



BOOK NO.

229

PET BIRDS OF BENGAL
(SONG BIRDS)

Presented to Dr. Baringo with my
best compliments -

Calcutta Oriental Series No. 10. E. 4

Infant

17/12/50

PET BIRDS OF BENGAL

Vol. I

BY

SATYA CHURN LAW, M.A., 'B.L.

Fellow of the Zoological Society of London;

Member of the British Ornithologists' Union

WITH A FOREWORD BY

DR. GRAHAM RENSHAW, M.D., F.R.S.E.

Editor "Natureland"; Formerly Editor
"The Avicultural Magazine"

With Illustrations by N. KUSHARI.

CALCUTTA AND SIMLA

THACKER, SPINK & CO.

1923

Printed by Mr. Nalin Chandra Paul, B. A.
at the Calcutta Oriental Press, 107, Mechuabazar St., Calcutta

FOREWORD

One of the crying needs of aviculture has been a pioneer, up-to-date and comprehensive volume on the wonderful bird-fauna of India, written not merely for the field naturalist but also for the lover of pets, with a sympathetic insight into the difficulties of a keeper of birds. The present readable and reliable work supplies this want.

Mr. Law needs no introduction to the Zoological public. Himself a fine naturalist and a keen observer, he has the happy faculty of presenting to his readers a vivid picture of the events that he records from time to time in the various natural history journals. As the editor of the *Natureland*, it has been my privilege to be in special touch with his ornithological studies. All the birds dealt with in this volume have lived in

Mr. Law's aviaries, and he has set forth nothing that has not come under his personal observation.

By a happy inspiration, the birds are designated by their Indian names, their English titles being given a subsidiary place, thus rendering the work of local as well as of general interest. Those of us who are interested in Shamas and Dhya-ls, in Bulbuls and Drongos, would, I am sure, heartily welcome this work.

Sale, Manchester
1923.

GRAHAM RENSHAW.

P R E F A C E

The conquest of Nature, that has been advancing apace with the spread of material civilisation, has been putting difficulties in the way of man's free communion with Nature. The music that cheered him up spontaneously in his rural or urban environments at a time when he did not assert his independence of Nature, has now to be enjoyed through special efforts for securing and preserving it within reach. The truth of this will be realised to some extent by visits to a city like Calcutta or London where the rattling of carriage-wheels and the grunting of bus-horns make it difficult to even turn one's thought to a past enjoyment of avine music amidst natural scenery. Many of us feel this want caused by the progress of our material civilisation and try to make up for it by periodical excursions into villages, marshes, jungles

and forests where Nature still has her citadel unassailed or unaffected. Such were the excursions made at times by President Roosevelt who used to refresh himself as also to satisfy his insatiable curiosity about the avine community by roaming about in the prairies and jungles of the United States or in the dense forests of far-off Africa; it was also the practice of the distinguished British ex-minister Viscount Grey who, not content with the stray song of a Robin at his window or a Finch in his garden, ran away from the cares of Whitehall into places where birds sang in chorus or poured forth floods of music in their unmolested natural abodes. Many lovers of bird-music may be of the habit which soothed the two statesmen in their gnawing cares, but there are others who want to have the remedy within easy reach. They will have the pleasure of the distant hills and dales as far as possible within the city itself, in their own garden, or in the

public grounds hard by. The pleasure is derived of course through suggestion and imitation on a small scale, like the scenery reproduced on a stage to represent the actual scenery stretching for miles. This offers scope for the application of the highest human art and ingenuity, for there in the aviaries or on the open ground is to be made such a blending of of Nature and Art that the latter may hide its identity and be mistaken for the former. This blending of art and nature is meant to delude not only the human spectators visiting the place for pleasure, but also its feathered inmates who must feel there quite at home and take the amenities of the artificial dales and woodlands to be the same as those in their former rural or sylvan habitat. Flitting, roaming or hopping from place to place or branch to branch; mating, nesting, and rearing their young; chirruping, cooing, and carolling to their hearts' content; loving instead of resenting the restraint on their freedom.

if they mind it at all, they would enjoy their existence quite as much as the human visitors who take to these resorts in their spare half-hours to watch the habits and movements of their feathered companions for delight and study. It is here that the skill and experience of the aviculturist become a necessity; it is here that the utility of ornithology as a branch of human knowledge becomes patent. The reproduction of conditions pleasant to the birds, and suitable to their ways of living, is possible only to a specialist who has a deep and intimate knowledge of bird-life. It is the application of this knowledge that serves to keep alive the birds in the artificial conditions of the aviary and enable them to thrive there. It also supplies the means by which the bounds of human knowledge in regard to birds may be made wider and wider; for the aviaries are the laboratories of the ornithologist and it is through them that aviculture has become a handmaid of ornithology. The

study of bird-life in Nature is beset with difficulties, and if we rely exclusively on the field observations of the ornithologist, we may have to wait long, and, in many instances, in vain. The field observer can not observe a particular bird the whole year through, and has, therefore, to glean facts in many cases from chance observations which may be misleading. The aviculturist, on the other hand, gets an opportunity of studying a bird for years in a scientific way and, if he does so, he can get at many truths regarding its nidification, courting, nesting etc., which are of the greatest interest and importance not only to a systematist for the purposes of classification, but also to a student of evolution. It is possible, therefore, through aviculture, to have not merely immediate pleasure and bits of knowledge of bird-life, the utility of which is admitted even by men with a practical turn of mind, but also to pursue their highest ideals of extending knowledge for the sake of know-

ledge, the immediate utility of which, though not so easily understood, is, nevertheless, very great on account of the fact that it alone can create the conditions through which discoveries of the highest importance become a possibility.

The practice of keeping birds in captivity dates in India from remote antiquity. The Vedic literature contains many references to talking birds like Mynahs and Parrots which were regarded as common favourites at the time. Pigeons were regarded as household birds of good omen. Accounts are available as to the caging of parrots at the time of Alexander the Great's invasion of India. This great warrior took away from here a number of ring-necked parrots which are known to this day as Alexandrine Parrakeets. *Ælian* informs us that "in India there were many parrots which were held sacred by the Brahmans because they could imitate human speech, and which were therefore neither killed nor captured by the

Indians." This statement is not wholly correct, because the talking propensity of the birds was discovered in captivity, and there was no sentiment among the people against the practice of caging them. The keeping of birds in aviaries, instead of in small cages, is noticed in the *Mrichchhakatika*, a sanskrit drama of about the 4th century A.D. The caging of talking birds for the adornment of houses and for pleasure was widely practised in ancient India, but evidences are meagre as to the caging of singing birds for the same purposes. Bigger birds like Saruses (Cranes), Peafowl, Raj-hans (Flamingoes) etc., were also kept at large in lawns and gardens in ancient India to heighten their beauty. Bird-fights were liked by the Hindu kings, while hawking was widely followed as a pastime. There is a Sanskrit work called *Syainika Sastra* by one of the Hindu princes, which gives a systematic study of the subject, recording and describing the habits and qualities of several species

of falcons, and the means by which they were caught, tamed and trained. The ancient Hindus were keen observers of birds and bird-life. It is my impression that Sanskrit works on birds have mostly been overtaken by the same fate that has befallen works on other special subjects of secular importance. The physical features of many birds as also many of their habits that escape the eye of ordinary observers are delineated by the world-renowned Sanskrit poet Kalidasa in his works with a faithfulness which is really admirable. Shortness of space prevents me from dilating on the point, but detailed information on it can be had from a work of mine in Bengali called *Pakhir Katha*. Suffice it to say that the evidence at our disposal does not enable us to have a full idea about the activities of the ancient Hindu in regard to bird-keeping; but there can be no doubt that it was extensively practised, and birds were kept in cages and open gardens not

only as a source of pleasure and as a luxury but also for diverse other purposes e.g., carriage of message, prevention of diseases by their presence (vide *Kautiliya Arthasastra*) etc.

