for *Lambertia* Oppenheim (preocc.); COSSMANN Paris Rev. crit. Paléozool. **4** p. 186.

Orechinus O. monolini, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 300 pls.

†*Ornithaster*, DOUVILLÉ Paris Bul. Soc. géol. (4) **2** p. 277.

†*Orthechinus [illegible]bicus* **sp. n.**, Santonien, Égypte, [illegible]URTAU Bull. Inst. Égypt. **5** p. 146, [illegible] fig. 4.

†*Orthopsis [illegible]ris* var. *granularis*, FOURTAU Bul[illegible]. Égypt **5** p. 143; FOURTAU Mém[illegible]. Égypt. **7** p. 44.—†*O. miliaris*, [illegible]kson Phylogeny of Echini.

†*Oxypleura* [illegible] section of *Clypeaster*, type *C. dom[illegible]*mel, LAMBERT Abh. Schweiz. Pal. [illegible] **38** p. 90.

†*Oxyclypeus* [illegible]ussed, HAWKINS Proc. Zool. Soc. p. 45[illegible]

Pachycentrotus **gen. n.** of *Strongylocentrotidae*, type *Sphaerechinus australiae* A. Agassiz, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 349.

†*Palaechinus agassizi* p. 457, †*P. carpenteri* p. 458 (nomina nud.), †? *P. konigii* p. 450 pl. xxix fig. 9, pl. xxxi fig. 7, †*P. loveni* p. 458 (nom. nud.), †*P. robinsi* p. 452, †*P.* sp. p. 458 ("of doubtful nature"), JACKSON Phylogeny of Echini.

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†*Palaeastiscidae* diagnosed, pp. 205, 250, Jackson T.c.

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†*Palearbacus*, section of *Clypeaster*, type *C. breunigi* Laube, Lambert Abh. Schweiz. Pal. Ges. **38** p. 89.

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†*Pedina rotata*, Jackson Phylogeny of Echini.

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†*Pelanechinus corallinus*, Jackson Phylogeny of Echini.

†*Peltastes stellulata*, *wrighti*, Jackson T.c.

†*Pericosmus latus*, De Stefani Boll. Soc. geol. ital. **27** p. 481.—*P. montecalensis*, Kranz N. Jahrb. Min. Beil Bd. **32** p. 721.

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†*Phymechinus mirabilis*, Jackson T.c.

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Pileinae, subfam. of *Pygasteridae*, containing *Pileus* and *Anorthopygus*, Hawkins Proc. Zool. Soc. p. 449.

†*Pileus*, diagnosed, *P. pileus* is type; Hawkins T.c. p. 449.

†*Plagiopygus carentonensis*, Lambert Bordeaux Actes soc. linn. **66** p. 79.

†*Platypleura* section of *Clypeaster*, type *C. marginatus* Lamarck, Lambert Abh. Schweiz. Pal. Ges. **38** p. 90.

Plesianthus section of *Clypeaster*, type *C. placunarius* Gray, Lambert T.c. p. 89.

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Pygaster sens. str., HAWKINS Proc. Zool. Soc. p. 451.

†Plesiocidaroida, JACKSON Phylogeny of Echini p. 205.

†*Plesiolampas michelini*, LAMBERT Ann. Univ. Lyon **1** p. 185.—†*P. saharae*, LEMOINE Bul. Museum, Paris **1910** p. 231.

Pleurechinus doderleini, JACKSON Phylogeny of Echini.

Plexechinus cinctus, JACKSON T.c.

†*Pliophyma* section of *Clypeaster*, type *C. atlas* Pomel, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 90.

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†*Polycyphus normannus*, JACKSON Phylogeny of Echini.—†*P. deslongchampsi*, PARIS York, Proc. Geol. Polyt. Soc. **17** p. 214.

Porocidaris eboraci, *milleri*, JACKSON Phylogeny of Echini.

†*P. pseudoserrata* VOGT., Földt. Évk. **20** p. 74.

†*Porpitella douvillei*, LAMBERT Ann. Univ. Lyon **1** p. 178.

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†*Praesentella degrangei*, LAMBERT Bordeaux Actes soc. linn. **66** p. 76.

†*Prenaster monzensis* **sp. n.** Éocène, Monz, LAMBERT Ann. Univ. Lyon **1** p. 191 pl. xvi figs. 20 & 21.

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†*P. jacquemeti*, †*P. lener*, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 53.

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†*Protocyamus* Gregory rejected, as n. of *Discoidea*, HAWKINS Proc. Zool. 452.

†*Protoechinus* p. 453, †*P. anceps* p. 454, JACKSON Phylogeny of Echini.

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†*P. tongrianus*, DE STEFANI Boll. soc. geol. ital. **27** p. 443.

†*P. loquatus* **sp. n.** Langhien, Bassin du Rhône, LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 51.—†*P. extranoiensis* **sp. n.**, Miocene, Eggenburg, SCHAFFER Wien Abh. geol. Reichsanst. **22** p. 187 pl. lix figs. 7–10.

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†*Pseudocidaris dieneri*, FOURTAU Mem. Inst. Égypt **7** p. 13.

†*Pseudodiadema pseudodiadema*, JACKSON Phylogeny of Echini.—†*P.* sp., Unter Oxford, Popilany, BODEN Geol. u. Pal. Abh. Jena **10** p. 75 pl. xxvii fig. 13.

†*P. hawei* **sp. n.** Cénomanien, Égypte, FOURTAU Bull. Inst. Égypt. **5** p. 139 pl. i fig. 1.

†*Pseudopedina zumsteini*, RICHARDSON Geol. Mag. **9** p. 7[illegible]

†*Psilosoma* Pl. [illegible]el, emend., p. 148; †*P. constrictum*[illegible]. **n.** Santonien p. 153 pl. i fig. 5, Égy[illegible]e, FOURTAU Bull. Inst. Égypt **5**.

†*Pygaster* s[illegible]divided, "*Plesiechinus*," *Pygaster* s. str. and *Macropygus*, q.v., HAWKINS Geol. Mag. **9** p. 10.—†*Pygaster* Agass. rediagnosed, with three subgenera, *Pygaster* sens. str., *Megapygus*, and *Macropygus*; †*P. semisulcatus* is type of *Pygaster* sens. str., HAWKINS Proc. Zool. Soc. p. 448.

†*Pygaster* s. str. temporary subgen. of *Pygaster* s. lat., †*P. dilatatus*, *macrocyphus* p. 11, †*P. umbrella* p. 11 pl. ii fig. 2, HAWKINS Geol. Mag. **9**.—†*P.* cf. *semisulcatus*, PARIS York. Proc. Geol. Polyt. Soc. **17** p. 215.

†*Pygasteridae*, redefined, with subfamilies *Pygasterinae* and *Pileinae*, HAWKINS Proc. Zool. Soc. p. 448.

†*Pygasterinae*, subfam. nov. of *Pygasteridae*, containing only *Pygaster*, HAWKINS T.c. p. 448.

Pygastrides Lovén rejected as probably a post larval Echinonëid, Hawkins T.c. p. 452.

†*Pygurus* discussed, Hawkins T.c. p. 493.—†*P.* sp. Kreide, E. Africa, Krenkel Beitr. Pal. Ost'Ung. **23** p. 202 fig.

†*Pyrina* discussed, Hawkins Proc. Zool. Soc. p. 189.—†*P. desmoulinsi*, Hawkins Geol. Mag. **9** p. 15 pl. ii fig. 9.

†*P.* "n. sp." Eocene, Friuli, Daineli Pisa Atti Soc tosc. sc. nat. **28** p. 95.

†*Rachiosoma delamarrei*, Fourtau Bull. Inst. Egypt. **5** p. 147.

†*Rhabdechinus* **gen. n.** near *Stomopneustes*, type †*Cidaris belouc* Ag., Lambert Rev. Crit. paléozool. **6** p. 69.

†*Rhabdocidaris sismondai*, Jokisimowitsch Zs. D. Geol. Ges. **62** p. 52.—†*R. maxima*, Paris York Proc. Geol. Polyt. Soc. **17** p. 215.

†*R.* "n. sp.," Eocene, Friuli, Daineli Pisa Atti Soc. tosc. sc. nat. **28** p. 93.

Rhaphidoclypus subgen. of *Clypeaster*, type *C. reticulatus* Linn., Lambert Abh. Schweiz. Pal. Ges. **38** p. 89.

†*Rhoechinus* sp. Duncan, Jackson Phylogeny of Echini p. 454.

Rotula dentata, Jackson T.c.

†*Salenia cincta, clarki, pattersoni, petalifera, scutigera*, Jackson T.c.—†*S. daleani*, Lambert Bordeaux Actes soc. linn. **66** p. 67.

Saleniidae, Jackson Phylogeny of Echini p. 203.

†*Salenidia savini* **sp. n.** Eocène, Montlaur, Lambert Ann. Univ. Lyon **1** p. 167 pl. xvi figs. 1–5.

Salenocidaris miliaris, profundi, variospina, Jackson Phylogeny of Echini.

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Salmacopsis, S. olivacea, Clark, H. L. Mem. Mus. Comp. Zool **34** p. 324 pls.

†*Sar master* **gen. n.** near *Prenaster*, p. 193, type †*S. miqueli* **sp. n.** Eocène, Mouz p. 195 pl. xvi figs. 25–27, Lambert Ann. Univ. Lyon **1**.

†*Schizaster parkinsoni*, De Stefani Boll. soc. geol. ital. **27** p. 176. pl. xvii figs. 11 & 12.—†*S. forcatus* p. 172; †*S.* sp. nov. indet., Eocène moyen Égypte p. 172 pl. iv fig. 3, Fourtau Bull. Inst. Egypt. **5**.—†*S. vicinalis*, Krasz N. Jahrb. Min. Beil. Bd. **32** p. 720.—†*S. alarici* p. 190, †*S. forcatus* p. 189, Lambert Ann. Univ., Lyon **1**.—†*S. archiaci* †*S. cotteaui* p. 94, †*S. desmoulinsi* p. 95, †*S. fontani* p. 95, pl. iii, figs. 1–3, †*S. latus*, p. 95, Lambert Bordeaux, Actes soc. linn. **66**.

†*S. melitensis* **sp. n.** Miocene, Malta, De Stefani Boll. Soc. geol. ital. **27** p. 179, pl. xvii, fig. 14.—†*S.* "n. sp.," Eocene, Friuli, Daineli Pisa, Atti Soc. tosc. sc. nat. **28** p. 98.

†*Schizechinus ducici*, De Stefani Boll. soc. geol. ital. **27** p. 441, pl. xvii, fig. 2.

†*Scutella petella*, Brown Geol. S.E. of Murray River p. 4.—†*S. melitensis*, De Stefani Boll. soc. geol. ital. **27** p. 147.—†*S. bonali*, Fallot Paris, B. Soc. Geol. (4) **1** p. 137.—†*S. subrotundaeformis*, Krasz N. Jahrb. Min., Beil. Bd. **32** p. 717.—†*S. bofilli* p. 67; †*S. gibbercula* p. 73 pl. v figs. 1 & 2; †*S. helvetica* p. 69; †*S. leognanensis* p. 63; †*S. paulensis* p. 64, pl. iv, figs. 10–12; *S. scillae* p. 62; †*S. striatula* p. 70; †*S. subrotunda* p. 61, fig. 1; †*S. subrotundaeformis* p. 66, Lambert Abh. Schweiz. Pal. Ges. **38**.

†*Scutella depereti* p. 68 pl. v figs. 3–5, †*S. deydieri* p. 72 pl. iv figs. 14–17, **spp. n.**, Helvétien, Vaucluse, Lambert T.c.—†*S.* "nov. sp." Helvetien, Hérault, Jacquemet Paris, Bul. Soc. geol. (3) **27** p. 751.

†*Scutellina blaviensis*, †*S. folium*, †*S. linderi*, Lambert Bordeaux, Actes soc. linn. **66** p. 69.

†*Sismondia marginalis tenuissima*, Cotteau Paris, Bul. Soc. géol. (4) **11** p. 436 figs. 2–4, pl. vi figs. 14–31.—†*S. rosacea*, Krasz N. Jahrb. Min. Beil. Bd. **32** p. 716.—†*S. archiaci*, †*S. billioti*, p. 70, †*S. occitana* p. 71, †*S. testudo* p. 70, Lambert Bordeaux Actes soc. linn. **66**.

†*S. bigranularis* **sp. n.**, Priabonien, Vertheuil, Lambert T.c. p. 72, pl. ii, fig. 2.

Spatangidae discussed, Hawkins Proc. Zool. Soc. p. 490.

Spatangina, Jackson Phylogeny of Echini p. 204.

Spatangus purpureus, GRIEG Arch. Math. Naturv. Kristiania **32** p. 9.—NICHOLS Proc. R. Irish Acad. **31** No. 57 p. 9.

†*S. pustulosus* DE STEFANI Boll. soc. geol. ital. **27** p. 462.—†*S. euglyphus*, KRANZ N. Jahrb. Min., Beil Bd. **32** p. 722.—†*S. austriacus*, SCHAFFER Wien, Abh. geol. ReichsAnst. **22** p. 191 pl. lix. figs. 1–3; pl. lx. fig. 7, text fig. 3.

†*S.* (*Maretia*) *perornatus* **sp. n.** Miocene, Eggenburg, SCHAFFER T.c. p. 190 pl. lix. figs. 4–6.

Spherosoma giganteum, *grimaldi*, JACKSON Phylogeny of Echini.

Sphaerechinus granularis pulcherrimus, JACKSON T.c.

†*Stenopatagus aragonensis*, LAMBERT Ann. Univ. Lyon **1** p. 197.

Sterechinus antarcticus, *diadema*, JACKSON Phylogeny of Echini.—*S. antarcticus* p. 159, *S. neumayeri* p. 160 pl. xiii fig. 1, KOEHLER Charcot exped.

Stirodonta, new suborder of Centrechinoida, including *Saleniidae*, *Phymosomatidae*, *Stomopneustidae*, *Arbaciidae*, JACKSON Phylogeny of Echini pp. 183, 203.

Stolonoclypus subgen. of *Clypeaster* type *C. humilis* "Klein," LAMBERT Abh. Schweiz. Pal. Ges. **38** p. 91.

†*Stomechinus bigranularis*, *granularis*, *perlatus*, JACKSON Phylogeny of Echini.—†*S. intermedius*, PARIS York, Proc. Geol. Polyt. Soc. **17** p. 215.

Stomopneustes variolaris, JACKSON Phylogeny of Echini.

Stomopneustidae, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 229.—JACKSON Phylogeny of Echini p. 303.

Strongylocentrotidae, CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 338.—JACKSON Phylogeny of Echini p. 204.

Strongylocentrotus droebachiensis, AWERINZEW Arch. zool. Paris (5) **8** p. i.—*S. depressus* p. 353, *S. drobachiensis* p. 358, *S. echinoides* p. 360 pls., *S. fragilis* p. 354 pls., *S. franciscanus* p. 354, *S. granularis* p. 353, *S. intermedius* p. 353, *S. nudus* p. 363 pl., *S. polyacanthus* p. 362 pls., *S. pulchellus* p. 356 pls., *S. pulcherrimus* p. 353, *S. purpuratus* p. 354, *S. sachalinicus* p. 353, CLARK, H. L. Mem. Mus. Comp. Zool. **34**.—*S. albus* p. 347 pl. xii fig. 1, *S. gibbosus* p. 346 pl. xii fig. 2, CLARK, H. L. Bull. Mus. Comp. Zool. **52**.—*S. albus*, *depressus*, *drobachiensis*, *erythrogrammus*, *franciscanus*, *gibbosus*, *lividus*, *mexicanus*, *purpuratus*, *tuberculatus*, JACKSON Phylogeny of Echini.—*S. lividus*, NICHOLS Proc. R. Irish Acad. **31** No. 57 p. 6.—*S. purpuratus*, ROGERSON Arch. Entw-Mech. Leipzig **35** p. 64.—*S. lividus*, RUSSTRÖM Bul. Inst. océan. Monaco n° **240**—**247** p. 1.

S. fragilis **sp. n.** California, JACKSON Phylogeny of Echini p. 128.

†*Temnaster* **gen. n.**, near *Gualtieria*, p. 105, type †*T. grasseauxi* **sp. n.**, Lutétien, Blaye p. 106, pl. iii figs. 6 & 7 LAMBERT Bordeaux Actes soc. linn. **66**.

Temnopleuridae CLARK, H. L. Mem. Mus. Comp. Zool. **34** p. 260.—JACKSON Phylogeny of Echini p. 203.

Temnopleurus p. 311, *T. hardwickii* p. 312, *T. reevesii* p. 313, *T. toreumaticus* p. 312, CLARK H. L. Mem. Mus. Comp. Zool. **34**.—*T. hardwickii*, *reevesii*, *toreumaticus*, JACKSON Phylogeny of Echini.

†*T. neuvillei* **sp. n.**, Lutétien, Blaye, LAMBERT Bordeaux Actes soc. linn. **66** p. 67 pl. i figs. 12–14.

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†*Tetracidaris*, JACKSON Phylogeny of Echini p. 201.

Tetrapygus niger, CLARK H. L. Bull. Mus. Comp. Zool. **52** p. 345 pl. x fig. 1.

†*Thagastea* Pomel prob. not distinct from *Fibularia*, HAWKINS Geol. Mag. **9** p. 300.

†*Thylechinus* Pomel discussed p. 167, †*T. pegoti* p. 172, LAMBERT Ann. Univ. Lyon **1**.—†*T. superbus*, VOGT Foldt. Evk. **20** p. 75.

†*T. minor* **sp. n.** Lutétien, Fontas et près Montlaur, LAMBERT Ann. Univ. Lyon **1** p. 173 pl. xvi figs. 6–9.

†*Tiarechinus princeps*, JACKSON Phylogeny of Echini.

†*Tornquistellus* p. 291, †*T. gracilis* p. 291 pl. xx fig. 15 JACKSON T.c.

†*Pozaster retusus*, Baldacci Roma Boll. comitato geol. 1901 p. 82.

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†*Trachypatagus meneghinii*, Kranz N. Jahrb. Min. Beil. Bd. **32** p. 721.

Trigonocidaris albida, Clark H. L. Mem. Mus. Comp. Zool. **34** p. 295.—Jackson Phylogeny of Echini.

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†*Trochotiara depressum*, Paris York. Proc. Geol. Polyt. Soc **17** p. 214.

†*Typocidaris cenomanensis* p. 138. †*T. essenensis* p. 139, Fourtau Bull. Inst. Egypt **5**.

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ARRANGED BY

J. S. DUNKERLY.

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Turbellarien, Studien u. Beschreibungen, genn. et spp. n. ; SEKERA SitzBer. Böhm. Ges. wiss. **1911** 13 pp. 1-38 1 pl.

Revision der schweizerischen Rhabdocoelen und Alloocoelen ; HOFSTEN Revue Suisse Zool. **20** pp. 543-687.

Monographie der Gruppe, *Olisthanellini* genn. et spp. n., SEKERA SitzBer. Böhm. Ges. Wiss. **1911** 21 pp. 1-93 2 pls.

Systematik der einheimischen Süsswassertricladen; LANG Zool. Anz. **41** pp. 11–13.

Polyclads from California; HEATH & MCGREGOR Philadelphia Proc. Acad. Nat. Sci. **64** pp. 155–186 figs. 1–12.

Temnocephaloidea, key to Families; ANNANDALE Rec. Ind. Mus. **7** p. 244.

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Caridinicola **gen. n.** *Scutariellidae indica* **sp. n.** Orissa and Bengal; ANNANDALE Rec. Ind. Mus. **7** p. 245 fig. 1.

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Geoplana picadoi **sp. n.** Costa Rica; BEAUCHAMP Arch. Zool. Paris **10** p. iii fig. 1.

Idioplanoides **nom. n.** for *Woodworthia* Laidlaw; BARBOUR Washington D.C. Proc. Biol. Soc. **25** p. 187.

Jordania **gen. n.** *Polycystididae stolci* **sp. n.** Böhmen p. 32 pl. figs. 26–29; SEKERA SitzBer. Böhm. Ges. Wiss. **1911** 13.

Leptoplana rupicola p. 164 fig. 2, *tenuis* p. 166 fig. 3, *saxicola* p. 167, *inquieta* p. 170, **spp. n.** California, HEATH & MCGREGOR Philadelphia Proc. Acad. Nat. Sci. **64**.

Lichenoplana lepida **sp. n.** California; HEATH & MCGREGOR Philadelphia Proc. Acad. Nat. Sci. **64** p. 174 fig. 5.

Olisthanella brinkmanni p. 80 pl. i fig. 1, *albicusis* p. 80 pl. i figs. 2–4, **spp. n.**, Böhmen; SEKERA SitzBer. Böhm. Ges. Wiss. **1911** 24.

Opisthocystis **gen. n.** *Polycystididae* type *Polycystis gottei* Bresslau; SEKERA SitzBer. Böhm. Ges. Wiss. **1911** 13 p. 31 pl. figs. 31–33.

Opistomum vejdovskyi **sp. n.** Böhmen; SEKERA SitzBer. Böhm. Ges. Wiss. **1911** p. 7 pl. figs. 7–10.

Phaenocora rufoferata Beschreibung; SEKERA SitzBer. Böhm. Ges. Wiss. **1911** 13 p. 5 figs. 1–6.

Phyllodana litoricola **sp. n.** California; HEATH & MCGREGOR Philadelphia Proc. Acad. Nat. Sci **64** p. 172 fig. 4.

Pilgramilla **gen. n.** *Graffillidae* p. 12, *sphagnorum* **sp. n.** Böhmen; SEKERA SitzBer. Böhm. Ges. Wiss. **1911** 13 p. 13 pl. figs. 11–14.

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Rhynchodemus bromelicola **sp. n.**, Costa Rica; BEAUCHAMP Arch. Zool. Paris **10** p. v figs. 2 and 3.

Scutariellidae **fam. n.** in *Temnocephaloidea*; ANNANDALE Rec. Ind. Mus. **7** p. 245.

Sorocelis eburnea **sp. n.**, Aralsee, p. 387, anatomy 389–408; MUTH Graz. Mitt. Natw. Ver. Steiermark **48**.

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Stenygloatoma coccum **sp. n.** fur *radiatum* var. *coccum* Sek; SEKERA SitzBer. Böhm. Ges. Wiss. **1911** 13 p. 19 pl. figs. 16–18.

Stylochoplana gracilis **sp. n.** California; HEATH & MCGREGOR Philadelphia Proc. Acad. Nat. Sci. **64** p. 163.

Stylostomum lentum **sp. n.**, California; HEATH & MCGREGOR Philadelphia Proc. Acad. Nat. Sci. **64** p. 176.

Taborella **gen. n.** *Olisthanellini* p. 86, *kofoicai* **sp. n.**, Böhmen; SEKERA Sitz-

Ber. Böhm. Ges. Wiss. **1911** 24 p. 18 figs. 16–19.

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Typhloplanella **gen. n.** *Olisthanellini* p. 84, für *Mesostoma vejdovskyi* Jaw. *halleziana* Vejd. and *hirudo* Sek. p. 83; *Ivesiana* **sp. n.** Südböhmen p. 83; Sekera SitzBer. Böhm. Ges. Wiss. **1911** 24.

(b) Trematoda.

Bemerkungen zum natürlichen System der monogenen Trematoden; Odhner Zool. Anz. **39** pp. 337–351 and **41** pp. 54–71.

Trematoden der Vögel Turkestans (Russ.); Solovjev Ann. mus. zool. **17** pp. 92–104 figs. 7–11.

Trematoden der Vögel Turkestans I. *Prosthogoniminae* (Russ.); Skrjabin Arch. veterin. nauk **42** pp. 1270–1287 1 pl.

Amphistomum conicum è commensale o parassita ?; Barbagallo Cagl. Boll. Soc. med. nat. **14** pp. 17–19.

Aneylocoelium **gen. n.** *Haplocladinae*, *typicum* **sp. n.** p. 198 pl. ix fig. 1, from *Trachurus trachurus*; Nicoll Parasitol. **5**.

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Cephalogonimus vesicaudus **sp. n.** in Fluss Schildkröten; Vickerson Zool. Jahrb. Abt. Syst. **33** p. 249.

Cercaria Blanchardi **sp. n.** from *Planorbis balianus*; da Silva Arch. parasit. **15** p. 398 fig.—*C. ordinata* **sp. n.** from striped snake, N. America; Nicoll Proc. Zool. Soc. 1912 p. 768 fig. 107a.

Derogenes fuhrmanni **sp. n.** in Cottus; Mola Centralbl. Bakt. Abt. 1 **65** p. 492.

Derogenoides **gen. n.** *Hemiuridae*, *arcuatus* **sp. n.** from *Trachinus draco*; Nicoll Parasitol. **5** p. **243** fig. **6**.

Dicrocoelium conspicuum **sp. n.** from *Mimus lividus*; de Faria Mem. Inst. Oswaldo Cruz **4** p. 62 pl. i.

Diplodiscus megalocirrus from *Hyla aurea* and *Limnodynastes peronii*, *microcirrus* from *Hyla cucingii* and *Limnodynastes tasmaniensis* **spp. n.**; Johnston Proc. Linn. Soc. N.S.W. **37** pp. 302–7 figs.

Diplostomum sirtale **sp. n** from striped snake, N. America; Nicoll Proc. Zool. Soc. **1912** p. 768 fig. 107b.

Distomum pulmonale, Morphologie; Kreo Centralbl. Bakt. Abt. 1 **65** pp. 115–138.

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Echinostomum exechinatum aus *Phalacrocorax carbo* pp. 100–102 fig. 9 *mesotestius* aus *Larcus fringillegus* pp. 102–103 fig. 10, **spp. n.**, Turkestan; Solovjev Ann. mus. zool. **17**.

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Gasterostomum tergestinum Stossich, correction; Nicoll Nap. Ann. Mus. Zool. **3** 14 pp. 1–3.

Gastrothylax bubalis **sp. n.** from *Bubalis* sp., Central Africa; Innes Parasitol. **5** pp. 217–226 8 text figs.

Gorgodera australiensis **sp. n.** from *Hyla aurea* and *Limnodynastes peronii*; Johnston Proc. Linn. Soc. N.S.W. **37** p. 325.

Heliostrema **gen. n.** *Liliopinae*, *magniovatum* **sp. n.** in *Iguana tuberculata*; Odhner Zool. Anz. **41** pp. 57–58.

Hemijera **gen. n.** *Hemiuridae*, *arcuata* **sp. n.** from *Lepidogaster gouanii*; Nicoll Parasitol. **5** p. 242 figs. 4 & 5.

Isoncistrum **gen. n.** p. 98 *Gyrodactylidae*, *loliginis* **sp. n.** from *Loligo* sp.; Beauchamp Paris Bul. soc. zool. **37** p. 98 fig. 1.

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Phyllomella eolae, correction; SOUTHERN Proc. R. Irish Acad. **31** p. 16.

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Pneumonaeces australis **sp. n.** from *Hyla aurea* and *Limnodynastes peronii*; JOHNSTON Proc. Linn. Soc. N.S.W. **37** p. 320 figs.

Podocotyle synguathi **sp. n.** from pipefishes; NICOLL Parasitol. **5** p. 238 figs. 1 & 2.

Polystomum bullienae **sp. n.** from *Hyla phyllochroa* & *H. leseueri*; JOHNSTON Proc. Linn. Soc. N.S.W. **37** p. 297 figs.

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Schizamphistomum sclerosporum (Creplin) anatomy; LOOSS Zool. Jahrb. Suppl. **15** i. pp. 313-351 figs. 17-19.

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VII. BRACHIOPODA AND BRYOZOA

ARRANGED BY

F. W. EDWARDS.

(a) BRACHIOPODA

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(*b*) FOSSIL.

Ordovician.

United States (Indiana), sp. n. *Batostoma*; **Cumings & Galloway, 14.**

Carboniferous.

England and Ireland, *Treposomata*, spp. n. *Batostomella, Dyscritella, Leioclema, Stenopora, Tabulipora, Verticillopora*, gen. n. *Koninckopora*; **Lee, 16.**

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England (Norfolk) spp. n. *Discoflustrellaria, Lateroflustrellaria, Membranipora, Rhagasostoma, Semieschara*; **Brydone, 6.**

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†*Callopora* development, CUMINGS Bull. Geol. Soc. America **23** p. 362.

Cellepora americana **sp. n.** Massachusetts, OSBURN Washington D.C. Bull. Bur. Fish. **30** p. 238.

†*Cribrilina biarritzensis* sp. n. France Tertiary, CANU Paris Bul. soc. géol. **10** p. 846.—*C. reticulata* sp. n. Indian Ocean, THORNELY London Trans. Linn. Soc. **15** 1912 p. 141.

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ARRANGED BY

H. B. PRESTON.

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Abbreviations employed in Sections II and III:—

descr. = described.
exp. } = expedition.
expdn. }
occ. = occurrence.
syn. = synonymy.

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Spongelomenia **gen. n.** genotype *S. Bathybia* **sp. n.** Barbados, HEATH Zool. Jahrb. Jena Suppl. **15** Bd 1 p. 475.

POLYPLACOPHORA.

Acanthochites leuconotus Lord Howe Is.; *approximans*. Lord Howe and Norfolk Is., spp. n., HEDLEY & HULL Proc. Linn. Soc. N. S. Wales **37** pp. 275–6.

Acanthochites rufus, limberi, rubrostriatus, spp. n., S. Australia, TORR Adelaide S. Aust. Trans. R. Soc. **36** pp. 167–169.

Acanthochites sibogae Moluccas, *thelenisi* **sp. n.** New Zealand, THIELE Zoologica Stuttgart **22** pp. 50 72.

Acanthochites subviridis **sp. n.** W. Australia, TORR Adelaide S. Aust. Trans. R. Soc. **35** p. 104.

†*Allochiton* **gen. n.** (*Chiton*). *A. gemmellaroi, costulatus, altus*, spp. n., Sicily Jurassic, FUCINI Paleontogr. Italica Pisa **18** pp. 111–127.

Callochiton deshayesi **nom. n.** for *Chiton sanguineus*, Desh., THIELE Zoologica Stuttgart **22** p. 7.

Callochiton suagi, TORR figured, TORR Adelaide S. Aust. Trans. R. Soc. **36** Pl. V figs. 1 a-f.

Chaetopleura brucei **sp. n.** South Orkneys, IREDALE in MELVILL & STANDEN Edinburgh Trans. R. Soc. **48** p. 333.

Chiton corypheus Norfolk Is., Raoul Is., *howensis* Lord Howe Is., *funereus* Lord Howe, Norfolk Is. and Raoul Is., spp. n., HEDLEY & HULL Proc. Linn. Soc. N. S. Wales **37** pp. 277–9.

Cryptoplax sykesi **sp. n.** E. Africa, THIELE Zoologica Stuttgart **22** p. 54.

Hanleya hanleyi Bean syn., DAUTZENBERG & FISCHER Moll. Hirondelle &c. Monaco **1912** pp. 21–23.

†*Heterochiton* **gen. n.** (*Chiton*). *H. baccai, vinassai*, **spp. n.**, Sicily Jurassic, FUCINI Paleontogr. Italica Pisa **18** pp. 111–121.

Ischnochiton hedleyi levis, bakeri spp. n. S. Australia, Torr Adelaide S. Aust. Trans. R. Soc. **36** pp. 166, 168–170.

Ischnochiton gabrieli, falcatus, spp. n., Western Port Victoria, Hull Melbourne Proc. R. Soc. Vict. **25** pp. 120–121.

Ischnochiton intermedius sp. n. Norfolk and Kermadec Isds., Hedley & Hull Proc. Linn. Soc. N. S. Wales **37** p. 274.

Ischnochiton verconis sp. n. W. Australia Torr Adelaide S. Aust. Trans. R. Soc. **35** pp. 102–103.

Lepidopleurus asellus (Chem) Spengler syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 31–33.

Lepidopleurus niger sp. n. W. Australia, Torr Adelaide S. Aust. Trans. R. Soc. **35** pp 105–106.

Lepidopleurus norfolcensis Norfolk I., *cotonatus* Lord Howe Is., spp. n., Hedley & Hull Proc. Linn. Soc. N. S. Wales **37** p. 273.

Lepidopleurus pelagicus sp. n. S. Australia, Torr Adelaide S. Aust. Trans. R. Soc. **38** pp. 165–166.

Mopalia retifera, schrenckii, spp. n. E. Siberia. Thiele Zoologica Stuttgart **22** pp. 30–31.

Ornithochiton discrepans sp. n. Lord Howe Is., Hedley & Hull Proc. Linn. Soc. N. S. Wales **37** p. 280.

Plaxiphora hedleyi, zebra, pustulosa, spp. n., W. Australia. Torr Adelaide S. Aust. Trans. R. Soc. **35** pp. 103 106–7.

Plaxiphora tasmanica nom. n. for *Chiton glaucus*, Quoy & Gaimard, *P. hedleyi* sp. n. Tasmania, Thiele Zoologica Stuttgart **22** p. 25.

†*Pterypochiton di-stefanoi, P.? mirificus*, spp. n., Sicily Jurassic, Fucini Paleontogr. Italica Pisa **18** pp. 109–111.

Tonicia hallianus sp. n. W. Australia, Torr Adelaide S. Aust. Trans. R. Soc. **35** pp 104–105.

Tonicella marmorea. Fab. syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 28–31.

Tonicella marmorea, Muskulatur und Fussdrüsen. Henrici Ark. Zool. **7** No. 35.

Trachydermon (*Bornochiton*) *ruber* Lin. *albus*, Lin. syn., Dautzenberg & Fischer, Moll. Hirondelle etc. Monaco **1912** pp. 23–28.

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Terebridae, Conidae, Pleurotomidae & Cancellariidae.

Admete viridula, Fab. syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 55–58.

Bela mauvillei sp. n., Vancouver Isd., Dall & Bartsch Ottawa Canada Dept. Mines Geol. Surv. Branch **14** **1910** p. 10.

Bela striatula, plicatula, glacialis spp. n., Antarctic, Thiele Deutsche Südpolar Exp. 1901–3 Berlin **1912** p. 215.

Bela turricula (Leach) Gray var. *maximilis*, G.O. Sars. var. *scalaris*, Möller, *B. gigantea* (Mörch), Knip., *bicarinata*, Couth., *reticulata*, Brown, *sarsi*, Verrill, *tenuicostata*, M. Sars syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 41–50.

Clathurella anceps, Eichw. var. *sculta, lincaris* Mont. var. *minor* varr. n., Britain, Marshall J. Conch. Leeds **13** pp. 297 299.

Clathurella dityloto sp. n., Persian Gulf, Melvill London Proc. Malac. Soc. **10** p. 252.

Clathurella kaulle villei, mehensti, alveolata, spp. n. French Guinea, Dautzenberg Ann. Inst. océan. Monaco **5** pp. 14–16.

Clionella tripartita (Weinkauff), syn., Smith London Proc. Malac. Soc. **10** pp. 53–54.

Conus kermadecensis sp. n., Kermadec Islands, Iredale London Proc. Malac. Soc. **10** p. 227.

Conus micarius sp. n., Queensland Hedley Sydney N.S.W. Rec. Austr. Mus. **8** pp. 147–148.

†*Conus gemmelloroi* sp. n. Sicily, Eocene, Cre chia-Rispoli Palermo Giorn. sc. nat. econ. **29** p. 100.

Daphnella corsicostata sp. n., N. S. Wales, Hedley Sydney N.S.W. Rec. Austr. Mus. **8** pp. 148–149.

Drillia cachrea sp. n., Persian Gulf, MELVILL London Proc. Malac. Soc. 10 pp. 250–251.

Daphnaria collesia sp. n., N. S. Wales, HEDLEY Sydney N.S.W. Rec. Austr. Mus. 8 p. 147.

Lora discussed, IREDALE London Proc. Malac. Soc. 10 p. 225.

Mangilia maurithana, clariscalpta, spp. n., Gulf of Oman, MELVILL London Proc. Malac. Soc. 10 pp. 251–252.

Mangilia hectica, arleaga, spp. n., Vancouver Isl., DALL & BARTSCH Ottawa Canada Dept. Mines Geol. Surv. Branch 14 1910 pp. 10–12.

Perrona perron var. [n.] *recvi*, *P. spirata* varr. [n.] *minor, weinkauffi*, STREBEL Hamburg Jahrb. wiss. Anst. 29 pp. 15 20–21.

Pleurotoma brachystoma, Phil. var. *alba*, var. n., Britain, MARSHALL J. Conch. Leeds 13 p. 303.

Pleurotoma lorta, French Guinea, *aniauta*, Libreville, spp. n., DAUTZENBERG Ann. Inst. océan. Monaco 5 pp. 11–13.

†*Pleurotoma sagenaua* sp. n. Victoria, Tertiary, CHAPMAN Melbourne Proc. R. Soc. Vict. 25 p. 191.

†*Pleurotoma* (*Calvatula*) *asperulata Lam.* var. *subsculpta, mariae* Hörn. et Auing. var. *persculpta* (*Perrona*), *semimarginata* Lk. var. *praecursor* varr. n., Eggenburg Miocene, SCHAFFER Wien. Abh. Geol. Rchs. Anst. 22 pp. 134–136.

Pleurotomella evadne, hypermnestra, spp. n., Persian Gulf, MELVILL London Proc. Malac. Soc. 10 pp. 252–253.

Pleurotomella similima, frigida, analata, deliciosa, spp. n., THIELE Deutsche Antarktik Südpolar Exp. 1901–1903 Berlin 1912 pp. 216–217.

Pusionella lanai sp. n. Mossamedes, DAUTZENBERG Ann. Inst. océan. Monaco 5 pp. 8–9.

Sacuteria concinna, sp. n., Burdwood Bank, MELVILL & STANDEN Edinburgh Trans. R. Soc. 48 p. 356.