The Muhammadan Emperors of India were very fond of cage-birds. Some of them were also fond of hawking and made elaborate arrangements for housing several kinds of hawks. The Emperor Akbar had several aviaries and bird-houses in which he kept a very large number of birds and pigeons. The first recorded attempt at cross-hybridisation in India is probably that of this monarch, who succeeded in raising the Fantail variety, appreciated so greatly by the Pigeon-fanciers of the present day. The sportive or fighting capacities of birds were greatly valued by the Muhammadans. The common Grey Partridges called Titar, Quails, Game Cocks and Bulbuls are noted for such capacities. A particular period of the year is still recognised as the time for holding such bird-

contests for the satisfaction of the people with a fancy for those spectacles.

Aviculture, as we understand it at present, is a very recent phase of bird-keeping. The term was first coined and used by the founders of the Avicultural Society of London in the latter part of the 19th century. The object of the Society is to encourage birds to live and thrive in congenial conditions in captivity in order to study their habits and the biological or ornithological phenomena for adding to the stock of our knowledge of bird-life. Foreign birds are to be extensively imported and studied. Before the establishment of this Society, bird-keeping in Europe followed a standard which was not exactly the present scientific one, and was rightly designated 'fancy'. The training of birds to imitate artificially created trilling sounds resulted in the nicely quavering song of the German Roller Canaries. The fanciers were also bent on unule-breeding and development and fixa-

tion of particular colour-marks in parts of the body. Aviculture, on the other hand, has for its province the scientific study of birds as mentioned already. Most ornithologists in the past were ignorant of the avicultural branch of their science,—a state of things which the Avicultural Society has helped a good deal to remove. How far it has been successful in the realisation of its objects may be gathered from the fact that in 1900, it could assert its claim so far as to have a special section for aviculture in the International Congress of Ornithology at Paris. The avicultural study of Indian birds was first systematically taken up by those English scientists who established a school of aviculturists in England. The most prominent names among them are those of Butler, Reginald Phillips, Astley, Teschemaker, Meade-Waldo, Seth-Smith, and Humphrys.

No comprehensive literature on Indian cage-birds from the pen of modern ornithologists is available. Sporadic attempts

at scientific caging and breeding of Indian birds are on record. Modern vernacular literature is utterly barren of books on ornithology generally, not to speak of a special branch of it regarding the cage-birds.

The ideal and the methods of enquiry of the European Aviculturists are almost unknown to the Indians who, however, appreciate the possibilities of many Indian birds for growing into valuable cage pets by virtue of their song, beauty and other attractive features. Europeans have not yet had ample opportunities for examining them thoroughly but the conclusion that would be reached by such an investigation in regard to the song-birds, would not, I think, be different from the opinion of Douglas Dewar that "song-birds are numerous in India...India possesses some song-birds which can hold their own in any company. If the shama, the magpie-robin, the fan-tailed fly-catcher, the white-eye, the purple sunbird, the orange-headed

ground thrush, and the bhimraj visited England in the summer, they would soon supplant in popular favour some of our British song-birds."

As a large number of Indian songsters is found in Bengal, the present volume is devoted to these song-birds, the subsequent volumes being reserved for the talking, fighting, and miscellaneous birds kept for show etc. I have not, however, confined myself wholly to the cage-habits of these birds, and this volume should not be regarded as a book exclusively on aviculture. Several Indian cage-birds are liked and caged by aviculturists in Europe, who thus become acquainted with their cage-life, but lack information about them in their wild state. I have attempted to deal in detail with this feature from direct field observation; at the same time, I have put in facts regarding cage-life supplementing my own experience by the results of observations made by European aviculturists in their bird-rooms. All the

birds touched in the volume are or were, sometime or other, inmates of my aviaries ; and I have said about them nothing which did not come within my personal observation, or was not verified as correct.

In including the birds in this volume, I have in view the limits of Bengal as they stand at present. When the first edition of Fauna (Birds) of British India appeared, Bengal was a much bigger province than it is now. It then included Bihar, Orissa and Chota Nagpur within its boundaries but those three divisions were sliced off into a separate province in 1912. A map of Bengal has been included in the volume, showing the present and past limits to enable the reader to understand the distribution of the birds treated of in the book. There is, however, a host of cage-favourites belonging to provinces other than Bengal. They do not as a rule come within my purview except in one or two cases in which the bird is not unfrequently seen in the fringe-areas of Bengal. The omission

of the king of songsters, the Nightingale, in a volume on song-birds may need some explanation, specially when it is so often seen in Bengal as a caged pet. It is never found in a wild state here. In fact, there was, and perhaps still is, some doubt as to its being an Indian bird; but I find that Mr. Stuart Baker has included it in his *Hand-list of Indian birds*. Another caged pet, not treated of in this book, is the Calandra Lark (*Melanocorypha maxima*), known to Indians as the "Jal". It is largely imported from China and is never found in the plains of India. Though an allied species of this Lark—*Melanocorypha bimaculata*—is a winter visitor to the north-western parts of India, it is seldom caught for the cage, people preferring the Chinese bird. Among other birds not noticed here are a few songsters like the Fantail Fly-catcher (*Rhipidura albifrontata*) and the Purple Sun-bird (*Arachnechthra asiatica*) which, though found plentifully in Bengal, are unknown as pet

birds. They are very delicate and are not likely to thrive on the regulation diet provided by Indian bird-keepers.

I have used freely in this volume the vernacular names of the birds with the object of familiarising the European readers with the local nomenclature. As regards the scientific names, I have followed Oates' authoritative volume—the *Fauna of British India*. The trinomial nomenclature which has been adopted in the second edition of the *Avi-fauna* (now in course of publication by Mr. Stuart Baker) has necessitated some very important changes in classification. As the published portion of the book reached me after I had sent my manuscripts to the press, I have no other alternative but to add an appendix containing the names. I have also appended some additional aviary notes on several birds the habits of which were observed during the period the text was in the press.

Dr. .Graham Renshaw, M.D., F.R.S.E.,

editor of the *Natureland*, has laid me under a deep obligation by contributing a foreword to this volume. I owe a deep debt of gratitude to Professor Bipin Behari Gupta, M.A., for his valuable suggestions, and to my cousin Dr. Narendra Nath Law, M.A., B.L., P.R.S., P.H.D., whose words have always served as a stimulus to my energy, and whose efforts have always been directed to the perfection of the results of my labours. Dr. Law has put me under a fresh obligation by including this volume in his Calcutta Oriental Series. My thanks are due to Mr. Sudhindra Lal Roy, M.A., for material assistance and to Mr. N. Kushari for the artistic drawing of the illustrations. I must also acknowledge the help I have received from Messrs. Nalin Chandra Paul and Raghu Nath Sil while putting the manuscripts through the press.

24, Sukeas Street,
Calcutta,
December, 1923.