Taranis morchi, Malm syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 54–55.

Perchra ambrosia sp. n., Persian Gulf, MELVILL London Proc. Malac. Soc. 10 p. 250.

Perchra clarkei sp. n., Aden, SMITH Nautilus Boston Mass. 26 pp. 75–76.

Perchra gravelì sp. n. Mossamedes, DAUTZENBERG Ann. Inst. océan. Monaco 5 p. 5.

Teretia anceps, Eichwald, syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 p. 50–52.

Theskia nana, Loven syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 p. 53.

Tomella lineata var. [n.] *gracilis, T. hapferi, pfefferi, loschei* [spp. n.] W. Africa, STREBEL Hamburg Jahrb. wiss. Anst. 29 pp. 6 9–11.

Typhlomangelia principalis sp. n., Antarktik THIELE Deutsche Südpolar Exp. 1901–1903 Berlin 1912 p. 215.

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Harpovoluta gen. n. (*Volutidae*) *vanhöffeni* sp. n. Antarktik, THIELE Deutsche Südpolar Exp. 1901–1903 Berlin 1912 p. 213.

Marginella amazona, Colenon. W. Africa; *gemmula, deliciosa* W. Africa; *ambigua* and var. *concolor* Rio de Oro; *bivittata pallata*, Praya Amelia; *gravelì*, Conaky and varr. *concolor, albina*, Praya Amelia; *columnella*, Praya Amelia; *aurata*, Mossamedes, spp. & varr. n., DAUTZENBERG Ann. Inst. océan. Monaco 5 pp. 19–26.

Marginella dautzenbergi, chaluacesi, spp. n., Sao Thomé Island, TOMLIN & SHACKLEFORD J. Conch. Leeds 13 pp. 319–320.

Marginella geminata sp. n., N.S. Wales etc., HEDLEY Sydney N.S.W. Rec. Austr. Mus. 8 pp. 145–146.

Marginella hyalina sp. n. Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 213.

Marginella (*Gibberula*) *replicata* sp. n., Persian Gulf, MELVILL London Proc. Malac. Soc. 10 p. 250.

†*Marginella macdonaldi* sp. n., Costa Rica, Pleistocene, DALL Smithsonian Inst. Misc. Collect. 59 No. 2 (Pub. 2077) p. 7.

Melo indicus, Gmel., anatomy of, FLEURE Rec. Ind. Mus. Calcutta 7 pp. 405–414.

Mitra biconica, Sykes = *Aphanitoma locardi*, Bavay, Sykes London Proc. Malac. Soc. 10 p. 4.

Mitra nodostaminea sp. n. N. S. Wales, Hedley Sydney N.S.W. Rec. Austr. Mus. 8 p. 150.

Mitra (*Volutomitra*) *parcellana* sp. n. South Orkneys, Melvill & Standen Edinburgh Trans. R. Soc. 48 pl. 355.

†*Mitra friedbergi* nom. n. for *M. subtilis*, Cossmann Rev. crit. paléozool. Paris 16 p. 214.

†*Oliva praenominata* nom. n. for *O. angustata*, Tate, Cossmann Rev. crit. paleozool. Paris 16 p. 215.

†*Olivella saxmaccoia* sp. n. Central America Pleistocene, Dall Smithsonian Inst. Misc. Collect. 59 No. 2 (Pub. 2077) p. 4.

Scaphella modesta sp. n. Off New South Wales, Hedley Sydney N.S.W. Rec. Austr. Mus. 8 p. 145.

Volata hirasei sp. n. Japan, Sowerby Ann. Mag. Nat. Hist. London 9 pp. 471–472.

†*Volata alfaroi* sp. n. Costa Rica Pleistocene, Dall Smithsonian Inst. Misc. Collect. 59 No. 2 (Pub. 2077) p. 8.

Fasciolariidae, Turbinellidae, Buccinidae, Nassidae, Columbellidae, Muricidae & Coralliophilidae.

Aesopus goforthi sp. n. California, Dall Nautilus Boston Mass. 25 pp. 127–128.

Anomalosipho subgen. n. Genotype *Sipho verkruzeni*, Kob. syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco 1912 p. 99–100.

Bathydomus obtectus sp. n. Antarktik, Thiele Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 247.

Boreotrophon macoani sp. n. Vancouver Isl., Dall & Bartsch Ottawa Canada Dept. Mines Geol. Surv. Branch 14 1910 p. 12.

Buccinella gen. n. (*Stenoglossa*), *B. jucunda* sp. n. bei Kerguelen, Thiele Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 246.

Buccinum undatum, Lin., *ciliatum*, Fab. *glaciale*, Lin., *angulosum*, Gray, *Donovani*, Gray, *tottoni*, Stimps, *terraenovae*, Beck, *groenlandicum*, Chem., *hydrophanum*, Hancock, *teane*, Gray syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco 1912 pp. 101–108, 116–119, 123–127, 129–130, 132–134, 137–138.

Buccinum undatum, Lin. var. *fasciata*, *B. richardi*, *B. glaciale*, Lin. varr. *quadricarinata* and *ecarinata*, *B. tottoni*, Stimps var. *angulifera*, *terrae-novae*, Beck varr. *teniseulpta*, *producta* and *abbreviata*, *groenlandicum*, Chem. varr. *kobelti* and *insignis*, *alicei*, spp. & varr. n., Arctic Seas, Dautzenberg & Fischer Moll. Hirondelle etc. Monaco 1912 pp. 113, 115–116, 122, 126, 128, 132–133, 136.

Buccinum solatum, Hermann 1871 = *Chrysodomus heros*, Gray 1850, Hedley & Pilsbry Nautilus Boston Mass. 26 p. 46.

†*Buccinum strombaides*, Hermann 1781 is the type of the genus *Cryptochorda*, Mörch 1858, Hedley & Pilsbry Nautilus Boston Mass. 26 1912 p. 47.

†*Buccinum* (*Dorsanum*) *Haueri Micht.* var. *excellens*, var. *scalata*, var. *subaucssii*, varr. n., Eggenburg Miocene, Schaffer Wien Abh. Geol. ReichsAnst. 22 pp. 146–147.

Bullia (*Leiodomus*) *tawaseudi* sp. n. Gulf of Oman, Melvill London Proc Malac. Soc. 10 p. 249.

†*Clavalithes headuelli* sp. n. Egypt Tertiary, Newton London Proc. Malac. Soc. 10 pp. 76–77.

Columbella (*Astyris*) *rosacea*, Gld. syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco 1912 pp. 145–146.

Dorsanum terebraeforme sp. n. Mossomedes, Dautzenberg Ann. Inst. océan. Monaco 5 pp. 33–34.

Fasciolaria australasia, Perry, var. *bakeri*, var. n. Victoria, Gatliff & Gabriel Viet. Nat. Melbourne 29 pp. 46–48.

Fasciolaria papillosa form n. *elongata* [loc. ?], *F. aurantiaca* form n. *brunnea* [loc. ?], *F. acutispira* [loc. ?], *scholvieni*, *dunkeri* S.-Afr., spp. n., *F. trapezium* form n. *pacteli* Nagasaki, Mauritius, Strebel Hamburg Jahrb. wiss. Anst. 28 Beih. 2 pp. 14, 27, 31, 33.

†*Fasciolaria* (*Euthriofusus*) *Burtigalensis* Bast. var. n. *rudis* Eggenburg Miocene, SCHAFFER Wien Abh. Geol. ReichsAnst. 22 p. 141.

†*Fusus* (*Clavella*) *sangiranensis* Mart. figured, MARTIN Leiden Samml. Geol. Reichsmus. 9 Pl. IX.

Gassaea sec. n. genotype *Nassa trisi*, MONTEROSATO J. conchyliol. Paris 59 pp. 295–296.

Jeannea gen. n. Genotype *J. hedleyi* sp. n. Kermadec Islands, IREDALE London Proc. Malac. Soc. 10 pp. 220–221.

Jumala turtoni, Bean syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 62–63.

Latiaxis armatus sp. n. Japan, Sowerby Ann. Mag. Nat. Hist. London 9 pp. 472–473.

Latiaxis princeps sp. n. Persian Gulf, MELVILL London Proc. Malac. Soc. 10 pp. 248–249.

Latirus fischerianus, Tapp. Can. syn. *L. pacteliana*, Kob. var. *carpentariensis*, var. n., Gulf of Carpentaria, HEDLEY Sydney N.S.W. Rec. Austr. Mus. 8 pp. 149–150.

Lepsiella gen. n. Genotype *Purpura scobina*, Q. & G., IREDALE London Proc. Malac. Soc. 10 p. 223 (in text).

†*Melongena andreaei* sp. n. Egypt Tertiary, NEWTON London Proc. Malac. Soc. 10 p. 79.

†*Melongena* (*Myristica*) *rothgana* sp. n. Carinthia Tertiary, KNETT Wien Beitr. Pal. Geol. OstUng. 25 pp. 83–86.

Murex brandaris, L. varr. *canaliaspinosus*, *delgadoi*, *monospinosus*, *spinotuberculatus*, *conica*, *novemcostatus*, *multicostatus*, varr. n., Coast of Spain, SERRADELL Barcelona Butlleti Club Montanyenc 1 pp. 8–11. P

Murex despectus Linné, Hermann's figure (1781) is that of *C. antiquus* sinistral, HEDLEY & PILSBRY Nautilus Boston Mass. 26 p. 47.

Murex patagiatus sp. n. N.S. Wales, HEDLEY Sydney N.S.W. Rec. Austr. Mus. 8 p. 151.

†*Murex ejectus*, Mart. figured, MARTIN Leiden Samml. Geol. Reichsmus. 9 Pl. IX.

†*Murex* (*Trophon*) *Deshayesii* var *pernavarra*, (*Ocinebra*) *crinaceus* Lin. var. *sublaevis*, varr. n., Eggenburg Miocene, SCHAFFER Wien Abh. Geol. ReichsAnst. 22 pp. 142, 144.

Nassa incrassata, Stimps., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 139–144.

Nassa pulla, L. var. *minor* var. n. Aden, SMITH Nautilus Boston Mass. 26 p. 77.

Nassa (*Hima*) *fischeri* sp. n. Mossamedes, DAUTZENBERG Ann. Inst. océan. Monaco 5 pp. 31–32.

†*Nassa saccoi*, *cocchii*, *monazonii*, spp. n., Italy Miocene, TRENTANOVE Roma Boll. Soc. geol. ital. 30 pp. 55–62.

Neothias, gen. n. Genotype *Purpura smithi*, Brazier, IREDALE London Proc. Malac. Soc. 10 p. 223 (in text).

Neptunea antiqua, Lin. syn. with varr. n. *media* & *kobelti*, subsp. *striata*, Jeff. var. n. *brewsi*, subsp. n. *japonica*, subsp. *carinata*, Penn. var. n. *elongata*, Arctic Seas, DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 68–75, 77–78.

Parasipho, subgen. n. Genotype *Fusus kroyeri*, Möller, DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 100–101.

Pareuthria plicatula sp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 212.

Penion, discussed, IREDALE London Proc. Malac. Soc. 10 pp. 223–224.

Probaccinum costatum sp. n. Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 211.

Pronepturnea gen. n. (*Stenoglossa*), *P. amabilis* sp. n. bei Kerguelen, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 246.

Prosipho pellitus, *certus*, *propinquus*, *papa*, *fuscus*, spp. n., bei Kerguelen, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 pp. 245–246.

Prosipho similis, *gracilis*, *glacialis*, *pusillus*, *nodosus*, *contrarius*, *spiralis*, *gaussianus*, *bisculptus elongatus*, spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 pp. 207–210.

Pusetuella nouchina, Lin. syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 288–291.

†*Purpuroidea? massaeformis* **sp. n.** Italy Triassic, Di Stefano Paleontogr Italica Pisa **18** pp. 99–100.

Purpura intricata **nom. n.** for *Columbella clathrata*, Braz, Hedley Sydney N.S.W. Rec. Austr. Mus. **8** p. 151.

Pygiolofusus deformis, Rve., syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** p. 67.

Quoyula **gen. n.** Genotype *Purpura monodonta* Q. & G., Iredale London Proc. Malac. Soc. **10** p. 221.

Siphonalia gracilis, Da Costa, *glaber*, (Verk.), Kob., *islandicus*, Chem., *kirsatus*, Jeff, *lapillus*, Mörch, *turgidulus* (Jeff.), Friele, *S.* (*Siphonalbia*) *elata*, Mörch, *jeffreysiana*, Turton, *S.* (*Turrisipho*) *undulatus*, Friele, *turtoana*, Rve., *dalli*, Friele, *S.* (*Anomalisipho*) *verkrüzeni*, Kob., *S.* (*Parasipho*) *kroyeri*, Möller syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 82–101.

†*Siphonalia paradoxica*, Jenk. **figured**, Martin Leiden Sammd. Geol. Reichsmus. **9** Pl. IX.

Sistrum opurense **sp. n.** South Pacific, Melvill London Proc. Malac. Soc. **10** pp. 27–28.

Thais ambustulatus **sp. n.** Queensland, Hedley Sydney N.S.W. Rec. Austr. Mus. **8** p. 152.

Thais, discussed, Iredale London Proc. Malac. Soc. **10** pp. 222–223.

Tritonidea castanea **sp. n.** Persian Gulf, Melvill London Proc. Malac. Soc. **10** pp. 249–250.

Trophon deggalskii **sp. n.** Antarktik, Thiele Deutsche Südpolar Exp. 1901–3 Berlin **1912** p. 213.

Trophon subtropicalis **sp. n.** Kermadec Islands, Iredale London Proc. Malac. Soc. **10** p. 227.

Trophon (*Barcetrophon*) *clathratus*, Lin., *gunneri*, Loven, *truncatus*, Ström, *T.* (*Trophonopsis*) *muricatus*, Mont., *barvicensis*, John., syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 147–149, 151–159.

Troschelia berniciensis, King, syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 59–61.

Turrisipho subgen. **n.** Genotype *Siphonalia undulatus*, Friele, Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** p. 97.

Volutopsius norvegicus, Chem. syn. Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 64–66.

Lotoridae, Cassidae, Dolidae, Cypraeidae, Strombidae, Aporrhaidae & Struthiolariidae.

Aporrhais pes-pelecani, Lin. A. (*Arrhoges*) *occidentalis*, Beck, syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 168–175.

Aquillus, Montfort, 1810 = *Cobestana*, Bolten, 1798, Dall Nautilus Boston Mass. **26** p. 59.

Aricia, Gray = *Monetaria*, Troschel, Shaw London Proc. Malac. Soc. **10** p. 26.

Cassidea pergi **sp. n.** Kermadec Islands, Iredale London Proc. Malac. Soc. **10** pp. 227–228.

Cypraea erosa var. *sabatha* & var. *carneola*, varr. n., Aden, Smith Nautilus Boston Mass. **26** p. 78.

Cypraea (*Tricia*) *arctica* (Sol.) Humph. syn., Dautzenberg & Fischer Moll. Hirondelle etc. Monaco **1912** pp. 160–165.

†*Cypraea gabrieli* **sp. n.** Victoria Tertiary, Chapman Melbourne Proc. R. Soc. Viet. **25** p. 190.

†*Cypraedia feuilletoni* **sp. n.** Java Eocene, Martin Leiden Sammd. Geol. Reichsmus. **9** pp. 134–135.

†*Pustularia gampingensis* **sp. n.** Java Eocene, Martin Leiden Sammd. Geol. Reichsmus. **9** p. 135.

†*Pyrula* (*Fulguroficus*) *Burdigalensis* Defr. var. *depressa*, *perangva* (*Melongena*) *corvata* Ag. var. *gasderndorfensis* (*Tudicla*) *rusticula* Bast. var. *alte spirata*, varr. n., Eggenburg Miocene, Schaffer Wien. Abh. Geol. ReichsAnst. **22** pp. 138–141.

†*Strombus coronatus* Defr. var. **n.** *praecedens*, Eggenburg Miocene, Schaffer Wien Abh. Geol. ReichsAnst. **22** pp. 149–150.

Septa, Perry may be retained for a section of *Lampusia*, Schumacher 1817, Dall Nautilus Boston Mass **26** p. 59.

†*Terebellum* (*Seraphs*) *siculum* sp. n. Sicily, Eocene, CHECCHIA-RISPOLI Palermo Giorn. sc. nat. econ. 29 p. 99.

Trivia desirabilis sp. n. Kermadec. Islands, IREDALE London Proc. Malac. Soc. 10 pp. 226–227.

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Argyropeza schepmaniana sp. n. Mekran Coast, MELVILL London Proc. Malac. Soc. 10 pp. 246–247.

Bittium brucei, Antarctic; *burdwoodianum*, Burdwood Bank, spp. n., MELVILL & STANDEN Edinburgh Trans. R. Soc. 48 p. 351.

Bittium vancouverensis sp. n. Vancouver Isd., DALL & BARTSCH Ottawa Canada Dept. Mines Geol. Surv. Branch 14 1910 pp. 19–20.

†*Bittium deshayesi* nom. n. for *Cerithium augustum* Desh., CERULLI-IRELLI Paleontogr. Italica Pisa 18 p. 145.

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†*Loxonema* (*Aclisina*) *cancellata* sp. n., Wisconsin Devonic, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21 p. 127.

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†*Mesalia subtrochoides* sp. n., Bosnia Eocene, Oppenheim Wien Beitr. Pal. Geol. OstUng. 25 p. 141.

†*Microptychis* gen. n. of *Loxonematida* Genotype *M. wrighti* sp. n., Ireland Lower Carboniferous, Longstaff London Q. J. Geol. Soc. 58 p. 307.

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†*Protoma cathedralis Brong.* var. n. *quadricincta*, Eggenburg Miocene, Schaffer Wien Abh. Geol. ReichsAnst. 22 p. 165.

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†*Triphora* (vide etiam *Triforis* et *Triphoris*) *perversa* var. *quadricingulata*, *T. semoidalis*, sp. & var. n., Italy Cainozoic, Cerulli Irelli Paleontogr. Italica Pisa 18 pp. 151–152.

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†*Turritella djadjariensis*, Mart. figured, Martin Leiden Samml. Geol. Reichsmus. 9 Pl. ix.

†*Turritella oppenheimi* nom. n. for *T. carinifera* Desh., Egypt Tertiary, Newton London Proc. Malac. Soc. 10 p. 81.

†*Turritella rosiccnsis*, *praestrangulata* spp. n., Bosnia Eocene, Oppenheim Wien Beitr. Pal. Geol. OstUng. 25 pp. 140–141.

†*Turritella schopeni* sp. n., Italy Triassic, Di-Stefano Paleontogr. Italica Pisa 18 p. 101.

†*Turritella semiconcava* sp. n., New Zealand Upper Cretaceous, Suter Wellington Trans. and Proc. N. Zeal. Inst. 43 p. 595.

†*Turritella turris* Bast. var. *rotundata*, *T.* (*Haustator*) *vermicularis* Brocc. var. *tricincta* varr. n., Eggenburg Miocene, Schaffer Wien Abh. Geol. ReichsAnst. 22 pp. 161, 165.

†*Turritella* (*Zaria*) *unicarinata* sp. n., Italy Cainozoic, Cerulli-Irelli Paleontogr. Italica Pisa 18 pp. 160–161.

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†*Amblaxus oleguaensis*, Arnold & Hannibal sp. n., Washington Eocene, HANNIBAL London Proc. Malac. Soc. 10 pp. 178–179.

Conthonyia aspera sp. n., Queensland, HEDLEY Sydney N.S.W. Rec. Austr. Mus. 8 pp. 141–142.

†*Dissostoma subanamia* sp. n., France Mid-Eocene, DONCIEUX Carcassonne Bul. soc. étud. sci. 23 pp. 39–40.

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†*Pachychilus lawsoni* California Miocene, *P. deaki*, Arnold & Hannibal, Washington Eocene, spp. n., HANNIBAL London Proc. Malac. Soc. 10 p. 183.

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†*Brancrillus*, gen. n. Genotype *B. physispira* sp. n., California Tertiary, Hannibal London Proc. Malac. Soc. 10 p. 191.

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†*Bythinia arundelensis* sp. n., Maryland, Clark Md. Geol. Surv. Lower Cretaceous p. 211.

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†*Enomphalus serpens* = *planorbis*, Nikantov Tomsk Izv. technol. Inst. 21 pp. 22–23.

†*Enomphalus straparolli formis* sp. n., Ostrau Carboniferous, Klebelsberg Wien Jahrb. Geol. ReichsAnst. 62 pp. 508–509.

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Heathilla, subgen. n. Genotype *Paludina seminalis*, Hinds, Hannibal London Proc. Malac. Soc. 10 pp. 186–187.

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†*Homalaxis praemeridionalis* sp. n. Victoria Tertiary, Chapman Melbourne Proc. R. Soc. Viet. 25 pp. 189–190.

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†*Hydrobia pseudoaspia* sp. n., Bahrloch Gouv. Stavropol, Sincov Verh. russ. mineral. Ges. 48 pp. 308–309.

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†*Lioplax andersoniana* sp. n., California Eocene, Hannibal London Proc. Malac. Soc. 10 p. 196.

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Potamolithus peruensis sp. n., Paraguay, PILSBRY Repts. Princeton Univ. Exp. Patagonia 1911 p. 589

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†*Pyrgulopsis williamsi* sp. n., California Pliocene, HANNIBAL London Proc. Malac. Soc. 10 pp. 189–190.

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Rissoa subantarctica, *studeriana*, *bythinella lartetia*, *miliaris*, *observationis*, spp. n., Kerguelen, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 pp. 238–239.

Rissoa (*Amphithalamus*) *alphesiboei*, Persian Gulf; *aristaei*, Bombay; *densilabrata*, Karachi, spp. n., MELVILL London Proc. Malac. Soc. 10 pp. 244–245.

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Rissoa (*Turbella*) *parva*, var. *interrupta*, J. Ad. *R.* (*Onoba*) *striata*, J. Ad., *R.* (*Alvania*) *jeffreysi*, Wall, *jan-mayeni*, Fricle, *R.* (*Actonia*) *subsoluta*, Arad., *R.* (*Cingula*) *castanea*, Möll., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 208–218.

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†*Valvata woodwardi*, Kennard = *V. goldfussiana*, Wüst, WÜST Frankfürt a. M. NachrBl. D. malakozool. Ges. 44 pp. 21–22.

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Vivipara rubicunda, v.Mts. var. n. *kisumuensis*, British E. Africa, Preston London Proc. Zool. Soc. 1912 p. 191.

Viviparus (vide etiam *Vivipara* et *Paludina*) *walkeri* sp. n., Florida, Pilsbry & Johnson Nautilus Boston Mass. 26 p. 48.

†*Viviparus marylandicus, arlingtonensis*, spp. n. Maryland, Clark Md. Geol. Surv. Lower Cretaceous p. 212.

†*Viviparus* (*Callina*) *turneri*, Nevada Eocene Hannibal; *V. washingtonianus*, spp. n., Washington Eocene, Hannibal London Proc. Malac. Soc. 10 pp. 193–194.

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Cyclophoridae & Cyclostomatidae.

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†*Acme flachi* sp. n., Miocän Deutschl., Clessin Regensburg Ber. natw. Ver. 13 p. 110.

Adelomorpha similis, flava, cingulata, spp. n., Neu Pommern, Leschke Hamburg Jahrb. wiss. Anst. 29 pp. 112–115.

Alycaeus costulosus, pavici & var. *minor, depressus, A.* (*Charax*) *fimbriatus* & var. *simplicilabris*, spp. & varr. n., Tonkin, Bavay & Dautzenberg J. conchyliol. Paris 60 pp. 49–54.

Annularia ramsdeni, pseudolatum, spp. n., Cuba, Pilsbry & Henderson Nautilus Boston Mass. 26 pp. 42–44.

Chondropoma carenasense, wilcoxi, spp. n., Cuba, Pilsbry & Henderson Nautilus Boston Mass. 26 pp. 44–45.

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Cyclotus (*Opisthoporus*) *bialatus* Mlldff., mss. sp. n. Loc. ? Kobelt in Martini & Chemnitz Conch. Cab. [Terrestrial Operculates] 1912 pp. 854–855.

Cyclotus (*Opisthoporus*) *bialatus*, Hab. ? ; *C.* (*Pseudocyclophorus*) *papuanus* & var. *Kapaurensis*, W. New Guinea ; *C.* (*P.*) *rollei*, Key Irds ; *C.* (*Opisthoporus*) *Kelantanensis* Kelantan, spp. & var. n., Kobelt Frankfurt a. M. NachrBl. D. malakozool. Ges. 44 pp. 8–10.

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†*Ericia schneidti* sp. n., S. Germany Tertiary, Jooss Centralbl. Min. Stuttgart 1912 pp. 90–91.

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†*Pomatias* (*Rhabdotakra*) *exc lleus* sp. n., Württemberg Upper Miocene, Jooss Frankfurt a. M. NachrBl. D. malakozool. Ges. 44 pp. 43–44.

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†*Epitonium* (*Sthenorytis*) *torocnse* **sp. n.** & **var.** *insigne* **var. n.** Central, America Pleistocene, DALL Smithsonian Inst. Misc. Collect. **59** No. 2 (Pub. 2077) pp. 6–7.

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†*Sphyradium hasta* sp. n., Kansas Pleistocene, Hanna Proc. U. S. Nation. Mus. 41 p. 373.

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†*Rumina decollata*, L. var. *elongata* var. n., S. France Pleistocene, CAZIOT & MAURY Paris Mem. soc. zool. 25 p. 57.

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†*Limnophysa auerbachensis* sp. n., S. Germany Tertiary, Jooss Centralbl. Min. Stuttgart **1912** p. 90.

†*Marinula colonia* sp. n., Central America Pleistocene, DALL Smithsonian Inst. Misc. Collect. **59** No. 2 (Pub. 2077) p. 4.

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†*Zalophaneylus*, gen. n. genotype *Z. morani* sp. n., Idaho Pliocene HANNIBAL London Proc. Malac. Soc. **10** p. 152.

Scaphopoda.

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Dentalium (*Antalis*) *entalis*, Lin., *agile*, M. SARS, syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 303–307.

†*Dentalium semicostatum, indianum* spp. n., Oklahoma Carboniferous, GIRTY New York N.Y. Ann. Acad. Sci. 21 p. 135.

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Siphonodentalium lobatum, Sow., *S.* (*Pulsellum*) *lofotense*, M. Sars, syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 309–313.

Lamellibranchia.

TETRABRANCHIA.
OSTRACEA, PECTINACEA, MYTILACEA.

Amussium laetum, iva, iceberi, zoniferum, margaritiferum, texturatum spp. n., *A. cristatellum* nom. n. for *Pecten* (*A.*) *cristatum* Bavay (non Bronn) Malay Archipelago, DAUTZENBERG & BAVAY Résult. Explor. Sibogo Mon. 53ᵃ pp. 31–34 36–38.

†*Amussium Zamboninii* sp. n. Sicily, Eocene, CHECCHIA-RISPOLI Palermo Giorn. sc. nat. econ. 29 pp. 89–90.

†*Anomya* (?) *flaccida* sp. n. Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 p. 19.

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†*Aucellina F. Schmidti* sp. n., Amurgebeit [? Cretaceous], SOKOLOV Trd. geol. Muz. Ak. nauk. 6 pp. 158–159.

†*Aucellina* (?) *lofotensis* sp. n., Andö, Norwegen Mesozoic, SOKOLOV Kristiania Skr. Vid. selsk. 1912 pp. 1–15.

†*Aviculopecten concentricus* sp. n., Oberdevon von Muhodjary, NIKANTOV Tomsk Trv. technol. Inst. 21 pp. 19 31.

†*Aviculopecten frechi, denckmanni* spp. n., Germany Devonian, BORN Stuttgart N. Jahrb. Min. Geol. Pal. 34 Beilage Bd pp. 575–576.

†*Avicula semillensi* sp. n., Belgium Frasnian, ASSELBERGHS Bruxelles Bull. Soc. géol. paléont. hyr. Mem. 26 p. 20.

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†*Avicula* (*Leiopteria*) *kercyniae* spp. n., Germany Devonian, BORN Stuttgart N. Jahrb. Min. Geol. Pal. 34 Beilage Bd pp. 576–577.

Camptonectes qausianus notalis spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 pp. 229–231.

Chlamys bruei, Payr. var. *sublaevis* var. n., Ile Finisterre, DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 p. 325.

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†*Chlamys monsregalensis, hoffmanni, limaeaeusis* spp. n. Sicily, Eocene, CHECCHIA-RISPOLI Palermo Giorn. sc. nat. econ. 29 pp. 82–86.

†*Clioplecta* gen. n. (near (*Pterinea*) *bicostata, unicostata*, spp. n., Maine Silurian, WILLIAMS Proc. U.S. Nation. Mus. 42 pp. 391–393.

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†*Dimya richei* sp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 p. 34.

†*Diotis janus*, Menegh. var. *paucicostata* var. n., S. Tirol Jurassic, HAAS

Wien Beitr. Pal. Geol. Ost-Ung. 25 p. 277–278.

†*Dreissensia carinatacurcata* sp. n., Bohrlöcher des Gouv. Stavropol. SINCOV St. Petersburg Verh. russ. mineral Ges. 48 p. 299.

†*Exogyra asiatica, aralensis*, spp. n., Obere Kreide des Aralsees, ARCHANGELSKIJ Izv. Turk. otd. russ. geogr. Obšč. 8 pp. 44–46.

Friersonia gen. n. type *Lamprosilis iridella*, OUTMANN Ann. Carnegie Mus. 8 p. 318.

†*Gervillia* (*Anyostella*) *angusta*, Mu-enst., var. n. *ricurca* Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 3–4.

†*Gryphaea cassianelliformis, obliqua G.* (?) *plicata, G. carinata, faba* spp. n. Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 21–23.

†*Halobia tommasii*, sp. n. Italy, Triassic, AIRAGHI Milano Atti Soc. ital. sc. nat. 51 p. 8.

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†*Inoceramus inconstans* & var. *saraunensis, tuberculatus, costellatus, corrugatus* spp. & var. n., Cretaceous England, WOODS London Palaeontographical Soc. 2 pp. 285–291 293 302 336 340.

†*Inoceramus spitzbergensis, labiatiformis* spp. n., Spitzbergen Cretaceous, STOLLEY Stockholm Vet.-Ak. Handl. 47 No. 11 pp. 20–26.

†*Inoceramus wollossowitschi* sp. n., Amurgebiet [? Cretaceous], SOKOLOV Trd. geol. Muz. Ak. nauk 6 pp. 164–166.

†*Inoceramus* (*Endocostea-Haenleinia*) *weidlingensis* sp. n., Nieder Oesterreich Eocene, TOULA Wien Verh. Geol. Reichsanst. 1912 pp. 219–224.

†*Kochia* (*Loxopteria*) *clarkei, lossani* spp. n., Germany Devonian, BORN Stuttgart N. Jahrb. Min. Geol. Pal. 34 Beilage Bd pp. 578–580.

Lima similima, ovalis spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 226.

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†*Lima* (*Plagiostoma*) *scaramellensis L.* (*Lima*) *judicana* spp. n. Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 5–6.

†*Limatula? fasciculata* sp. n. Oklahoma Carboniferous, GIRTY New York N.Y. Ann. Acad. Sci. 21 p. 134.

†*Limea aralensis* sp. n., Obere Kreide der Aralsees, ARCHANGELSKIJ Izv. Turk. otd. russ. geogr. Obšč. 8 pp. 56–57.

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Modiolaria rhyllensis sp. n. Victoria, GATLIFF & GABRIEL Melbourne Proc. R. Soc. Vict. 25 p. 167.

Monia aculeata, Müll. var. *laevis* var. n., Coast of Norway, DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 p. 319.

Monia aculeata, Müll., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 316–319.

†*Myalina elegantula, oviforme* spp. n., Germany Devonian, BORN Stuttgart N. Jarb. Min. Geol. Pal. 34 Beilage Bd pp. 580–581.

†*Mysidioptera arcolata, subuncinata* spp. n., Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 8–9.

†*Mytilarca trigonale* sp. n., Wisconsin Devonic, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21 p. 108.

Mytilus edulis, Lin., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 353–362.

Mytilus inflatus, subrimosus spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 pp. 56–57.

†*Neithea, aralensis* sp. n., Obere Kreide des Aralsees, ARCHANGELSKIJ Izv. Turk. otd. russ. geogr. Obšč. 8 pp. 54–55.

Ostrea gryphoides, Schlot. syn. & var. *cultackensis* var. n., NEWTON &

SMITH Rec. Geol. Surv. India 42 pp. 6–8 13.

†*Ostrea beegi, subsemiplana* spp. n., Obere Kreide des Aralsees, ARCHANGELISKI Izv. Turk. otd. russ. geogr. Obšč. 8 pp. 30–35.

†*Ostrea Stolzi* sp. n., Buochserhorn (Schweiz) Jurassic, TRAUTH Wien Mitt. Geol. Ges. 1 pp. 452–453.

†*Ostrea subsupinata, perangusta, subroncaensis, rarilamella* mut. *prisca*, & var. *fabrezanensis, sicardi, precrassissima, pterophora, tournali, senessei*, *O.* (*Hectryonia*) *boriesi*, *O.* (*Pycnodonta*) *Oppenheimi, peritirregularis*, *O.* (*Exogyra*) *bonnesai*, spp. mut & var. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 pp. 9–32.

Pecten (*Chlamys*) *pelseneeri* nom. n. for *P. rugosus*, Sow. non Lk., *P.* (*C.*) *senatorius*, Gmel. varr. *lilacina, articulata*, *P.* (*C.*) *bullatus*, *P.* (*Cyclopecten*) *translucens, micaceus* varr. & spp. n., Malay Archipelago, DAUTZENBERG & BAVAY Résult. Explor. Siboga Mon. 53b pp. 6 8 17 30–31.

†*Pecten aralensis* sp. n., Obere Kreide des Aralsees, ARCHANGELISKI Izv. Turk. otd. russ. geogr. Obšč. 8 p. 57.

†*Pecten bittneri, josephi, aquaenovae, schopeni, inflatus* spp. n. Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 10–16.

†*Pecten etruscus* sp. n., Italy Miocene, TRENTANOVE Roma Boll. Soc. geol. ital. 30 pp. 72–73.

†*Pecten praecursor* sp. n. = *P. consobrinus* var., Victoria, CHAPMAN Mem. Nat. Mus. Melbourne 1912 pp. 36–39.

†*Pecten redemptus* sp. n., Sardinia Bathonian, FUCINI Pisa Atti Soc. tosc. sc. nat. 27 pp. 98–99.

†*Pecten* (*Camptonectes*) *groenlandi* sp. n., Greenland Jurassic, RAVN Kjöbenhavn Medd. Grönl. 45 pp. 465–466.

†*Pecten* (*Chlamys*) *bonae* sp. n., Italy Jurassic, FABIANI Venezia Atti Ist. ven. 70 pp. 1462–1463.

†*Pecten* (*Chlamys*) *schmidti* sp. n., Stanserhorn (Schweiz) Jurassic, TRAUTH Wien Mitt Geol. Ges. 1 pp. 450–451.

†*Pecten* (*Lyropecten*) *pittieri* sp. n., Central America Pleistocene, DALL Smithsonian Inst. Misc. Collect. 59 No. 2 (Pub. 2077) p. 10.

†*Perna carinata* sp. n., Italy Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 p. 4.

†*Perna groenlandica* sp. n., Greenland Jurassic, RAVN Kjöbenhavn Medd. Grönl. 45 pp. 462–463.

Philobrya tumida, laevis, barbata, spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 pp. 227 252.

†*Plicatula inaequivalvis* sp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 p. 34.

†*Plicatula pseudoauriculata, subflabellata, gradata, scaramillensis*, spp. n., Italy Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 17–19.

†*Pseudobeligmus dubius* sp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 p. 45.

†*Pseudomonotis* (*Eumicrotis*) *grammaniurensis* sp. n., Italy Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 1–2.

†*Pterinea laxata* sp. n., Maine Silurian, WILLIAMS Proc. U. S. Nation. Mus. 42 p. 393.

Pterinopecten telleri sp. n., Wisconsin Devonic, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21 p. 112.

†*Radula di-stefanoi, normanna*, spp. n., Sicily Eocene, CHECCHIA-RISPOLI Palermo Giorn. sc. nat. econ. 29 pp. 90–91.

†*Spondylus aralensis* sp. n., Obere Kreide des Aralsees, ARCHANGELSKI Izv. Turk. otd. russ. geogr. Obšč. 8 pp. 59–60.

†*Spondylus hispanicus, blanquieri, paucispinosus, boriesi, peradherens*, spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 pp. 37–41.

†*Terquemia* (?) *gibba* sp. n., Italy Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 16–17.

Volsella modiolus, Lin., *gallica*, Dtz., *phaseolina*, Phil., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 363–366 368–370.

†*Valsella corbarica, leymerici*, spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon **30** pp. 50–52.

†*Valsellopsis douvillei, fabrezanensis, sennesi*, spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon **30** pp. 46–48.

ARCACEA, SUBMYTILACEA, ERYCINACEA.

Notes upon the families and genera of the Najades, ORTMANN Ann. Carnegie Mus. **8** pp. 222–365.

Anodonta anatina var. n. *circularis* Germany, HILBERT Königsberg Schr. physik. Ges. **52** p. 270.

Anodonta cooperiana, Lea is not a synonym of *A. gibbosa*, Say, FRIERSON Nautilus Boston Mass. **25** pp. 129–130.

Anodonta piscinalis var. *sarica* var. n., *nova* sp. n., Baikalsee, DYBOWSKI Peterburg Ann. mus. zool. Ac. sc. **17** pp. 215.

Anodonta woodiana syn., PRESTON Rec. Ind. Mus. Calcutta **7** pp. 282–284.

†*Anoplophora accitaddai, A.* (?) *impressa, A. dauneiformis, A.* (?) *gammaniensis*, spp. n., Italy Triassic, SCALIA Catania Atti Acc. Gioenia V **5** No. 8 pp. 39–40.

†*Anthracomello* subgen. n. *taffiana* sp. n., Oklahoma Carboniferous, GIRTY New York N.Y. Ann. Acad. Sci. **21** pp. 131–132.

Arca (*Bathyarca*) *pectunculoides*, Scacchi, *A.* (*B.?*) *glacialis*, Gray, syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco **1912** pp. 384–389.

†*Arca acoroides, A.* (*Anadara*) *dancyi, A.* (*Pectinatarca*) *bearnensis*, spp. n., France Aquitanian, COSSMANN & PEYROT Bordeaux Actes soc. linn. **66** pp. 267–269 280–282 285–286.

†*Arca contejeani* nom. n. for *A. rustica*, Contej., COSSMANN Rev. crit. paléozool. Paris **16** p. 215.

†*Arca gracilis*, sp. n., Bolivia Silurian, STEINMANN & HOEK Stuttgart N. Jahrb. Min. Geol. Pal. **34** Beilage Band pp. 248–249.

†*Arca perangusta, fagesi, custugensis*, spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon **30** pp. 62–67.

†*Arca* (*Scapharca*) *limonica, pittieri, A.* (*Noetia*) *macdonaldi* spp. n., Costa Rica Pleistocene, DALL Smithsonian Inst. Misc. Collect. **59** No. 2 (Pub. 2077) pp. 2–9.

Arconaia lanceolata syn., PRESTON Rec. Ind. Mus. Calcutta **7** pp. 307–308.

Arkansia gen. n. (*Unionidae*) genotype *A. wheeleri* sp. n., Arkansas, ORTMANN & WALKER Nautilus Boston Mass. **25** pp. 97–100.

Arnoldiana gen. n., genotype *Anodonta dejecta*, HANNIBAL London Proc. Malac. Soc. **10** pp. 128–129.

Astarte antarctica sp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin **1912** p. 229.

Astarte sulcata, Da Costa, *crenata*, Gray, *elliptica*, Brown, *A.* (*Tridonta*) *semisulcata*, Leach, *A.* (*Nicania*) *banksi*, Leach, syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco **1912** pp. 412–428.

†*Astarte alta* sp. n., Greenland Jurassic, RAVN Kjöbenhavn Medd. Grönl. **45** p. 473.

†*Astarte incrassata* (Brocchi) mut. *sallomacensis* mut. n. *A. degrangei, atarensis, A.* (*Goodallia*) *mayeri*, spp. n., France Aquitanian, COSSMANN & PEYROT Bordeaux Actes soc. linn. **66** pp. 139–141 143–147.

†*Barbatia barbata* (Lin.) var. *lithodomoides, B. biali, denticina, degrangei*, var. & spp. n., *B. praenominata* nom. mut. = *Arca dicholoma*, Hoern, France Aquitanian, COSSMANN & PEYROT Bordeaux Actes soc. linn. **66** pp. 292–296 299–301.

†*Beushausenia commutata* nom. n. for *Arca transversa*, Grep., COSSMANN Rev. crit. paléozool. Paris **16** p. 214.

†*Carbonicola duponti* sp. n., Carboniferous Belgium, HIND Mém. Mus. Belgique Bruxelles **6** pp. 15–16.

†*Cardiola gibbera* sp. n., Germany Devonian, BORN Stuttgart N. Jahrb. Min. Geol. Pal. **34** Beilage Bd p. 585.

Cardita congelascens sp. n., Burdwood Bank, MELVILL & STANDEN Edinburgh Trans. R. Soc. **48** p. 362.

Cardita intermedia sp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin **1912** p. 230.

†*Cardita dolomitica* sp. n., Italy Triassic, DI STEFANO Paleontogr. Italica Pisa **18** p. 73.

†*Cardita squamosissima, albasiensis, ligeoni, boriesi, formosa, miqueli*, spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 pp. 75–80.

†*Cardita (Glans) sallomacensis, raulini, salbriacensis, syrtica, ruginosa, johannae*, spp. n., France Aquitanian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 164–174.

†*Cardiopsis inopinata, koeneni*, spp. n., France Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 133–136.

Chamberlainia hainesiana syn., PRESTON Rec. Ind. Mus. Calcutta 7 p. 280.

†*Crassatella cannettensis, subsalsensis, depressa, brevis, angusta, corbarica, custugensis, rabatensis, obliqua, subaequalis, baicheri, scurasi*, spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 pp. 81–98.

†*Crassatella obliquecaudata* sp. n., Bosnia Eocene, OPPENHEIM Wien Beitr. Pal. Geol. Ost-Ung. 25 pp. 138–139.

†*Crassatella raulini, emiliae* spp. n., France Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 124–128.

Cristaria plicata, bellua, herculea, C. (Plethobasus) sowerbyi, reiniana syn., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 280–281.

†*Ctenodonta (Palaeoneilo) transversalis, ostraiensis*, spp. n., Polu. Ostrau Carboniferous, KLEBELSBERG Wien Jahrb. Geol. ReichsAnst. 62 pp. 483–485.

†*Cucullaea galdieri* sp. n., Italy Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 36–37.

†*Cucullella la vallei, dewalquii, stainieri*, spp. n., Belgium Frasnian, ASSELBERGS Bruxelles Bull. Soc. géol. paléont. hyr. Mem. 26 pp. 25–29.

Cumberlandia gen. n. genotype *Unio monodonta*, Say, ORTMANN Nautilus Boston Mass. 26 pp. 13–14.

Cusa carditelloides sp. n., New Zealand, SUTER Records Canterbury Museum 1 p. 278.

Cyamiomactra problematica var. *truncata* var. n., New Zealand, SUTER Records Canterbury Museum 1 p. 277.

Cyamium bennetti, exasperatum, piscium, spp. n., Falkland Isds., PRESTON Ann. Mag. Nat. Hist. London 9 pp. 237–239.

Cyamium rotundatum, commune, fragillimum, spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 pp. 231 255–256.

†*Cyrtodonta gratia* sp. n., Quebec Devonic, CLARKE Educ. Dept. St. Mus. Bull. No. 149 p. 129.

Dalliella purpurea, suberassa, insularis syn., PRESTON Rec. Ind. Mus. Calcutta 7 p. 294.

Davisia bennetti, concentrica, spp. n., Falkland Isds., PRESTON Ann. Mag. Nat. Hist. London 9 p. 639.

†*Eurymyella convexa, denbowensis*, spp. n., Maine Silurian, WILLIAMS Proc. U.S. Nation. Mus. 42 pp. 389–390.

†*Fossularca peyrerensis, F. (Galactella) miocaenica* sp. & mut. n., France Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 314–317.

Gabilliotia cuphratica, syn., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 284–285.

†*Gonidea hemphilli* sp. n., California Miocene, HANNIBAL London Proc. Malac. Soc. 10 p. 128.

Hyriopsis bialatus, cumingii, myersianus, schlegeli syn., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 279–280.

Kellya suborbicularis, Mont., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 434–437.

Kellyella miliaris, Phil., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 430–431.

Lamellidens (*L.*) *marginalis* and varr. *obesus, tricolor, candaharicus, thwaitesi, consobrinus, lamellatus, scutum, corrianus, generosus, jenkinsianus, zonatus* syn. and *L.* (*L.*) *marginalis* var. *sublamellatus*, var. *sawaddyensis*, Burma; *L.* (*L.*) *nongyangensis*, Nongyang Lake; *narainporensis*, Bengal; *phenchooganjensis*, Sylhet; *mainwaringi*, Siliguri, varr. & spp. n., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 302–306.

Leda antarctica, longicaudata, spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 229.

Leda pendei sp. n., Vancouver Isl., DALL & BARTSCH Ottawa Canada Dept. Mines Geol. Surv. Branch 14 1910 pp. 9–10.

†*Leda bergi* sp. n., Obere Kreide des Aralsees, ARCHANGELSKI Izv. Turk. otd. russ. geogr. Obšč. 8 pp. 63–64.

†*Leda* (*Lembulus*) *biati*, *peracuta*, spp. n., France Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 228–233.

Leganisaia (*nardinensis* var.) *naegelei nisibina*, Bourguignat mss., spp. n., Mesopotamia, KOBELT Rossmässler's Icon. Europ. L. & Susswasser Moll. 19 pp. 7–8 17.

Lepidodesma lanzulati syn., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 281–282.

Limnobasilissa subgen. n. genotype *Margaritana subangulata*, J. G. Cooper, HANNIBAL London Proc. Malac. Soc. 10 p. 127.

Limopsis minuta, Phil., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 390–391.

Limopsis scalea sp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 228.

†*Limopsis dumasi* sp. n., France Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 320–321.

†*Limopsis maccoyi*, *benamarinensis*, spp. n., Southern Australia Tertiary, CHAPMAN Melbourne Proc. R. Soc. Vict. 23 pp. 421–425.

Lissarca media, *kerguelensis*, spp. n., bei Kerguelen, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 253.

†*Macrodon inglii*, *hagenii*, spp. n., Greenland Jurassic, RAVN Kjöbenhavn Medd. Grönl. 45 pp. 470–471.

†*Macrodon parasparensis*, *subauriculatus*, *attenuatus*, *baccai*, *crassus*, spp. n., Italy Triassic SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 33–36.

Malletia pellucida, *concentrica*, spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 254.

†*Malletia degrangei*, *M.* (*Neila*) *raulini*, spp. n., France Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 242–244.

Margaritana margaritifera syn., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 285–286.

Über *Margaritana sinuata* Lamarck. (*Pseudunio* Haas.), ISRAËL Geia Jahrsber. Ges. Natw. 53–54 1912 pp. 93–102.

†*Margaritana* (*Pseudunio*) *herrei* sp. n., Eocene California, HANNIBAL London Proc. Malac. Soc. 10 p. 121.

†*Megalodus* (*Neomegalodus*) *mariani*, *parmai*, *elymus*, spp. n., Italy Triassic, DI STEFANO Paleontogr. Italica Pisa 18 pp. 79–84.

†*Megambonia wisconsinensis* sp. n., Wisconsin Devonic, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21 p. 120.

†*Migranaja*, gen. n. genotype *Unio littoralis*, Lam., HANNIBAL London Proc. Malac. Soc. 10 p. 124.

†*Modiomorpha oblique*, *schucherti*, *clarkei*, spp. n., Wisconsin Devonic, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21 pp. 114–115.

Montacuta dromanacasis sp. n. Victoria, GATLIFF & GABRIEL Melbourne Proc. R. Soc. Vict. 25 p. 167.

Montacuta substriata, Mont. syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 438–440.

†*Myoconcha cornalbae*, Stoll. var. *alternicostata* var. n., Italy Triassic, DI STEFANO Paleontogr. Italica Pisa 18 pp. 67–68.

†*Myoconcha incurva*, *tommasii* spp. n. Italy. Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 28–29.

†*Myophoria gammaniurensis*, *anna* spp. n. Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 46 48.

†*Myophoria suttonensis* sp. n., British Columbia Jurassic, CLAPP & SHIMER Boston Proc. Soc. Nat. Hist. 34 p. 433.

†*Myophoria tommasii* sp. n., Italy Triassic, DI STEFANO Paleontogr. Italica Pisa 18 p. 72.

Mysella truncata, *frigida* spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 pp. 230–231.

Nodularia (*Lanceolaria*) *oxyrynchus*, *N.* (*N.*) *douglasiae*, and var. *shanghaiensis*, *N.* (*N.*) *caerulea* and varr. *gandichaudi*

and *kreaudreni*, *N.* (*N.*) *shurtleffiana*, *accola*, *pachysoma*, *bonneaudi*, *andersoniana*, *pagio*, *crispata*, *scobina*, *ingallsiana*, *pazii*, *olivaria*, *nuttalliana*, *involuta*, *N.* (*Rediatula*) *crispisulcata*, *lima* and var. *siligariensis* syn. & *N.* (*N.*) *chaudhurii* Upper Burma; *theobaldi* Assam; *pectea* Siam, spp. n., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 288–293.

Nucula falklandica sp. n., Falkland Isds., PRESTON Ann. Mag. Nat. Hist. London 9 p. 637.

Nucula notobenthalis, *kerguelensis* spp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 254.

Nucula superba, Hedley figured and discussed, HEDLEY Sydney N.S.W. Rec. Austr. Mus. 8 p. 131 pl. xl figs. 1–2.

Nucula tennis, Mont., *tumidula*, Malm., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 392–396.

†*Nucula benoisti*, *aturensis*, *oligodonta*, *sacyi*, *burdigalica* spp. n. France, Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 211–219.

†*Nucula bouffeti*, *angusta* spp. n., France Eocene, DONCIEUX Ann. Univ. Lyon 30 pp. 69–70.

†*Nucula doncieuxi* nom. n. for *N. angusta*, Doncieux, COSSMANN Rev. crit. paléozool. Paris 16 p. 215.

†*Nucula wewokana* sp. n., Oklahoma Carboniferous, GIRTY New York N.Y. Ann. Acad. Sci. 21 p. 131.

Nuculana peraula, Müll., *minuta*, Müll., syn., DAUTZENBERG & FISCHER Moll. Hirondelle etc. Monaco 1912 pp. 396–402.

†*Nuculina dumasi* sp. n. France, Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 pp. 248–249.

†*Nuculopsis* gen. n. type *Nucula centricosa*, Oklahoma, Carboniferous, GIRTY New York N.Y. Ann. Acad. Sci. 21 p. 133.

†*Nyassa elongata* sp. n., Wisconsin Devonic, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21 p. 111.

Paraptera gen. n. genotype *Lampsilis* (*Proptera*) *gracilis* (Barnes), ORTMANN Mem. Carnegie Mus. 4 p. 301.

Parreysia (*P.*) *corrugata* and varr. *laevirostris* and *wappoorensis*, *P. wynegungaensis*, *favidens* and varr. *pinax* and *plagiosoma*, *P. smaragdites*, *bhamoensis*, *feddeni*, *tavoyensis* and var. *triembolus*, *P. rajahensis*, *corbis*, *burmanus*, *sikkimensis gowhattensis* syn. and *P.* (*P.*) *favidens* var. *assamensis*, Assam, *P.* (*P.*) *pernodulosa*, Burma; *daccaensis*, Dacca; *annandalei*, Gowhatty; *perconvexa*, Nangyong Lake var. & spp. n., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 297–302.

Pectunculus hedleyi sp. n., Queensland; *P. glycimeris*, L. var. *martelli* nom. n. for *P.* (*Axinia*) *glycimeris*, L. var. *stellata*, Dautz, LAMY J. conchyliol. Paris 59 pp. 123–124 132.

Pectunculus, list of spp. labelled by Lamarck in Paris Museum, LAMY Bul. Muséum Paris 1911 p. 431.

Pectunculus, note on generic name, DALL London Proc. Malac. Soc. 10 pp. 255–256.

Physunio (*P.*) *gravidus*, *micropterus* syn., PRESTON Rec. Ind. Mus. Calcutta 7 pp. 293–294.

Pilsbryoconcha exilis syn., PRESTON Rec. Ind. Mus. Calcutta 7 p. 282.

†*Pleurophorus* aff. *elongatus*, Moore n. var. *sublamellata* [sic], *P. di francoi*, *expansus*, *postice-gradatus*, *granulatus* spp. n. Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V 5 No. 8 pp. 41–42.

Pseudodon (*Trigonodon*) *crebristriatus* and var. *peguensis*, *P.* (*P.*) *condembuschiana*, *inoscularis*, *cumingii*, *tamidus*, *salweenianus*, *cambodjensis*, *ava* syn. & *P.* (*Trigonodon*) *crebristriatus* var. *curcata* var. n., Pegu, PRESTON Rec. Ind. Mus. Calcutta 7 pp. 295–296.

Pseudodontopsis piestius, Bourguignat Mss., = *Pseudodon piestius*, Brgt., KOBELT Rossmassler's Icon. Europ. L. & Susswasser Moll. 19 pp. 5–6.

Pseudokellya gradata sp. n., Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin 1912 p. 231.

†*Pteromeris unidentata*, Dujardin mut. *helvetica* mut. n. France, Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. 66 p. 202.

Rochefortia excellens sp. n., Queensland, HEDLEY Sydney N.S.W. Rec. Austr. Mus. 8 p. 134.

Rochefortia grippi **sp. n.**, California, DALL Nautilus Boston Mass. **25** pp. 128–129.

Rotundaria raised from subgen. to gen., ORTMANN Mem. Carnegie Mus. 4 p. 330.

†*Schizodus judicensis* **sp. n.** Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V **5** No. 8 p. 58.

Shistodesmus lampreyanus syn., PRESTON Rec. Ind. Mus. Calcutta **7** p. 287.

Solenaia soleniformis, syn., PRESTON Rec. Ind. Mus. Calcutta **7** p. 285.

Tellimya ovalis, gibbosa, minima **spp. n.**, Antarktik, THIELE Deutsche Südpolar Exp. 1901–3 Berlin **1912** pp. 230 255.

†*Tindaria inopinata* **sp. n.** France, Aquitainian, COSSMANN & PEYROT Bordeaux Actes soc. linn. **66** pp. 247–246.

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†*Sphenia wallacei* **sp. n.**, Central America Pleistocene, DALL Smithsonian Inst. Misc. Collect. **59** No. 2 (Pub. 2077) p. 3.

†*Tancredia jarneri* **sp. n.**, Greenland Jurassic, RAVN Kjöbenhavn Medd. Grönl. **45** pp. 475–476.

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Myacea. Adesmacea.

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Dibranchia.
Lucinacea, Tellinacea, Anatinacea.

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†*Paracyclas lirata* **sp. n.** *P. ohioensis tenuistrata* **sp. & var. n.**, Wisconsin Devonic, Cleland Wisconsin Geol. Nat. Hist. Surv. Bull. No. **21** pp. 118–119.

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†*Schafhäutlia (?) judicaria* sp. n. Italy, Triassic, SCALIA Catania Atti Acc. Gioenia V **5** No. 8 p. 55.

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(GENERAL)

ARRANGED BY

D. SHARP

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ARRANGED BY

W. T. CALMAN, D.Sc.

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†*Burgessia* gen. n. type *bella* sp. n. p. 177 fig., British Columbia, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

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XI. ARACHNIDA

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ARRANGED BY

W. T. CALMAN, D.Sc.

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Gadolla, 1011; Die europäischen Saturniiden.

Neuroptera.

Navás, 1917; Córcega *Micromus* sp. n.

Hemiptera.

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Sahlberg, 2400; Finland *Lathridiidae, Acalidae* (Schwedisch).

Coleoptera.

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Holdhaus, 1267; der Färöer.

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Semenov, 2549; Küstengebiet, *Eochlaenius* gen. n. sp. n.

Suvorov, 2738; Gouv. Tomsk. *Curculionidae* spp. n.

Weise, 2989; spp. n. *Donacia, Plateumaris.*

Wuorentaus; Zwei bemerkenswerte. (Finnisch) Medd. Soc. Fauna Fenn. 38.

Hymenoptera.

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Forsius, 957; Finland Schlupfwespen.

Johansson, 1409; Bienen Finland.

Kieffer, 1499; Norwegen, neue *Proctotrypidae* &c.

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Räsänen, 2228; Ameisen Ostrobothnia (Finnisch).

Rengel, 2272; Norwegen *Vespidae.*

Roman, 2340; Südfinnland Gezogene Ichneumoniden.

Skorikov, 2610; Alai-Gebirge, *Bombus* sp. n.

Stitz, 2668; Norwegen *Formicidae.*

Strand, 2701; Norwegen *Chalastogastra.*

Ulbricht, 2838; Norwegen *Pimplinae.*

Lepidoptera.

Austaut, 73; Siberia *Oeneis* sp. n.

Chapman, 514; Vladivostock *Hydroecia* sp. n.

Fabritius; Bemerkenswerte, Finland; Medd. Soc. Fauna Fenn. 38 p. 79.

Korb & Püngeler, 1558; Ussuri, gen. n. *Noctuidae.*

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Sheldon, 2565; Norway trip.

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Wahlgren, 2942; Ängermanland Schweden.

Trichoptera.

Kolbe, 1554; Glazialzeitliche Reliktenfauna im hohen Norden.

Diptera.

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Hellén, 1207; Finnische *Chilosia.*

Ringdahl, 2312. *Anthomyidae*, new for Sweden and new localities.

Wahlgren. 2941; Swedish *Dolichopodidae* and *Lonchopteridae.*

Aphaniptera.

Wahlgren. 2943; Sweden, new localities.

Heteroptera.

Poppius. 2162; *Cimex* n. sp.

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Thysanoptera.

Poppius. 2160; *Physopus bubicornis.*

Plecoptera, Odonata.

Klapálek, 1527; Plecoptera norvegica.

Barteneť, 132; Transbaikalien *Odonata* spp. n.

Ephemeroptera.

Bengtsson. 171: Schweden gen. n., 9 spp. n.

Orthoptera.

Wahlgren: *Sphingonotus cyanopterus* Schweden.

Apterae Pratora.

Reuter: Finland, *Eosentomon*, Medd. Soc. Fauna Fenn. 38 p. 89.

(d) British Islands.

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Insecta.

Number of British species; **Morley** p. 28 Entomologist 45.

Britain, origin of fauna; **Wilson**, 3210.

†**Bolton**, 265; coal measures, genn. n.

Coleoptera.

Summary for 1911; **Beare**, 153.

Localities of rare species; **Nicholson**, Ent. Rec. 24 pp. 168 etc.

Notiophilus biguttatus Th. ?; **Black** p. 185 Ent. Mag. 48.

Ophonus, revision, 2 spp. n.; **Sharp**, 2563.

Laccobius, the british; **Edwards** p. 210 Ent. Mag. 48.

Oligota sp. n.; **Sharp**, 2561.

Gyrophaena sp. n.; **Joy**, 1445.

Lathrobium ripicola instead of *boreale*; **Newbery**, 1951.

Planeustomus flavicollis, novelty; **Sharp** p. 162 Ent. Mag. 48.

Claviger longicornis, novelty; **Walker**, 2947.

Catops monticagus novelty; **Donisthorpe**, 756.

Acritus minutus withdrawn; **Edwards** p. 187 Ent. Mag. 48.

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Carpophilus sexpustulatus; **Corbett** p. 114 Ent. Mag. 48.

Henoticus germanicus novelty (nec *serratus*) in London; **Newbery** p. 286 Ent. Mag. 48.

Aditesia watsoni and *Cartodere elongata* var. introduced; **Champion** p. 10 Ent. Mag. 48.

Thanasimus rufipes novelty; **Beare**, 152.

Eryx fairmairei novelty; **Donisthorpe**, 754.

Strophosomus curripes, novelty; **Sharp**, 2562; & **Donisthorpe** Tom. cod. p. 197.

Orthochaetes insignis novelty; **Joy**, 1443.

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Choetocnema conducta, novelty; **Horrell**, 1296.

Longitarsus sp. n.; **Dollman**, 751.

Longitarsus, revision completed; **Tomlin & Sharp**, 2783.

Hymenoptera.

Bombi, novelty; **Sladen**, 2612.

Anergates atratulus, novelty; **Crawley**, 617.

Formicidae, races, nomenclature; **Donisthorpe** p. 306 Ent. Rec. 24.

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Mymar sp. n.; **Enock**, 868.

Lepidoptera.

British butterflies; **Stewart**, 2659.

Food-plants etc.; **Scorer**, 2535.

Immigrant *Lep.*; **Walker** p. 197 Ent. Mag. 48.

Pyrameis atalanta, immigration; **Tulloch**, 2815.

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Various localities, 1911; **Colthrup** pp. 90–96 Ent. Rec. 24.

Scoparia revision; **Chapman**, 507.

Coleophora trigeminella, novelty; **Bankes**, 108.

Neuroptera.

Neuroptera in 1911; **Lucas** pp. 221–223 Entomologist 45.

Diptera.

Ephelia sp. n.; **Bergroth**, 183.

Novelties, spp. n.; **Verrall**, 2871.

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Syntemna morosa, novelty; Adams p. 67 Ent. Mag. 48.

Syntemna alpicola, novelty; Jenkinson p. 67 Ent. Mag. 48.

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Phoridae notes; Malloch, 1752a.

Telmatoscopus sp. n.; Eaton, 800.

Phora spp. n.; Wood, 3123.

Fannia, monograph; Malloch, 1747.

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Localities, *Thryptocera minutissima* withdrawn; Bloomfield p. 264 Ent. Mag. 48.

Triogma trisulcata, novelty; Carter, 488.

Heteroneura 3 spp. n.; Collin, 580.

Aphaniptera.

Palaeopsylla kohauti, novelty; Rothschild p. 67 Ent. Mag. 48.

Hemiptera.

Psallus vitellinus, novelty; Butler, 460.

Psylla albipes, novelty; Edwards p. 65 Ent. Mag. 48.

2 spp. n.; Theobald, 2763.

Myzus sp. n.; Theobald, 2760.

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Thysanoptera.

Thysanoptera, novelties, spp. n.; Bagnall, 96.

Cephalothrips monilicornis novelty; Bagnall, 95.

Hoodia bagnalli sp. n.; Karny, 1460.

Lipoptera (= Mallophaga).

Novelties; Bagnall & Hall, 98.

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Pseudoneuroptera (= Odonata).

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Glamorgan; Hallett, 1164.

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Ganglbauer, 1019; *Malthodes* sp. n. Krim.

Jacentkovskij, 1361; Polen, *Ipidae* (Russ.).

Jacentkovskij, 1362; Bessarabien, *Staphylinidae* (Russ.).

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Kieseritzky, 1513; Gebiet der Donschen Kosaken.

Kebedev, 1644; Gouv. Kazan, *Aphodius* sp. n. (Russ.).

Lučník, 1671; Bemerkungen über Cicindeliden und Carabiden der russischen Fauna (Russ.)

Lučník, 1717; *Meloidae*, Gouv. Stavropol.

Plavilščikov, 2145; Gouv. Kaluga, *Cerambycidae* (Russ.).

Pliginskij, 2146; Krim, *Carabidae* (Russ.).

Pliginskij, 2147; Krim, *Trechus* spp. n. (Russ. & Deutsch.).

Sazovskij, 2399; Wiborg, *Cerambycidae* (Russ.).

Voronoovskij, 2915; Cicindeliden und Silphiden, Orenburg (Russ.).

Hymenoptera.

Enslin, 870; *Tenthredinidae* Mitteleuropas.

Nielsen, 1962; *Lyda stellata* Denmark.

Smits van Burgst, 2621; Dutch Ichneumonidae.

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Alfken, 30; Bienenfauna von Westpreussen.

Friese, 981; *Colletes* Zentral-Europa.

Habermehl, 1156; *Stylocryptus* spp. n.

Kieffer, 1499; Deutschland, neue *Proctotrypidae*.

Kieffer, 1500; Deutschland *Polygnotus* sp. n.

Martin, 1770; *Anagrus subfuscus*.

Meyer, 1828; Die Tenthredinidien Posen.

Reichensperger, 2249; Ameisenfauna der Rheinprovinz.

Schirmer, 2449; Provinz Brandenburg.

Scholz, 2472; Raubwespen, oberschlesischen Arten.

Scholz; Hymenoptera aculeata, Seltenere schlesische Vorkommnisse; Breslau Jahresh. Ver. Insektenk. 5 pp. 15–17.

Strand, 2701; Deutschland *Chalastogastra*.

Taschenberg; *Cynips coriaria* nicht von Halle; Zs. Natw. 83 p. 460.

Ulbricht, 2838; Deutschland *Pimplinae*.

Frey-Genner, 974; Valois Apides sociales.

Frey-Gessner, 975; Catalogue of *Apidae* of Switzerland.

Graeffe, 1100; Hummelarten der Alp n Steiermarks.

Klapálek, 1523; *Bombus* Böhmens.

Kohl, 1551; *Nysson* sp. n.

Mocsáry Ann. Mus. Hungar. 10 p. 300; *Orysson unicolor* Hongrie.

Ruschka, 2389; Chalcididen, gen. n. 5 spp. n. Oesterreich.

Szépligeti, 2751; Hungary *Bracbus* sp. n.

Wettstein, 3034; Apidenfauna des Wiener botanischen Gartens.

Birula, 233; Kiev, *Sphecidae* sp. n.

Kurdiumov, 1596; Krim *Tetrastichus* sp. n.

Kurdiumov, 1600; Poltava etc. *H.* parasitica spp. n.

Kurdiumov, 1601; Poltava, Chalcididen aus *Eriococcus grcci*.

Lepidoptera.

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Beer, 167; *Geometriden* des Erfurter Gebietes.

Bornemann, 290; Verzeichnis Magdeburg und des Harzgebietes.

Dadd, 645; *Acidalia* n. sp.

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Gillmer; *Stegania trimaculata* in der Pfalz; Intern. ent. Zs. **6** p. 217.

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Hellweg, 1218; Nachtrag Westfalens.

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Jammerath, 1378; Verzeichnis, Osnabrück und Umgegend.

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Martini, 1778; *Grapholitha* sp. n. Thüringen.

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Petry, 2081; *Bucculatrix* sp. n. Germany.

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Rüger, 2385; *Macrolepidoptera* Bad Kissingen und des Rhöngebirges.

Schmidt, 2462; Mikrolepidopteren Niederschlesiens.

Schopfer, 2474; Mikrolepidopteren Dresdener Gegend.

Schütz, 2496; Tagfalterfauna Oberlausitz, Böhmen und Leitmeritz.

Walther; Lichtfangergebnis Dresden; D. ent. Zs. Iris **26** pp. 211–215.

Warnecke, 2954; Verschwundene Falter der Niederelbe.

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Favre, 902; Gorges de l'Areuse.

Lacreuze, 1609; Hespérides de la Suisse.

Pearson, Ent. Rec. **24** pp. 265–267; Switzerland and Black forest.

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Vorbrodt, 2911; Schmetterlinge der Schweiz.

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Hafner, 1157; Verzeichnis Krain Grossschmetterlinge.

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Mitterberger, 1849; *Argyresthia*; Oberösterreich.

Pieszczek, 2140; Verbreitung *Colias myrmidone* Oesterreich-Ungarn.

Rebel, 2235; Herkulesbad und Orsova.

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Schawerda, 2429; Bosnien und Herzegowina.

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Wagner, 1928; *Cucullia anthemidis* Oesterreich-Ungarn.

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Brunicki, 428; Verzeichnis, Bezirke Stryj (Polish).

Čugunov, 634; Gouv. Enisei. (Russ.)

Klemensiewicz, 1534; Galizischen Lepidopterenfauna (Polish).

Ksenžopolskij, 1585; Südwest-Russland (Russ.).

Miller & Zubovskij, 1847; Bessarabien, Macrolepidopteren.

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Trichoptera.

Petersen, 2076; The Danish Trichoptera (Danish).

Thienemann, 2768; *Rhyacophila* [illegible] Deutschland.

†**Ulmer**, 2839; amber *Trichoptera.*

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Dziędzielewicz, 796; Novae species Trichopterorum Montibus Carpaticis (Galicie).

Martynov, 1782; Bessarabien sp. n. (Russ.).

Neuroptera.

Schirmer, 2447; Mark Brandenburg. Planipennia.

Pongrácz, 2151; *Chrysopiden* Ungarns.

Diptera.

Böttcher, 252; *Sarcophaga* spp. n.

Kieffer, 1503; nouveaux *Tendipes.*

Lundbeck, 1720; Diptera-danica *Dolichopodidae.*

Petersen, 2074; Denmark 3 novelties.

Becker, 154; Belgium gen. n.

Goetghebuer, 1078; Belgium *Chironomidae* spp. n.

Andries, 41; *Microdon* sp. n.

Bandermann; *Scleropogon diadema* Rörig bei Halle; Intern. ent. Zs. 6 p. 209, and **Schirmer** p. 230 T.c.

Enderlein, 861; Germany gen. n. *Scatopsidae.*

Krober, 1580; *Drosophilinae* gen. n. Germany.

Landrock, 1627; *Bolitophila* spp. n.

Lassmann, 1634; Hallischen, Die *Syrphus*-Arten.

†**Meunier**, 1820; Amber ins.

Rübsaamen, 2383; Deutsche Gallmücken und Gallen.

Rübsaamen, 2384; Deutsche Gallmücken und Gallen.

Schroeder, 1492; Pommern.

Thienemann, 2767; Dipterenheft der Süsswasserfauna Deutschlands.

Galli-Valerio & Rochaz de Jongh, 1017; *Phlebotomus papatasi*, im Kanton Waadt.

Kieffer, 1511; Luganer See, *Pelopia* sp. n.

Rougemont & Escher-Kündig, 2372; *Phytomyza* sp. n.

Böttcher, G., 253; *Sarcophaga* n. sp. Hungary.

Czižek, 642 & 644; *Tipula* sp. n. Mähren.

Landrock, 1628; *Mycetophilidae* Mährens.

Landrock, 1629; Mycetophiliden aus Mähren 6 spp. n.

Landrock, 1630; *Mycetophilidae* 4 spp. n.

Landrock, 1632; *Exechia* sp. n. Mähren.

Landström, 1721; *Mycetophilidea* Ungarn, spp. n.

Oldenburg, 1994; Drei neue, Tirol.

Strobl, 2706; Die Dipteren von Steiermark. ii. Nachtrag.

Vimmer, 2895; *Diptera* Bohemiae.

Aphaniptera.

Dampf, 652; Westdeutschlands.

Dampf, 656; Estland *Aphaniptera.*

Jordan & Rothschild, 1440; Hungary *Ctenophthalmus* sp. n.

Wagner, 2938; Polar-Ural *Amphipsylla* sp. n.

Hemiptera.

Jensen-Haarup, 1393; Denmark, novelties, *Heteroptera* and *Cicadidae.*

Jensen-Haarup, 1394; Danish *Heteroptera* (Danish).

Goot, 1084; Verzeichnis der holländischen *Psyllidae.*

Goot, 1086; Verzeichnis der holländischen Cocciden.

Goot, 1087; Neue Niederländische *Aphididae.*

Gulde, 1153; Heteropteren-Fauna Deutschlands.

Haupt, 1188; Germany *Homopt.* 2 spp.

Hueber, 1332; Deutschen *Plagiognatharia.*

Lindinger, 1692; *Aspidiotus* sp. n.

Meijere, 1801; *Hamamelistes* sp. n.

Schmidt, 2458; Pommern.

Schumacher, 2511; Mark Brandenburg; *Coccidae.*

Schumacher, 2512; sp. n. *Sciocoris*-Deutschland.

Schumacher, 2514; Lygaeidae, Pyrrhocoridae der Mark.

Schumacher, 2518; Zusammensetzung der Hemipteren-Fauna Nordwestdeutschland.

Schumacher, 2519; Ostfriesischen Inseln.

Schumacher, 2524; Homopteren, Oldenburg, Ostfriesland Insel Baltrum.

Schumacher, 2525; Oldenburg, Ostfriesland und Insel Baltrum.

Schumacher, 2527; Hemipteren Schlesiens.

Cholodkovskij, 534; Schweiz, Chermesiden (Russ.).

Sabransky, 2396; Hemipterenfauna Steiermarks.

Šulc, 2717; *Coccidae* Bohemiae.

Šulc, 2718; *Heliococcus* n. g. Böhmen.

Poppius, 2159; Krim *Systellonotus* sp. n.

Kiričenko, 1517; Kaluga, Heteroptera (Russ.).

Kiričenko, 1519; Krim, *Hemiptera-Heteroptera.*

Thysanoptera.

Karny, 1463; Austria *Haplothrix* sp. n.

Kurdiumov, 1602; *Anthothrips* sp. n.

Plecoptera.

le Roi, 1674; Plecopteren Rheinland-Westfalen.

Handlirsch, 1174; Permischen Kupferschiefern der Kargala-Steppe sp. n.

Pseudoneuroptera.

Leonhardt, 1671; Frankfurt a. M.

Leonhardt, 1672; Ober-Elsass.

Kleiber, Mitt. Schweiz. ent. Ges. 12 pp. 67 and 68; *Boyeria irene* am Vierwaldstättersee.

Bartenev, 135; Krim, Odonata (Russ.).

Voroncovskij, 2914; Odonatenfauna der Umgebung von Orenburg.

Orthoptera.

Döderlein, 746; Elsass Heuschrecken.

La Baume, 1607; Dermaptera und Orthoptera Ostpreussens.

Leonhardt; Deutschland, Mainzer Becken. *Stenobothrus nigromaculatus* u. *Sphingonotus coerulans*; Ent. Zs. Frankfurt a. M. **26** p. 99.

Schirmer, 2445; Mark Brandenburg.

Schirmer, 2446; Einheimischer *Stenobothrus*.

Schirmer, 2448; Berlin.

Czižek, 643; *Paracaloptenus caloptenoides* Niederösterreich.

†**Handlirsch, 1173**; Insekten aus dem mittleren Oberkarbon des Königreiches Sachsen; gen. n. 5 spp. n.

Karny, 1453; Prenjgebiet *Platycleis*.

Werner, 3000; Orthopteren-Faunistik Oesterreichs.

Zottu, Bull. Soc. Bucarest **18** pp. 39–42; Roumania Orthopt. List.

Šugurov, 2715; Grusien, *Oedipodidae* gen. n. sp. n.

Aptera.

Absolon, 4; Gletscherflöhe in den niederösterreichischen Voralpen.

†**Olfers, 1995**; Thysanur im Bernstein.

Prell, 2177; *Eosentomon*, sp. n.

†**Silvestri, 2585**; Thysanuren des baltischen Bernsteins; 2 n. spp.

(f) France.

Insecta, collectively.