S. C. LAW.

	Page
The Tuti (Scarlet Rose-Finch)	265
The Koel and its allies	284
Appendix	323
Additional Aviary Notes	325
Glossary	341
Scientific Nomenclature	343
Index	349

MAP

Bengal, past and present

Frontispiece

PLATES

	Facing page
Shama, male and female	I
Shama	9
Dhayal, male and female	20
Iora	119
Bush-Larks	129
Shama and nest	325
Shama feeding young }	
Shama nestling }	330

ILLUSTRATIONS

	PAGE
Magpie-Robin	34
Pied Bush-chat	38
Pied Bush-chat feeding young	43
Indian Bush-chat	49
Indian Bush-chat	51
Brown-backed Indian Robin, male and female	56

xxviii

	PAGE
Brown-backed Indian Robin with insect	60
Indian Blue-throat	67
Indian Blue-throat and nest	69
Common Ruby-throat, male	73
Common Ruby-throat, female	75
Indian Yellow-eyed Babbler	80
Indian Yellow-eyed Babbler, feeding	82
Indian Yellow-eyed Babbler, male and female	84
Gold-fronted Chloropsis, catching spider	96
Gold-fronted Chloropsis, hanging head downwards	98
Orange-bellied Chloropsis	108
Iora	112
Iora, family party	116
Indian Sky-Lark (mock-combat)	135
Indian Sky Lark	141
Bengal Bush-Lark	143
Singing Bush-Lark	144
Crested Lark	147
Bush-Lark and nest	150
Crested Lark	164
Orange-headed Ground Thrush	166
Orange-headed Ground Thrush, courting	180
Himalayan Whistling Thrush	193
Grey-winged Blackbird	208
Grey-winged Blackbird	210

	PAGE
Grey-winged Blackbird, female and nest	213
Racket-tailed Drongo in flight	229
Racket-tailed Drongo	236
Large Pied Wagtail on housetop	247
Large Pied Wagtail on ground	252
Hodgson's Rose-Finch	273
Koel	284
Hawk-Cuckoo	291
Indian Cuckoo	304
Pied Crested Cuckoo	305

PET BIRDS OF BENGAL
(SONG BIRDS)

NIKUNNI



PET BIRDS OF BENGAL

—:0:—

THE SHAMA

(CITTOCINCLA MACRURA)

The Shama, as a songster, is entitled to the first place in the whole feathered community of India, and for the matter of that, in Bengal. For a competitor to whom it yields in song, we have to look to regions which are, strictly speaking, outside India, to that unassuming bird which, despite its homely beauty, has been rendered immortal by its vocal charms—the Nightingale. Though the Shama is overstepped by this

prince of songsters by a long distance, yet the sweetness of its song is highly remarkable for its variety, depth, impetuousness, and modulation, which have made it the darling of both the high and the low throughout the length and breadth of India. This bird was familiar to our ancestors in the long past. The name *Shama* signifies 'glossy dark'—a predominant colour of the bird. The name has another fascination for the Hindus, whose love and reverence for the goddess of that name are so well-known. The bird has yet another charm. It is very docile in captivity, though so bold and fearless in demeanour. This, added to its beauty and its wonderful capacity for imitating human voices and calls of other birds and animals, has greatly enhanced its value as a caged pet. The attention which it can thus command from its master is no less remarkable. It is commonly kept in a lovely cage of superior workmanship, always wrapped up with a piece of clean linen, and taken out every evening for an airing.

Those who can afford, engage servants specially for this purpose, and it is not an unusual sight in many an Indian city to see several such cages taken out to a municipal park or open ground for the airing. A covered cage is always looked upon by the Indians as essential to keeping a bird in health and song. The belief has taken such a firm hold on the mind of the masses that no amount of reasoning can dissuade them from this practice which is obviously contrary to all hygienic rules ; for, in fact, birds in open cages, enjoying air and light, do not sing the less or fare the worse in health. In spite of this drawback in caging, the caged Shama can be pronounced to be an avicultural success, for the bird grows robust and lives long in confinement, and, except for the short moulting period, it sings throughout the year. And, since the bird is often caged when young, it gets accustomed to human intrusion, and acquires a non-chalant air about it, singing away its days quite oblivious of the presence of man.

The Shama, in freedom, is not a familiar sight to us. It is a denizen of thick jungles and dense forests, keeping generally to the underwood. It loves to frequent thickets in glades and valleys located in the midst of hills or mountains. It is, therefore, absent in the districts devoid of these natural features. In Bengal, which is one of the most thickly populated provinces, this bird confines itself to those jungly districts where human habitation is scarce. For this reason, it rarely makes the Deltaic portion of Bengal its place of abode, but is often a dweller of the western skirts of the districts of Midnapore and Birbhum. Eastwards from the Padma in the verdant hills of Cachar, Assam, and Tipperah, it is very numerous. In other parts of India, its most important ranges are the Terai districts of the Sub-Himalayan regions from Nepal to Dibrugarh in Assam. It is also represented in the well-wooded hills and forests of Central India, Orissa, Chotanagpur, and the Rajmahal Hills. In Southern India, it is

Distribu-
tion

a permanent resident of the hill-ranges of the West as far north as Khandalla in the Sahyadri. Its range extends beyond the Palk Straits into Ceylon, where it is very abundant. In the eastern parts of the Deccan, it is seen in Malabar. It is absolutely a stranger in the provinces west of the Ganges, and in Rajputana. It is widely and abundantly found all over Burma.

It is invariably a resident bird in the localities to which its range is confined, but in the hill-tracts of Cachar, it has been observed to be a winter visitant. It seldom

Field
Notes

ascends the hills to any great height, nor is it ever seen in cultivated tracts, however well-wooded.

The hills and forests, the jungles around streams, and woods in valleys and dales which the bird frequents are hardly considered by it as its safest retreats; and so, by way of further precaution, this wary bird betakes itself to the most impervious thickets, underwood, and clumpy bushes, where it is able to escape the most searching

observations. Almost everywhere within its range, the bird shows a preference for particular spots, over which it holds sway and even seems to stick to these favoured haunts in spite of devastations by occasional fires, which break out in the forests.

The Shama thus chooses for its habitation places where Nature is luxuriant and arrayed in its varied glories. In the mornings and evenings, from the midst of a bush or a bamboo-scrub—for which it seems to have a partiality—it mingles its impetuous melody with the music of rustling leaves and murmuring rills. And, while rapt in its own song, the least sound will send it scurrying through the air—so shy and easily alarmed it is ! But its flight is never long ; and re-lighting at a short distance, it vanishes into leafy cover, whence it renews its song with as much vigour. When the usual notes are thus suddenly interrupted, the bird gives out a sort of monosyllabic sound, which Legge says resembles *churr churr*. But to me it hears

more like *t'chat t'chat*. This peculiar sound is accompanied by a jerking up of the tail.

It never soars high into the air, nor is it ever seen perched on the topmost branches of trees ; but it makes it a point to keep as near the ground as possible, generally selecting low branches for perching. From such a position, it is always on the look-out for any insect which may stray into view. As soon as it notices its prey, it comes down to pick it up ; and if, in the act of swallowing the worm, it happens to spot another, it hops up to bag this one also. It is chiefly insectivorous, its menu consisting of grasshoppers, small beetles, ants, flies and their congeners.

Solitary in its habits, it aggressively drives away any member of its own community, and on the approach of one, it will at once attack the latter, fighting fiercely till one gives ground. The unsociability of this bird falsifies the proverb that *birds of a feather flock together*. This peevish

temper makes it shun even the proximity of its unobtrusive mate, who wisely keeps aloof, and from a distance, takes silent pride in the vocal attainments of her enchanter. If, by inadvertence, she comes too near her lord, he forgets all codes of chivalry and does not even hesitate to give her a sound chastisement.

The only season, when the Shama does not dislike the company of its mate, is when instinct obtains mastery over its temper in the mating period. It mates during April and June, and the female rears up the brood. Hollows in trees or stumps from two to twenty feet from the ground are selected by it for nesting, and sometimes she takes advantage of holes made by other birds. She stuffs up the hollow with dry leaves about three inches thick, and makes upon this bed of leaves a loose nest of twigs and grass. The eggs laid by her are usually four in number, rather small in size, and ovate in shape. The ground colour is dull greenish,

Nests and
Eggs



SHAMA

very often a pale sea-green. The whole is densely freckled with rich brown, thickly mingled with dull purplish.

If there is any bird which repays the care bestowed on it, it is the Shama. Its rich coloration, bold and vivacious movements, powerful and melodious voice and unlimited power of mimicry—all combine to make it the most desirable subject for the cage or the aviary.