Picard, 2122; Coléoptères et Hyménoptères du midi.

Loiselle, 1698; Deux nouveaux insectes Cécidogènes.

Coleoptera.

Antessanty; Aube; Troyes Mém. soc. Acad. **75** p. 60.

Barthe; nouvelle pour la faune française; Miscell. entom. **20** p. 17.

Bedel, 166; Seine *Scarabaeidae*.

Bourgeois, 300; Catalogue Vosges.

Buysson; Elatérides de Saône-et-Loire.

Caillol; Capture en Provence d'une espèce de Silphide nouvelle pour la France; Marseille Bul. soc. linn. pp. 173–178.

Caillol; Capture d'un Coléoptère nouveau pour la Provence; Marseille Bul. soc. linn. **4** pp. 201–202.

Deville, 705 & 706; Wimereux.

Deville, 709; *Amaurops* nouveau.

Falcoz, 890; Dévoluy Hautes-Alpes.

Falcoz; *Philonthus spermophili* et *Henoticus serratus*; Lyon Ann. soc. linn. **59** pp. 93–97.

Grouvelle, 1142; *Meligethes* nouveau.

Hustache, 1345; Deux Curculionides nouveaux.

Lienhart, 1685; Mares salées de Lorraine.

Pic, 2098; Catalogue Saône-et-Loire.

Pionneau; Note sur les Coléoptères intéressants du sud de la France; Miscell. entom. **20** p. 18.

Hymenoptera.

Lichtenstein; Feuille jeunes natural **42** p. 104.

Lepidoptera.

Ashby pp. 15–17 Ent. Rec. **24**; France etc., trip.

Bethune-Baker, Ent. Rec. **24** pp. 67–71; Digne trip.

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Duclos; Capture du *Lophopteryx carmelita*; Rouen Bul. soc. sci. nat. **46** 1911 p. 29.

Gurney; Entomologist **45** p. 96 etc.; Digne *Rhopalocera*.

Homberg, 1280; *Acidalia* sp. n.

Joannis, 1398; Microlépidoptères cécidogènes 2 spp. n.

Pearson; Ent. Rec. **24** pp. 96–99; Alps, Dauphiné, trip.

Picard, 2123; France Teigne des pommes de terre.

Picquenard, 2125; Finistère.

Rowland-Brown, Entomologist 45 p. 333; *Evetria melampus.*

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Neuroptera.

Lacroix, 1610 & 1611; Neuroptères de France.

Diptera.

Lesne; *Phlebotomus papatasi* en Bourgogne; Bull. soc. ent. France 1912 p. 410.

Hemiptera.

Lambertie, 1621.

Lambertie, 1622; Nouveaux ou rares de la Gironde.

Peneau, 2055; Notules.

Psocoptera.

Enderlein, 858; Neue Gattung.

Orthoptera.

Cadro; Mante religieuse dans le Pas-de-Calais; Feuille natural. Paris 42 1912 p. 24; Id. A. Gasser T.c. 35; Smits p. 52.

Chopard; Contribution à l'étude des Orthoptères de France; France Bull. soc. ent. 1912 pp. 384-386.

Hay, 1191; *Tetrix.*

(g) South Europe and Mediterranean Basin.

Insecta, collectively.

Navás, 1935; Granada 4 spp. n. *Baetis, Symphorobius, Aleuropteryx, Peripsocus.*

Cobelli; Trentino, *Biorrhiza* and *Boreus*; Zs. wiss. Insektenbiol. 8 p. 112.

Navas, 1924; Névroptères, s.l., de Corse.

Morton, 1888; Bouches du Rhone and Sierra Albarracin.

Jeannel & Peyerimhoff, 1390; Maroc oriental.

Royer, 2374; Beni Swassen.

Coleoptera.

Apfelbeck, 49a; Balkan peninsula spp. n.

Bondroit, 268; *Stenus* spp. n.

Wagner, 2932; *Apion* 2 spp. n.

Cameron, 471; Portugal *Vesperus* sp. n.

Csiki, 632a; Balkans *Hylaia* sp. n.

Bolivar, 263; Spain *Broscus* sp. n.

Escalera, 875; Spain *Asida* 2 spp. n.

Fuente, 1004; Spain *Ochodaeus* sp. n.

Lauffer, 1637; *Dorcadion* of Spain 3 spp. n.

Pic; Un *Malachius* d'Espagne inconnu; Bull. Soc. ent. France 1912 p. 392.

Reitter, 2261; *Gastrallus* sp. n. Barcelona.

Bernhauer, 206; Sicily *Zyras* sp. n.

Bondroit, 269; Italy *Stenus* sp. n.

Della Beffa, 683; Coccinellidae italiani, revisione.

Della-Beffa, 684; Coleotteri della Valle di Susa (Piemonte).

Della-Beffa, 685; Valle del Maira Piemonte.

Della Beffa e Gagliardi, 686; Toscana.

Eggers, 820; Sicilia *Scolytidae* 3 spp. n.

Fiori, 936; Italy *Malthodes* sp. n.

Fiori, 937; topografiche italiane.

Mancini, 1756; *Anophthalmus* sp. n.

Ragusa, 2224; Sicilia.

Roubal, 2368; Sicily *Cryptocephalus* sp. n.

Vitale, 2903; Sicilia, *Cicindela.*

Vitale, 2903; Sicilia *Carabidae.*

Bedel, 163; *Liosoma* de Corse.

Sainte-Claire Deville, 710; Catalogue Corse.

Eggers, 818; Sardische Borkenkäfer.

Krausse, 1566; Sardinien.

Krausse-Heldrungen, 1570; Gennargentugebirge Sardinien.

Reitter, 2254; Sardinia *Rhinosimus* n. sp.

Strohmeyer, 2708; Sardinien *Dryocoetes* sp. n.

Cameron, 470; Malta *Trogophloeus* sp. n.

Depoli, 696; *Dorcadion* Liburnia, spp. n.

Formánek, 962; *Tornaema* sp. n. Dalmatien.

Karaman e Novak, 1448; Dalmatia.

Matits, 1791; *Bembidium* n. sp. Serbien.

Reitter, 2264; *Bucanius* sp. n. Dalmatien.

Reitter, 2265; *Cryptophagus* sp. n. Dalmatien.

Reitter, 2269; *Raymondionymus* sp. n. Dalmatien.

Reitter, 2271; *Silphidae* n. gen. Bosnien.

Schatzmayr, 2424; Valle d'ospo.

Holdhaus, 1266; des Monte Gargano, der Adriatisfrage.

Gridelli, 1115; escursioni Küstenland.

Müller, 1907; *Athous* der ostadriatischen Provinzen.

Meyer, 1827; Des Karstgebietes bei Fiume.

Heyrovský, 1250; *Oedemeridae* Bulgariens.

Penecke, 2057; *Mycetochara* und *Rhagomycha* spp. n. Bulgarien.

Reitter, 2268; *Athous* sp. n. Bulgarien.

Reitter, 2263; *Alophus rhodopensis* sp. n.

Müller, 1905; *Athous* Karstprovinzen Dalmatien.

Krekich-Strassoldo, 1572; *Anticidi* del litorale e della Dalmazia.

Cameron, 468; Turkey *Xantholinus* sp. n.

Wagner, 2934; *Stomodes* 2 spp. n. Rumänien and Griechenland.

Bickhardt, 229; Algier *Saprinus* sp. n.

Daniel, 659; deux nouveaux du nord de l'Afrique.

Grouvelle, 1140; *Cryptophagus* nouveaux d'Algérie.

Grouvelle, 1141; *Brachyleptus* nouveaux d'Algérie et de Tunisie.

Lesne et Orbigny, 1679; Mauritanie.

Normand, 1967; *Cephennium* du nord africain.

Normand, 1968; faune tunisienne *Stenichnus* spp. n.

Obenberger, 1977; N. Africa *Anthaxia* 2 spp. n.

Peyerimhoff, 2082; phytophages du nord africain 2 spp. n.

Pic, 2101; Maroc 2 spp. n.

Hustache, 1344; *Nargus* sp. n. Syria.

Reitter, 2258; *Otiorrhynchus* sp. n. Kleinasien.

Reitter, 2261; *Tanatophilus* sp. n. Russ. Armenien.

Hymenoptera.

Emery, 835; Der Wanderzug der Steppen- und Wüstenameisen von Zentral-Asien nach Süd-Europa und Nord-Afrika.

Mantero, 1762; Cinipidi di Liguria.

Mercet, 1812; Spain *Aphelinus* sp. n.

Mercet, 1813 & 1814; Spain *Prospaltella* sp. n.

Mercet, 1815; Spain *Mymaridae* 2 spp. n., gen. n.

De Stefani Perez, 700; Sicily *Cynips* sp. n.

Krausse, 1564; sardische Ameisen.

Du Buysson, 774; *Chrysidae* nouveaux Maroc.

Ferton, 927; nouveaux d'Algérie.

Karavajev, 1449; Formiciden Italien, Nord-Afrika.

Krausse, Wien. ent. Zeit. 31 p. 250; *Formica fusca glebaria* Sardinien.

Morley, 1884; Cyprus *Metopius* sp. n.

Pagnetti-Hummler, 2029; Apiden Corfu.

Santschi, 2408; Nouvelles Fourmis de Tunisie.

Santschi, 2409; Formicides l'Afrique mineure.

Santschi, 2410; Mauritanie occidentale.

Schmiedeknecht, 2465; gen. n. *Ichneum.* Tunis.

Smits van Burgst, 2622; Tunesian Ichneumonidae, 5 spp. n.

Stauder, 2646; algerischen Formiciden.

Turner, 2827; Haut-Kharoum *Stizus* sp. n.—Turner, 2830; Mogador *Gorytes* sp. n.

Pérez, 2059; Mellifères spp. n. Syrie.

Strand, 2680; Syria *Iphiaulax* spp. n.

Zavattari, 3243; Sardegna.

Lepidoptera.

Rebel, 2238; *Pilotocera aegimiusalis* Mediterrangebiet.

Warren, 2958; *Leptosia* sp. n.

Mendes, 1810; Portugal S. Fiel annotated list.

Codina, Boll. soc. Aragon 10 pp. 113–117; Catalonia short annotated list.

Fernández, 925; Sierra de Jaen list.

Gervais d'Aldin, 1035; Andalousie.

Ribbe, 2297; Andalusien.

Wagner, 2927; Reise nach Andalusien.

Woodward, Ent. Rec. 24 pp. 172–174; Gibraltar.

Barrett, Entomologist 45 p. 231 etc.; Messina trip.

Harrison, 1181; Italy *Ithysia* sp. n.

Lepidotteri del Piemonte; Rocci, 2329.

Rhopalocera et *Sphinges* faunae romanae; Rostagno, 2346.

Rostagno, 2347; Bombyces faunae romanae.

Turati, 2817; Sicilia 7 spp. n.

Turati & Verity, 2819; *Heterocera, Microlepidoptera, Rhopalocera* Alpi marittime.

Turati, 2816; Sardinia 4 spp. n., *Noctuidae* and *Oeneria.*

Rebel, 2236; Korfu.

Rebel, 2233; Monte Maggiore Istrien.

Schawerda, 2429; Bosniens und Herzegowina.

Buxton, T. A. & Buxton, D. A. J., Ent. Rec. 24 pp. 59–63; Greece trip.

Meyrick, 1835; Greece *Acrocercops* sp. n.

Drenowsky, 760; höchsten Teiles des Zentral-Balkans.

Graves, Ent. Rec. 24 pp. 293 & 294: Constantinople notes.

Draudt, 759; neue Acidalien Aegypten.

Emmerich-Hoegen, *Glottula pancratii* Tunis; Intern. ent. Zs. 6 p. 274.

Herzog, 1237; Berichtigung Aegypten und Syrien.

Holl, *Piérides* Notes; Alger Bul. soc. sci. nat. 4 p. 176–180.

Holl, 1269; Microlépidoptères algériennes.

Holl, 1270; Notes.

Holl, 1271; *Zygaena* d'Alger.

Le Cerf, 1647; Mauritanie.

Oberthür, 1981; *Hybocampa* sp. n. algérien. Paris.

Oberthür, 1982; Algeria *Augiades* sp. n.

Rebel, 2232; Unter-Aegyptens spp. n.

Rothschild, 2357; Algeria *Lamlassa* sp. n.

Rothschild, 2360; Algeria spp. n., *Lymantria, Noctuidae* and *Geometridae.*

Turati, *Taeniocampa witzenmanni* en Algérie et en Sardaigne. Paris Bul. soc. ent. 1912 p. 414–417 av. fig.

Bang-Haas, 106; Syria *Dolbina* sp. n.

Chapman, 513; Lebanon *Agriades* sp. n.

Culot, 637; Liban *Syntomis tricingula.*

Meyrick, 1837; Asia minor and Algeria *Adelidae* spp. n.

Meyrick, 1839; Asia minor spp. n.

Neuroptera.

Andréu, 37; Spain *Boriomyia* sp. n.

Lacroix, 1612; Algérie et Tunisie 2 spp. n.

Navás, 1915; Syria *Solter* sp. n., Atlas *Neuroleon* etc., Egypt spp. n.

Navás, 1916; genn. and spp. n.

Navás, 1917; *Chrysopa* sp. n.

Navás, 1920; Egypt *Nesoleon* sp. n.

Navás, 1926; Algérie spp. n.

Navás, 1933; Algeria *Nelees* sp. n.

Petersen, 2075; Corsica.

Diptera.

Andréu, 38; Spain *Tipulidae.*

Arias, 50; Spain *Asilus* sp. n.

Arias, 51; Spain Additions.

Becker, 158; Pyrenäen *Phoridae* gen. n.

Escobet, 836; Spain, Catalogue.

Villeneuve, 2886; *Sarcophaga* n. sp. Greece.

Newstead, 1955; Malta *Phlebotomus* sp. n.

Kertész, 1489; Creta gen. n. *Acalyptratae.*

Alexander & Leonard, 27; Ile Djerba *Geranomyia* sp. n.

Becker, 161; *Thereviden* gen. n. 2 spp. n. Aegypten.

Bezzi, 218; liste des Asilidés de la Tunisie.

Weiss, 2993; Djerba *Phora chlorogastra.*

Kertész, 1490; *Glabellula* n. sp. Asia minor.

Aphaniptera.

Jordan & Rothschild, 1439; Portugal *Palaeopsylla* sp. n.

Jordan & Rothschild, 1442; Algeria spp. n.

Krausse-Heldrungen, 1571; Sardische Flöhe.

Hemiptera.

Bergevin; Biologie *Calliodis tibialis cinerae*; Bull. Soc. Alger 1911 p. 126.

Bueno Bol. Soc. Aragon 10 pp. 184–186 & 195–203; Spain list.—**Bueno** op. cit. 11 pp. 169–174; Catalonia short list.

MacGillavry, 1741; *Heteroptera* Corsika.

Poppius, 2155; *Heteroptera* Algier.

Reuter & Poppius, 2288; Egypt and Aden *Termatophylidae* gen. n.

Schumacher, 2521; Rhynchoten von der Insel Cypern.

Trabut, 2797; Catalogue cochenilles, Algérie.

Isoptera.

Silvestri, 2591; Tunis genn. & spp. n.

Pseudoneuroptera.

Bartenev, 133; Montenegro.

Orthoptera.

Ebner, 802; Griechenland.

Krauss, 1568; Sardinien.

Krausse-Heldrungen, 1569; Dermapteren auf Sardinien.

Aptera.

Silvestri, 2592; Portici *Campodeidae* spp. n.

(h) Caucasus, West & Centr. Asia.

Insecta, collectively.

Zaicev, 3238; Spätherbstfauna von Abchasien (Russ.).

Coleoptera.

Demaison, 687; notes Asie mineure.

Fleischer, 938; *Dyschirius* sp. n. Taschkent.

Kerremans, 1482; Caucasus and Persia *Sphenoptera* sp. n.

Kožan ikov, 1562; Transcaspius, *Aphodiini* spp. n.

Lamecre, 1625; Bagdad *Prionus* sp. n.

Ohaus, 1985; Arabia *Adoretini* sp. n.

Petri, 2078; *Lixus* n. sp. Turkestan.

Reitter, 2257; *Myiodes* sp. n. Transkaukasus.

Reitter, 2259; *Malegia* spp. n.

Reitter, 2260; *Neobaris* sp. n. Transkaukasien.

Roubal, 2366; Kaukasus *Lesteva* sp. n.

Roubal, 2367; spp. n. Kaukasus.

Sumakov, 2724; Russisch-Mittelasien.

Suvorov, 2737; Alashan *Neolarcadion* spp. n.

Hymenoptera.

Kokujev, 1552; Turkestan, *Ichneumonidae* spp. nn.

Kokujev, 1553; Kreis-Aresch, *Vespidae, Apidae, Fossores, Parasitica,* spp. n.

Mocsáry, 1858; Caucasus *Chrysis* spp. n.

Mocsáry, 1858; Arabia *Chrysis* sp. n.

Semenov, 2547; Transcaucasia, Mongolia, etc., *Chrysididae* spp. n.

Lepidoptera.

Burrows, 450; Turkestan *Hydroecia* sp. n.

Čugunov, 633; Kuznecki-Alatau.

Jachontov, 1365; Kaukasische Arctiiden.

Krulikovskij, 1583; Centralasiens.

Miller, 1846; *Lycaenidae* 2 spp. n. Transkaukasien.

Pagenstecher, 2028; *Parnassius apollo,* Kaukasien.

Prout, 2181; Sokotra *Eucrostes* sp. n.

Neuroptera.

Navás, 1928; W. Asia *Myrmecaelurus* sp. n.

Navás, 1920; Muscat.

Navás, 1930; Kaukasus gen. n. *Panorpatae.*

Diptera.

Becker & Stein, 160; Persien spp. nn.

Aphaniptera.

Dampf, 657; Kaukasus, *Ischnopsyllus* sp. n.

Hemiptera.

Kiričenko, 1520; Turkestan, Buchara, Transcaspia Hemiptera-Heteroptera spp. nn.

Poppius, 2163; Neue Miriden.

Pseudoneuroptera.

Bartenev, 137; Odonaten des Tiflisер Museums (Russ.).

Bartenev, 138; Transkaukasien spp. n. (Russ.).

Orthoptera.

Burr, 441; *Kalocrania* sp. n.

Burr, 445; Collecting, Caucasus and Transcaucasus.

Ebner, 801; Mesopotomier 2 spp. n.

Šugurov, 2716; Pontische Küste des Kaukasus.

Uvarov, 2846; Transcaspiens, spp. n.

Uvarov, 2847; Kaukasische *Psorodonotus* sp. n.

Uvarov, 2848; Turkestan, g. n., *Platycleis* sp. n.

Africa.

Insecta, collectively.

Houard, 1313; Zoocécidies du nord de l'Afrique.

Howard, 1324; Mozambique injurious insects.

Schouteden, etc., 2485; spp. n.

Simpson, 2600; S. Nigeria malevolent insects.

Coleoptera.

Alluaud, 32; *Carabomorphus* spp. n.

Aurivillius, 69; Abyssinie et l'Afrique orientale *Curculionidae* spp. n.

Bernhauer, 208; Staphyliniden.—**Bernhauer, 213**; Neue Staphyliniden.

Bickhardt, 229; *Histeridae* spp. n.

Bolkay, 264; *Anisognathus* sp. n.

Boppe, 272; Ce rambycides nouveaux l'Afrique et de Madagascar.

Cameron, 469; Red Sea *Bledius* sp. n.—Cameron, 472; Massowah *Scopaeus* sp. n.

Chatanay, 519; *Lichenum* du Sénégal.—Chatanay, 521; genre nouveau *Cadinires.*

Clavareau, 542; *Criocerides* spp. n.—Clavareau, 544; *Corynodes* spp. n.

Dupuis, 784; *Cyclosomus* sp. n.

Eichelbaum, 823; Kilimandjaro zwei *Philanthus* spp. n.

Fleutiaux, 941; *Eucnemidae* spp. n.

Gebien, 1023; *Tenebrionidae.*—Gebien, 1024; *Tenebrionidae* spp. n.

Gestro, 1038; Uganda *Hispidae* spp. n.—Gestro, 1040; Uganda *Ichthyurus* spp. n.—Gestro, 1042; Somali *Paussus* sp. n.

Grouvelle, 1137; Congo *Nitidulidae* and *Colydiidae* spp. n.—Grouvelle, 1139; *Aphanocephalus* sp. n.

Hagedorn, 1158; Ipiden 3 spp. n.—Hagedorn, 1159; Neue Borkenkäfergattungen und Arten.—Hagedorn, 1160; *Scolytidae* spp. n.

Hintz, 1255; *Crossotidae* spp. n.—Hintz, 1256; Cerambyciden spp. n.

Horn, 1294; *Cicindelinae.*

Janson, 1383; *Cetoniidae* spp. n.

Jeannel, 1387; *Carabomorphus* sp. n.

Jordan, 1434; *Anthribidae* list. *Deuterocrates* sp. n., *Litotropis* sp. n.—Jordan, 1438; *Cylindroides* sp. n.

Kerremans, 1482; *Buprestidae* 2 spp. n.—Kerremans, 1483; *Buprestidae* spp. n.—Kerremans, 1485; *Buprestidae.*

Kolbe, 1555; Phaeochroinen sp. n.

Kuntzen, Heinrich, 1591; *Nerissini* spp. n.—Kuntzen, 1592; *Uhelia* sp. n.—Kuntzen, 1594; *Ennodius* sp. n.

Lesne, 1675; *Bostrychopsis* sp. n.

Marshall, 1768; 3 spp. n., *Azya* and *Cryptognatha.*—Marshall, 1769; *Curculionidae* gen. n.

Mollenkamp, 1861; *Metopodontus* sp. n.

Lewin, 1681; *Blepharida* sp. n.

Lewis, 1682; *Histeridae* 3 spp. n.

Moser, 1892; Cetoniden spp. n.

Ohaus, 1985; *Adoretini* spp. n.—Ohaus, 1988; abessynische Ruteliden spp. n.—Ohaus, 1990; *Popillia* sp. n.

d'Orchymont, 2006; *Neohydrophilus* sp. n.

Petri, 2079; *Gastroclisus* spp. n.

Pic, 2107; *Idgia* sp. n.

Prell, 2173; Africa *Cyphonaites* spp. n.—Prell, 2174; *Ingastini* spp. n.

Sampson, 2404; Uganda *Xyleborus* 2 spp. n.

Schmidt, 2451; *Coprini* spp. n.

Sicard, 2575; Sicard, 2577; Coccinellidy spp. n.—Sicard, 2578; *Coccinellidae* spp. n.—Sicard, 2580; *Coccinellidae* spp. n.—Sicard, 2581; 2 spp. n. *Chilocorus* and *Caria.*

Spaeth, 2631; Ostafrikanische Cassiden.—Spaeth, 2632; *Cassidae* spp. n.

Strohmeyer, 2707; *Peryomamatus* 13 spp. n.—Strohmeyer, 2709; Neue Platypodiden.

Wagner, 2931; *Apion* spp. n.

Wasmann, 2961; Myrmekophilen spp. n.—Wasmann, 2966; *Mimanomma* neuer Dorylinengast.—Wasmann, 2967; Myrmekophilen spp. n.

Weise, 2989; *Chrysomelidae* spp. n.—Weise, 2991; *Coccinellidae* spp. n.—Weise, 2992; *Chrysomelidae* spp. n.

Hymenoptera.

Andrieu & Vuillet, 42; *Vipio* sp. n.

Bingham, 231; *Fossoria* spp. n.—Bingham, 231; spp. n., *Notogonia, Odynerus, Prosopis, Halictus, Ceratina.*

Brauns, 315; Zusätze und Berichtigungen zu Dr. H. Frieses „Die Bienen Afrikas".—Brauns, 316; Bienen Afrikas.

Cameron, 473; Congo many spp. n.

Crawford, 615; *Anastatus* sp. n.—Crawford, 616; *Chalcididae* spp. n.

De Stefani Perez, 701; *Chalcididae* gen. n.

Emery, 827; *Myrmicinae* spp. n.—Emery, 833; *Formicidae.*

Enderlein, 839; *Spathiinae* spp. n.—Enderlein, 840; *Eubadizon* sp. n.—Enderlein, 841; *Alysia* sp. n.—Enderlein, 845; *Evania* sp. n.

Enslin, 873; *Tenthredinidae* spp. n.

Friese, H., 979; Bienen Süd-Afrikas. — Friese, 982; *Trigona* sp. n.

Ghigi, 1044; *Oxygyachelus* spp. n.

Hedicke, 1193; Cynipiden gen. n.

Kieffer, 1501; Cynipiden et Bethylides de l'Afrique du Sud.—Kieffer, 1502; deux nouveaux Chalcidides.

Maidl, 1745; *Xylocopa* 6 spp. n.

Meade-Waldo, 1797; *Megachile* 3 spp. n.

Mocsáry, 1857 & 1858; *Chrysis* spp. n.

Morley, 1884; *Ichneumonidae* spp. n.

Santschi, 2411; *Formicidae* spp. n.—Santschi, 2413; *Carebara* spp. n.—Santschi, 2414; *Crematogaster* 2 spp. n.

Schulthess Rechberg, 2497; *Vespidae* 2 spp. n.—Schulthess-Rechberg, 2498; *Belonogaster* nov. sp.

Strand, 2673; Neue afrikanische *Sphecodes* und *Ceratina* spp. n.

Strand, 2678; Betr. H. Friese.—Strand, 2688; 2 neue *Nomia*. Strand, 2690; Süd-Kamerun und Spanisch-Guinea, *Trigonalidae* genn. n.—Strand, 2691; Kamerun und Spanisch-Guinea Bienen spp. n.—Strand, 2692; *Nomia* spp. n.—Strand, 2702; Neue und *Evades*, *Steganomus* und *Prosopis*, spp. n.

Szabó, 2749; *Epitritus* sp. n.

Turner, 2825; *Elis* spp. n.—Turner, 2827; Stizus 5 spp. n.—Turner, 2828 & 2830; *Fossoria* spp. n.—

Lepidoptera.

Sokotra *vide* W. Asia Lepidoptera.

Aurivillius, 70; *Diestogyna* spp. n.

Druce, 761; *Parnara* sp. n.—Druce, 762; *Mimacraea* 2 spp. n.—Druce, 763; *Lycaenidae* 2 spp. n., gen. n.—Druce, 765; *Ophiusinae* 5 spp. n.—Druce, 766; Cameroons *Omnatothelxis* sp. n.

Eltringham, 826; *Acraea* monograph, 2 spp. n.

Grunberg, 1146; *Rhopalocera* spp. n.

Hampson, 1167; *Pyraustinae* spp. n.—Hampson, 1168; *Agaristidae* 4 spp. n.—Hampson, 1169; *Noctuidae* spp. n.

Le Cerf, 1619; Afrique orientale spp. n.—Le Cerf, 1652; Afrique orientale gen. n. *Argyriadae*.—Le Cerf, 1655; *Papilio* sp. n.

Mendes, 1811; list.

Meyrick, 1833; *Microlepidoptera* 45 spp. n.—Meyrick, 1839; spp. n., genn. n.

Neave, 1938; *Pseudacraea* sp. n.

Neustetter, 1949; *Cymothoë* sp. n.

Prout, 2180; Rhodesia *Zamarada* spp. n.—Prout, 2181; *Hemitheinae* spp. n.

Rebel, 2234; *Usta* sp. n.

Rothschild, 2358; *Balacra* spp. n.—Rothschild, 2362; *Lithosiinae* spp. n.

Rothschild & Jordan, 2364; *Sphingidae* spp. n.

Schouteden, 2482; *Cymothoe* sp. n.

Schultze, 2499; neue Liptenjden.—Schultze, 2500; Fünf neue *Mimacraea*-Formen.—Schultze, 2501; Rhopaloceren spp. n.

Standfuss, 2642; *Taeniocampa* n. sp. Algier.

Strand, 2670; Kamerun spp. n.—Strand, 2674; Tagfalter und Schwärmer, Abessynien.—Strand, 2675; *Banaea* sp. n.—Strand, 2676; Westafrikanische *Danaidae*, *Satyridae*, *Nymphalidae*, *Notodontidae* und *Drepanidae*.—Strand, 2677; Mkatta und Morogoro Deutsch Ost-Afrika, spp. n.—Strand, 2679; *Glyphodes* spp. n.—Strand, 2681; Süd-Kamerun und Spanisch-Guinea, *Saturniidae*, *Brahmaeidae*, *Striphnopteryginae*, *Sphingidae*, *Notodontidae*, *Syntomidae*, *Hypsidae* und *Agaristinae* spp. n.—Strand, 2682; Süd-Kamerun und Spanisch-Guinea *Lasiocampidae* genn. & spp. n.—Strand, 2683; *Lithosiinae* spp. n.—Strand, 2684; Novitäten *Lasiocampidae* und *Lymantriidae*.—Strand, 2685; Süd-Kamerun und Spanisch-Guinea, spp. n.—Strand, 2687; sp. n. *Lobobunaea*.

Strand, 2689; neue Notodontidengattung.—Strand, 2693; *Eustrotia* sp. n. Gross-Namaland.—Strand, 2695; Zur Kenntnis *Rigema* spp. n.

Trimen, 2800; *Neptis* sp. n.

Zerny, 3247.

Trichoptera.

Ulmer, 2842; *Trichoptera.*

Neuroptera.

Klapalek, 1530; Ägyptischen Sudan und Nord-Uganda 2 spp. nn.

Navás, 1915; spp. n. *Ascalaphides Myrmeleonides.*

Navás, 1916; genn. et spp. n.

Navás, 1917; *Chrysopidae* and *Hemerobiidae* spp. n.

Navás, 1920; *Myrmeleonidae* many spp. n.; 1922, 3 spp. n.

Navás, 1925; Névroptères nouveaux ou critiques.

Navás, 1928; spp. n.

Navás, 1932; spp. n. *Ascalaphidae, Myrmeleonidae, Chrysopidae.*

Navás, 1933; *Myrmeleonidae* spp. n.

Navás, 1934; spp. n.

Petersen, 2073; 2 spp. n.

Soldanski, 2629; Süd-Kamerun und Spanisch-Guinea *Ascalaphiden.*

Stitz, 2666; *Palpares* spp. n.

Diptera.

Alexander, 18; *Tipulidae* 2 spp. n.

Austen, 75, 76, 77, 78; *Tabanidae* spp. n.—Austen, 79; E. Africa *Stygeromyia* sp. n.—Austen, 80; *Ceratopogoninae* spp. n.—Austen, 81; *Tabanidae* 11 spp. n.—Austen, 82; *Hippobosca* sp. n.

Becker, 155; *Chloropidae*, Monographie gen. et spp. n.

Bezzi, 220; *Syrphidae* spp. n.—Bezzi, 223; *Bombyliidae* spp. n. gen. n.—Bezzi, 225; *Muscidae Tachinidae* 8 spp. n.

Carter, 489; *Tabanus* 3 spp. n.

Edwards, 806; *Kellogginia* sp. n.—Edwards, 808; Culicidae revision, spp. n.

Enderlein, 838; *Sciarinae* gen. n.—Enderlein, 853; spp. n. *Phoridae.*—Enderlein, 863; Transvaal *Limonia* sp. n.—Enderlein; Loxoneurinen und Ortalinen.—Enderlein, 867; *Psilocephala* sp. n. Transvaal.

Gedoelst, 1027; *Oestridae* 2 spp. n.

Grünberg, 1144; *Glossina* sp. n.

Hendel, 1220; 2 spp. n., *Trigonometopus* and *Meracanthomyia.*

Kieffer, 1506; *Cecidomyiidae* 2 genn. n.

Krober, 1577; *Therevidae* spp. n.

Malloch, 1749; *Phoridae* sp. n.

Meunier, 1822; Zanzibar copal *Chironomus* spp. n.—Meunier, 1824; *Chironomidae* Copal de Zanzibar et de Madagascar.

Neave, 1937; blood-sucking, annotated list.

Newstead, 1953; *Glossina* sp. n.—Newstead, 1954; *Phlebotomus* 2 spp. n.

Pittaluga, 2144; *Oecacta* sp. n.

Rodhain & Bequaert, 2330; *Oestridae* 2 spp. n.

Rouband, 2370; Stomoxydes.

Simpson, 2599; Nigeria, blood-sucking *Diptera.*

Speiser, 2637; *Chrysops* sp. n.

Surcouf, 2733; Tabanides de la Sangha.

Theobald, 2759; *Culicidae* spp. n.

Ziemann, 3251; Verbreitung der blutsaugenden Tiere in Kamerun.

Aphaniptera.

Watertson, 2976; *Ctenophthalmus* sp. n.

Hemiptera.

Aulmann, 65; Psylliden spp. n.—Aulmann, 66; *Chlorita* n. sp.

Bergroth, 179; 9 spp. n.—Bergroth, 180; *Coreidae* spp. n.—Bergroth, 181; *Tingitidae* 2 spp. n.—Bergroth, 185; *Cenaeus* spp. n. Guinea.

Brain, 309; Cape Town, *Pseudococcus* spp. n.

Breddin, 319; *Henicocephalus* sp. n., *Reduviidae* gen. n.

Distant, 724; *Cicadidae* spp. n.—Distant, 725; 6 spp. n. *Pentatomidae* and *Reduviidae.*—Distant, 727; *Bathycoelia* 2 spp. n.—Distant, 728; Liberia *Platypleura* sp. n.

Horvath, 1299; *Tingitidae* 2 spp. n., gen. n.

Jacobi, 1370; Homoptera spp. n., genn. n.

Jeannel, 1388; Réduvide troglophile nouveau de l'Afrique orientale.—**Jeannel, 1389**; Nouveau *Macrosponges*, Mozambique.

Jordan, 1428; *Polychromidae* gen. n.

Jordan & Rothschild, 1441; 1 gen. n. *Clinocoridae*.

Lallemand, 1618; *Cercopidae* spp. n.

Melichar, 1808; *Delphacinarum* n.g. n. sp.

Montandon, 1869; *Macrocoris* spp. n.

Montandon, 1870; *Laccotrephes* 2 spp. n.

Morstatt, 1886; *Ploiariola* sp. n.

Newstead, 1957; African Coccidae spp. n.

Reuter, 2286; Fernando Po *Reduvioluss* sp. n.

Rothschild, 2352; gen. n. *Cimicidae*.

Schmidt, 2454; *Fulgoridae* spp. n.—**Schmidt, 2455**; Zwei neue Tettigometriden-Gattungen.—**Schmidt, 2457**; *Fulgoridae* spp. n. genn. n.—**Schmidt, 2459**; *Cercopidae* spp. n.

Schouteden, 2478; *Coreidae* spp. n.—**Schouteden, 2479**; *Antestia* 2 spp. n.—**Schouteden, 2483**; *Coreidae* spp. n. —**Schouteden, 2486**; spp. n.

Schumacher, 2515; Neue Gattung der Graphosominen.—**Schumacher, 2516**; Kamerungebirge spp. n.—**Schumacher, 2523**; Ledrinen 2 genn. n. 5 spp. n.—**Schumacher, 2529**; *Lacetas* spp. n.

Spooner, 2638; *Delphacidae* spp. n.

Vayssière, 2867; Deux nouveaux de l'Afrique occidentale.

Ellipoptera (= Anoplura).

Harms, 480; *Haematopinus* sp. n.

Thysanoptera.

Karny, 1455; 2 spp. n.—**Karny, 1454**; Tubulifieren.

Karny, 1465; gen. n.

Trybom, 2809; Natal und Zululand, Verzeichnis, genn. and spp. n.—**Trybom, 2810**; Britt. Ostafrika 1 gen. n. sp. n.

Psocoptera.

Enderlein, 859; gen. n.

Lipoptera (= Mallophaga).

Watertson, 2974; *Mackayia* sp. n.

Isoptera.

Holmgren, 1279; spp. and genn. n.

Silvestri, 2584 & 2586; spp. n.

Sjöstedt, 2603; Afrikanische Termiten 9 spp. n.

Wasmann, 2967; *Mirodermes* sp. n.

Wasmann und Werner, 2969; Ägyptischen Sudan und Nord-Uganda *Termiten* und *Embidaria*.

Embioptera.

Enderlein, 837; spp. n.

Plecoptera.

Klapálek, 1525; Plecoptera.

Ephemeroptera.

Eaton, 799; *Oligoneuria* sp. n.

Navás, 1932; gen. n.

Paraneuroptera.

Martin, 1775; Sikasso 4 spp. n.—**Martin, 1776**; Gomphines spp. n.

Ris, 2314; spp. n.—**Ris, 2317**; Ägyptischen Sudan und Nord-Uganda 1 sp. n.

Orthoptera.

Bolivar, 260; Congo 50 spp. n.

Burr, 441 & 446; *Dermaptera*.—**Burr, 449**; *Blandex* n. gen.

Giglio-Tos 1051; Mantidae spp. n.—**Giglio-Tos, 1053**; Specie nuove di Fasmidi Nuova Guinea.

Griffini, 1119; *Eremus* sp. n.—**Griffini, 1123**; Del K. K. Naturhist Hofmuseum di Vienna, Gryllacridi 2 spp. n.

Rehn, 2242; African *Mantidae* and *Phasmidae* spp. n.—**Rehn, 2243** African *Eumastacinae* 2 spp. n.—**Rehn, 2245**; *Mantidae* and *Phasmidae* spp. n.

Shelford, 2572; *Blattidae*.

Sjöstedt, 2604; Kamerungebirges 1 gen. n. 4 spp. n. **Sjöstedt, 2605**; Brit. Ostafrika genn. n. spp. n.

Werner, 2998; Mantodeenfauna Nordostafrikas.

Collembola.

Borner, 249; Collembolen, *Dicranocentrus* sp. n.

Carpenter, 484; Nigeria *Isotoma* sp. n.

Madagascar and Mascarene Islands.

Coleoptera.

Arrow, 54; Mauritius *Phytalus* sp. n.—**Arrow, 55**: *Hexodon* 3 spp. n.

Boppe, 273; *Closterus* sp. n.—**Boppe, 274**; Genre nouveau de Cérambycides.

Borchmann, 276; *Lagriiden*, *Allecuiden* und *Melaiden* spp. n.

Chatanay, 520; Asidide nouveau.—**Chatanay, 523**; Nouveaux Asidides.

Fleutiaux, 942; Comores *Elateridae* spp. n.

Lamberton, 1623; Genre curieux.

Moser, 1892; *Pygora* sp. n.

Ohaus, 1985; *Adoretini* spp. n.

Scott, 2537; Seychelles, *Adephaga & Lamellicornia*.

Sicard, ; Coccinellides spp. n.—**Sicard,** Seychelles *Coccinellidae*.

Théry, 2765; *Buprestidae* spp. n.

Vuillet, 2922; *Clivina* sp. n.

Hymenoptera.

Bordage, 979; Notes biologiques recueillies à l'île de la Réunion.

Cockerell, ; Seychelles spp. n.

Emery, 827; *Myrmecina* gen. n.

Enderlein, 839; gen. n. *Dacnusinae*.—**Enderlein, 840**; *Braconidae* gen. n.

Forel, ; Seychelles spp.n.

Kieffer, ; Seychelles Proctotrupoidea gen. and spp. n.

Kohl, 1550; *Passaloecus* sp. n.

Meade-Waldo, 1798; Seychelles *Diploptera*.

Morley, 1883; Seychelles *Ichneumonidae* spp. n.

Morley, 1884; *Henicospilus*, sp. n.

Roman, 2341; Madagascar *Pimpla* and *Ipobracon* n. sp.

Santschi, 2411; *Formicidae* spp. n.

Lepidoptera.

Druce, 765; *Achaea* sp. n.

Fryer, 1001; Seychelles and Aldabra spp. n.

Hampson, 1167; Seychelles *Marasmia* sp. n., Madag. *Bocchoris* sp. n.

Joannis, 1399; *Catocalinae* gen. n.

Le Cerf, 1650; *Scoria* sp. n.

Meyrick, 1839; spp. n. genn. n.

Prout, 2181; *Gelasma* sp. n.

Neuroptera.

Navás, 1915; *Scorа* spp. n.—**Navás, 1917**: *Leucochrysa* and *Chrysopa* spp. n.

Diptera.

Austen, 75; Madagascar, Rodriguez, Aldabra I., *Tabanidae* spp. n.

Collin, 581; *Limosina* sp. n.; **582**; *Phoridae* spp. n.

Edwards, 813; Seychelles *Tipulidae*.

Enderlein, 838; Seychelles *Mycetophilidae* spp. n.—**Enderlein, 846**; Seychelles *Sciaridae* spp. n.—**Enderlein, 848**; *Canopylocera* sp. n.—**Enderlein, 861**; Seychelles gen. n. *Scatopsidae*.—**Enderlein, 863**; *Tipulidae* sp. n.—**Enderlein, 864**; *Sule* sp. n.

Hendel, 1220; Seychelles and Madagascar *Acalyptratae* spp. n.

Kertesz, 1492; Seychelles *Stratiomyiidae* genn. n. 2 spp. n.

Lamb, 1620; Seychelles *Acalyptratae*.

Meunier, 1822; copal, *Chironomus* and *Ceratopogon* spp. n.

Theobald, 2764; Seychelles *Culicidae* spp. n.

Hemiptera.

Bergroth, 180; spp. n. *Coccidae* and *Neididae*.—**Bergroth, 185**; Comoro *Odontopus* sp. n.

Distant, 724; gen. n. Cicadidae.—**Distant, 729**; Seychelles *Yanga* sp. n.

Lallemand, 1618; Madagascar and Mahé *Cercopidae* spp. n.

Schouteden, 2480; *Amberiana* sp. n.

Pseudoptera.

Enderlein, 859: Seychelles and Madag. genn. n.

Paraneuroptera.

Ris, 2314: spp. n.

Orthoptera.

Bolivar, 261: Seychelles spp. n.

Burr, 441: *Prolabia* sp. n.—Burr, 448: *Anisolabis* sp. n. Comoren.

Giglio-Tos, 1051: *Tarachomantis* sp. n., Comoro *Polyspilotra* sp. n.

Griffini, 1120: *Spiczophilus* sp. n.—Griffini, 1122: *Gryllacris*.—Griffini, 1126: *Carcinopsis* sp. n.

Shelford, 2571: Madagascar *Euthecanopteryx*, *Hemianaphocta* spp. n.

Asia, Tropical & Eastern.

Including Japan, Biluchistan, Afghanistan.

For West and Central Asia *vide* Palaearctic (*b*); for North Asia *vide* Palaearctic (*c*).

Insecta, collectively.

Annandale, 44: Bengal.

Buttel-Reepen, 461: Reisebrief aus Ceylon's Bergen.

Coleoptera.

Arrow, 53: Sikkim *Anomala* 11 spp. n.—Arrow, 56: Burma *Anomala* spp. n.

Bickhardt, 227: *Histeriden* Formosa.

Blair, 240: India etc. *Pyrochroidae* spp. n.

Borchmann, 278: Lagriidae, Alleculidae, Cantharidae, spp. n. Formosa.

Boucomont, 292: Genre nouveau et espèces nouvelles de Coprophages, Yunnan.

Dupuis, 780: Formosa *Carabidae* spp. n.

Eggers, 819: India *Hylastes* sp. n.

Fleutiaux, 941: India *Dicladus* sp. n.—Fleutiaux, 944: Rangoon *Scopulifer*.

Fowler, 968: India, *Cicindelidae*, *Paussidae* and *Rhysodidae*.

Gestro, 1037: India *Hispidae* spp. n.—Gestro, 1041: India and Formosa *Ichthyurus* spp. n.

Grouvelle, 1138: Annam and Formosa *Psammoecus* spp.—Grouvelle, 1139: *Aphanocephalus* spp. n.

Hauser, 1189: *Ceptolabrus* sp. n. China.

Heikertinger, 1202: *Mantura* sp. n. Japan.

Horn, 1293: Formosa *Cicindelinae*.

Houlbert, 1317: Yunnan Lucanide genre nouveau.

Jordan, 1433: Assam and Burma *Zygocnodes* 2 spp. n.—Jordan, 1435: India *Anthribidae* spp. n.—Jordan, 1436: Formosa *Anthribidae* spp. n.

Kerremans, 1481: Formosa Buprestiden, spp. n.

Kožančikov, 1562: *Aphodius* sp. n.

Lameere, 1625: China *Prionus* spp. n.

Lesne, 1678: Psoïen indien.

Lewis, 1682: Burma *Hololepta* sp. n.

Mollenkamp, 1860: Formosa *Lucanidae*.—Mollenkamp, 1861: India *Neolucanus* sp. n.

Moser, 1890: India and Tonkin Hopliiden spp. n.—Moser, 1889: *Holotrichia* spp. n.

Ohaus, 1985: *Adoretini* spp. n.

Olivier, 1996: Formosa *Lampyridae* spp. n.—Olivier, 2004: Lampyrides de l'Indo-Chine.

Petri, 2079: *Gasteroclisus* spp. n.

Pic, 2119: Longicornes de Chine.—Pic, 2104: *Pyrochroa* de Malacca.

Raffray, 2222: Formosa *Pselaphidae* spp. n.

Roeschke, 2332: Formosa *Carabus* sp. n.

Sampson, 2404: Ceylon, Burma, Singapore, 3 spp. n., *Xyleborus* and *Crossotarsus*.

Schenkling, 2434: Formosa *Cleridae* spp. n.

Schilder, Ent. Bl. 8 p. 96: Cicindelinenfauna des chines. u. japan.

Schmidt, 2451; *Aphodiinae, Orphninae* und *Hybosorinae*, spp. n.

Schönfelt, Deutsche ent. National-Bild. 2 pp. 189 & 190; Formosa *Brenthidae*.

Sicard, 2575; Formosa *Cochophora* sp. n.

Strohmeyer, 2711; Formosa *Ipidae* 3 spp. n.

Vuillet, 2919; Indo-China *Euschizocerus* sp. n.

Wasmann, 2963; Formosa *Paussidae* 2 spp. n.—Wasmann, 2967; India *Thoricta* sp. n., *Diausa* sp. n.

Weise, 2989; Chrysomelidae.

Wellman, 2996; Japan, Formosa, Tibet, *Lyttidae* spp. n.

Hymenoptera.

Cameron, 474; Hongkong *Anomalon* sp. n.

Cockerell, 556; India *Nomia* sp. n.—Cockerell, 566; Formosa *Nomia* spp. n.

Crawford, 615; *Chalcididae* and *Proctotrypidae*, spp. n.

Enderlein, 839; *Spathiinae* spp. n.—Enderlein, 841; Ceylon Braconiden spp. n.—Enderlein, 843; Chalcididen Ceylons.—Enderlein, 844; Formosa *Braconidae, Proctotrupidae* and *Evaniidae*.—Enderlein, 845; Ceylon 2 spp. n., *Pseudofoenus* and *Stephanus*.—Enderlein, 855; India *Paniscus* sp. n., Formosa gen. n.

Forel, 949; Japan *Camponotus* sp. n.—Forel, 955; Formosa *Formicidae* spp. n.—Forel, 960; India genn. n. & spp. n. *Formicidae*.—Forel, 961; India etc. neue Ameisenformen.

Hedicke, 1192; Formosa *Cynipidae*.

Kertész, 1489; China *Ptilona* sp. n.

Krieger, 1573; Hinterindien *Pristomerus* spp. n.

Maidl, 1745; *Xylocopa* spp. n. India and Annam.

Meade-Waldo, 1797; India *Megachile* sp. n.

Mocsáry, 1857; Formosa *Chrysis* spp. n.—Mocsáry, 1858; *Chrysis* spp. n.

Morley, 1884; *Ichneumonidae* spp. n.

Paiva, 2048; Abor Expedition.

Perkins, 2062; *Chalcidae* spp. n.—Perkins, 2063; *Dryinidae* spp. n. China.—Perkins, 2065; China *Nesoprosopis* sp. n., *Megachile*.

Rohwer, 2338; *Tenthredinidae* spp. n.

Strand, 2680; *Evania, Aphanolaxe*, spp. n.

Szabó, 2749; Singapore *Epitritus* sp. n.

Turner, 2827; Ceylon *Stizus* sp. n.—Turner, 2830; *Fossoria* spp. n.—Turner, 2832; The genus *Cerceris* monograph British India.

Viereck, 2881; India *Braconidae* and *Ichneumonidae* spp. n.—Viereck, 2882; *Ichneumonidae* and *Braconidae* spp. n.—Viereck, 2883; Japan Parasitica spp. n.

Zavattari, 3242; Kashmir *Odynerus* sp. n.

Lepidoptera.

Dekhi Philipe, 675; India *Lethe kansa* and *Dophla patala*.

Evans, 881; List of Indian butterflies.—Evans, 882; India *Rhopalocera*.

Fernández, 925; Hunan brief list.

Fruhstorfer, 990; *Lycaenidae, Yasoda* and *Suasa*, spp. n.—Fruhstorfer, 998; *Nymphalidae* subspp. n.

Green, 1112; Ceylon butterflies.

Hampson, 1167; *Pyraustinae* spp. n.—Hampson, 1170; The moths of India, spp. n.—Hampson, 1169; *Noctuidae* spp. n.

Hannyngton, 1176; Distribution of *Lethe kansa* and *Dophla patala*.

Joannis, 1397; Trois nouvelles espèces de hétérocères Cochinchine.—Joannis, 1399; Tonkin *Enmonodia* sp. n.

Jordan, 1426; *Agaristidae* spp. n.

Le Cerf, 1650; Tonkin *Aschistophleps* sp. n.

Meyrick, E., 1832; India *Microlepidoptera* many spp. n.—Meyrick, 1835; India and Ceylon *Gracilariidae* spp. n.—Meyrick, 1837; India *Nemotois* spp. n.—Meyrick, 1839; spp. n., genn. n.

Prout, 2181; India etc., *Hemitheinae* spp. n.

Rothschild, 2362; *Lithosianae* spp n.

Rothschild & Jordan, 2364; Malay Penins. *Marumba* sp. n.

Swinhoe, 2748; India etc. *Lycaenidae* and *Hesperiidae* spp. n.

Warren, 2958; India, Japan, etc., *Noctuidae* spp. n.

Wileman, 3119; Formosa *Geometridae* spp. n.—Wileman, 3200; Formosa *Noctuidae* spp. n.—Wileman, 3201; Formosa *Geometridae* spp. n.

Wileman, 3202; Formosa 6 spp. n., *Phalera*, *Trachea* and *Geometridae*.

Neuroptera.

Nagano, 1913; Japan *Lymantria* sp. n., *Epicopeia* sp. n.

Nakahara, 1914; *Climaciella* sp. n.

Navás, 1915; India, China, etc., spp. n.—Navás, 1916; spp. n., gen.—Navás, 1917; *Chrysopidae* and *Hemerobiidae* spp. n.—Navás, 1928; Baluchistan *Palpares* sp. n., Burma *Dimares* and *Nesalcon* sp. n.—Navás, 1929; Formosa gen. n., Piu-fa sp. n., Tshifu gen. & sp. n. *Myrmeleonidarum*.

Petersen, 2072; Formosa *Panorpa*, *Micromus*, 2 n. spp.—Petersen, 2073; Ceylon *Macronemurus* sp. n.

Diptera.

Alcock, 12; Malaya *Anopheles* sp. n.

Annandale, 45; *Phoridae* associated with ants.

Becker, 155; *Chloropidae*, Monographie, gen. & spp. n.

Bezzi, 219; *Rhagionidae* et *Empididae* Formosa spp. n.

Bottcher, 254; Formosa *Sarcophaga* spp. n.

Brunetti, 422; *Nematocera* general work.—Brunetti, 423; oriental *Culicidae*.—Brunetti, 424; *Aphiochaeta* sp. n.—Brunetti, 425; India many spp. n.—Brunetti, 427; *Simulium* Ceylon sp. n.

Christophers, 541; Andamans *Culicidae*.

Daniels, 660; Malay States *Culicidae* 2 spp. n.

Davys, 671; Anophelines Quetta.

Enderlein, 838; Japan *Scinra* sp. n.—Enderlein, 856; Ephydriden nov. gen.—Enderlein, 863; Formosa *Tipulidae* spp. n.—Enderlein, 865; Ortalinen und Loxoneurinen.—Enderlein, 866; Formosa *Dolichopidae* spp. n.

Fry, 1000; Anophelines of Chota Nagpur.

Hendel, 1221; Formosa *Ducus* spp. n.

Hendel, 1220; Indien and Formosa, Acalyptratae 3 spp. n.

Kertész, 1488; *Dorylaidae* spp. n. Formosa.

Kieffer, 1508; Formosa *Chironomidae* spp. n.—Kieffer, 1509; Ceylan nouveaux Chironomides.—Kieffer, 1510; Cecidomyies de Ceylan.

Kröber, 1577; Formosa *Thereviidae*.—Kröber, 1578; Thereviden der indo-australischen Region.—Kröber, 1582; Formosa Thereviden, Omphraliden.

Leicester, 1662; Malay States *Culicidae* many spp. & genn. n.

Lichtwardt, 1684; Formosa *Nycteribosca* spp. n.

Paiva, 2047; Calcutta *Culicidae*.

Patton & Cragg, 2045; India *Philaematomyia* sp. n.

Riedel, 2306; Formosa Nematocera polyneura.

Schmitz, 2466; Bengalen *Chonocephalus* nov. sp.

Stanton, 2645; Malaya *Anopheles*.

Hemiptera.

Breddin, 320; spp. n., *Pentatomidae* and *Homoeoceras*.—Breddin, 322; India *Indra* sp. n.

Cholodkovskij, 531; Himalaya, *Pemphigidae* spp. n.

Crawford, 613; India *Psyllidae* spp. n.

Distant, 723; *Cicadidae* and *Fulgoridae* spp. n., genr. n.—Distant, 724; India *Cicadidae* and *Fulgoridae* spp. n.—Distant, 726; India etc., spp. n., *Cicadidae*, *Jassidae*.—Distant, 727; India gen. n. near *Piezodorus*, *Jassidae* spp. n.—Distant, 729; Tonkin *Cosmopsaltria* sp. n.

Green, 1107; India *Margarodes* sp. n.

Horváth, 1302; Japan etc., *Stephanitis* spp. n.—Horváth, 1305; Tonkin *Poecilocoris* sp. n.

Jordan & Rothschild, 1441; *Cacodmus* sp. n.

Lallemand, 1618; India *Leptataspis* sp. n.

Matsumura, 1792; Cicadinen Japans.—**Matsumura, 1793**; Acocephalinen und Bythoscopinen Japan.

Montandon, 1869; Annam *Gestroiella* sp. n.

Poppius, 2153; Malacca *Kosmiocoris* sp. n.—**Poppius, 2154**; Formosa *Lygus* sp. n.—**Poppius, 2164**; India and Ceylon *Brycorinae* spp. n.

Reuter & Poppius, 2288; *Tetratophyliden* spp. n.

Rothschild, 2354; India *Oliocoris* sp. n.

Schmidt, 2459; *Leptataspis* sp. n. Malacca.

Schumacher, 2522; *Cyphostethus* sp. n. China.

Thysanoptera.

Bagnall, 93; India *Panurothrips* sp. n.—**Bagnall, 97**; India gen. n.

Isoptera.

Bugnion, 436; Ceylan *Eutermes* n. sp.

Holmgren, 1277; India sp. n.—**Holmgren, 1279**; spp. & genn. n.

Embioptera.

Enderlein, 837; spp. n.

Psocoptera.

Enderlein, 851; Orientalische.

Plecoptera.

Klapálek, 1522.—Klapálek, 1524; Formosa gen. n.—**Klapálek, 1529**; *Kamimuria* 12 spp. n. China, Japan.

Ephemeroptera.

Ulmer, 2840; Formosa.

Paraneuroptera.

Ris, 2314; spp. n.—**Ris, 2316**; Formosa, Südchina, Tonkin, spp. n.

Orthoptera.

Burr, 441; Formosa *Pygo* sp. n.—**Burr, 448**; *Anechura* sp. n. Nordindien.—**Burr, 449**; *Chelisoches* sp. n. Formosa.

Hancock, 1171; *Tetriginae* spp. n.

Thysanura und *Collembola.*

Imms, 1355; India etc., 27 spp. n., gen. n.

Silvestri, 2589; Machilidarum species novae.

Asiatic Archipelago.

Java to New Guinea, incl. Philippines.

Insecta, collectively.

Mjöberg, 1855; Mallophagen und Anopluren Java.

Moulton, 1896; Borneo trip, *Pentatomidae* 2 spp. n.

Coleoptera.

Bernhauer, 211; Philippinen Staphyliniden spp. n.

Bickhardt, 230; *Histeridae* spp. n.

Blair, 240; *Pyrochroidae* spp. n.

Clavareau, 543; N. Guinea *Aesernia* 2 spp. n.

Felsche, 904; Philippinen Lucaniden spp. n.

Fleutiaux, 941; *Eucnemidae* spp. n.—**Fleutiaux, 944**; *Eucnemidae* spp. n.

Gahan Proc. ent. Soc. London 1911 p. lxxix; Borneo *Daphisia* sp. n.

Gebien, 1024; *Tenebrionidae* spp. n.

Gestro, 1039; Sumatra *Ichthyurus* sp. n.

Grouvelle, 1138; Java *Psammoecus* spp. n.—**Grouvelle, 1139**; *Aphanocephalus* spp. n.

Hagedorn, 1159; New Guinea gen. n. *Scolytidae*.

Heller, 1209; Lamellicornier Deutsch-Neuguinea.—**Heller, 1210**; N. Guinea, *Cerambycidae* genn. & spp. n.—**Heller, 1212**; Celebes 2 spp. n., *Chrysochroa* and *Celebia*.—**Heller, 1213**; Luzon *Discolomidae* gen. n.—**Heller, 1214**; Philippinische Rüsselkäfer.—**Heller, 1215**; *Chalcocrates* sp. n. N. Guinea.

Horn, etc., 1295; New Guinea spp. n.

Janson, 1384; Borneo *Cetoniidae* 5 spp. n.

Jordan, 1438; Neue Anthribiden.—Jordan, 1433; *Anthribidae* 4 spp. n.

Kerremans, 1484; Borneo *Buprestidae* spp. n.

Lewis, 1582; *Histeridae* 3 spp. n. Java, Batchian and New Guinea.

Mollenkamp, 1861; Borneo *Aegus* sp. n.—Mollenkamp, 1862; *Lucanidae*.

Moser, 1889; *Holotrichia* spp. n.—Moser, 1890; *Hoplidea* spp. n.—Moser, 1892; *Cetoniidae* spp. n.

Moulton, 1900; Bornean *Buprestidae*.

Ohaus, 1985; Djampea *Trigonostoma* sp. n.—Ohaus, 1992; Rutelidea.

Petri, 2079; Sumatra *Gasteroclisus* sp. n.

Pic, 2103; Pyrochroïdes de Java et de Sumatra.—Pic, 2107; *Idgia* sp. n Java.

Pierce, 2135; Philippines gen. n. *Curculionidae*.

Prell, 2174; *Dynastini* spp. n.

Raffray, 2221; Java *Batrisocerus* 3 n. spp.

Ritsema, 2318; Borneo *Cryptoderma* sp. n.—Ritsema, 2319; *Euchitonia* sp. n. Sumatra.—Ritsema, 2320; Sumatra *Aulacochilus* sp. n.—Ritsema, 2321; *Metopodontus* sp. n. Sumatra.

Sampson, 2404; Borneo *Crossotarsus* sp. n.

Sicard, 2578; Philippines *Caria* sp. n.

Spaeth, 2633; Borneo *Cassidae* spp. n., gen. n.

Vuillet, 2920; *Dasylinda* sp. n.

Wagner, 2937; sp. n. *Apion* Luzon.

Wasmann, 2962; Paussiden, etc., 3 spp. n. Java.

Weise, 2989; *Chrysomelidae* spp. n.

Hymenoptera.

Cameron, 479; Two new *Ichneumonidae* Aru.—Cameron, 480; Sarawak spp. n.

Crawford, 615; Philippine Is. *Sympiesis* sp. n.

Enderlein, 839; *Spathiinae* spp. n.—Enderlein, 840; Sumatra *Eubadizon* sp. n.—Enderlein, 841; Sumatra *Braconidae* spp. n.—Enderlein, 855; *Paniscinae* gen. n. spp. n.—Enderlein, 859; *Ophioninae* gen. n. Sumatra.

Enslin, 872; *Tenthredinoidea* Java.

Forel, 958; Ameisen Java.—Forel, 960; Sumatra genn. n. spp. n. *Formicidae*.—Forel, 961; neue Ameisenformen Sumatra etc.

Friese, 983; Bienenfauna von Neu-Guinea und Oceanien 2 spp. n.

Krieger, 1573; *Pristomerus* spp. n.

Maidl, 1745; Philippines 4 spp. n.

Meade-Waldo, 1796; New Guinea, *Scaria* spp. n.

Moscary, 1857; Sumbawa *Chrysis* sp. n.

Morley, 1884; *Ichneumonidae* spp. n.

Perkins, 2061; Amboina, *Abispa* and *Odynerus*, sp. n., N. Guinea, *Palaeorhiza* sp. n.—Perkins, 2063; Java *Bryinidae* spp. n.

Rohwer, 2338; *Tenthredinidae* spp. n.

Stitz, 2667; Ameisen Ceram und Neu-Guinea.

Strand, 2680; *Evania*, *Iphiaulax*, spp. n.

Turner, 2826; New Guinea spp. n. *Fossoria*.—Turner, 2829; Amboina *Dasyproctus* sp. n.—Turner, 2831; New Guinea *Thynnidae* spp. n.

Viehmeyer, 2878; Ameisen Deutsch-Neuguinea.

Lepidoptera.

Chapman, 512; Borneo *Notarthrians* sp. n.

Courvoisier, 609; Javanische Lycaeniden.

Druce, 761; *Hesperiidae* 4 spp. n., gen. n.

Eecke, 814; *Thestias* sp. n.

Friehstorfer, 991; Sula Mangoli *Hypolimnas* sp. n.

Fruhstorfer, 998; *Nymphalidae* subspp. n.

Hampson, 1167; *Pyraustinae* spp. n.—Hampson, 1169; *Noctuidae* spp. n.

Jordan, 1426; *Agaristidae* spp. n.—Jordan, 1429; New Guinea *Delias* spp. n.—Jordan, 1430; 3 spp. n., *Abisara* and *Dicallaneura*.—Jordan,

1431; New Guinea *Eulaodeta* 4 spp. n. —Jordan, 1437; *Zygaenidae* spp. n.

Kendrick, 1477; New Guinea *Pyralidae* spp. n.

Klunder van Gigen, 1537; *Neptis* sp. n.—Klunder van Gijen, 1539; Microlepidoptera von Java und Kei-Inseln 9 spp. n.

Martin, 1771; *Papilio* sp. n. Celebes. —Martin, 1773; *Euploea* Celebes.—Martin, 1774; *Delias* 2 spp. n. Celebes.

Meyrick, 1837; Celebes *Nematois* sp. n.—Meyrick, 1839; spp. n. genn. n.

Moulton, 1898; Borneo *Lycaenidae* revision.—Moulton, 1899; Borneo *Delias* sp. n.

Prout, 2181; *Hemitheinae* spp. n.

Rebel, 2239; *Ogyris* sp. n. Neu-Guinea.

Rothschild, 2359; Borneo spp. n. *Aegeriidae* and *Syntomidae*.—Rothschild, 2362; *Lithosianae* spp. n.

Rothschild & Jordan, 2364; New Guinea *Macroglossum* sp. n.

Strand, 2675; New Guinea *Charagia* sp. n.

Warren, 2958; *Noctuidae* spp. n.—Warren, 2959; New Guinea *Geometridae* spp. n.

Neuroptera.

Enderlein, 852; *Panorpata* Java 2 spp. n.

Navás, 1915; spp. n.—Navás, 1917; N. Guinea *Chrysocerca* sp. n.—Navás, 1928; N. Guinea *Myrmeleon* sp. n.

Diptera.

Enderlein, 838; *Mycetophilidae* spp. n.—Enderlein, 863; *Tipuliden* spp. n. —Enderlein, 865; Ostalinen und Loxoneurinen.—Enderlein, 866; Dolichopodiden *Psilopodini* spp. n.

Kieffer & Leeuwen, 1512; Java *Cecidomyiidae* spp. n.

Kröber, 1578; *Therevidae* genn. & spp. n.

Malloch, 1749; *Phoridae* spp. n.—Malloch, 1750; Philippines *Limosina* sp. n.

Meijere, 1800; *Pulicipora* neue Arten.

Muir, 1909; *Ascodipteron* sp. n.

Hemiptera.

Ashton, 62; *Mana* sp. n.

Aulmann, 67; Psylliden Neu-Guinea, gen. n.

Bergroth, 180; *Coccidae* spp. n.

Breddin, 320; spp. n., *Pentatomidae* and *Oncopeltus*.—Breddin, 322; Borneo *Indra* sp. n.—Breddin, 327; Ceylon *Reduviidae* spp. n.

Distant, 726; Borneo *Harinoga* sp. n.—Distant, 729; *Cicadinae* 4 spp. n. —Distant, 730; New Guinea 10 spp. n., genn. n.

Goot, 1088; Zwei neue javanische Aphiden, Verzeichnis der bekannten indischen Blattläuse.

Green, 1109; *Coccidae* Java 2 spp. n.

Horváth, 1300; Java 4 spp. n.—Horváth, 1302; Java, N. Guinea, *Stephanitis* spp. n.—Horváth, 1303; N. Guinea *Caridophthalmus* sp. n.

Lallemand, 1618; New Guinea *Cercopidae* 2 spp. n.

Montandon, 1869; *Naucoridae* 2 spp. n., gen. n.

Moulton, 1897; Borneo list of *Cicadidae* spp. n.

Poppius, 2153; *Capsidae* genn. n.—Poppius, 2156; *Araspus* 4 spp. n. Neu Guinea.—Poppius, 2164; *Bryocorinen* spp. n.

Reuter, 2286; Luzon *Campylomma* sp. n.

Schmidt, 2456; *Mana* sp. n. Sumatra.—Schmidt, 2457; *Bythopsyrna* sp. n. Nias.—Schmidt, 2458; Sumba *Scieroptera* sp. n.—Schmidt, 2459; Sumatra *Cercopidae* gen. n.

Thysanoptera.

Bagnall, 93; Philippines *Megnothrips* sp. n.

Karny, 1461; Gallenbewohnende Java.—Karny, 1462; Zwei neue javanische Genera.

Embioptera.

Silvestri, 2588; *Oligotoma* sp. n.

Isoptera.

Holmgren, 1279; spp. & genn. n.

Plecoptera.

Klapálek, 1526; *Nemura* sp. n. Java.

Paraneuroptera.

Laidlaw, 1615; Borneo *Oreganaphus* sp. n.—Laidlaw, 1616; Borneo spp. n.—Laidlaw, 1617; Borneo gen. n.

Ris, 2314; spp. n.—Ris, 2315; Java und Krakatau.—Ris, 2316; spp. n. Philippinen.

Orthoptera.

Burr, 447; *Dermaptera* Java and Sumatra.—Burr, 442; Java *Ariscenia* sp. n.—Burr, 449; New Guinea *Anisolabis* sp. n.

Giglio-Tos, 1051; Mantidae spp. n.—Giglio-Tos, 1052; *Pulchriphyllium* n. sp. New Guinea.—Giglio-Tos, 1054; Neu-Guinea, *Aphroptera* sp. n.

Griffini, 1119; Lombok *Gryllacris* sp. n.—Griffini, 1121; Borneo *Gryllacris* sp. n.—Griffini, 1125; *Gryllacridae* of Borneo.

Hancock, 1171; *Saussurella* spp. n.

Jacobson, 1372; *Myrmecophaga americana* Java.

Karny, 1452; genn. & spp. n. *Locustoidea* Neu-Guinea.

Shelford, 2566; New Blattidae New-Guinea.—Shelford, 2570; *Prosopleeta* spp. n.

Thysanura.

Silvestri, 2589; Java gen. n. *Machilidae*.

Protura.

Berlese, 199; sp. n.

Australia and Tasmania.

Insecta, collectively.

Michaelsen, 1844; S.W. Australia.

Dodd, 743; Trip.

Coleoptera.

Blackburn, 237; *Melolonthini* spp. n.

Blair, 240; *Lemodes* 2 spp. n.

Ferguson, 920; Amyceridae.

Fleutiaux, 941; *Eucnemidae* 2 spp. n.

Goudie, 1090; Water-beetles, Victoria.—Goudie, 1091; North-Western Victoria *Psolaphidae*, *Paussidae*, *Scydmaenidae*.

Grouvelle, 1139; *Aphanocephalus* sp. n.

Lea, 1640; many spp. n.—Lea, 1641; *Rhytiphora* n. sp.—Lea, 1642; New.

Mjöberg, 1853; *Eucurtia* gen. & sp. n. S. Australia, termitophilous.

Moser, 1892; *Chlorobapta* sp. n.

Ohaus, 1988; Anoplognathiden spp. n.

d'Orchymont, 2006; *Neosternolophus* sp. n.

Pic, 2102; Hylophilides.

Schmidt, 2451; *Aphodius* sp. n.

Hymenoptera.

Bingham, 231; spp. n., *Cerceris*, *Gorytes*, *Odynerus*, *Rhynchium*, *Alastor*.

Cameron, 477 & 478; New Parasitic.

Cockerell, 550; 10 spp. n. *Prosopinae*.—Cockerell, 551, 552, 556, 567; *Apidae* spp. n.—Crawford, 615; *Podagrion* sp. n.

Forel, 961; *Rhopalothrix* sp. n.

Girault, 1065, 1066, 1067; spp. n., genn. n.—Girault, 1072; *Melittobia* Queensland sp. n.

Mocsáry, 1858; *Chrysis*; sp. n.

Morley, 1884; *Ichneumonidae* spp. n.

Perkins, 2061; spp. n., genn. n., *Apidae* and *Eumenidae*.

Turner, 2825; *Anthobosca* sp. n.—Turner, 2829; *Fossoria* spp. n.—Turner, 2831; *Thynnidae* spp. n.—Turner, 2833; *Cerceris*.

Lepidoptera.

Hampson, 1169; *Noctuidae* spp. n.

Meyrick, 742; *Cyclotorna* spp. n.—Meyrick, 1835; *Gracilariidae* spp. n.—Meyrick, 1837; *Nemotois* 2 spp. n.—Meyrick, 1839; spp. n.

Strand, 2671; *Synemon* spp. n.

Turner, 2820; *Cirphis* sp. n.

Warren, 2958; *Noctuidae* spp. n.

Waterhouse & Lyell, 2972; New *Hesperiidae*.

Neuroptera.

Navás, 1917; *Berotha* sp. n.

Petersen, 2073; *Acanthaclisis* sp. n.

Diptera.

Austen, 75; *Pangonia* sp. n.

Hermann, 1225; Asilidae spp. n.

Kröber, 1579; *Therevidae* genn. & spp. n.—**Kröber, 1579**; Thereviden 2 genn. n.—**Lichtwardt, 1684**; *Nycterimyia* sp. n.

Malloch, 1749; *Phoridae* sp. n.

Muir, 1909; *Ascodipteron* sp. n.

Ricardo, 2299; *Asilidae* spp. n.

Summers, 2725; *Tabanidae* spp. n.

Taylor, 2756; *Culicidae* 4 spp. n.

Hemiptera.

Ashton, 57, 58, 59, 60, 61; New *Cicadidae*.

Bergroth, 187; *Pentatomidae* spp. n.

Distant, 726; *Cicadidae* 2 spp. n.

Poppius, 2164; *Bryocorinae* spp. n.

Schouteden, 2480; 2 spp. n. *Deroplon* and *Neomenistheus*.

Isoptera.

Holmgren, 1278; *Porotermes* sp. n.

Paraneuroptera.

Tillyard, 2775; *Diphlebia* life-histories spp. n.

Orthoptera.

Werner, 2999; *Mantodea* und *Phasmodea* gen. n.

North America.

Insecta, collectively.

Faunal zones, map; Canad. Ent. **44** p. 129.

Banks; At the *Ceanothus* in Virginia; Ent. News **23** p. 102–110.

Cockerell, 570; The Miocene fauna of Florissant.

Gibson, 1048; Canada, captures 1910 & 1911.

Hunter; Some notes on insect abundance in Texas in 1911, Proc. Ent. Soc. Washington **14** p. 62–65.

Hunter, Pratt, & Mitchell, 1343; Cactus insects.

Hyslop, 1346; Pacific northwest.

Lehmann, 1660.

Visher, 2902; South Dakota. A partial list of the insects collected.

Slosson; Collecting, Pennsylvania Ent. News **23** p. 171–173.

Trotter, 2808a; Galls of N. America, *Andricus* sp. n.

Coleoptera.

Angell, 43; *Necrophorus* spp. n.

Baker, 99; **Bernhauer**; *Staphylinidae* spp. n. beach at Laguna.

Bernhauer, 204; *Staphylinidae* spp. n.

Blatchley, 242; 4 spp. n., *Coelambus*, *Aphodius*, *Hymenorus* and *Andrimus*.—**Blatchley, 243**; *Dicaelus* sp. n.

Casey, 491; American *Byrrhidae*.—**Casey, 493**; Longicornia spp. n.

Davis, 667; Distribution of tiger beetles.

Dury, 786; *Symbiotes* spp. n.—**Dury, 786a**; *Cychrus*, New Mexico sp. n.

Fall, 891; 10 spp. n.—**Fall, 892**; new *Tetropium*, *Bruchides*.—**Fall, 893**; *Collops* spp. n.—**Fall, 894**; Four new myrmecophilous.

Fisher & Kirk; *Cerambycidae* from Harrisburg, with notes; Ent. News **23** p. 308–316.

Frost, 989; *Agrilus* spp. n.—**Frost**, Canad. Ent. **44** pp. 304–308; Maine, collecting in.

Kraus, 1563; *Lasconotus* spp. n.

Lameere, 1625; *Prionus* 2 spp. n.

Leng, 1666; Distribution of *Cicindelidae* in eastern North America.—**Leng, 1667**; Salt meadow beetles.—**Leng**; *Soronia decumana* Alabama, J. New York Ent. Soc. **20** p. 134.

Matheson, 1789; *Haliplidae* spp. n.

Möllenkamp, 1861; *Platycerus* sp. n.

Nunenmacher, 1975; *Coccinellidae* spp. n.

Ohaus, 1991; *Byrsopolis* sp. n.

Olivier, 2002; *Lampyridae* spp. n.

Pierce, 2135; *Curculionidae* spp. n.

Schaeffer, 2421; *Hister* 3 spp. n.—**Schaeffer, 2422**; *Collops* spp. n.—**Schaeffer**; *Coccinella undecimpunctata* Massachusetts, Psyche 19 p. 104.

Swaine, 2740; *Ipidae* 5 spp. n.

Wagner, 2936; *Apion* spp. n.

Walton, 2952; *Symbiotes* sp. n.

Wellman, 2996; *Lyttidae* spp. n.

Westcott, 3003; *Anatis* sp. n.

†**Wickham, 3116**; Fossil, Florissant.

Wickham & Wolcott, 3117; *Cleridae.*

Wolcott, 3218; *Saprinus* sp. n. and *Brachus* sp. n.

Hymenoptera.

Banks, 109; *Cerceris* spp. n.—**Banks, 110**; *Fossoria* spp. n.