Though in India this bird has received the attention of bird-lovers from time immemorial, no one seems to have studied it from an avicultural view-point. We know little of its wild life ; and we, in India, knew as little about its life in the cage till Europeans took up the study.

The Shama is one of those birds which in a free state shun all intimacy with man. But once caged, it seems to forget all antipathy towards him and becomes the most lovable pet. It never pines for its loss of liberty ; and its easy and cheerful life indicates that it fully appreciates the love and

care of its protector. If hearty cheerfulness conduces to long life, it is no wonder that the Shama stands a life of bondage so well and so long.

When accommodating the Shama, it should be remembered that it is very restless. It is always frisking about with its tail working up and down. It should have sufficient space inside the cage; otherwise its continual tail-play will injure that beautiful appendage of its graceful person. While introducing it into the aviary, it should be kept in mind that this bird, however tame it may be, has a wonderful combative temperament. The presence of another Shama serves as a red rag to a bull. It never condescends to accept others of its kind as chums, and seems to think that the latter are there to be its uncomplaining fags. When in a warlike mood, its healthy optimism would even lead it to give battle to its keeper, if the latter were to enter the aviary without the conciliatory dish of mealworms. It carries its aloofness

to such an extent that it would at first refuse to chum up with a female Shama if introduced into its dwelling. The male does not seem to be at all anxious for a feminine companion. You can never thrust a female Shama near a male without a lengthy introduction. The female, knowing well the tyrannical temper of the male, will at first shrink in fear. Both should at first be kept in different cages inside the same aviary. Occasionally, they may be let loose. At first there is sure to be trouble, but the male will begin to tolerate the female gradually, and may even mate in the long run.

Indian experience has seldom recorded any instance of the Shama breeding in captivity. A couple of years back I noticed a pair trying to build a nest in the hollow of a stump inside an aviary of the Calcutta Zoological Gardens, but nothing came of it. A pair of Shammas, in the aviary of Mr. G. C. Mandal of Calcutta, built a nest and hatched their young which, however, did not survive long. But we find mention of several instan-

ces of the Shama having bred in captivity in England. In this direction, the observations of Mr. Reginald Phillips are of great value. The female Shama seems to take the initiative in building a nest. The male never responds to the female's silent appeal until the former is thoroughly satisfied as to the latter's earnestness. In selecting materials for the nest, the female shows much discrimination. In one instance, it carried dead leaves of Ivy and Euonymus while it studiously rejected those of Rhododendrons. It chose straw and the finest hay for the inner lining of the nest but never looked at moss and hair. The period of incubation seems to last for about eleven or twelve days. It is only when the nestlings come out that the keeper will feel the greatest difficulty as to food. While in ordinary times the Shama would take to all sorts of artificial food, it refuses to eat anything but insects at this time. The keeper will thus be hard put to in maintaining a sufficient supply of live grubs both

for the chicks and the parents. A regular supply of mealworms and cock-roaches should be kept up at this time. The mealworms need not be cut up into pieces. The capacious throat of the young bird can receive whole cock-roaches without the least danger of suffocation. In India we hand-rear captive nestlings with *sattoo* made into soft paste with water, and a few grasshoppers. It is interesting to note how the parent-birds try to keep the fact of its nest a secret. In your presence it will never go straight to its nest but will make a show of stopping at different places before finally entering it. The Shama is very careful about sanitation, and the male may often be seen carrying the excreta, and dropping them at places far from the nest. When the young are considered able to fly, the mother-bird gives them a preliminary course of training by supporting them from beneath, after shoving them off a perch. As soon as the aviary-bred nestlings attain their adult plumage, the question naturally arises as to

the propriety of in-breeding and even trying any experiment of cross-breeding a Shama with an English bird like the Robin.

In this country it thrives well on *satoo* prepared with boiled ghee, grass-hoppers, and a few maggots. In England it is given cock-roaches, mealworms, gentles, ants' eggs and the yolk of hard-boiled eggs. Pieces of raw meat are also given, but this should be sparingly used, for too much of this food may bring on diarrhœa. Ordinarily the Shama does not require any great attention. But at the time of moulting, careful watching and feeding are necessary, for then it is susceptible to a kind of warty growth on the legs and feet and the space immediately above the eyes. It should be carefully guarded against cold and draughts during the period.

Its song loses none of its charm in confinement. Besides its usual song, it has a habit of uttering a few set phrases over and over again, pausing after each utterance. These repetitions are rendered in the verna-

cular as "*Gopeejee rojee bhejo*" (Send us our daily bread, O! Gopeejee). These sounds are repeated a great number of times and then suddenly changed. Its imitative faculty knows no bounds. It can mock any bird to perfection and can faithfully render the voices of cocks, crows, and kites. Even the female Shama is not altogether devoid of song. My own specimen sings as beautifully as the male and repeats the above-mentioned set phrases. It is no wonder therefore that in some countries, the bird is called "*Hundred-Tongued*."

In India the Shama is housed in a cage which is generally kept covered. But the aviary with plenty of space, air, and light is the best place for keeping it. It may be rough in its dealings with its own kind, but it seldom gives trouble to others of the avian community. If you care for its cheerfulness, you should always provide for the luxury of a bath, for this bird is inordinately fond of a dip in water. It is curious that if there be two male Shammas in

the same aviary, none would even bathe. Because a bath means wet plumage which means damaged armour to a bird, and a wet bird succumbs easily if attacked. In one case it cost a Shama its life for bathing in an aviary where it had a pugnacious companion.

The Shama is easily available for purchase all over the country. Birds caught young in the Terai are brought down in numbers to Gorakhpur and Monghyr to be hand-reared. These birds take to cage-life easily ; but those from Midnapore, generally caught while adult, very often pine away in captivity.

The Shama's outward appearance is beautiful and striking, if not gaudy. The head, back, and throat with the Coloration neck and breast are black with a splendid gloss throughout. * All the underparts are a rich bright chestnut

* I have, however, noticed Shamas with chestnut streaks just above both the eyes—a thin straight line elongated bothways towards the nape and the mandible but not reaching those parts.

except the thighs which are white. The rump and the upper tail-coverts are white ; and during excitement when the bird puffs up its whole plumage, the downs on these two parts show conspicuously in two fluffy patches of snowy whiteness. The wings are dark brown, and the primaries edged with lighter brown. The tail of the Shama is a very important part of its anatomy inasmuch as the length of the tail gives to this extremely graceful bird much of its grace. The central tail-feathers are the longest while the lateral are much graduated, which means that they gradually become shorter on both sides. The two pairs of central tail-feathers are completely black, while the others are white at the end, the white increasing gradually on the outer feathers. The basal end is always black. The line of demarcation between the black and the white is drawn in an irregularly slanting direction.

This pleasing coloration is denied to the less assuming female Shama, in which black

is replaced by slaty brown and chestnut by rufous. The female birds of Tenasserim are often darker than their Indian cousins.

The bill of the Shama is slender, compressed and black, its legs are of pale flesh-colour, its claws light horn and eyes deepest brown.

The baby Shama is dark brown in its upper parts with reddish edges to wing-coverts; underneath, it is pale rufous with brown mottlings on the throat and breast. Its colour, however, varies a good deal. A full-fledged young does not take long to assume full adult plumage.

The usual length of the Shama is eleven inches, the female being smaller by an inch in the tail.

THE DHAYAL

(*COPSYCHUS SAULARIS*)

If there is a bird, very familiar in an Indian village, and has a voice exquisitely sweet, it is the Dhayal. The black and white markings of its body correspond so nearly to those of the Magpie, that it is known as the Magpie-Robin. The bird resembles the English Robin in many of its habits. Constantly jerking up its tail, it loves, like the Robin, to frequent places close to human habitation. Bold and vivacious, it steps into our verandahs, and nests in the holes and crannies of human dwellings. As a songster it has no rival in the plains of India, the Shama being a bird of the forest depths. Its notes are clear and varied. They greet our ears the very first thing in

the morning, and when all nature is silent in the evening, their cheerful music rings out a farewell to the departing day.