Bartlett, 140; North American *Scoliinae.*

Cockerell, 556; *Epeolus* sp. n.—**Cockerell, 559**; *Coelioxys* 5 spp. n.—**Cockerell, 560**; *Chelynia* sp. n.—**Cockerell, 562**; Canada 4 spp. n., *Megachile* and *Osmia.*—**Cockerell, 574**; *Eucerinae* list of spp.

Crawford, 614; 2 spp. n., *Perdita* and *Phileremulus.*—**Crawford, 616**; *Chalcidae* spp. n.

Davidson, 663; *Bombus* spp., California.

Fernald, 924; *Chlorion* spp. n.

Fullaway, 1010; Gall-fly parasites California, spp. n.

Gahan, 1013; Two new genera parasitic Hymenoptera.

Girault, 1057; U.S. and Canada, *Chalcididae* spp. n. etc.—**Girault, 1058**; *Trichaporus* sp. n.—**Girault, 1059**; *Aphelinoidea* sp. n.—**Girault, 1071**; *Stephanodes* sp. n.—**Girault, 1074**; *Polynema* sp. n.—**Girault,** Canad. Ent. 44 p. 88; *Anaphes pratensis.*

Hooker, 1286; *Ophionini* spp. n.

Leonard, 1669; Honey ants Point Loma.

Macgillivray, 1739; *Xyelidae* and *Lydidae* spp. n.

Matheson & Crosby, 1790; *Chalcidae* gen. n.

Mitchell & Pierce, 1848; Ants Victoria county, Texas.

Morley, 1884; *Ichneumonidae* spp. n.

Rohwer, 2334; Chalastogastra Boulder county.—**Rohwer, 2336**; *Eumenidae* and *Fossoria*, spp. n.—**Rohwer, 2337**; *Orgasus* spp. n.—**Rohwer, 2338**; *Tenthredinidae* spp. n.—**Rohwer,** Canad. Ent. 44 p. 276; Canada, *Tenthredinidae* short list.

Strickland, 2705; *Pezomachinae* spp. n.

Trotter, 2808a; *Andricus* sp. n.

Viereck, 2881; *Braconidae* and *Ichneumonidae* spp. n.—**Viereck, 2882**; *Braconidae* and *Ichneumonidae* spp. n.—**Viereck, 2883**; spp. n., *Ichneumonidae* and *Braconidae.*—**Wheeler, 3008**; *Pseudococcus* sp. n.—**Wheeler, 3009**; *Myrmecocystus* sp. n.

Lepidoptera.

Barnes & Mcdunnough, 119; *Noctuidae* spp. n.—**Barnes & McDunnough, 120**; *Noctuidae* 3 spp. n.—**Barnes & McDunnough, 122**; Revision of the *Megathymidae.*—**Barnes & McDunnough, 123**; Illustrations of rare and typical.—**Barnes & McDunnough, 124**; Fifty new species and varieties.—**Barnes & McDunnough, 125**; *Alpheias* spp. n.—**Barnes & McDunnough, 127**; *Givira* sp. n.—**Barnes & McDunnough, 128**; New *Microlepidoptera.*

Braun, 312; *Nepticula* spp. n.

Busck, 451; *Microlepidoptera* spp. n. Laguna beach.—**Busck, 452**; *Epicallima* sp. n.—**Busck, 454**; *Epicallima* sp. n.—**Busck, 456**; *Acrolophus* spp. n.

Dyar, 790; Laguna beach, *Pyralidae* spp. n.—**Dyar, 793**; *Noctuidae* 3 novelties.—**Dyar, 794**; *Noctuidae* 2 spp. n.

Grinnell, 1129; Additions and corrections to the list of southern California.

Grossbeck, 1134; *Geometridae* spp. n.

Hampson, 1167; Arizona *Glyphodes* sp. n.

Knetzler; St. Louis; Ent. News 23 p. 203–207.

Meyrick, 1839; *Heliodines* sp. n.

Newcomer, Ent. News 23 p. 81; Notes on western U.S. Lepidoptera.

Pearsall, 2052; *Geometridae* spp. n.—Pearsall, 2053; *Eupithecia* sp. n.

Perrin & Russell, 2067; Nova Scotia catalogue.

Prout, 2181; *Hemitheinae* spp. n.

Swett, 2743; *Hydriomena* 2 spp. n.

Watson & Coleman; *Iphiclides ajax* and *Eurymus interior* from the summit of Mt. Marcy; Bull. Brooklyn Ent. Soc. 8 p. 4–6.

Winn, Canad. Ent. 44 pp. 213–216; Yukon list.

Wormsbacher, 3225; Catocalen Vereinigten Staaten.

Wright, 3227; *Rhopalocera.*

Trichoptera.

Hill-Griffin, 1251; New, Oregon.

Neuroptera.

Banks, 112; *Mantispilla* spp. n.

†Cockerell, 563; *Raphidia*, Colorado Miocene.

Navás, 1918; *Malacomyza, Chrysopa, Symphrodius*, spp. n.

Petersen, 2073; *Drepanicus* sp. n.

Diptera.

Aldrich, 15; *Ephydra* sp. n.

Alexander, 20; Fulton county *Tipulidae*.—Alexander, 23; *Brachypremna* sp. n.—Alexander, 24; *Adelphomyia* 2 spp. n.—Alexander, 26; New *Tipulidae*.

Becker, 155; *Chloropidae*, Monographie, gen. & spp. n.

Cole, 579; Diptera Laguna beach.

Cresson, 620; *Pipunculus* spp. n.

Doane, 733; *Tipula* spp. n.

Dyar, 791; Distribution of mosquitoes.

Felt, 908; *Diarthronomyia* sp. n. California.—Felt, 911; *Cecidiomyiidae* spp. n.—Felt, 912; *Agthrocnodax* sp. n.—Felt, 913; *Cecidomyiidae* spp. n.—Felt, 914; *Cecidomyiidae* spp. n.—Felt, 915; *Itonididae* spp. n.

Hermann, 1225; *Asilidae* spp. n.

Hine, 1254; *Tabanidae* 5 spp. n.

Hooker; *Cecidomyia foliora*; Ent. News Philadelphia 23 p. 172.

Johannsen, 1404; *Mycetophilidae*.—†Johannsen, 1407; *Mycomya* sp. n. Colorado Miocene.

Johnson, 1412; spp. n.—Johnson, 1413; notes.—Johnson, 1414; *Chrysopilus* sp. n.—Johnson, 1415; spp. n. *Mydaidae* and *Asilidae*.—Johnson, 1416; *Haematopota* spp. n.

Krober, 1581; Thereviden.

Malloch, 1748; *Pipunculidae* spp. n.—Malloch, 1749; *Phoridae* spp. n.—Malloch, 1750; spp. n.

Malloch & Knab, 1753; *Limosina.*

Smith, 2616; spp. n.

Townsend, 2791; *Tachinidae* spp. n.

Walton, 2951; 2 spp. n., *Agromyza* and *Micropalpus.*

Welch, 2995; *Psychoda* sp. n.

Hemiptera.

Abbott, 1; gen. n. *Corixidae.*

Banks, 111; *Ploiariodes* sp. n.

Barber, 115; Distribution of Hemiptera.

†Cockerell, 558; *Fulgoridae* gen. n.

Cockerell, 561; *Phenacoccus* sp. n.

Davidson, 664; *Aphidae*, spp. n. California.

Davis, 665; Aphididae of Nebraska.—Davis, 666; *Cicada* sp. n.—Davis, 670; *Psalliopus* sp. n.

Essig, 879; *Aphididae* of southern California.

Gee, 1030; list, South Carolina.

Herrick, 1230; Mississippi, notes.

Horváth, 1298; Faunes hémiptérologiques de l'Europe et de l'Amérique du Nord.—Horváth, 1301; *Cimicidae.*

Montandon, 1871; *Hydrocorisae* 5 spp. n.

Olsen, 2005; Annotated list Long Island.

Patch, 2039; Aphidae spp. n.—**Patch**, 2041; *Psyllidae* spp. n.—**Patch**, 2044; *Livia* sp. n.

Phillips & Davis, 2092; *Toxoptera* sp. n.

Reuter, 2286; 2 spp. n., *Plagiognathus* and *Microphylellus*.

Reuter & Poppius, 2288; *Termatophylidae* gen. n.

Sasscer, 2417; *Fiorinia*.

Torre Bueno, 2785; *Corizus* sp. n.—**Torre Bueno**, Ent. News 23 pp. 316–318; *Nezara viridula*.—**Torre Bueno**; Records of Heteroptera from Brownsville, Texas, T.c. p. 120–122.—**Bueno**, Canad. Ent. 44 pp. 209–213; Long island, long list.

Tothill, 2786; *Wuthenia* sp. n.

Van Duzee, 2852; spp. n.—**Van Duzee**, Ottawa Natural. 26 pp. 68–70; Canada, trip.

Wilson, 3211; spp. n.—**Wilson**, 3212; *Lachnus* sp. n.

Zimmer, 3253; The *Pentatomidae* of Nebraska.

Thysanoptera.

Hood, 1281; 2 spp. n.—**Hood**, 1282; n. gen. 3 spp. n.—**Hood**, 1283; spp. n.—**Hood**, 1284; *Phlocothripidae* 3 spp. n.—**Hood**, 1285; New gen. & spp.

Jones, 1425; California and Georgia spp. n.

Parrott; *Euthrips pyri* in New York.

Russell; Notes; Washington Proc. Ent. Soc. 14 p. 128.

Lipoptera.

Kellogg & Mann, 1474; From Alaskan birds.

McGregor, 1743; *Colpocephalum* sp. n.

Paine, 2030; Mallophaga from birds at Laguna beach.—**Paine**, 2031; *Heterodoxus* sp. n.—**Paine**, 2032; *Trichodectes* spp. n.

Plecoptera.

Klapálek, 1522; spp. n.

Paraneuroptera.

Root, Canad. Ent. 44 p. 208; Ontario list.

Walker, 2944; Canada list, *Coenagrion* sp. n.

Williamson, 3205; *Argia* n. sp.—**Williamson**; Indiana *Somatochlora*; Ent. News 23 pp. 152–155.

Wilson, 3207; Cumberland valley Kentucky and Tennessee.

Orthoptera.

Davis, 668; *Belocephalus* 3 spp. n. Florida.—**Davis**; *Dendrotettix quercus* New Jersey; Ent. News Philadelphia 23 1912 p. 2.

Fox, 969; Two *Xiphidium* spp. n.

Rehn, 2244; Santa Rita mountains, Arizona.—**Rehn & Hebard**, 2247; *Gryllidae* gen. n.—**Rehn & Hebard**, 2248; Southern Florida, *Atlanticus* sp. n.

Walker, Canad. Ent. 44 pp. 171 & 172; The *Blattidae* of Ontario.

Thysanura.

Silvestri, 2590; *Campodeidae* spp. n.

Central America.

Coleoptera.

Casey, 491; Panama *Byrrhidae* gen. n.—**Casey**, 492; Revision, *Asidini*.—**Casey**, 493; Longicornia spp. n.

Dupuis, 779; *Omophron* 2 spp. n.

Fleutiaux, 941; *Eucnemidae* spp. n.

Kraus, 1563; *Lasconotus* spp. n. Mexico.

Lesne, 1677; Lyctides nouveaux du Mexique.

Ohaus, 1991; Rutelini spp. n.

Sicard, 2575; *Harmonia*, *Exoplectra*, spp. n.

Wagner, 2929 & 2930 *Apion* spp. n.

Wickham & Wolcott, 3117; Notes, *Cleridae*.

Hymenoptera.

Bartlett, 140; Mexico *Scolia* sp. n.

Cameron, 475; Costa Rica *Megacanthopus* and *Odynerus*, spp. n.

Cockerell, 553; *Apidae* spp. n.—**Cockerell**, 554; *Apidae* spp. n.—

Cockerell, 555; *Apidae* spp. n. **Cockerell, 564**; *Eustypiura* sp. n. Guatemala.—**Cockerell, 565**; *Apidae* spp. n.—**Cockerell, 572**; Guatemala *Apidae* spp. n.

Cockerell, W. P., 575; Guatemala *Apidae* short list.

Crawford, 616; *Chalcidae* spp. n.

Enderlein, 840; Brit. Honduras *Eubadizon* sp. n.—**Enderlein, 655**; Mexico *Paniscus* spp. n.

Fernald, 924; *Chlorion* spp. n.

Forel, 948; Nicaragua *Eciton* sp. n.—**Forel, 950**; *Myrmicinae*.—**Forel, 953**; *Azteca* spp. n.

Hooker, 1286; *Ophionini* spp. n.

Maidl, 1745; *Xylocopa* sp. n. Mexiko.

Mocsáry, 1858; *Chrysis* spp. n.

Morley, 1884; *Ichneumonidae* spp. n.

Perkins, 2062; *Chalcidae* spp. n.

Rohwer, 2336; *Fossoria* spp. n.—**Rohwer, 2338**; *Tenthredinidae*, Mexico spp. n.—**Rohwer, 2339**; Panama, *Tenthredinidae* genn. n.

Viereck, 2880; Panama gen. n. *Braconidae*: **2883**; *Parasitica* spp. n.

Zavattari, 3241; *Eumenidae* spp. n.

Lepidoptera.

Busck, 455; New *Microlepidoptera* Mexico.—**Busck, 457**; New genera and species of *Microlepidoptera*, Panama.

Davis & Gibbs P. ent. Soc. London 1912 pp. xlv–xlviii; Honduras and Guatemala *Rhopalocera* list.

Draudt, 758; *Taygetis* sp. n. Mexiko.

Dyar, 789; Mexico spp. n.—**Dyar, 795**; chiefly Mexico, many spp. n.

Ehrmann, 822; Honduras *Papilio* sp. n.

Hampson, 1167; *Pyraustinae* spp. n. —**Hampson, 1169**; *Noctuidae* spp. n.

Rothschild, 2361; *Syntomidae* spp. n. —**Rothschild, 2362**; *Lithosianae* 2 spp. n.

Schaus, 2425 & 2426; Costa Rica many spp. n.

Walsingham, 2950; *Tineidae* genn. and spp. n.

Trichoptera.

Felber, 903; *Helicopsyche* Mexico.

Neuroptera.

Navás, 1915; Guatemala *Episperches* sp. n.—**Navás, 1928**; Panama *Balaga* sp. n.

Diptera.

Alexander, 16; *Tipulinae* spp. n.—**Alexander, 17**; *Rhipidia* spp. n.—**Alexander, 19**; *Furcomyia* spp. n.—**Alexander, 21**; Costa Rica. *Mongoma* sp. n.

Becker, 155; *Chloropidae*, Monographie, gen. et spp. nn.

Enderlein, 838; *Mycetophilidae* spp. n. —**Enderlein, 853**; Costa Rica *Aphiochaeta* sp. n.—**Enderlein, 861**; Costa Rica *Practrosciara* sp. n.—**Enderlein, 863**; *Tipulidae* spp. n.—**Enderlein, 866**; Costa Rica *Psilopus* sp. n.

Felt, 913 & 914; *Cecidomyidae* sp. n.

Knab, 1544; *Anisopus* spp. n.

Knab & Malloch, 1545; *Limosina* sp. n.

Kröber, 1581; Mexico *Therevidae* spp. n.

Malloch, 1748; Nicaragua *Pipunculus* sp. n.—**Malloch, 1749**; *Phoridae* spp. n.—**Malloch, 1751**; Panama, spp. n.—**Malloch, 1752**; *Pipunculus* spp. n.

Townsend, 2787; Lower California short annotated list.

Hemiptera.

Montandon, 1871; Mexico *Amblystus* sp. n.

Schmidt, 2457; Costa Rica *Gaetulia* sp. n.

Lipoptera.

Kellogg & Mann, 1475; Islands off Lower California.

Embioptera.

Enderlein, 837; *Oligotoma* sp. n.

Paraneuroptera.

Calvert, 465; *Erpetogomphus* sp. n. Costa Rica.

Orthoptera.

Burr, 449; *Spongovostox* sp. n. Panama.

Rehn & Hebard, 2247; *Mogoplistii*, Panama, spp. n.

Thysanura.

Silvestri, 2590; Mexico *Campodeidae*, spp. n.—**Silvestri**, 2595; Thysanura, Mexico 23 spp., 2 spp. n.

Antilles.

Incl. Bermudas; excl. Trinidad.

Coleoptera.

Arrow, 54; *Phytalus* sp. n.

Bickhardt, 230; Barbados *Acritus* sp. n.

Casey, 493; Cuba *Stenodontes* sp. n.

Olivier, 1998; *Photinus* sp. n.—**Olivier**, 2003; Lampyrides.

Hymenoptera.

Bartlett, 140; Cuba *Scolia* sp. n.

Cockerell, 550; S. Domingo *Centris* sp. n.—**Cockerell**, 556; Jamaica *Apidae* spp. n.

Enderlein, 855; Cuba *Paniscus* sp. n.

Forel, 948; *Formicidae*.—**Forel**, 956; Cuba *Pheidole* sp. n.

Hooker, 1286; *Ophionini* spp. n.

Morley, 1884; *Ichneumonidae* spp. n.

Zavattari, 3241; Eumeniden, Cuba spp. n.

Lepidoptera.

Hampson, 1167; *Pyraustinae* spp. n.—**Hampson**, 1169; *Noctuidae* spp. n.

Prout, 2181; Bahamas *Racheospila* sp. n., Antigua *Synchlora* sp. n.

Rothschild, 2361; *Syntomidae* spp. n.

Skinner, 2608; Cuba *Mesosemia* sp. n.

Walsingham, 2950; Jamaica gen. n. *Occophoridae*.

Diptera.

Alexander, 17; *Rhipidia* spp. n.—**Alexander**, 19; Cuba *Furcomyia* sp. n.—**Alexander**, 25; Porto Rico gen. n. *Tipulidae*.

Felt, 907; St. Vincent *Lasiopteryx* sp. n.—**Felt**, 909; *Cecidomyiidae* spp. n.—**Felt**, 910; *Ulella* sp. n. St. Vincent.

Hemiptera.

Back, 88; Cuba *Aleyrodes* 2 spp. n.

Distant, 724; Cuba gen. n. *Cicadidae*.

Reuter, 2286; Porto Rico *Pycnoderes* sp. n.

Reuter & Poppius, 2288; Jamaica *Termatophyliden* sp. n.

Scott, 2536; Dominica *Microvelia* sp. n.

Van Duzee, 2852; Jamaica *Xestocephalus* sp. n.

Paraneuroptera.

Wilson, 3206; Jamaica.

Orthoptera.

Caudell, 500; *Gonatista* sp. n. San Domingo.

Rehn & Hebard, 2247; *Gryllidae* spp. n.

South America, including Trinidad.

Insecta, collectively.

Navás, 1918; *Ephemeroptera, Psocoptera, Neuroptera*, spp. n.

Scott, 2536; Trinidad bromeliaceolous insects.

Coleoptera.

Bernhauer, 207; Staphyliniden, spp. n.—**Bernhauer**, 210; Staphyliniden 3 n. genn. 20 spp. n.—**Bernhauer**, 212; Staphyliniden spp. n., gen. n.

Bickhardt, 230; *Hypobletus* spp. n.

Borchmann, 277; Neue Heteromeren, Argentinien.

Bourgeois, 301; Bahia *Gymnetis* sp. sp. n.

Bowditch, 305; *Diabrotica* spp. n.

Brèthes, 334; *Eustilbus* sp. n.—Brèthes, 335; *Pandeleteius* sp. n.

Bruch, 410; *Oxycorynus* sp. n.—Bruch, 411; Argentina *Cerambycidae* spp. n.—Bruch, 412; Argentina *Cerambycidae* catalogue.

Casey, 492; Revision. *Asidini*.—Casey, 493; *Cerambycidae*, spp. n.

Fleutiaux, 941; *Eucnemidae* spp. n.—Fleutiaux, 943; *Elateridae*, gen. n.

Gebien, 1024; *Tenebrionidae* spp. n.

Heller, 1208; *Metamasiopsis*, spp. n.

Kuntzen, 1593; *Dercylus*, spp. n.

Lesne, 1676; *Ascutotheca*, sp. n.

Lewis, 1682; *Histeridae* 3 spp. n.

Mann; Brazil, List, *Histeridae* and *Buprestidae*.

Möllenkamp, 1862; *Lucanidae* spp. n.

Moser, 1892; *Gymnetis* sp. n.

Ohaus, 1984; *Aclopus* sp. n.—Ohaus, 1986; *Hoplognathus* n. sp.—Ohaus, 1991; Ruteliden spp. n.

Nunemacher, 1976; *Coccinellidae*, Brazil 2 spp. n.

Olivier, 1997; *Diaphanes* and *Lucidota* sp. n.—Olivier, 2002; *Lampyridae* spp. n.

Pic, 2095; spp. n., *Malacodermidae Anobiidae* and *Anthicidae*.—Pic, 2099; Discodon spp. n.—Pic, 2115; Deux nouveaux *Discodon*.

Prell, 2172; *Heterogomphus* spp. n.—Prell, 2174; Dynastinen spp. n.—Prell, 2175; Dynastinen gen. n.

Raffray, 2220; *Prelaphidae* spp. n.

Rothkirch & Panten, 2351; Neue Stigmoderidae.

Sampson, 2404; Trinidad, 2 spp. n., *Amphicranus* and *Xyleborus*.

Schaeffer, 2423; Brazil spp. n.

Schmidt, 2451; *Coprini* spp. n.

Sicard, 2575; *Coccinellides* spp. n.—

Sicard, 2576; Coccinellides Bolivie spp. n.

Spaeth, 2634; Neue Cassiden.

Szombáthy, 2751a; *Semiotus* spp. n.

Wagner, 2929, 2936, 2930; *Apion* spp. n.

Wasmann, 2967; *Staphylinidae* gen. n.

Waterhouse, 2970; *Conognatha* spp. n.

Wolcott, 3219; *Cleridae* Brazil, spp. n.

Hymenoptera.

Alexander, 16; *Tipulinae* spp. n.

Bertoni, 215; 2 spp. n., *Xanthogonalos* and *Trimeria*.

Brues, 413; Brazilian *Ichneumonidae* and *Braconidae* spp. n.

Cameron, 475 & 476; *Aculeata* many spp. n.

Cockerell, 556; Peru *Megachile* sp. n.—Cockerell, 568; Peru 2 spp. n., *Megachile* and *Xeneglossa*.—Cockerell, 571; Brazil *Apidae* spp. n.

Crawford, 616; *Chalcidae* spp. n.

Du Buysson, 775; *Orysaus* sp. n. *Chrysidae* gen. n.

Ducke, 776; Die natürlichen Bienengenera, spp. n.

Enderlein, 839; Spathiinen spp. n.—Enderlein, 840; Colombia *Eubadizon* sp. n.—Enderlein, 855; *Paniscinae* spp. n.—Enderlein, 859; *Ophioninae* spp. n.

Forel, 948; *Formicidae* spp. n.—Forel, 950; *Myrmicinae* spp. n.—Forel, 951; *Pheidole* and *Cremastogaster* spp. n.—Forel, 952; *Myrmicinae* spp. n.—Forel, 953; *Dolichoderinae* spp. n.—Forel, 954; *Camponotinae* spp. n.

Friese, 980; *Apidae* spp. n.—Friese, 984; Argentinien *Colletes* 2 spp. n.

Girault, 1056; Paraguay Chalcididae spp. n.

Hooker, 1286; *Ophionini* spp. n.

Jörgensen, 1400; *Chrysididae* and *Aculeata* enumeration.—Jörgensen, 1401; spp. n. Apiden Mendoza.—Jörgensen, 1402; Berichtigungen und Ergänzungen Apiden.

Jörgensen, Schrottky, 1403; *Megalopta* sp. n.

Kieffer, 1506; Chile and Patagonia *Proctotrypidae* 2 spp. n.

Maidl, 1745; *Xylocopa* spp. n.

Mocsáry, 1858; *Chrysis* spp. n.

Morley, 1884; *Ichneumonidae* spp. n.

Rohwer, 2335; Brazil *Tenthredinidae* gen. n.—Rohwer, 2336; *Fossoria* spp. n.

Santschi, 2412; *Carebara* sp. n.—Santschi, 2415; Fourmis.

Schulz, 2504; *Hoplitalysia* sp. n.

Strand, 2680; *Evania*, *Macrojoppa* spp. n.—Strand, 2703; Beiträge zur Kenntnis der *Hymenopteren* Paraguay Biologica hes. Nester.

Turner, 2825; *Elis* 2 spp. n.

Viereck, 2882; *Ichneumonidae* and *Braconidae* spp. n.—Viereck, 2883; Trinidad *Chelonus* sp. n.

Zavattari, 3241; Neotropischen Eumeniden.

Lepidoptera.

Brabant, 306; *Pseudacontia* sp. n.

Dognin, 749; Macro-Heterocera and *Pyralidae* many spp. n.—Dognin, 750; Hétérocères nouveaux.

Druce, 763; *Thecla* and *Hesperiidae* spp. n.—Druce, 765; Peru *Ophisma* sp. n.—Druce, 766; Peru *Atteria* sp. n.

Dyar, 974; Trinidad *Noctuidae* gen. n.—Dyar, 795; Brazil *Semyra* sp. n.

Fassl, 898; Neue *Heliconius*-formen, Kolumbien.—Fassl, 899; *Papilio* sp. n.

Fruhstorfer, 993; Nymphaliden.—Fruhstorfer, 996; Pieriden.

Hampson, 1167; *Pyraustinae* many spp. n.—Hampson, 1169; *Noctuidae* spp. n.

Jones, 1442; *Thecla* spp. n.—Jones, 1423; Brazil spp. n.

Jordan, 1893; *Protoparce* sp. n.—Jordan, 1432; *Nyceryx* sp. n.

Lathy & Rosenberg, 1636; *Catasticta* spp. n.

Lehr, 1661; Schmetterlingsfauna der Pampas.

Meyrick, 1838; *Microlep.* 97 spp. n., 9 genn. n.—Meyrick, 1839; spp. n.

Neustetter, 1950; Neue *Heliconius*.

Prout, 2181; *Hemitheinae* spp. n.

Rebel, 2239; *Callithea* sp. n. Peru.

Rothschild, 2361; *Syntomidae* spp. n.—Rothschild, 2362; *Lithosianae* spp. n.

Schaus, 2427; *Mesoscia* sp. n.—Schaus, 2428; *Nolnidae* spp. n. French Guiana.

Schrottky, 2493; Zwei Syntomiden Argentiniens.

Strand, 2675 & 2686; spp. n.—Strand, 2698; Neue Satyriden Roraima.

Walsingham, 2950; *Tineidae* spp. n.

Zerny, 3247; *Heterocera* spp. n.

Trichoptera.

Martynov, 1781; Peru spp. n.

Neuroptera.

Navás, 1915; spp. n.—Navás, 1916; gen. n. *Myrmeleonidae*.—Navás, 1917; *Allochrysa* sp. n.—Navás, 1919; *Ascalaphidae*.—Navás, 1920; Brazil gen. n. *Myrmeleonidae*.

Petersen, 2073; 2 spp. n.

Diptera.

Alexander, 17; *Rhipidiae* spp. n.—Alexander, 19; *Furcomyia* sp. n.—Alexander, 22; *Gonomyia* sp. n.

Becker, 155; *Chloropidae*, Monographie, gen. et spp. n.

Bréthes, 337; *Chironomidae* gen. n.

Cresson, 619; Acalyptratae spp. n.

Edwards, 807; Trinidad *Lygistorrhina* sp. n.

Enderlein, 838; *Mycetophilidae* spp. n.—Enderlein, 842; Richardiinen, n. gg. et spp.—Enderlein, 847; Phoriden Süd-Brasiliens.—Enderlein, 848; *Pterocallinae* gen. n.—Enderlein, 853; *Phoridae* spp. n.—Enderlein, 854; Neue Chironomiden Brasilien.—Enderlein, 861.—Enderlein, 862; *Pantophthalmidae* spp. n.—Enderlein, 866; *Dolichopidae* spp. n.—Enderlein, 863; *Tipulidae* genn. n.

Felt, 914; *Karschomyia* sp. n. Peru.

Hendel, 1220; *Acalyptratae* 5 spp. n.

Hermann, 1225; Chile, Peru and Bolivia, genn. et spp. n. *Asilidae*.

Lahille, 1614; *Anopheles* sp. n.

Lutz & Neiva, 1725; *Phlebotomus* spp. n.

Malloch, 1750; *Simulium* spp. n.

Summers, 2726; *Phlebotomus* sp. n.

Surcouf & Gonzalez-Rincones, 2734; Diptères piqueurs et suceurs de sang Vénézuela.

Townsend, 2794; Muscoid from the Andean and Pacific coast.

Aphaniptera.

Enderlein, 860; gen. n.

Hemiptera.

Bergroth, 180; Argentina *Coreidae* spp. n.—**Bergroth, 182**; Argentina gen. n. *Myodochidae*.

Breddin, 323; *Calamocoris*.—**Breddin, 325**; Pentatomiden 2 genn. n.—**Breddin, 326**; spp. n. *Oncodochilus*, *Mormidea* and *Spiloslethus*.

Brèthes, 338; gen. n.

Distant, 724; *Cicadidae* spp. n.

Goot, 1085; *Aphis* sp. n. Chile.

Horváth, 1301; *Cimicidae*.

Lallemand, 1618; *Cercopidae* spp. n.

Montandon, 1869; Brazil *Limnocoris* sp. n.—**Montandon, 1870**; 2 spp. n., *Ranatra* and *Curicta*.

Petersen, 2071; New Ephemerida from Argentine.

Poppius, 2153; *Capsidae* gen. n.

Reuter, 2286; spp. n.

Schumacher, 2517; Neue Asopinen.

Thysanoptera.

Bagnall, 93; *Docessissophothrips* sp. n.

Karny, 1460; *Liothrips* sp. n.—**Karny, 1463**; Argentina *Hoplothrips* sp. n.

Embioptera.

Enderlein, 837; genn. n.

Lipoptera.

Paine, 2032; *Gyropus* sp. n.

Pseocptera.

Townsend, 2788; *Vulturops* gen. n.

Parancuroptera.

Ris, 2313; *Gomphinae* spp. n.—**Ris, 2314**; spp. n.

Orthoptera.

Borelli, 287; *Forficulidae* gen. n.—**Borelli, 288**; Argentina *Doru* sp. n.

Bruner, 421; *Acridoidea*, many spp. n.

Burr, 441; *Psalis* sp. n.—**Burr, 448**; *Forficulidae* 4 spp. n.—**Burr, 449**; *Spongovostox* spp. n.

Caudell, 499; *Epipygus* sp. n. Peru.

Chopard, 538; Guyane française spp. n., *Mantidae* and *Phasmidae*.

Gahan, 1014; Amazons *Prisopus* sp. n.

Griffini, 1126; Patagonia *Heteromallus* sp. n.

Shelford, 2571; spp. n.—**Shelford, 2573**; *Blattidae* Central Peru.

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Mictopsichia picturata Assam p. 35, *hexaphala* Ceylon p. 36, Meyrick Exot. Microlep. 1.

Mnemonica gen. n. *Micropterygidae* type *subpurpurella* Haw., Meyrick p. 5 f. 8 Gen. ins. 132.

Mnesichara gen. n. near *Carcina*, *dictyota* Guatemala pl. vi f. 16, p. 126, *picticollis* Panama p. 127 f. 17, spp. n., Walsingham Biol. Centr. Amer. Lep. Het. 4.

Monopis crocicapitella and allies, characters, genitalia, Banks p. 39 Ent. Mag. 48.—*M. florilega* Ceylon, *viatica* Assam, spp. n., p. 114, Meyrick J. Bombay Soc 21 1911.

Moriloma gen. n., *pardella* sp. n. p. 3, Panama, Busck Smithsonian Inst. Misc. Coll. 59 Pub. 2079.

Mothonica gen. n. *Stenomidae*, *periapta* sp. n. Costa Rica pl. v f. 20, Walsingham p. 153 Biol. Centr.-Amer. Lep. Het. 4.

Myrmecozela glebifera, *leontina*, *metrophora*, p. 126, spp. n., India, Meyrick J. Bombay Soc. 21.

Necedes gen. n. *Oecophoridae*, *stigmaphylli* Jamaica with var. *brevipalpis*, p. 138, *incisa*, *championella* pl. iv f. 35,

p. 139, spp. n., Centr. America, WALSINGHAM Biol. Centr.-Amer. Lep. Het. 4.

Nemaphora stenochlora sp. n. Algeria, MEYRICK p. 3 Gen. ins. 133.

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Nepticula polydoxa p. 107, *sporadopa* p. 108, spp. n., Ceylon, MEYRICK J. Bombay Soc. 21.—*N. pallida* p. 85, *discollorella* p. 86, *almella* p. 87, *leucostigma* p. 88, *tiliella* p. 90, *rhoifoliella* p. 93, *rhamnella* p. 96, *saccharella* p. 97, *argentifasciella* p. 100, *obscurella* p. 95, spp. n., U. S., figs., BRAUN Cincinnati Ohio J. Soc. Nat. Hist. 21.—*N. slingerlandella*, CROSBY Agric. Exp. Sta. New York Bull. 308 pp. 217–228 ff. 25–38; life-history, CROSBY p. 25 Canad. Ent. 44.

Odites crocota, *insons*, p. 60, spp. n., S. Africa, MEYRICK Ann. S. Afric. Mus. 10.

Oecophyllembius neglectus, storia naturale, SILVESTRI Boll. Lab. Portici 6 p. 176 33 fig.

Ommatolhelxis grandis sp. n. Cameroons pl. x f. 9, DRUCE p. 133 Ent. Mag. 48.

Opogona orchestris Ceylon, *dramatica* Assam, *stathmota* Ceylon and S. India, *xanthocrita* S. India, *pandora* Assam, *sphaerotoma* S. India, *cerodella* Himalayas, *plasturga*, *elaitis*, S. India, *photographa* Assam, spp. n., MEYRICK pp. 110–112 J. Bombay Soc. 21.

Opostega epistolaris sp. n. S. India p. 108, MEYRICK T.c.

Ordrapia fanniella sp. n. p. 6 Panama, BUSCK Smithsonian Misc. Coll. 59 Pub. 2079.

Orphnolechia bathrogramma sp. n. Venezuela, MEYRICK p. 711 Tr. ent. Soc. London 1911.

Oxycryptis gen. n. *Gelechiidae*, *attonita* sp. n. Colombia, MEYRICK p. 692 T.c.

Paltodora helicevada, *hiberna*, p. 57, *magnanima* p. 56, *pentacentra* p. 57, spp. n., S. Africa, MEYRICK Ann. S. Afric. Mus. 10.

(x–9210 *j*)

Paraclemensia acerifoliella p. 56 pl. xviii & xvii f. 5, FELT N. Y. St. Mus. Bull. No. 155.

Parapodia gen. n. voisin d'*Apodia*, *tamaricicola* sp. n. France, p. 305, JOANNIS Bull. Soc. ent. France 1912.—*P. sinuica* Fr. (as *Gelechia*) = (*tamaricicola* Joann.), JOANNIS Bul. soc. ent. France 1912 p. 380.

Parastega gen. n. near *Stegasta* for *Psoricoptera nivicinctella* Zell., MEYRICK p. 693 Tr. ent. Soc. London 1911.

Parectopa picroglossa p. 20, *thiasodes*, Ceylon, *hacmatoula* India, p. 21, spp. n. MEYRICK Gen. ins. 128.—*P. bathracma* sp. n. Transvaal, MEYRICK p. 25 Exot. Microlep. 1.

Peleopoda regiella sp. n. p. 7 Panama, BUSCK Smithsonian Misc. Coll. 59 Pub. 2079.

Phrixosceles lithographa sp. n. Queensland, MEYRICK p. 13 Gen. ins. 128.

Phtorimœa operculella, Morphologie externe et appareil digestif de la chenille de, BORDAS C. R. Acad. sci. 154 pp. 450–452; Appareil séricigène des chenilles de; BORDAS Paris C. R. Acad. sci. 154 pp. 618–620.

Phyllobrostis eremitella sp. n. p. 305 France, JOANNIS Bull. Soc. ent. France 1912.

Phytomimia gen. n. p. 133 near *Coptotelia*, *chlorophylla* pl. iv f. 22, *redundans* f. 23, Centr. America, spp. n., p. 134, WALSINGHAM Biol. Centr. Amer. Lep. Het. 4.

Picrospora gen. n., p. 66, *anastrota* p. 67, *area* p. 66, spp. n., S. Africa, MEYRICK Ann. S. Afric. Mus. 10.

Plexippica gen. n. p. 64, *vertebrata* sp. n. S. Africa, MEYRICK T.c.

Plocamosaris gen. n. *Xyloryctidae*, *pandora* sp. n. Brazil, MEYRICK p. 706 Tr. ent. Soc. London 1911.

Polyortha chlamydata sp. n. Colombia, DOGNIN p. 50 Hét. nouv. 6.

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Prytaneutis gen. n. allied to *Lyonetia*, *clavigera* sp. n. Ceylon, p. 109, MEYRICK J. Bombay Soc. 21.

Pseudurgis scutifera p. 67 sp. n. S. Africa, MEYRICK Ann. S. Afric. Mus. 10.

Psilocorsis argyropasta Mexico pl. iv f. 8, *indalma*, p. 118, *purpuriacea* f. 7, p. 119, Guatemala, spp. n., WALSINGHAM Biol. Centr.-Amer. Lep. Het. 4.

Pyroderces simplex = (*gossypiella* Wlsm.), DURRANT p. 207 Bull. ent. research 3.

Sabatinca caustica, *colliarcha*, p. 124, *quadrijuga* p. 126, spp. n., New Zealand, *S. incongruella* Walker supersedes *Palaeomicra chalcophanes* Meyr.; MEYRICK Trans. N. Zeal. Inst. 44.

Saphenentis galerita sp. n. Himalaya p. 127, MEYRICK J. Bombay Soc. 21.—*S. granosa* p. 67 sp. n. S. Africa, MEYRICK Ann. S. Afric. Mus. 10.

Scythris fasciculata, *melanodora*, p. 61, *roscida* p. 60, spp. n., S. Africa, MEYRICK T.c.

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Simaethis xanthogramma, *anthorma*, Philippines, p. 42, *tropilia*, *cumetra*, p. 43, *antichlora* p. 44, *strepsides* e, *cothurnata*, p. 45, *achyrodes*, Assam, *ialeura* India, p. 46, *psilachyra* Ceylon, *holachyrma*, *lethaea*, p. 47, Assam, *fulminea* Ceylon, *dichlora* Hainan, p. 48, *diplogramma*, *itriodes*, p. 49, *piloria*, *halimora*, Assam, p. 50, spp. n., MEYRICK Exot. Microlep. 1.—*S. zonicuta*, *ministra*, p. 121, *analoga* p. 122, spp. n., N. Zealand, MEYRICK Trans. N. Zeal. Inst. 44.

Stenoma zelotes, *ceratistes*, *demodica*, p. 159, *phaula* pl. v f. 26, *plurima* f. 27, *epicta* f. 28, p. 160, *prosora* f. 29, *comosa* f. 30, p. 161, *ocellifer*, *fumifica* f. 21, *machetes*, p. 162, *hemiscia* p. 163, *discolor* p. 164, *fractinubes* f. 32, *caprimulga* f. 33, p. 165, *tolmeta* f. 34, *ochlodes* f. 35, *fractilinea*, p. 166, *mustela* pl. vi f. 1, *aphanes*, *homala* f. 8, p. 167, *petrina* f. 9, *catenifer*, p. 168, spp. n., Centr. America, WALSINGHAM Biol. Centr. Amer. Lep. Het. 4.—*S. megalurca*, *isomeris*, p. 711, *melanesia*, *glaucopa*, p. 712, *trichorda*, *hyrsiatis*, *pourocentra*, p. 713, *pelinitis*, *phaeophanes*, p. 714, *clavifera*, *melanixa*, p. 715, *macronota*, *flammata*, p. 716, *orthocapna* p. 717, spp. n., S. America, MEYRICK Tr. ent. Soc. London 1911.—*S. dissimilis* Lebensweise der Raupen, LEDERWALDT Zs. wiss. Insektenbiol. 8 p. 5.

Stomphastis gen. n. *Gracilariidae*, *plectica* sp. n. India, MEYRICK p. 19 Gen. ins. 128.

Taleporia aphrosticha sp. n. p. 123 N. Zealand, MEYRICK Trans. N. Zeal. Inst. 44.

Telcia hyoscyamella sp. n. Aegypt, REBEL p. 89 D. ent. Zs. Iris 26.

Teratomorpha gen. n. near *Cryptolechia*, *albifrons* pl. iv f. 18, p. 127, *producta* p. 128 f. 19, spp. n., Centr. America, WALSINGHAM Biol. Centr. Amer. Lep. Het. 4.

Thanmatolita gen. n. near *Cryptolechia*, *hamifera* sp. n. Mexico pl. iv f. 6, p. 117, WALSINGHAM T.c.

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Thiotricha janatrix sp. n., MEYRICK p. 64 Exot. Microlep. 1.

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Thrasyplaxa gen. n. *Glyphipterygidae*, *tyracopa* sp. n. Colombia, MEYRICK Exot. Microlep. 1.

Thriambeutis coryphaea sp. n. Philippines, MEYRICK p. 61 Exot. Microlep. 1.

Thysiarcha gen. n., *idax* sp. n. S. Africa, MEYRICK p. 62 Ann. S. Afric. Mus. 10.

Timocratica gen. n. *Stenomidae* p. 706, *isographa* sp. n. Venezuela p. 707, MEYRICK Tr. ent. Soc. London 1911.

Tinea suspiciosa p. 66 sp. n. S. Africa, MEYRICK Ann. S. Afric. Mus. 10.—*T. artificiosa* sp. n. Ceylon p. 119, *brachychlora*, Ceylon, remarks, p. 117, *camarsta canicoma*, *charmatica*, *chelycdes*, *cholcea*, spp. n., India and Ceylon, pp. 117–120, *glabrella* notes S. India and Ceylon, p. 123, *hierographa*, *imbricata*, *iritis*, *isoplaca*, *melanochrysa*, *mellifua*, *opisigona*, *orphnodes*, *plasmatica*, spp. n., India, Baluchistan and Ceylon, pp. 116 120–123; *platystis*, India, Burma and Ceylon, described p. 124, *sacerdos*, India described, p. 123, *sartoria* p. 120, *secantica* p. 117; *schoenoploca* S. India p. 115, *sindonia* p. 118, *sphaeragistis* p. 121, *strophiota* p. 118, *trierodes* p. 117, *zelocosma* p. 121, spp. n., India and Ceylon, MEYRICK J. Bombay Soc. 21.

Tocasta gen. n., *priscella* sp. n., p. 4, Panama, BUSCK Smithsonian Inst. Misc. Coll. 59 Pub. 2079.

Tortyra sybaritis Queensland, *tabularia* Lifu, p. 37, *hyalozona* Colombia p. 38, spp. n., MEYRICK Exot. Microlep. **1.**

Trichorhabda gen. n. *Adelidae* for *fasciolata* Butl., MEYRICK p. 3 Gen. ins. **133.**

Trichotaphe directa sp. n. Venezuela, MEYRICK p. 694 Tr. ent. Soc. London **1911.**

Trichothyrsa gen. n. *Glyphipterygidae*, *coridarcha* Assam, *flammivola* India, p. 61, *taediferu*, *pyrrhocoma*, Ceylon, *grypodes* India, p. 62, spp. n., MEYRICK Exot. Microlep. **1.**

Tricloscella xanthota Mexico pl. iv f. 32, *cuzusta* Centr. and S. America, f. 33, spp. n., WALSINGHAM p. 137 Biol. Centr. Amer. Lep. Het. **4.**

Trophimaea testata sp. n. Ceylon p 124, MEYRICK J. Bombay Soc. **21.**

Ulomatra gen. n. *Adelidae* p. 27, *indigna* sp. n. Transvaal p. 28, MEYRICK Exot. Microlep. **1.**

Urangela gen. n., *pygmaea* sp. n., p. 2, Panama, BUSCK Smithsonian Inst. Misc. Coll. **59** Pub. **2079.**

Valentinia turachodes p. 148 pl. v f. 16, *neptes* f. 17, *bromeliae*, p. 149, spp. n., Centr. America, WALSINGHAM Biol. Centr.-Amer. Lep. Het. **4.**

Xyloryeta navigatrix sp. n. Colombia, MEYRICK p. 705 Tr. ent. Soc. London **1911.**

Xyrosaris secreta p. 64 sp. n. S. Africa, MEYRICK Ann. S. Afric. Mus. **10.**

Zetesima gen. n. *Stenomidae*, *lasia* sp. n. Panama pl. v f. 25, WALSINGHAM p. 157 Biol. Centr.-Amer. Lep. Het. **4.**

TRICHOPTERA.

Die Trichopteren des baltischen Bernsteins; ULMER Beitr. Natk. Preussen **10** pp. iv + 380.

Recherches histologiques sur l'influence du régime alimentaire, *Limnophilus flavicornis*, ROQUES Paris C. R. ass. franç. avanc. sci. **40** 1911 pp. 566–578 av. fig.

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Biology of the net-spinning larva of Trichoptera, WESENBERG-LUND Kobenhavn Fra Naturens Værksted **1912** pp. 161–171 15 figg.

Trichoptera, Bau der Rectaldrüsen, CHOLODKOVSKII St. Peterburg Trav. Soc. nat. **43** 1 pp. 67–73 106–108 pl. i.

Novae species *Trichopt.*; DZIEDZIELEWICZ Kraków Spraw. Kom. fizyogr. **45** 1911 pp. 45–47. (No names have been received in connection with this.)

†*Adelomyia* gen. n., inc. sed. p. 331, *exularis* sp. n. p. 333, Bernstein, ULMER Beitr. Naturk. Preussen **10.**

†*Agraylea spathifera* sp. n. Bernstein, ULMER p. 39 T.c.

†*Allodrichia ampullata* sp. n., Bernstein, ULMER p. 40 T.c.

Apatania groenlandica sp. n. Groenland, KOLBE p. 41 Deutsche ent. Zeitschr. **1912.**

†*Archaeocerunoccia* gen. n. near *crunoccia* p. 288, *tenuicornis* p. 290, *validicornis*, *aperter*, p. 292, spp. n., Bernstein, ULMER Beitr. Naturk. Preussen **10.**

†*Archaeoneureclipsis* gen. n. *Polycentropidae*, *fortis*, p. 69, *geminata* p. 11, spp. n., Bernstein, ULMER T.c.

†*Archactinodes* gen. n. near *Tinodes* p. 178, *armata* p. 183, *globata*, *lanceolata*, p. 185, *dives* p. 187, *pauper* p. 188, *uncinata* p. 189, *angusta* p. 192, *tenuis* p. 193, *securifera* p. 194, *hageni* p. 195, *exarata* p. 197, spp. n., Bernstein, ULMER T.c.

Atopsyche ikonnikovi sp. n. Peru, MARTYNOV Ann. mus. zool. Ac. sc. **17** p. 34 figs. 54–59.

†*Aulaecamyia* gen. n. *Sericostomatidae*, *infuscata* sp. n. Bernstein, ULMER pp. 321 & 322 Beitr. Naturk. Preussen **10.**

†*Beraeodes pectinata* sp. n. Bernstein, ULMER p. 327 T.c.

Catoxythira gen. n. *Hydroptilidae*, *fasciata* sp. n. Kongo, ULMER p. 82 Ergebn. Zentr.-Afrik. Exp. **4** L. 6.

Chimarrha galeata p. 30 figs. 48–52, *consimilis* p. 33 fig. 53, spp. n., sp. ? Description p. 33, Peru, Martynov Ann. mus. zool. Ac. sc. **17**.

†*Diplectrona ocularia* p. 213, *minima* p. 215, spp. n., Bernstein, Ulmer Beitr. Naturk. Preussen **10**.

Dipseudopsis bidens sp. n. O.-Afr., Ulmer p. 88 Ergebn. Zentr.-Afrik. Exp. 4 L. 6.

Dolophilus insignis sp. n. Peru, Martynov Ann. mus. zool. Ac. sc. **17** p. 29 figs. 44–47.

†*D. medius* p. 51, *congener* p. 52, *impar* p. 53, spp. n., Bernstein, Ulmer Beitr. Naturk. Preussen **10**.

†*Electracanthinus* gen. n. *Philopotamidae* p. 54, *klebsi* sp. n. p. 56, Bernstein, Ulmer T.c.

†*Electragapetus* gen. n. near *Catagapetus*, *woitatus* sp. n. Bernstein, Ulmer pp. 33–34 T.c.

†*Electraulax* gen. n. *Sericostomatidae* p. 295, *breviascuta*, *longiuscula*, p. 296, spp. n., Bernstein, Ulmer T.c.

†*Electrocerum* gen. n. *Odontoceridae*, *pedestre* sp. n. Bernstein, Ulmer pp. 243 & 244 T.c.

†*Electrocrunoecia* gen. n. near *Crunoecia*, *turbata* sp. n. Bernstein, Ulmer pp. 292 & 294 T.c.

†*Electrodiplectrona* gen. n. near *Diplectrona* p. 216, *decipiens* p. 218, sp. n. Bernstein, Ulmer T.c.

†*Electrohelicopsyche* gen. n. fur *Mormonia taeniata* Pictet, Ulmer p. 310 T.c.

†*Electropsilotes* gen. n. *Odontoceridae*, *rara* sp. n. Bernstein, Ulmer pp. 246 & 247 T.c.

†*Electrotrichia* gen. n. *Hydroptilidae*, *subtilis* sp. n. Bernstein, Ulmer pp. 42 & 43 T.c.

†*Erotesis aequalis* sp. n. Bernstein, Ulmer p. 265 T.c.

†*Gavonema regulare* sp. n. Bernstein, Ulmer p. 240 T.c.

†*Goëra gracilicornis* sp. n. Bernstein, Ulmer p. 272 T.c.

Grammotaulius bettenii sp. n. p. 18 pl. iii Oregon, Hill-Griffin Ent. News **23**.

Helicopsyche montana sp. n. Mexico, Felber p. 46 Zeitschr. wiss. Insektbiol. **8**.—*H. minuscula* sp. n. Peru, Martynov Ann. mus. zool. Ac. sc. **17** p. 3 figs. 1–4.

†*H. typica*, *confluens*, spp. n., Bernstein, Ulmer p. 307 Beitr. Naturk. Preussen **10**.

†*Holocentropus consobrinus* p. 120, *consanguineus* p. 122, *pertatus* p. 124, *curvatus* p. 130, *emega* p. 131, *sciasus* p. 183, *discedens* p. 135, *echinatus* p. 136, *cornutus* p. 137, *calvatus* p. 138, *lunciger* p. 139, *uncatus* p. 140, spp. n., Ulmer T.c.

†*Hydropsyche viduata* sp. n. Bernstein, Ulmer T.c.

Hydroptila cruciata sp. n. O.-Afrika, Ulmer p. 83 Ergebn. Zentr.-Afrik. Exp. 4 L. 6.

Leptocerus ramosus p. 103, *pulcher* p. 105, Kamerun, *curvatus* p. 107 Rives du Moyen Chari, *fissus* p. 108 O.-Afr., spp. n., Ulmer T.c.

†*Lithax atrabula* sp. n. Bernstein, Ulmer p. 274 Beitr. Naturk. Preussen **10**.

†*Lype prolongata* p. 203, *eximia* p. 204, spp. n., Bernstein Ulmer T.c.

Macronema distinctum sp. n. Sp. Guinea, Ulmer p. 100 Ergebn. Zentr.-Afrik. Exp. **4** L. 6.

†*Maniconcaedes* gen. n. *Sericostomatidae*, *conwentzi* sp. n. Bernstein, Ulmer pp. 202 & 303 Beitr. Naturk. Preussen **10**.

Marilia elongata sp. n. p. 14 figs. 17–20, sp. ? p. 16 fig. 21, *flexuosa* p. 17 figs. 22–27 Peru, Martynov Ann. mus. zool. Ac. sc. **17**.

†*M. ophthalmica* sp. n. Bernstein, Ulmer p. 248 Beitr. Naturk. Preussen **10**.

†*Molanna crassicornis* sp. n. Bernstein, Ulmer p. 254 T.c.

†*Molannodes indubia* p. 251, *dubia* p. 252, spp. n., Bernstein, Ulmer T.c.

Mortoniella tranquilla sp. n. Peru, Martynov Ann. mus. zool. Ac. sc. **17**, p. 38.

Mystacides alafimbriata sp. n. p. 19 pl. iv Oregon, Hill-Griffin Ent. News **23**.

†*Neurecli psis geniculata* p. 73, *proxima* p. 74, *torquisti* p. 75, *exsculpta* p. 77, spp. n., Bernstein, ULMER Beitr. Naturk. Preussen **10**.

†*Nyctiophylacodes* gen. n. near *Nyctiophylax*, *cretula* sp. n. Bernstein, ULMER pp. 172 & 173 T.c.

Nyctiophylax danubicus sp. n. Bessarabien (Russ.), MARTYNOV Varšava Izv. Univ. **1912** 5 pp. 4–8 ff. 2–7.

†*N. rectus* p. 144, *hamatus* p. 145, *claviger* p. 147, *pexus* p. 148, *variana* p. 149, *repandus* p. 152, *bidentatus* p. 154, *diffusus* p. 155, *insectus* p. 156, *ocellus*, *acutus*, p. 157, *magnicularis* p. 159, *articulatus* p. 160, *coalitus* p. 161, *procerus* p. 162, *subacuminatus* p. 163, *sellatus* p. 164, *excelsus* p. 16 , *curvus* p. 166, *sinuatus* p. 167, *serpentinus* p. 169, *quadruplex* p. 171, spp. n., Bernstein, ULMER Beitr. Naturk. Preussen **10**.

Oecetis furca (Russ.), MARTYNOV Varšava Izv. Univ. **1912** 5 p. 2 f. 1.

†*Ogmomyia* gen. n. inc. sed. p. 333, *cuspidata* sp. n. p. 335, Bernstein, ULMER Beitr. Naturk. Preussen **10**.

†*Palaeagapetus* gen. n. *Glossosomatinae*, *rotundatus* sp. n., Bernstein, ULMER pp. 35 & 36 T.c.

†*Palaeocraunoecia* gen. n. near *Craunoecia* p. 282, *crenata* p. 283, *attenuata* p. 284, *abbreviata* p. 286, spp. n., Bernstein, ULMER T.c.

†*Palaeolepidostoma* gen. n. für *Helicopsyche*, *serricornis* sp. n. Bernstein, ULMER pp. 308–309 T.c.

†*Palaeolepidostoma* gen. n. für *Trichotanum prussicum* Hagen, ULMER p. 297 T.c.

†*Peri somyia* gen. n. (inc. sed.) p. 338, *sulcata* sp. n. p. 339 Bernstein, ULMER T.c.

†*Philopotamus hamatus* sp. n. Bernstein, ULMER p. 45 T.c.

†*Phryganea latissima* p. 232, *egregia* p. 234, *scutularis* p. 236, spp. n. Bernstein, ULMER T.c.

Phylloicus bromelianum, BANKS Ent. News **23** p. 80. —*P. spectabilis* p. n. p. 9 figs. 9–12, *anomalus* p. 13 figs. 13–16, Peru, MARTYNOV Ann. mus. zool. Ac. Sc. Petersb. **17**.

†*Phylocentropus simplex* p. 63, *spiniger* p. 65, *ligulatus* p. 66, *antiquus* p. 68, spp. n., Bernstein, ULMER Beitr. Naturk. Preussen **10**.

†*Platrocnemia excavata* p. 88, *furcata* p. 90, *protensa* p. 91, *tubulosa* p. 92, *triangulata* p. 94, *singularis* p. 95, *prismatica* p. 96, *spinosa* p. 97, *clavata* p. 99, *ventralis* p. 102, *rostrata* p. 103, *maculata* p. 105, *spinigera* p. 106, *angulata* p. 109, *simplicissima*, *diesicta* p. 110, spp. n., Bernstein, ULMER T.c.

†*Potamyia nitida* sp. n. Bernstein, ULMER p. 210 T.c.

Protodipseudopsis decolorata sp. n. W.-Afr., ULMER p. 89 Ergebn. Zentr.-Afrik. Exp. 4 L. 6.

Polymorphogiaus similis, *angustipennis*, spp. n., Kamerun, ULMER pp. 96–97 T.c.

†*Pseudoberaeodes* gen. n. *Sericostomatidae*, *saxea* sp. n. Bernstein, ULMER p. 323 Beitr. Naturk. Preussen **10**.

†*Rhabdoceras fusculum* sp. n. Bernstein, ULMER p. 241 T.c.

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XIII. PROCHORDATA

INCLUDING

ENTEROPNEUSTA AND PTEROBRANCHIA

ARRANGED BY

I. B. J. SOLLAS

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XIV. VERTEBRATA

(GENERAL)

i.e., complementary to Mammalia, Aves, Reptilia, and Pisces

ARRANGED BY

D. SHARP

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Urocampus southwelli sp. n. Ceylon, Duncker l.c. p. 30 fig.

Corythoichthys quinquarius figured, Snyder Proc. U. S. Nat. Mus. 42

1912 pl. iii f. 1, 1a.—*C. porcibdomas* figured, McCulloch Rec. W. Austral. Mus. 1 1912 p. 21 f. 2.

Sygnathoides figured, McCulloch l.c. p. 8; pl. v f. 1, 1a.—*S. gerda* figured, Snyder Proc. U. S. Nat. Mus. 42 1912 pl. ii f. 3.—*S. spurior, argyrosticta*, Fowler, Proc. Acad. Nat. Sc. Philadelphia p. 31.—*S. vera*, development of pelvic area, Bellec Ann. Mag. Nat. Hist. ser. 8 10 1912 pp. 613–621 pl. xvi.

Micrognathus ashmeadi sp. n. Isle of Pines, *gilberti* pl. xxii f. 1, figured, Snyder Proc. U. S. Nat. Mus. 42 1912.

Icosteus aenigmaticus figured, Snyder l.c. pl. lxi f. 2.

Neamia canopus sp. n. Bahama Is., Rosen Lund Univ. Arsskr. N.F. 7 Afd. 2 No. 9 p. 26 fig. 4.

BERYCOMORPHI.

Polymixiidae.

†*Omosoma gothlandica* descr. and fig., Erasmo Riv. Ital. Pal. 18 1912 p. 97 pl. iii f. 7.

†*Hypsicentrus crassipes, curvatus*, descr. and fig., Erasmo Riv. Ital. Pal. 18 1912 pp. 95–97 pl. iii ff. 1–4.

Berycosidae.

†*Berycopsis elegans* figured, Woodward Monogr. Palaeont. Soc. pl. iii f. 1.

Carangidae.

Platycerys = *Caristius*, Regan Ann. Mag. Nat. Hist. (8) 10 1912 p. 637.

ZEOMORPHI.

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Oreosoma atlanticum descr. fr. N. Zealand, Waite Trans. N. Zeal. Inst. 44 p. 197 pl. xi.

Parazenopsis gen. n. *argentea* sp. n. Morocco, Cligny Ann. stat. aquic. Boulogne-sur-Mer 2 1912 p. 82.—*Zeus conchifer*, Lowe, Cligny l.c. p. 164.

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PERCOIDEA.

Serranidae.

†*Oligithus* (*Percichthys*) *aequalis* var. *burdigalensis* var. n. Miocene of Bordeaux, Priem Bull. soc. geol. France ser. 4 11 1911 p. 41 f. 4.

Epinephelus estuarius descr., Ogilby Ann. Queensland Mus. 10 1911 p. 30.

Siniperca kneri sp. n. Ichang, Garman Mem. Mus. Comp. Zool. 40 1912 p. 112.

Bathyclupea hemigramma figured, McCulloch Rec. W. Austral. Mus. 1 1912 pl. x f. 2.

Acanthoclinus fuscus sp. n. Bermuda Is., Bean Proc. Biol. Soc. Washington 25 p. 124.

Pseudanthias ventralis figured, Snyder Proc. U. S. Nat. Mus. 42 1912 pl. liii f. 1.

Kuhliidae.

Kuhlia, Japanese spp., Jordan & Thompson Proc. U. S. Nat. Mus. 41 1912 pp. 521–526.—*K. boenitis* descr. and fig., Ogilby Ann. Queensland Mus. 10 1911 p. 46.

Safole nom. n. = *Bodianoperca* Jordan nec Dello, Jordan Proc. U. S. Nat. Mus. 43 1912 p. 886.

Edelia vittata figured, McCulloch Rec. W. Austral. Mus. 1 1912 pl. x f. 2.

Plesiopidae.

Paraplesiops melanogris figured, McCulloch Rec. W. Austral. Mus. 1 1912 pl. ix.

Trachinops laeviatus, occurrence in Tasmania, Hall Proc. Roy. Soc. Tasmania 1911 p. 32.

Acanthoclinus is related to *Plesiops*, Regan Ann. Mag. Nat. Hist. (8) 10 1912 p. 266.

Acanthoplesiops gen. n. type *Acanthoclinus indicus* Day, Regan l.c.

Priacanthidae.

Japanese spp., Jordan & Thompson Proc. U.S. Nat. Mus. 41 1912 pp. 527–535.

Chilodipteridae.

Apogonichthys ocyurus figured, Snyder Proc. U. S. Nat. Mus. 42 1912 pl. lxiii f. 2.

Amia berthae p. 47 pl. v f. 1, *nigripes* p. 49 pl. v f. 2, spp. n., Queensland, Ogilby Ann. Queensland Mus. 10 1911.—*Amia dicaeum* p. 131 pl. xxxiv f. 1 *parvula* p. 132 pl. xxxiv f. 2, *hyalina* p. 133 pl. xxxvi f. 3, *diversa*

p. 434 pl. xxxvii f. 1, *nigrocincta* p. 435 pl. xxxvii f. 2, *unimaculata* p. 436 pl. xxxiv f. 3, *striata* p. 437 pl. xxxv f. 1, *albomarginata* p. 438 pl. xxxv f. 2, *atrogaster* p. 439 pl. xxxv f. 3, spp. n., Philippines, RADCLIFFE Proc. U. S. Nat. Mus. 41 1912.

Amioides subgen. n. (*Amia*) *grossidens* sp. n. Philippines, RADCLIFFE t.c. p. 440 pl. xxxvi f. 1.

Neamia gen. n. *octospina* sp. n. Philippines, RADCLIFFE t.c. p. 441 pl. xxxvi f. 2.

Chilodipterus nigrotaeniatus p. 442 pl. xxxvii f. 3, *zonatus* p. 443 pl. xxxviii f. 1, spp. n., Philippines, RADCLIFFE t.c.

Synagrops serratospinosa sp. n. Philippines, RADCLIFFE t.c. p. 444 pl. xxxviii f. 2.

Hymnodus megalops sp. n. Philippines, RADCLIFFE t.c. p. 445 pl. xxxviii f. 3.

Parasphyraenops gen. n. *atrimanus* sp. n. Bermuda Is., BEAN Proc. Biol. Soc. Washington 25 p. 124.

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Elelia philippina = *Scombroides lysan*, BEAN & WEAD Proc. U. S. Nat. Mus. 42 1912 p. 602.

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Latilus ruber Kishinouye descr., SNYDER Proc. U. S. Nat. Mus. 42 1912 p. 417.

SILLAGINIDAE.

Sillago bostockii figured, MCCULLOCH Rec. W. Austral. Mus. 1 1912 pl. x f. 1.

ERYTHRICHTHYIDAE.

Erythrichthys scintillans sp. n. Hawaii, JORDAN & THOMPSON Proc. U. S. Nat. Mus. 41 1912 p. 599.

LUTIANIDAE.

Platynius amoenus figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lxiii f. 3.

NEMIPTERIDAE.

Heterognathodon doederleini Beschreibung, PIETSCHMANN Ann. Hofmus. Wien 25 1911 p. 431.

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Xystaema havana sp. n. Cuba, NICHOLS Bull. Amer. Mus. 31 1912 p. 189.

Liognathus hastatus p. 58, *moretonicusis* p. 59, spp. n., Queensland, OGILBY Mem. Queensland Mus. 1 1912.

SCIAENIDAE.

†*Otolithus* (*Sciaenidarum*) *corii* var. *Cossmanni* var. n. p. 42 ff. 5 6, *pyrenaicus* sp. n. p. 43 f. 7, Helvetian Basses-Pyrénées, PRIEM t.c.

†*Otolithus* (*Sciaena*) aff. *ovatus* var. *Grossouvrei* var. n. Miocene of France, PRIEM Bull. soc. géol. France ser. 4 11 1911 p. 39 fig. 1.

LETHRINIDAE.

Lethrinus laticaudis redescr., OGILBY Mem. Queensland Mus. 1 1912 p. 52.

Pentapus formosulus figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lxiv f. 1.

SPARIDAE.

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Erynnis gen. n. type *Pagrus cardinalis*, JORDAN & THOMPSON Proc. U. S. Nat. Mus. 41 1912 p. 573.

KYPHOSIDAE.

Japanese spp., JORDAN & THOMPSON Proc. U. S. Nat. Mus. 41 1912 pp. 588–597.

Kyphosus gibsoni sp. n. Queensland, OGILBY Mem. Queensland Mus. 1 1912 p. 50.

PEMPHERIDAE.

Cataluja umbra figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lii f. 3.

CHAETODONTIDAE.

Chaetodon aurora De Vis = *falcula* Bl. *nigripes* De Vis = *citrinellus* C. & V. *germanus* De Vis = *pelewensis* Kner, OGILBY Mem. Queensland Mus. 1 1912 p. 54.

Holacanthus spynx De Vis = *cyanotis* Gthr., Ogilby l.c.

H. potteri sp. n. Honolulu, Jordan & Metz Proc. U. S. Nat. Mus. 42 1912 p. 525 pl. lxxi f. 1.

Enoplosidae.

Enoplosus serotinus sp. n. Queensland, De Vis Ann. Queensland Mus. 10 1911 p. 29.

Cichlidae.

Nannacara taenia sp. n. Amazon, Regan Ann. Mag. Nat. Hist. (8) 9 1912 p. 505.—*N. binocularis* sp. n. Brit. Guiana, Eigenmann Mem. Carnegie Mus. 5 1912 p. 488 pl. lxvi f. 1.

Acquidens potarensis sp. n. Brit. Guiana, Eigenmann t.c. p. 490 pl. lxvi f. 2.—*A. azurifer* sp. n. W. Ecuador, Fowler Proc. Acad. Philad. 63 1911 p. 515 f. 7.

Acarichthys gen. n. type *Acara heckelii* M. & T., Eigenmann, t.c. p. 500.

Heterogramma ortmanni sp. n. Brit. Guiana, Eigenmann t.c. p. 506 pl. lxviii f. 1.

Geophagus pellegrini p. 505, *hondae* p. 506, spp. n., Colombia, Regan t.c.

Crenicichla alta sp. n. Brit. Guiana, Eigenmann t.c. p. 516 pl. lxviii f. 3.

Cichlosoma (*Parapetenia*) *atromaculatum* sp. n. Colombia, Regan t.c. p. 507.

Cichlasoma tuba, *spilotum*, spp. n., Costa Rica, Meek Field Mus. Publ. Zool. 10 1912 p. 73.

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Pomacentridae.

Chromis ecrater sp. n. Honolulu, Jordan & Metz Proc. U. S. Nat. Mus. 42 1912 p. 526 pl. lxxi f. 2.

Abudefduf clarki pl. liii f. 2, *richardsoni* pl. lxiv f. 2, *rex* pl. lxiv f. 3, *rhomaleus* pl. lxv f. 1, figured, Snyder Proc. U. S. Nat. Mus. 42 1912.

Labridae.

Pseudolabrus parilus p. 90 pl. xii, *lostockii* p. 91 pl. xi f. 1, figured, McCulloch Rec. W. Austral. Mus. 1 1912.

Lepidaplois mirabilis figured, Snyder Proc. U. S. Nat. Mus. 42 1912 pl. lxvi f. 1.

Choerodon weberi sp. n. Aru Is., Ogilby Ann. Queensland Mus. 10 1911 p. 52.—*C. jordani* figured, Snyder Proc. U. S. Nat. Mus. 42 1912 pl. lxv f. 2.

Scaridae.

Callyodon lunula pl. lxvi f. 2, *bancrofti* pl. lxvi f. 3, *oedema* pl. lxvii f. 1, figured, Snyder Proc. U. S. Nat. Mus. 42 1912.

Pseudoscarus plumbeus sp. n. Bermuda Is., Bean Proc. Biol. Soc. Washington 25 p. 125.

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Gadopsis is a Percoid, Regan Ann. Mag. Nat. Hist. (8) 10 1912 p. 266.

Bathymasteridae.

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Callionymidae.

Draculo mirabilis figured, Snyder Proc. U. S. Nat. Mus. 42 1912 pl. lxi f. 2.

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NOTOTHENIIDAE.

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Agonostomus bryanti sp. n. Java, BEAN & WEED Proc. U. S. Nat. Mus. 42 1912 p. 597 fig.

Mugil pseudotelestes sp. n. Schatt el Arab, PIETSCHMANN Anz. Akad. Wien 1912 p. 268.

ATHERINIDAE.

Atherina pinguis p. 38 pl. xii f. 1, *lacunosa* p. 40 pl. xii f. 2, figured, *A. honoriae* p. 42 pl. xii f. 3 sp. n. Queensland, OGILBY Mem. Queensland Mus. 1 1912; *A. mugiloides* nom. n. = *A. punctata* De Vis *nec* Bennett, MCCULLOCH Proc. R. Soc. Queensland 24 1912 p. 47 fig.

Craterocephalus gen. n. *fluviatilis* sp. n. N.S. Wales, MCCULLOCH t.c. p. 48 pl. i f. 1.

C. maculatus Macleay figured, MCCULLOCH t.c. pl. i f. 2.

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Polydactylus speculariis descr., OGILBY Ann. Queensland Mus. 10 1911 p. 44.

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Enercrus gen. n. *ventralis* sp. n. Bermuda Is., BEAN Proc. Biol. Soc. Washington 25 p. 123.

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Anabas ansorgii sp. n. Congo, BOULENGER Ann. Mus. Congo Zool. ser. 1 2 fasc. 3 1912 p. 23 pl. xvii f. 7.

TRICHIUROIDEA.

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Jordanidia raptoria figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lii f. 2.

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Acanthocybium forbesi sp. n. Philippines, SEALE Philippine Journ. Sci. D. 7 No. 4 1912 p. 283 fig.

SIGANOIDEA.

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Siganus consobrinus p. 54 pl. xiii. *aurolineatus* p. 56, spp. n. Queensland, OGILBY Mem. Queensland Mus. 1 1912.

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ELEOTRIDAE.

Eleotris fortis sp. n. Formosa, TANAKA Fish. Japan p. 106 pls. xxvii ff. 108 & 109 xxviii f. 113.—*E. latifasciatus* sp. n. Panama, MEEK & HILDEBRAND Publ. Field Mus. Zool. 10 1912 p. 68.

Parioglossus gen. n. *taeniatus* sp. n. Aldabra, REGAN Trans. Linn. Soc. 15 pt. 2 1912 p. 302.

Dormitator gymnocephalus sp. n. Brit. Guiana, EIGENMANN Mem. Carnegie Mus. 5 1912 p. 523.

Xenisthmus proriger figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lxviii f. 3.

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Nematogobius ansorgii figured, BOULENGER Ann. Mus. Congo Zool. ser. 1 2 fasc. 3 pl. xvii f. 8.

Awaous macropterus **sp. n.** Ceylon, Duncker Jahrb. wiss. Anst. **29** 1912 p. 252 fig.

Garmannia rubra **sp. n.** Bahama Is., Rosén Lund Univ. Årsskr. N.F. **7** Afd. 2 No. 5 p. 63 fig. 1.

Mucogobius **gen. n.** type *Gobius mucosus* Günth., McCulloch Rec. W. Austral. Mus. **1** 1912 p. 93.

Gobius (*Cryptocentrus*) *stigmatophorus* **sp. n.** Waigeu, Beaufort Zool. Anz. **39** 1912 p. 136.

Gobius (*Rhinogobius*) *scapulopunctatus* **sp. n.** Waigeu, Beaufort t.c. p. 137.

Schismatogobius **gen. n.** *bruynisi* **sp. n.** R. Eme, Ceram, Beaufort t.c. p. 139.

Sicyopterus longifilis p. 140, *brevis* p. 141, **spp. n.**, Ceram, Beaufort t.c.

Sicyopus multisquamatus **sp. n.** Ceram, Beaufort t.c. p. 142.

Doryptena okinawae, pl. lxvii f. 2, *tanegasimae* pl. lix f. 2, figured, Snyder Proc. U. S. Nat. Mus. **42** 1912.

Hetereleotris arenarius figured, Snyder t.c. pl. lxvii f. 3.

Zonogobius boreus figured, Snyder t.c. pl. lix f. 3.

Gnatholepis sindonis figured, Snyder t.c. pl. lxviii f. 1.

Amblygobius naraharae figured, Snyder t.c. pl. lxviii f. 2.

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Aspasma minima f. 2, *misakia* f. 3, figured, Snyder t.c. pl. lxix.

BLENNIOIDEA.

Osteology and classification, Regan Ann. Mag. Nat. Hist. (8) **10** pp. 265–280 figg.

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Alticus margaritarius pl. lxi f. 3, *novemmaculosus* pl. lxix f. 3, figured, Snyder Proc. U. S. Nat. Mus. **42** 1912.

Salarias aldabrensis **sp. n.** Aldabra, Regan Trans. Linn. Soc. **15** pt. 2 1912 p. 302.—*S. muscarus* f. 1, *sinuosus* f. 2, figured, Snyder t.c. pl. lxx.

Enchelyurus hepburni figured, Snyder t.c. pl. lxx f. 3.

Congrogadidae.

Synopsis of the genera, Regan Ann. Mag. Nat. Hist. (8) **10** 1912 p. 268.

Notograptidae.

Blanchardia maculata Castelu. — *Notograptus guttatus* Günth., Ogilby Mem. Queensland Mus. **1** 1912 p. 216.

Clinidae.

Calliblennius **nom. n.** for *Zacalles* Jord. & Snyd., Barbour Proc. Biol. Soc. Washington **25** p. 187.

Emblemaria markii **sp. n.** Bermuda Is., Bean Proc. Biol. Soc. Washington **25** p. 126.

Auchenopterus grandicornis **sp. n.** Bahama Is., Rosén Lund Univ. Årsskr. N.F. **7** Afd. 2 No. 5 p. 69 fig.

Xiphidiontidae.

Xiphister versicolor **sp. n.** Bering Sea, Gilbert & Burke Bull. U. S. Bur. Fish. **30** p. 88 f. 33.

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Gumnoclinus **gen. n.** type *cristulatus* **sp. n.** Bering Sea, Gilbert & Burke Bull. U. S. Bur. Fish. **30** p. 86 f. 30.

Alectridium **gen. n.** near *Alectrias* type *aurantiacum* **sp. n.** Bering Sea, Gilbert & Burke t.c. p. 87 f. 31.

Anoplarchus insignis **sp. n.** Bering Sea, Gilbert & Burke t.c. p. 88 f. 32.

Zoarcidae.