The Dhayal is indeed a superb singer. With its presence in the gardens, orchards, barnsides, and the backyards of houses, it is one of the attractions of our rural surroundings. The semi-domestic nature of the bird has left it in comparative liberty, and though it is often caged, people have not the same rage for it as they have for the more unfamiliar Shama. Legge says that, like the latter, the Dhayal is a mimic; it can roll its tongue in imitation of other birds. Layard also records that its power of mimicry manifests itself in its wild life as well. This, if true, is singular, as it is unlike other birds that have similar habits. Even the parrots do not show this trait while at large. The Dhayals in my own aviary, however, do not "degrade" their voice, as has been observed also by Gould, "by apish tricks of imitation." The Dhayal's pugnacious instinct makes it a special favourite



Male

DHAYAL

Female

with the rich in Nepal where it is kept like gamecocks for fighting.

It is one of the most widely distributed birds in India and is found everywhere except in the extreme North-west beyond the Punjab. In Rajputana and westwards, the desert tracts are too arid for its habitation. It is, however, found in Kathiawar, Sind, and in and around Karachi, whence it departs in April with the advent of summer. Eastwards it is abundant and is an inevitable feature of bird life everywhere—both in the Sub-Himalayan regions from Mussoorie eastwards, and the hills and plains of Aryavarta. In Bengal, no place is unrepresented up to the very base of the Himalayas, where it is not seen higher up than the Terai. Thence its range extends up to Burma. Though not so abundant in the Deccan, it is pretty numerous along the Hills in the West, and in the lowlands of the Madras Presidency in the East. It is distributed throughout the whole island of Ceylon.

Distribu-
tion

The characteristic difference between the Shama and the Dhayal is that while the former confines itself solely to the most secluded depths of forests, the latter, though not unknown in the solitude of woods, seldom strays very far from the vicinity of man. Its graceful form is always in evidence around us. Early at dawn, before other members of the fledged tribes are astir, it pours forth its music in a continuous stream from the foliage. At noon it is generally busy, silently foraging for food in the chequered shades of gardens and orchards. While thus engaged, the approach of man does not seem to ruffle its composure, and except bestowing a half-amusing quizzical look, it cares no more for your presence than for that of any other living thing. At the same time, it will not allow you to take any undue liberty with it. If it notices that you are trying to come very near, it will fly away a few yards, and perching on the branch of a tree, regard your discomfiture with a sublime complacency or

defy you by a musical rebuke for thoughtlessly disturbing it at its midday meal. In the evening when the day's labour is over, it resumes its rapturous strain of music till late at dusk.

This habit of keeping early and late hours is true also of the more retired Shama. In fact, we observe many traits common to both these birds. The Dhayal is as voracious an insect-feeder as the Shama. It seeks its prey near the ground and generally selects the low branches of trees for perching, though it is not uncommon to find it seated on the top of some large tree or other elevated spots. In pugnacity, it is almost a cousin-german to the Shama. Like all pugnacious birds, the Dhayal is unsociable to a degree, staying alone throughout the greater part of the year, and only occasionally in the company of its mate.

Sometimes one may notice a deviation from this habit of exclusiveness on the part of the Dhayal. But this is seasonal only. Prompted by a freshly roused combative

instinct, the bird suddenly develops a gregarious impulse during the mating period. It is not unusual to observe a number of Dhayals congregating in an open space in a garden or a grove to fight out duels like the knights of mediæval Europe. As each bird comes out a winner, its success is received with such an uproar of applause that the uninitiated may easily mistake it for some disaster in the avine world. Amidst such din and commotion, each competitor engages in combat till one is left the sole champion of the field. Then, mighty pleased with themselves and their performances, the birds retire to their roosts, chattering the while and discussing perhaps the merits of different competitors. The Dhayal's bullying tendency very often betrays it into bondage. Bird-catchers take advantage of this propensity and employ tame birds to entrap it. Among the various devices which are resorted to, one is to bring a caged Dhayal to the place where wild ones abound. Small sticks smeared with bird-

lime are attached to the cage. As soon as the captive bird begins to sing, the wild Dhayals while coming down to challenge the newcomer perch upon the sticks and get fastened to the bird-lime. Sometimes the tame bird is taken out of the cage and tied to a long piece of string. While combating its wild antagonist, it holds the latter in such a firm grip with its beak and claw that the catcher has no difficulty in securing the bird.

The Dhayal is full of activity. Watch it feeding on the ground in the alleys and by-lanes of our countryside, you cannot fail to notice its quick and animated movements. With its wing half open or almost drooping, it hops about in search of its prey, and at each hop, stops with a jerk of its tail instantly spread out and turned to the sky. If cattle pass by at the moment, it flies up to a low twig and keeps a sharp eye on any insect or grub that may chance to be brought to light. The moment it is noticed, it comes down to snatch it up and after

beating it to death, returns with it to its former perch. Always in motion, it raises and depresses its body accompanied by a flirtation of its tail. This tail-play is most in evidence during the mating season and specially at the time when several of Dhayals are engaged in fighting out their duels. The display consists in expanding the tail like a fan so as to show the white outer feathers, and continually jerking it up and down. Although far from shy, the bird likes the security of a thicket and revels in the shade. While warily working its way along the hedge, it betrays its presence by uttering its shrill note every now and then. It seldom sings in full view of man whose sudden intrusion would check its flow of vocal music; and when thus interrupted, it assumes a still attitude, fixing its cold look upon him. If you advance nearer, it will fly up to a higher perch or a more distant twig. When flushed, it is seen to fly directly from its perch in the cover of the thicket to a more remote hiding place.

The hen bird is not slow to follow her mate's example, but if she flies, she keeps aloof from her lord and loses herself amidst dense cover. While at ordinary times the Dhayal seldom indulges in protracted flights, it has been observed to develop a tendency for sustained aerial gyrations in the mating season. The female Dhayal is far less obtrusive than the male, and as she has a less striking appearance, she easily eludes detection. In conformity with the etiquette of pugnacious birds, she knows what distance to keep between herself and her lord. This explains why the males appear singly so often, but if you take a little pain to watch carefully, you are likely to detect its retiring partner not very far off. The Dhayal is conscious of its right to its territory and tenaciously keeps to its hunting ground. It is not timid. Fond of insects as it is, it may be easily encouraged to closer familiarity with man, if we care to put now and then a few grubs or disabled worms in its way, or fix up in some safe place close to

our habitation little boxes or even earthen pots which will be readily acceptable to the bird as its nesting site. It is a beneficial bird as far as its insect-feeding habit goes; and so, the more it is left to its liberty and allowed to multiply, the better.

The Dhayal does not appear to sing in the same way all the year round. It has been observed to be in full choral activity chiefly during the mating period viz., in April and May. The bird seems at that time to be possessed with a musical mania, warbling forth its amorous notes, which by reason of their volume, depth, variety, and sweetness sound perfect to the human ear. From August, its song begins to lose much of its sweetness until in mid-winter it ceases to fascinate us as before. And lo! when February comes, its voice begins again to get into form and emerge once more into full-throated melody towards the close of March.

The Dhayal takes to house-keeping at this period and for nearly four months it is busy

rearing up its family. The bird seems to have a remarkably monogamous instinct.

Nests and
Eggs

Observations of its habits in the aviary substantiate the fact that a cock-bird which has lost its hen refuses to chum up with any other female, and feels so much enraged as to kill all subsequent wives submitted for its approval. The Dhayal breeds throughout the plains of India ; but many birds resort to the Dhoons and Terais of the Himalayas during the nesting season. Holes in trees, walls, banks, corners of the under-roof or the caves of a verandah are the places generally selected for nesting. The nest is invariably placed in a secure and sheltered position and is made up of roots, grass, fibres, feathers—in fact anything that is to hand is utilized for the purpose. In the hills, the nest is a shallow loosely-built cup of moss, small twigs, and dry leaves. The Dhayal develops a great fondness for particular places. However far it may stray from its abode in other seasons, it will come back year after

year to the same spot as soon as the nesting season arrives, and build its nest in exactly the same place. Five is the usual complement of eggs, which are oval, neither broad nor very narrow, somewhat elongated, with a moderately glossy surface. The ground colour is sometimes greenish or greenish white, and sometimes greenish-blue with rusty blotches.

In the cage, the Dhayal is no less attractive than the Shama. It becomes tame and docile, and appears very happy, seeming to realise that "*iron bars do not a prison make*",

Cage-life and sings away its time as sweetly as when at liberty. Young, hand-reared birds grow up very hardy and make very nice pets, but adult birds seem to feel their loss of liberty very keenly just after capture. The provision of a bath in the cage delights it immensely, for it enjoys a dip in water as much as the Shama. Its treatment in captivity is almost similar to that of the latter. The food prepared for the one is well suited to the other. Only a

little more insect-food is necessary in order to keep it in health. This discourages many people from caging it. Apart from this question of its insect-food, there are good grounds for leaving it at liberty. The bird is so much attached to the vicinities of human habitation that it seems not to be a gain to deprive it of its freedom. The growth of civilization with the concomitants of modern town-planning is working such a havoc on bird-life that even many of the commonest birds have chosen to leave our company for ever. It is not advisable, therefore, to make life unbearable even for those few that still adhere to us. In Bengal such a large number of nestlings of this bird is caught during the nesting season that the law meant to prevent it by declaring the season a closed period for bird-catchers utterly fails in its object. One effect of this indiscriminate capture is that in Calcutta what was once a familiar garden-bird a few years back is now a *rara avis*.

It is not very difficult to get the Dhayal

to breed in captivity: Any small wooden box comes handy to it for nesting. It is known to have done so successfully in England. In a few instances, however, the nestlings were killed by the cock-bird, which had to be separated from the hen soon after she had laid eggs. When it is housed in an aviary with other birds, care should be taken to eliminate the smaller and weaker birds, as the latter are likely to be worried by the bad-tempered Dhayal.

The bird is very well-proportioned, has a graceful form, and looks very bold for its tail which is almost always carried erect. The upper part of its body is black with a blue metallic gloss, the white
Coloration wing-coverts forming a broad band.

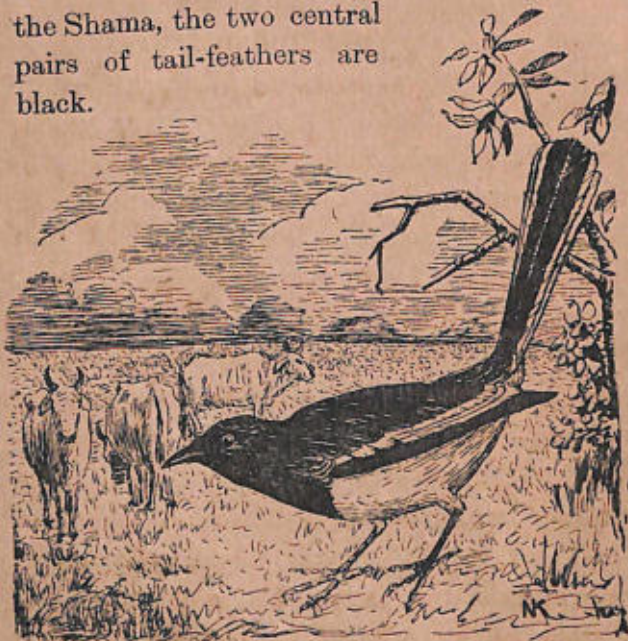
The under-surface is white from the chest downwards. The two median pairs of tail-feathers are black, the others white, the fourth pair is either white with a small black tip, or white with a greater or less amount of black. The bill is black, iris hazel-brown, and the legs dark plumbeous.

In the female, the upper part of the body is uniformly dark-brown glossed with blue. In the wings and tail, the white is distributed as in the male. Chin, throat, breast, and sides of the neck are grey; forehead and cheeks mottled with white and grey; sides of the body, vent, under tail-coverts pale fulvescent, and middle of the abdomen whitish.

In the young, the upper plumage is dark brown streaked with rufous; the white in the wings being as that in the adult; the tail brown with similar white patches. Throat and breast greyish brown streaked with rufous. The rest of the lower body is white. The young assume adult plumage as soon as they are fully fledged.

The Dhayal is considerably smaller in size than the Shama, being only about eight inches from the tip of its bill to the end of its tail. But if we leave the tail in both cases out of account, the Dhayal becomes larger than the Shama, the reason being that the latter has a longer tail. The

Dhayal's tail which is much shorter equals its wings in length. In both the Dhayal and the Shama, the two central pairs of tail-feathers are black.

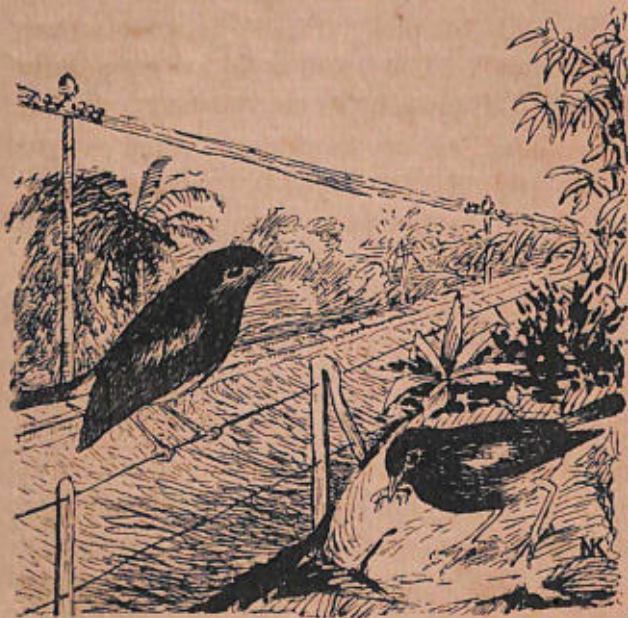


THE PIDDAH

(PRATINCOLA CAPRATA)

The Piddah, otherwise known as *Pratincola caprata*, is a very wee, little bird. Its popularity is in an inverse ratio to its diminutive size. It is not an unworthy minstrel of the Indian countryside. Considering its tiny body, the sweet and pleasant warble produced by its subtle mechanism is a marvel which makes it highly esteemed as a cage-bird. Though its song has not the power, volume, and compass of either the Shama or the Dhayal, it is still beautifully sweet. Foreigners, too, have not been chary in their praise of its song. Blyth states that "its song approaches to that of the English Robin, but is more uniformly plaintive". Its sprightly movements and courageous demeanour are no less its attractions. It is

the Piddah may be seen indulging in gay flutterings in the most self-approved manner. It does not probably altogether shun



human proximity. For, once driving through one of the suburban lanes of Allahabad, I noticed on the low branches of wayside trees several Piddahs which did not seem at all ruffled by the rattling of

my *Ekka*. It has, however, the stereotyped habit of using the top-most twigs of a bush or the summit of a large boulder as its perch and observatory, from where it constantly sallies out to pick up passing insects from the ground. These insects are generally carried to its perch to be finished off, but sometimes they are swallowed when caught on the ground. The bird is entirely insectivorous and has a special fondness for caterpillars, black-ants and beetles. Flies and midges, too, are not discarded.