Lycodes bothriocephalus p. 178 pl. x f. 2, *brachycephalus* p. 179 pl. x f. 3, **spp. n.** Kaiser Wilhelm II Land, Pappenheim Deutsch. Südpolar Exped. **13** Zool. 5 1912.—*L. concolor* **sp. n.** Antarctic, Roule & Despax Bull. Mus. Paris **1911** p. 280.—*L. camchaticus* **sp. n.** Kamchatka, Gilbert & Burke Bull. U. S. Bur. Fish. **30** p. 89 f. 34.

Lycodichthys antarcticus figured, Pappenheim t.c. pls. ix f. 6 & x f. 4.

FIERASFERIDAE.

Fierasfer frantii sp. n. Celebes, PORTA Notes Leyden Mus. 34 1912 p. 185.

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Scorpaena, key to Australian species, p. 94, *S. sumptuosa* figured pl. xiii, MCCULLOCH Rec. W. Austral. Mus. 1 1912.

Sebastodes taczanowi figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. liv f. 2.

Pontinus microlepis sp. n. Bermuda Is., BEAN Proc. Biol. Soc. Washington 25 p. 125.

Apistops gen. n. type *Apistus caloundra*, OGILBY Ann. Queensland Mus. 10 1911 p. 54.

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Trigla Morphologie der vorderen paarigen Extremitäten, BELLING Moskva Bull. Soc. nat. 1911 1–3 pp. 46–92 pl. ii–iii textf. 1–3.

Lepidotrigla kishinouyi figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lvi f. 3.

Paratrigla gen. n. type *Trigla pleuracanthica*, OGILBY Ann. Queensland Mus. 10 1911 p. 56.

HEXAGRAMMIDAE.

Hexagrammus aburaco = *otakii*, SNYDER Proc. U. S. Nat. Mus. 42 1912 p. 429 pl. lv f. 1.

PLATYCEPHALIDAE.

Platycephalus platysoma sp. n. Baluchistan, ZUGMAYER Ann. Mag. Nat. Hist. ser. 8 10 1912 p. 595.

COTTIDAE.

Cottus nozawae figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lv f. 2; *C. bubalis* 12 inches long, CLARKE Naturalist 1912 p. 191.

Oxynectes modestus figured, SNYDER t.c. pl. lvi f. 1.

Bero zanclus figured, SNYDER t.c. pl. lvi f. 2.

Archaulus gen. n. near *Archistes biseriatus* sp. n. Bering Sea, GILBERT & BURKE Bull. U. S. Bur. Fish. 30 p. 36 f. 1.

Icelus uncinalis Bering Sea p. 39 f. 2, *spatula* Kamchatka p. 41 f. 3, spp. n., GILBERT & BURKE t.c.

Thyriscus gen. n. near *Icelus anoplus* sp., n. Bering Sea, GILBERT & BURKE t.c. p. 43 f. 4.

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Myoxocephalus batrachoides Kamchatka p. 58 f. 11, *parvulus* Bering Sea p. 59 f. 12, spp. n., GILBERT & BURKE t.c.—*M. yesoensis* figured, SNYDER t.c. pl. lv f. 3.

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Eurymen gen. n. near *Gilbertidia gyrinus* sp. n. Kamchatka, GILBERT & BURKE t.c. p. 64 f. 14.

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Podothecus xyztes figured, SNYDER Proc. U. S. Nat. Mus. 42 1912 pl. lvii f. 2.

CYCLOPTERIDAE.

Cyclolumpus gen. n. *asperrimus* sp. n. Japan, TANAKA Fish. Japan p. 86 pl. xxi.

Eumicrotremus phrynoides sp. n. Bering Sea, GILBERT & BURKE Bull. U. S. Bur. Fish. 30 p. 69 f. 15.

Crystallichthys cyclospilus sp. n. Bering Sea, GILBERT & BURKE t.c. p. 74 f. 19.

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XVI. REPTILIA AND BATRACHIA

ARRANGED BY

C. L. BOULENGER

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AUSTRALIA: the petrels and gulls with coloured plates; **Mathews, 917**: a checklist of the birds; **Mathews, 919**: additions and corrections; **Mathews, 920**: nests and eggs of birds breeding in Australia and Tasmania; **North, 1014**: a notice of Mr. Court's Australian eggs; **Shufeldt. 1368**: a discussion on the Australian species of *Corvus*; **Ogilvie-Grant, 1031**: 726 new subspecies described; **Mathews, 919, 920**: n. gen. et sp. *Oscalidae* **Mathews, 922.**

AUSTRALIAN & NEW ZEALAND SEAS: n. spp. *Oceanites*, *Pelagodroma*, *Fregetta*, *Puffinus*, *Majaqueus*, *Pterodroma*, *Prion*, *Pseudoprion*, *Heteroprion*, *Pelecanoides*, *Diomedea*, *Thalassarche*, *Phoebetria*, *Hydrochelidon*, *Sterna*, *Anous*, *Gygis*, *Larus*, *Catharacta*; **Mathews, 917, 919.**

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NEW SOUTH WALES: coloured figures of the insectivorous birds of N.S.W.; **Anon., 28**: on the birds of the small islands of the coast; **Hull, 690**: field notes on the Spotted Bower-Bird and other birds in the Moonie river district north-west of Sydney; **Jackson, 708**: bird life in the Riverina district; **White, 1599**: bird notes round Cobbora; **Austin, 56**: n. sp. *Pseudogerygone*; **Campbell, 236.**

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Argentine, Chile and Patagonia: passing observations during a journey through; **Blaauw, 143.**

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Peru: n. sp. *Automolus* and *Thamnophilus* described and other rare birds noticed; **Hellmayr, 615:** n. sp. *Coereba*; **Lowe, 846.**

Brazil: annotated lists of collections made near Para and on the islands of Mexiana and Marajo by Mr. L. Müller; **Hellmayr, 614:** n. spp. *Conopophaga, Virevolanius, Knipolegus, Platyrhynchus, Hypocnemis*; **Berlepsch, 118:** n. sp. *Myrmotherula, Pieumnus, Momotus*; **Snethlage, 1385:** n. sp. *Coereba*; **Lowe, 846.**

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Columbia: diagnoses of new species and subspecies of *Crypturus, Chamaepetes, Leptotila, Pionopsitta, Capito, Veniliornis, Rhamphocaenus, Drymophila, Formicarius, Grallaria, Upucerthia, Synallaxis, Picolaptes, Xenicopsis, Knipolegus, Muscisaxicola, Myiodynastes, Tyrannulus, Platypsaris, Attila, Rupicola, Phaeoprogne, Troglodytes, Thryophilus, Cinnicerthia, Planesticus, Vireosylva, Basileuterus, Spinus, Ammodramus, Myospiza, Atlapetes, Cyanocompsa, Diglossa, Sporathraupis, Chlorospingus*; **Chapman, 260:** n. sp. *Chrysoptilus*, **Madarasz, 868:** n. spp. *Sporophila, Penelope*; **Todd, 1498.**

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A new division of North America into faunal regions; **Trotter, 1509:** n. subsp. *Butorides* and *Ardea*; **Oberhoser, 1021, 1022.**

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MEXICO: descriptive catalogue of the birds; **Herrera, 645:** n. sp. *Ardea*; **Thayer and Bangs, 1470.**

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NEW MEXICO: list of birds observed in October at the head waters of the Gila river; **Bergtold, 117:** Birds of the cottonwood groves; **Bailey, 69:** also **Bergtold, 116: Merrill, 951.**

COLORADO: a history of the birds of the State; **Sclater, 1340:** The present status of its check list of birds; **Cooke, 319:** a survey of the life zones and lists of breeding birds arranged accordingly; **Cary, 243:** notes from the north central districts; **Warren, 1565:** notes on the wading birds of the Barr lake region; **Rockwell, 1223:** Three new bird records, *Calcarius lapponicus lapponicus*, *Hylocichla guttata aequicensis* and *Planesticus migratorius migratorius*; **Hersey, 647, 648:** also **Betts, 126.**

NEVADA: faunal features of Humbolt county and a list of birds observed with field-notes; **Taylor, 1454:** a journey to the Star lake country and other notes from the Tahoe region; **Ray, 1168:** bird-notes in the Tahoean mountains; **Ray, 1166:** also **Ray, 1167.**

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IDAHO: some birds of the Saw-tooth mountains; **Jewett, 714:** first record of *Zonotrichia albicollis*; **Wyman, 1650.**

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OHIO: a study of the avifauna of the Lake Erie islands; **Jones, 722**: notes from the Tri-reservoir region; **Henninger, 641**: ecological notes on birds; **Dury, 412**: also **Henninger, 640**: **Morse, 980**: **Stover, 1420**: **Wisman, 1626.**

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NEW JERSEY: winter notes; **Kohler, 771**: also **Allen, 14**: **Harlow, 585**: **Kohler, 772, 773**: **Kuser, 798**: **Moore, 972, 973.**

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MACKENZIE: list of birds noticed on the Seton expedition of 1907 to Athabasca and Great Slave Lakes; **Seton & Preble, 1358.**

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ALASKA: field notes on the birds of the Aleutian Islands and Bering Sea; **Bent, 112**: n. subsp. *Lagopus* described; **Bent, 111**: also **Swarth, 1444.**

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GREENLAND: notes on rare birds and on *Chandelasmus streperus* and *Passerella iliaca* new to that country; **Schioler, 1312**: two new records *Turdus iliacus* and *Totanus totanus*; **Gronberger, 550.**

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ATLANTIC OCEAN: birds observed on a voyage from Holland to South America; **Heurn, 664**: n. spp. *Prion, Megalopterus*; **Mathews, 917.**

PACIFIC OCEAN: n. spp. *Majaqueus, Macronectes, Pseudoprion, Thalassarche, Gelochelidon*; **Mathews, 917.**

INDIAN OCEAN: n. spp. *Puffinus, Macronectes, Prion, Pseudoprion, Thalassarche, Thalassogeron, Gygis*; **Mathews, 917**: also **Oort, 1051.**

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III.—SYSTEMATIC.

The arrangement of Sharpe's "Handlist of birds" is here used; where generic names differ, the name in the Handlist is prefixed in square brackets.

ORDER STRUTHIONIFORMES.

Struthio camelus, domestication and breeding in Algeria, MENEGAUX, Rev. Sci. Paris **50** (2. semest.) 1912 p. 44; domestication in Madagascar, SCHULZ, Rev. Fr. d'Orn. **2** p. 273.

ORDER CASUARIIFORMES.

Dromiceius novaehollandiae woodwardi, p. 175 N.W. Australia, *D. n. rothschildi* p. 175 S.W. Australia, **subsp. n.**, *D. spencceri* **nom. n.** pro *D. minor* Spencer p. 176, MATHEWS, Nov. Zool. **18**.

Peronista **gen. n.** for type *Dromaius peroni*, Rothschild, MATHEWS, Austr. Av. Rec. **1** p. 107.

Casuarius casuarina johnsonii, on the coloration of the head and neck, MATHEWS, Austral Av. Rec. **1** p. 66 pl. i.—*C. bennetti*, die Verschiebung des Sternums, KORNE, SitzBer. Ges. natf. Freunde **1911** p. 384.—*C. keysseri*. **sp. n.** German New Guinea, with remarks and complete list of other species of the genus, ROTHSCHILD, Bull. B. O. C. **29** p. 49.

ORDER TINAMIFORMES.

Tinamus latifrons, figured from Ecuador, MENEGAUX (see No. **939** p. 3 pl. i)

Crypturus soui caucae **subsp. n.** Western Columbia, CHAPMAN, Bull. Amer. Mus. N.H. **31** p. 141.

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British Game birds described and illustrated, OGILVIE-GRANT, London 1912 4to.

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Catheturus lathami, account of a nest and its opening in Woburn Park, Engl., Lodge, Bull. soc. acclim. **59** p. 715.—*Alectura lathami robinsoni* **subsp. n.** Mid. Queensl., Mathews, Nov. Zool. **18** p. 177.

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Lagopus lagopus, in Halbinsel Yamal (Russ.), Zitkov, Ann. mus. zool. **17** p. 329 Textf. 7; field notes in the Alps, Morand, Verh. Schweiz. Natf. Ges. **95** p. 233; figured in colour, Grinnell, Bird-Lore **14** p. 376.—*L. lagopus brevirostris* **subsp. n.** Altai Mts., Hesse, Ornith. Monatsber. **20** p. 101.—*L. rupestris sanfordi* **subsp. n.** Aleutian Isles, Bent, Smiths. Misc. Collect. **56** No. 30 p. 1.

Lyrurus tetrix, distribution in Holland, Beaufort, Ardea **1** p. 50.

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Coturnix coturnix, experiments in variation and geographical subspecies, Cavazza, Verh. intern. ZoolKongr. Jena **8** p. 783; due speciali forme, Cavazza, Riv. ital. Orn. **1** p. 131 1 tav.; experimental studies in the geographical variation, Cavazza, Archivio zool. ital. **5** p. 29 5 pls.; its migrations, Menegaux, Rev. Fr. d'Orn. **2** p. 251; also Bulletin de l'Institut général psychologique Paris **12** 92; also Rev. sci. Paris **50** (2. semest.) p. 394; the brown-throated variety (? hybrid *C. communis* × *C. capensis*) in Northamptonshire, Aplin, Zoologist **1912** p. 349.—*C. coturnix corsicana* **subsp. n.** Corsica, Tschusi, Orn. Jahrb. **23** p. 218.—*C. australis meleillensis*, Melville Is., N. Australia, *C. a. queenslandicus*, N. Queensl. **subspp. n.**, Mathews, Austral. Av. Rec. **1** p. 26; *C. pectoralis praetermissa* p. 178 W. Australia, *C. australis rogersi* p. 179 N.W. Australia, *C. a. mungi* p. 179 N.W. Australia, Mathews, Nov. Zool. **18.**

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[*Tragopan*] *Ceriornis satyra*, its display, Smith, Avicult. Mag. **3** p. 153 pl.

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p. 249.—*P. turkestanicus*, Hermaphrodit? (Russ.), ZARUDNYI, Mess. ornith. **3** p. 120.—*P. strauchi choensis* **subsp. n.** Kansu, China, OGILVIE-GRANT, Bull. B. O. C. **31** p. 16.—*P. holdereri* and *P. kiangsuensis*, distinguishing characters and habitats in central China, THAYER and BANGS, Mem. Amer. Mus. Comp. Zool. **40** p. 140.

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Odontophorus melanonotus, figured from Ecuador, MENEGAUX (see No. **939** p. 4 pl. ii).

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[*Carpophaga*] *Muscadivores consobrina babiensis* **subsp. n.** N.W. Sumatra, RICHMOND, Proc. Biol. Soc. **25** p. 103.—*M. aenea mistua* **subsp. n.** Barussan Isles Sumatra, OBERHOLSER, Smith. Misc. Coll. **60** No. 7 p. 2.

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[*Hemiphaga*] *Carpophaga novaezealandiae*, Maori methods of snaring, MATTHEWS, Trans. Proc. N. Zeal. Inst. **43** p. 603.

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Geotrygon linearis trinitatis **subsp. n.** Trinidad, Hellmayr & Seilern, Bull. B. O. C. **31** 1912 p. 13.—*G. goldmani* **sp. n.** Panama, Nelson, Smithsonian Inst. Misc. Collect. **60** No. 3 p. 2.

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Rallus aquaticus korejevi figured from Hupeh, China, Thayer & Bangs, Mem. Mus. Comp. Zool. **40** p. 144 pl. iii fig. 1.

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Amaurornis phoenicura cleptea **subsp. n.** Nias Is., Oberholser, Smith. Misc. Coll. **64** No. 7 p. 2.

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Porphyrio caeruleus, taken in Dordogne, France, FÉVRIER, Rev. Fr. d'Orn. **2** 1912 p. 222; nesting in Algeria, WALLIS & PEARSON Bull. B.O.C. **29** p. 103.—*P. melanotus woodwardi* **subsp. n.** West Australia, MATHEWS, Austral Av. Rec. **1** p. 29.

Fulica atra, breeding habits and number of broods raised, ALLIN, Zoologist **1912** p. 35.—*F. atra ingrami* **subsp. n.** N. Terr. Australia, MATHEWS, Nov. Zool. **18** p. 196.

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[*Lophaethyia*] *Podiceps cristatus*, secondary sexual characters and their general bearing to the whole conception, HUXLEY, Science **36** p. 601.—*Colymbus taibaelli* habits as affected by the freezing of open water, CAHN, Auk **29** p. 439.

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Eudyptula minor woodwardi **subsp. n.** W. Australia, MATHEWS, Nov. Zool. **18** p. 199.

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†*Plautus impennis*, the eggs in the Thayer Museum, THAYER, Auk **29** p. 208 pl. xii.

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[*Alle*] *Mergulus alle*, numbers destroyed and driven inland in Jan. 1912, WITHERBY, Brit. Birds **5** pp. 282 309 337; in south Lancashire, WILLIAMSON, Lancs. Nat. **4** p. 385.

Uria troile, the "Ringed" variation breeding in Dorset, ASHFORD, Zoologist **1912** p. 233.

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Sterna sandvicensis, *S. hirundo*, *S. minuta*, *S. dougallii*, *S. paradisaea*, nesting habits and haunts in England described and photographed, BICKERTON, Homelife of the Terns 1912 pp. 1-88 32 pls.—*S. caniaca*, status and nesting in the Dee Valley, Aberdeen, THOMSON, Scot. Nat. **1912** p. 81.—*Thalasseus bergii bakeri* Mekran coast p. 346, *T. b. edwardsi* Ceylon p. 347, *T. bengalensis arabicus* Red Sea p. 355, **subspp. n.**, MATHEWS, Bds. Austral. **2**.—*S. bergii gwendolenae* p. 208 S.W. Australia, *S. striata incerta* p. 208 E. Australia, *S. s. christopheri* p. 209 W. Australia, *S. nereis horni* p. 209 W. Australia, *S. sinensis torrenti* p. 210 N.W. Australia, *S. sumatrana kempi* p. 210 Torres Straits, **subspp. n.**, MATHEWS, Nov. Zool. **18**.—*S. dougallii bangsi* **subsp. n.** Foochow, MATHEWS, Bds. Austral. **2** p. 364.—*Melanosterna anaethetus recognita* **subsp. n.** Bahama Isls., MATHEWS, Bds. Austral. **2** p. 403.—*S. fuliginosa*, taken in Cachar, India, BAKER, Bombay J. Nat. Hist. Soc. **21** p. 684.—*Sternula nereis exul* **subsp. n.** New Caledonia, MATHEWS, Bds. Austral. **2** p. 385.

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[*Strix*] *Asio flammeus pallidus*, eine selbständige Form (Russ.), ZARUDNYI, Mess. ornith. **3** p. 113.—*Tyto novaehollandiae melvyi* Queensland p. 34 *T. n. ichitei* S. Australia p. 34, *T. n. riordani* Victoria p. 35, *T. n. melvillensis*, Melville Is. N. Australia p. 35, *T. longimembris georgiae* N. Terr. Australia p. 75, **subspp. n.**, MATHEWS Austral. Av. Rec. **1**; *T. alba alexandrae* p. 256, N. Terr. Australia, *T. novae hollandiae perplexa* p. 257 W. Australia, *T. n. kimberli* p. 257 N. W. Australia, *T. tenebricosa multipunctata* p. 257 N. Queensl. *T. t. magna* p. 258 Victoria, **subspp. n.**, MATHEWS, Nov. Zool. **18**.

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Platycercus venustus melvillensis **subsp. n.** Melville Is. N. Australia, Mathews, Austral Av. Rec. **1** p. 36; *P. elegans victoriae* p. 270 Victoria, *P. e. subadelaidae* p. 270 S. Australia, *P. flaveolus innominatus* p. 270 S. Australia, *P. adscitus elseyi* p. 271 Queensl., *P. icterotis salvadori* p. 273 S. W. Australia, *P. i. whitlocki* p. 273 W. Australia, *P. barnardi schulzi* p. 273 S. Australia, *P. b. augustus* p. 273 S. Australia, *P. zonarius dandasi* p. 274 W. Australia, *P. z. connectens* p. 274 W. Australia, **subspp. n.**, Mathews, Nov. Zool. **18**.

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[*Nanodes*] *Lathamus discolor trepidus* **subsp. n.** Victoria, Mathews, Nov. Zool. **18** p. 279.

Melopsittacus undulatus intermedius, North Terr. and *M. u. patlidiceps* N.W.

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Podargus strigoides melvillensis subsp. n. Melville Is. N. Australia, MATHEWS, Austral Av. Rec. 1 p. 37; *P. papuensis baileyi* p. 281 N. Queensl., *P. p. conigravi* p. 281 Waigeau Is., *P. p. rogersi* p. 281 N. Queensl., *P. strigoides cornwalli* p. 282, *P. s. victoriae* p. 282 Victoria, *P. s. rossi* p. 282 S. Australia, *P. s. mungi* p. 283 N. W. Australia, *P. s. dendyi* p. 283 N. W. Australia subspp. n., MATHEWS, Nov. Zool. 18.

Aegotheles cristata murchisoniana subsp. n. Mid Australia, MATHEWS, Nov. Zool. 18 p. 284.

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Coracias garrula, taken near St. Omer, France, KEMPEN, Rev. Fr. d'Orn. 2 p. 425.—*C. garrula caucasica* subsp. n. Batoum (Russ.), NESTEROV, Mess. ornith. 3 p. 156.

Eurystomus orientalis bravi subsp. n., N. W. Australia, MATHEWS, Nov. Zool. 18 p. 285.

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A revision of the classification of the Kingfishers, MILLER, Bull. Amer. Mus. N. H. 31 p. 239.

Alcedo ispida found near Simla, DODSWORTH, Bombay J. Nat. Hist. Soc. 21 p. 661; feeding its young with frogs, MAGRATH, Bombay J. Nat. Hist. Soc. 21 p. 661.—*A. meninting callima*, *A. m. subcirdis* subspp. n. Barussan Isles, Sumatra, OBERHOLSER, Smiths. Inst. Misc. Collect. 60 No. 7 p. 7.—*A. meninting proxima* subsp. n. Pagi Is. Sumatra, RICHMOND, Proc. Biol. Soc. 25 p. 101.

Alcyone azurea alisteri subsp. n. N. W. Australia, MATHEWS, Austral Av. Rec. 1 p. 37; *A. azurea victoriae* p. 285 Victoria, *A. a. mixta* p. 285, N. Queensl., *A. pusilla halli* p. 286 N. Queensl. subspp. n., MATHEWS, Nov. Zool. 18.—*A. ramsayi* sp. n. North Territory, Australia, NORTH, Ibis 1912 p. 119.

Microalcyone gen. n. for type *Alcyone pusilla halli*, MATHEWS, Aust. Av. Rec. 1 p. 107.

Cleyx cinnamomina sp. n. E. Sumatra, OBERHOLSER, Smiths. Inst. Misc. Collect. 60 No. 7 p. 7.

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Halcyon macleayii pulla and *H. sordidus melvillensis* Melville Is. N. Australia, subspp. n., MATHEWS, Austral Av. Rec. 1 p. 38; *H. macleayii distinguendus* p. 288, *H. pyrrhopygius obscurus* p. 288 N.W. Australia, *H. sanctus ramsayi* p. 289 N. W. Australia, *H. s. confusus* p. 289 N. Queensl., *H. sordidus cockianni* p. 289 N. Queensland, subspp. n., MATHEWS, Nov. Zool. 18.—*H. pyrrhopygius utingi* subsp. n. N. Queensl., MATHEWS, Austr. Av. Rec. 1 p. 118.

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Cranorrhinus corrugatus megistus subsp. n. Batu Isles, Sumatra, OBERHOLSER, Smiths. Inst. Misc. Collect. 60 No. 7 p. 6.

[*Rhytidoceros*] *Buceros undulatus*, field notes in Java, HEECKEREN TOT WALIËN, Ardea 1 p. 84.

Sub-Order Upupae.

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Sub-Order Meropes.

Merops apiaster, in der Schweiz, FISCHER-SIGWART, Ornithol. Beob. 8 p. 181.—*M. persicus*, breeding grounds near Bagdad noticed and photographed, SASSI, Wien. Ann. Nat. Hist. Hofmus. 26 p. 119 pl. i.—*M. persicus chrysocercus* and *M. p. persicus* figured to show distinctive characters, ROTHSCHILD & HARTERT, Nov. Zool. 18 p. 525 pl. ix.—

M. ornatus shortridgei **subsp. n.** West Australia, MATHEWS, Nov. Zool. **18** p. 290.

Sub-Order Momoti.

[*Prionornis*] *Electron platyrhynchus subsolis* **subsp. n.** Panama, NELSON, Smithsonian Inst. Misc. Collect. **60** No. 3 p. 5.—*E. carinatus viridis* **subsp. n.** Costa Rica, RIDGWAY, Proc. Biol. Soc. **25** p. 89.

Eumomota superciliaris bipartitus **subsp. n.** Mexico, RIDGWAY, Proc. Biol. Soc. **25** p. 90.

Momotus momota camelcusis **subsp. n.** Amazonas Brazil, SNETHLAGE, Ornith. Monatsb. **20**, p. 155.—*M. lessonii exiguus* **subsp. n.** Mexico, RIDGWAY, Proc. Biol. Soc. **25** p. 89.—*M. conexus recondilus* **subsp. n.** Panama, NELSON, Smithsonian Inst. Misc. Collect. **60** No. 3 p. 4.

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Chordeiles virginianus henryi, photographed from life, WARREN, Condor **14** pp. 93, 95, 97.—*C. acutipennis texensis*, protective coloration, TAYLOR, Condor **14** p. 222 f. 85.

Eurostopodus argus harterti **subsp. n.** N. Terr. Australia, MATHEWS, Nov. Zool. **18** p. 291.

Nyctidromus albicollis nelsoni S. W. Mexico p. 90 *N. a. sumichrasti* S. E. Mexico p. 91 **subspp. n.**, RIDGWAY, Proc. Biol. Soc. **25**.

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[*Caprimulgus*] *Antrostomus nelsoni* **sp. n.** Mexico, RIDGWAY, Proc. Biol. Soc. **25** p. 90.—*Caprimulgus accrae* and *C. fulvicentris*, figured with critical notes on the distinctness of these two species, BANNERMAN, Ibis **1912** p. 247, pl. iv.—*C. macrurus yorki* N. Queensl., *C. m. keatsi*, N. Terr. **subspp. n.**, MATHEWS, Nov. Zool. **18** p. 291.—*C. europaeus sarudnyi* **subsp. n.** Lake Baikal, Siberia, HARTERT, Vög. pal. Fauna **2** p. 849.—*C. mirificus* **sp. n.** E. Sumatra, OBERHOLSER, Smiths. Inst. Misc. Collect. **60** No. 7 p. 7.

Philemyctenus **gen. n.** for type *Caprimulgus ocellatus*, RIDGWAY, Proc. Biol. Soc. **25** p. 98.

Antiaurus **gen. n.** for type *Stenopsis maculicaudus*, RIDGWAY, Proc. Biol. Soc. **25** p. 98.

Setopagis **gen. n.** for type *Caprimulgus parvulus*, RIDGWAY, Proc. Biol. Soc. **25** p. 98.

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[*Cypseloides*] *Nephoecetes niger borealis*, sexual differentiation, SWARTH, Auk **29** p. 241.

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Phaethornis adolphi fraterculus **subsp. n.** Panama, NELSON, Smithsonian Inst. Misc. Collect. **60** No. 3 p. 9.

Goethalsia **gen. n.** p. 6 for type *G. bella* **sp. n.** Panama, NELSON, Smithsonian Inst. Misc. Collect. **60** No. 3 p. 7.

Eriocnemis flocens **sp. n.** Panama, NELSON, Smithsonian Inst. Misc. Collect. **60** No. 3 p. 8.

[*Trochilus*] *Archilochus colubris*, figured in colour, WRIGHT, Bird Lore **14** p. 186. —*Calypte costae*, nesting habits, DIXON, Condor **14** p. 75 figs. 27 & 28.

Selasphorus alleni, early nesting at Santa Barbara, BOWLES, Condor **14** p. 77.

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Sub-Order Cuculi.

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Surniculus lugubris barussarum **subsp. n.** Barussan Isles Sumatra, OBERHOLSER Smiths. Inst. Misc. Collect. **60** No. 7 p. 5.

Cuculus canorus, interesting observation on breeding habits, LOYD, Brit. Birds **6** p. 62, SELOUS, *t.c.* p. 90, OWEN, *t.c.* p. 91; laying in nests of *Acrocephalus palustris* and *Anthus obscurus*, WILD & JOURDAIN, Brit. Birds **6** p. 155; egg taken in Berks as early as April 29th. JOURDAIN, Brit. Birds **6** p. 18; feeding its own young, JANDER, Wild und Hund, **18** p 576; field notes in Norway, LIE-PETTERSEN, Bergen Naturen **36** pp. 129 192 1 fig.—*C. canorus bakeri* Assam p. 948, *C. c. insulindae* Borneo p. 952, **subspp. n.**, HARTERT, Vög. pal. Fauna **2.** —*C. rubricatus atherstoni* N. Queensland p. 11, *C. c. albani* S. W. Australia p. 12, **subspp. n.**, MATHEWS, Austral Av. Rec. **1.**

Cercococcyx olivinus **sp. n.** Rutschuru nr. Lake Albert Edward, SASSI, Wien, Ann. NatHist. Hofmus **26** pp. 341 378.

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[*Metallococcyx*] *Chrysococcyx smaragdineus* and *C. s. intermedius*, critical remarks on a resuscitated subspecies from S. Africa and on Reichenow's generic term *Metallococcyx* applied to this species, BANNERMAN, Ibis **1912** p. 241.

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Barbatula chrysocoma schubotzi **subsp. n.** French Soudan, REICHENOW, Ornith. Monatsber **20** p. 28.—*B. bilineata*, egg figured, GROTE, J. Ornith. **60** p. 523 pl. 9 fig. 1.

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Trachyphonus nobilis **sp. n.** Lake Ngami, Ogilvie-Grant, Ibis **1912** p. 397.

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Aulacorhynchus prasinus virescens **subsp. n.** Honduras, America, Ridgway, Washington Proc. Biol. Soc. **25** p. 88.—*A. caerulcicularis cognatus* **subsp. n.** Panama, Nelson, Smithsonian Inst. Misc. Collect. **60** No. 3 p. 4.

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Sub-Order Pici.

A critical revision of the Woodpeckers based on the collections in the Zoological Museum at Berlin, Hesse, Mitt. Zool. Mus. **6** 1912 p. 133.

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Meiglyptes tukki calceuticus, *M. grammithorax microterus* **subspp. n.** Barussan Isles. Sumatra, Oberholser, Smiths. Inst. Misc. Collect. **60** No. 7 p. 6.

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Picumnus innominatus malayorum Malay peninsula, *P. i. aruncolorum* Nilgari hills S. India, **subspp. n.**, Hartert, Vög. pal. Fauna **2** p. 937.—*P. rarzeae* **sp. n.**, Amazonas, Brazil, Snethlage, Ornith. Monatsb. **20** p 154.

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[*Hedymela*] *Muscicapa collaris*, taken in Sussex, a new British record, Nichols, Brit. Birds **5** p. 238 fig.

[*Siphia*] *Muscicapa parva* Nest und Gelege, Grimm, Zs. Oologie Berlin **22** p. 104; *Erythrosterna parva* in Italy, Balducci, Riv. ital. Orn. **2** p. 35 also Salvadori, *ibid* p. 162.

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[*Muscicapula*] *Dendrobiastes hyperythra alifurus* **subsp. n.** Buru, and other subspecies discussed, STRESEMANN, Nov. Zool. **19** p. 330.

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Royigerygone **gen. n.** for type *Gerygone mathewsae* Mathews, MATHEWS, Austr. Av. Rec. **1** p. 110.

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Terpsiphone paradisaea affinis, habits in "semi-captivity," BAKER, Aviculture Mag. **3** p. 302.—*Tchitrea paradisi ceylonensis* **subsp. n.** Ceylon, SARUDNY & HÄRMS, Ornith. Monatsber. **20** p. 60.—*T. melanura*, taxonomic note, SALVADORI, Torino Boll. Musei zool. anat. **27** 1912 No. 651.

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R. LYDEKKER, F.R.S.

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Bull. or Rep.

Aarau, Mitt. Natf. Ges.—Mitteilungen der aargauischen naturforschenden Gesellschaft. Aarau. 8vo. 1 Swi.

Aarsb. Norges Fiskerier, Bergen.—Aarsberetning vedkommend Norges Fiskerier, Bergen. 2 Nor.

Aarsb. off. Foranst. Landb., Kristiania.—Aarsberetning angaaende de offentlige Foranstaltninger til Landbrugets Fremme. 1 Nor.

Abeille, Paris.—Abeille (l'). Sec. Bedel, Paris. [irrégul.] 2 Fr.

Abh. geol. Specialkarte Els.-Lothr., Strassburg.—Abhandlungen zur geologischen Specialkarte von Elsass-Lothringen. Strassburg. [2–3 H. jährl.] 1 Ger.

Acireale, Rend. Mem. Acc. Zelanti.—Rendiconti e Memorie della R. Accademia degli Zelanti, Acireale. 1 It.

Actes Mus. hist. nat., Rouen.—Actes du Muséum d'histoire naturelle. Rouen (Seine-Inférieure). [irrégul.] 5 Fr.

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Agric. colon., Firenze.—Agricoltura (L') Coloniale. Organo dell' Istituto Agrario Coloniale Italiano e dell' Ufficio Agrario sperimentale dell' Eritrea. Firenze. — It.

Agric. Gaz., Sydney, N.S.W.—Agricultural Gazette, Sydney, N.S.W. 1 N.S.W.

Agric. litt. Mer. Noire, Novorossijsk.—[Черноморское сельское хозяйство: органъ Сухумскаго общества сельскаго хозяйства. Новороссійскъ [Agriculture du littoral Rus. de la Mer Noir; bulletin mensuel de la Société agricole de Soukhoum-Kale, Novorossijsk]. — Rus.

Akad. Ért., Budapest.—Akademiai Értesitő, Budapest. [Akademischer Anzeiger, Budapest.] — Hun.

Akvarium, Moskar.—Акваріумъ и комнатныя растенія. Сборникъ издаваемый Московскимъ Обществомъ Любителей акваріума и комнатныхъ растеній. Москва [L'aquarium et les plantes d'appartement. Recueil édité par la Société des Amateurs d'aquariums et des plantes d'appartement. Moscou]. — Rus.

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Albany Univ., N.Y., Bul. St. Mus.—Bulletin of the New York State Museum. University of the State of New York, Albany, N.Y. 4 U.S.

Albany, N.Y., St. Educ. Dep. Mus. Bul.—New York State Education Department, New York State Museum Bulletin, Albany, N.Y. 4 U.S.

Albany, N.Y., St. Educ. Dept. Mus. Mem.—New York State Education Department, New York State Museum Memoirs, Albany, N.Y. 5 U.S.

Albany, N.Y., St. Educ. Dept. Mus. Rep.—New York State Education Department, New York State Museum Annual Report, Albany, N.Y. 6 U.S.

Albany, N.Y., Trans. Alb. Inst.—Transactions of the Albany Institute, Albany, N.Y. 7 U.S.

Alger, Bul. Soc. hist. nat.—Alger, Bulletin de la Société d'histoire naturelle de l'afrique du Nord. — Fr.

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Állatt. Közlem., Budapest.—Állattani Közlemények, Budapest. [Zoologische Mittheilungen, Budapest.] 32 Hun.

Allg. Fischereiztg, München.—Allgemeine Fischerei-Zeitung, red. v. B. Hofer, F. Fischer u. H. Reuss. München. [½ monatl.] 24 Ger.

Allg. Forstztg, Frankfurt a. M.—Allgemeine Forst- und Jagd-Zeitung, hrsg. v. Lorey. Frankfurt a. M. [monatl.] Nebst Supplement: Jahresbericht über Veröffentlichungen und wichtigere Ereignisse im Gebiete des Forstwesens etc. 25 Ger.

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Amani, Mit. Biol. landw. Inst.—Mitteilungen aus dem biologisch-landwirtschaftlichen Institut Amani. [wöch.] — Ger.

Amer. Geol., Minneapolis, Minn.—American Geologist, Minneapolis, Minnesota. 13 U.S.

Amer. J. Anat., Philadelphia, Pa.—The American Journal of Anatomy, published by the Wistar Institut of Anatomy and Biology, Philadelphia, Pa. [Includes Proc. Ass. Amer. Anat.] 11 U.S.

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Amer. Nat., New York, N.Y., or Lancaster, Pa. [formerly Boston, Mass.]—The American Naturalist, New York, N.Y., or Lancaster, Pa. 21 U.S.

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Amiens, Bul. soc. apicult. Somme.—Bulletin de la société d'apiculture de Somme. — Fr.

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An. Mus., San Salvador.—Anales del Museo nacional, organo oficial del Instituto del mismo nombre, San Salvador. — Salvador.

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Ann. ass. nat., Levallois-Perret.—Annales de l'association des naturalistes, Levallois-Perret. — Fr.

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Ann. Natal. Govt. Mus., London.—Annals of the Natal Government Museum, London. — S. Afr.

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Arb. Neurol. Inst. Wien, Leipzig.—Arbeiten aus dem Neurologischen Institute (Institut für Anatomie und Physiologie des Centralnervensystems) an der Wiener Universität, hrsg. v. H. Obersteiner. Leipzig u. Wien. [zwangl.] — Ger.

Arcachon, Trav. soc. sci. station zool.—Société scientifique et Station zoologique d'Arcachon (Gironde). Travaux des Laboratoires. Paris. [annuel.] 106 Fr.

Arch. anat. microsc., Paris.—Archives d'anatomie microscopique, dir. Ranvier et Hennegny. Paris. [trimestr.] 107 Fr.

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