Shyness is alien to the character of this little bird. It does not care for your presence until you are too uncomfortably near ; and, even then, it avoids you only by a short flight to a neighbouring bush, whence with a defiant up-jerk of the tail, it watches your further movements. If, instead of pursuing it, you leave it alone and care to watch the bird, your patience will be fully rewarded. For it is one of the boldest, springiest and most elegant of our birds and its movements are extremely graceful. It

is never at rest. From one perch it will fly down to the ground, pick up an insect and at once carry it to the same or another perch—all done in a flash. There the insect is swallowed; next, the tail is jerked up as a sign of self-satisfaction and, lastly, a strain of pleasant chirrup is sent forth. Then after looking round in the most self-assertive manner with one or more tail-movements, it sallies forth again. The extremely mobile tail of the Piddah is a remarkable feature of its anatomy and seems to have spring-adjustments from the way it is continually worked up and down. But this movement is not altogether mechanical. Every up-jerk of the tail is expressive of an emotion—pleasure or displeasure. The tail-play is most frequent during its meals, the tail indicating with barometrical precision its pleasure at every morsel of food acquired. The tail-jerks again, accompanied by angry *t'chat, t'chat* sounds, are expressive of anger when intruded upon by man or beast, or when foiled in an attempt to catch a parti-

cularly tasty insect. No one should suppose that this little bird is incapable of giving expression to its displeasure. Not being over much fond of company, it dislikes close proximity of birds of the same feather. On such occasions and in the breeding season it not only expresses its indignation by angry up-jerks of the tail, but also becomes irascible and pugnacious. In a big feeding ground several of these birds may be seen but each keeps within its own range and seldom intrudes on the other.

I have already said that this bird amply repays observation. Though small, its body is stout and strongly built. Its legs are strong and in all its movements there is an elegant buoyancy. Even its melodies are expressive of the bird's buoyant and intrepid nature. There is no constraint in its vocal outpourings, which very often consist of notes that are generally unmusical chatterings. But in between them, the bird gives out short warbles which are distinctly sweet and melodious. Towards evening, when

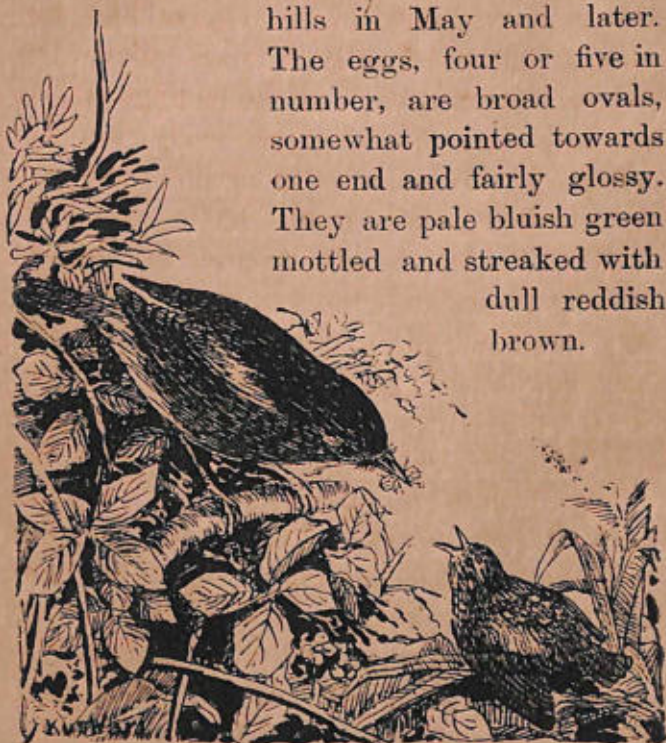
after the day's labour it is about to retire to rest, its chatterings increase which are always accompanied by its Dhayal-like tail-play. But occasionally it rises above this vulgar demonstration of its feelings and, in the mornings specially, no early riser will miss its joyous melodies poured forth with great ardour usually from a bush.

The Piddah builds its nest in the most unlikely places and never minds the proximity of man. It builds in a hole in the ground, "the foot-print of a bullock serving the purpose very frequently,"

Nests and
Eggs

as Oates says. Sometimes the nest is placed on the ground under the shelter of a tuft of grass. Holes in banks close to frequented roads, or even in a well, are not rejected by it as unsuitable. It is not at all punctilious in the choice of materials for its nest which is a shabby pad of soft grass lined with fine roots, vegetable fibres, horse or even human hair, cotton, wool—in fact anything that it lights upon. Its breeding season is from

March to June. In the plains, however, it lays mostly in March and April, but in the hills in May and later. The eggs, four or five in number, are broad ovals, somewhat pointed towards one end and fairly glossy. They are pale bluish green mottled and streaked with dull reddish brown.



The caged Piddah is out and out a hand-reared nestling, numbers of which are brought down for sale to the Calcutta bazaar every rainy season from the north-western parts of the country. Their value is easily guessed, for a hand-reared bird makes a nice pet, and a bold and long-lived cage-bird. Although on account of its diminutive size, it can be kept in the smallest cages, an aviary is its fitting accommodation ; for this bird which is always full of activity wants sufficient space for its sprightly movements. As a matter of fact, the Piddah receives scant treatment from its Indian keepers—a very small cage with a dirty air-blocking wrapper is all that is considered material for its existence. And the poor bird has such a lusty and robust constitution, and an affable temper that it readily reconciles itself to its lot ! But to speak the truth, the dingy cage is a veritable hell for the bird, which loves open life and demands ample scope for its unceasing activities. Like the

Dhayal and the Shama, the Piddah is pugnacious to a degree, fighting not only with its own kind, but its distant relatives and sometimes other birds which are much bigger than itself. Self-assertion, which is a conspicuous trait in its character, betrays it into frequent quarrels with the Robins (*Thamnobias*) and Red-starts (*Ruticillas*). So the housing of Piddahs in an aviary requires a little attention, as it is not unattended with dangers. Broadly speaking its treatment in captivity should be similar to that of the Shama and the Dhayal, and the diet which is appropriate for the two, will suit the tiny Piddah admirably.

Nothing is known about its breeding habits in captivity, and the people who have a mind to try the experiment feel handicapped for want of female birds which are not at all available for purchase in the Indian markets. The reason lies in the fact that the male Piddah is alone valued as a song-bird and consequently caught and caged while quite a nestling; and as the male

develops the distinctive white wing-patch while it is quite a chick, it is easily recognised and picked out by bird-catchers.

The Piddah is one of those birds in which the sexes differ in colour and the Coloration seasonal changes of plumage are quite marked.

The male is clothed in black except the rump, the ventral portions and a bar on the wing which are white.

In the female grey with reddish-brown streaks replaces the black and the white is replaced by wood-brown; the tail is black.

In autumn after the completion of its seasonal moult, the bird puts on a new garb. This happens when its new feathers which overlap like the scales of a fish show their edges only; and as the colour of these edges is brown in the case of the male bird, and greyish in the female, the effect is to give its owner either a brown or a greyish appearance. But the edges wear away gradually, so that, as the hidden portions of the feathers

begin to re-appear, the original colouring of the bird is restored.

The young birds are tawny brown with dusky mottlings. The male chick becomes easily recognisable from the earliest period by the white wing-patch.

The iris of the Piddah is brown ; its bill, legs and claws are black. The bill is broad at the base and well notched. In size the bird does not exceed five inches and a half.

the same characteristics as the other bird, though less known as a cage-favourite. It is dressed in a parti-coloured attire—a lovely black cap with a ruddy chestnut waistcoat, set off by its immaculate white collar—which gives it a distinctly handsome appearance and makes it a conspicuous figure amidst its furzy surroundings. But all this splendour of its gay plumage is lost to mankind, as unlike the Dhayal, it is too shy to visit our gardens and orchards. It gives

Field
Notes

a wide berth to human surroundings but avoids forests as well like the Piddah. It prefers the open, keeping to tracts covered with small furzy bushes, or to cultivated fields, specially corn, maize and millet fields, and sugar-cane plantations, where they destroy the insects. It perches on a clod of earth, a post or a swaying stem in search for insects, and flies down to the ground for just sufficient time to catch its prey. It is prodigiously active. The opening and jerking up of the tail at



short intervals is a frequent habit with this Piddah. This bird is commonly believed to be a winter visitor, migrating to Siberia in summer. But it is doubtful if such small birds, that never associate in flocks, undertake such long and arduous journeys. They are very probably local migrants. So many birds breed in the Himalayas and

in the hill-ranges of the Punjab and the N. W. Frontier Province that Oates is inclined to differentiate it from the Siberian species which differs in the depth of its black and red colours. At all events, during winter, birds of this species populate the whole of Northern India as far south as Belgaum. Further south, its existence has not been

Distribu-
tion

noted, but Hume says it has been reported common in south-west Mysore. It is commonly met with in Bengal in winter. Two of the birds in my aviary were caught within a few miles from Calcutta. In summer the Kher-Piddah is found throughout the Himalayas from Afghanistan to Assam up to an elevation of 5,500 feet. It nests also in the Salt-Ranges, the Suleiman hills, in the plains skirting these hills, and in the valleys of the Sutlej and the Beas.

It breeds in April and May and has probably more than one brood in the year. The situation of the nest varies according to locality. It may be found in some low

thick bush or shrub, or dense tuft of grass,
on or near the ground. Some-
times the crevices on hills near
the fields serve the purpose. Its
nursery is generally a cup of coarse grass
mingled with moss, lined with fine grass,
fur, cattle-hair, or feathers. Nests placed
in holes in walls are mere shapeless pads.
The eggs are four or five in number, pale-
green with brownish-red spots.

The reason why in India it is scarce as
a cage-bird is not difficult to detect. It
evades the gaze of bird-fanciers on account
of its retiring nature and its song can hardly
compare with that of the Dhayal
and the Shama, which are there-
fore so much liked as cagepets.

But the Kher-Piddah is undoubtedly a
more handsome bird than the pied Bush-
chat, and to those who are fastidious about
size and colour, its value can hardly be over-
looked. As compared with the Piddah, its
behaviour in an aviary is exemplary. It is
neither rough nor irascible in its dealings

with its mess-mates, though it does not forget now and then to show its temper towards its own kind. It is undoubtedly the more delicate of the two and therefore it is not safe to leave it in the company of any pugnacious birds. Sheer dread of company is enough to kill it. Insect is its favourite dish, but the invaluable *sattoo* meal cannot be dispensed with. Bath and sunrays are also indispensable to keeping it in health and spirits.

Like the Piddah, it undergoes a seasonal change of plumage, but in it the change is more marked. In summer, the whole upper body of the male is black except a wing-patch, rump, upper tail-coverts, Coloration and a large spot on each side of the neck, all of which are white. The breast and lower parts are bright-red—a colour which is entirely absent in the Pied Bush-chat. The red is deep on the breast and pales lower down. The female is a reddish-brown bird without the white collar on the neck. In summer it looks a little

paler. The young is a brown bird with mottlings on the breast.

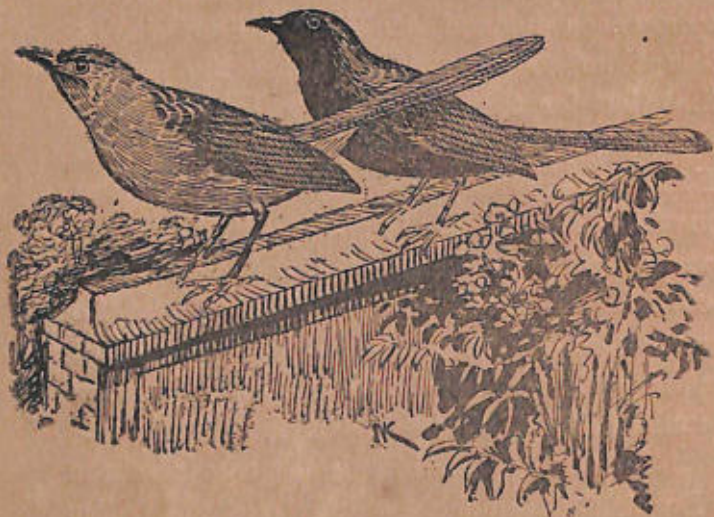
In winter the black feathers of the male are edged with reddish-brown so that the cumulative effect is to give it a reddish-brown appearance instead of black. The bird at this time so closely resembles the female that but for the white collar in the neck the sexes are well-nigh indistinguishable. Except when they are in full dress in the mating season, it is difficult to come across two birds which are exactly alike in colour. This is due to the fact that the young birds are gradually assuming adult plumage, while the feathers of the old are undergoing a process of continual abrasion.

Our Kher-Piddah is a cousin of the English Stone-chat which "one may often note by a furzy wayside, perched on a bush." The English bird has a "nice little song and breeds early in spring, lays five eggs of dull pale sea-green with reddish spots". In coloration, too, they are similar, except that the white portions in the English bird are broader than in the Indian.

Indian Robin

THE KĀLI SHAMA

(THAMNOBIA CAMBAIENSIS)



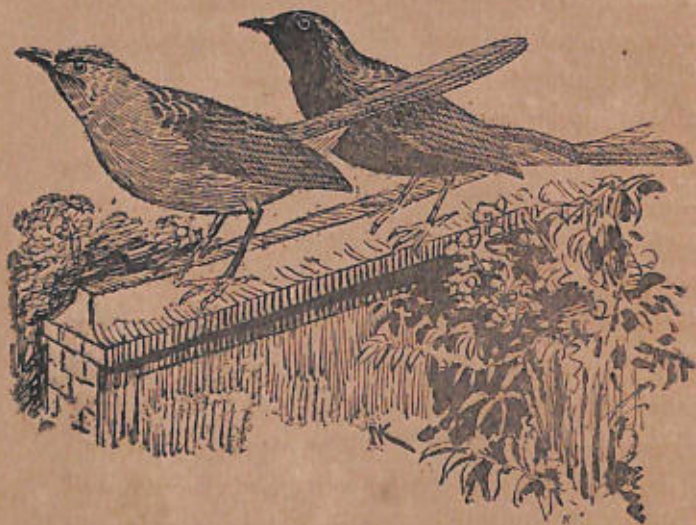
As graceful and well-built as the Dhayal, though smaller than it in size but larger than the Piddah by about an inch, this bird lends a charm to the Indian countryside by its agile movements and smart tail-play. It is called the Indian Robin by the English residents of

this country. The Indian name of the bird—Kāli Shama—is apparently a product of association of ideas. Any one who sees it will at once be reminded of the Shama,—so close do the two birds come as regards their movements and tail-play. It is the absence of the chestnut colour from the breast of the Indian Robin (where it is replaced by black) which distinguishes it from the Shama and bestows on it the distinctive vernacular name. The chestnut, however, is shifted down to its seat of trousers, where it becomes visible whenever its tail is thrown far up over its back. The darker tone of the general body-colour of the Indian Robin suggests a likeness to the Piddah (*Pratincola caprata*) with which it is found often in similar surroundings. The chief point of its resemblance to the Piddah is in its habit of nesting in holes and capturing its quarry on the ground, but in this latter habit, we notice some difference. Instead of quietly waiting like the Piddah for the approach of insects, the Robin hops and

Indian Robin

THE KĀLI SHAMA

(THAMNOBIA CAMBAIENSIS)



As graceful and well-built as the Dhayal, though smaller than it in size but larger than the Piddah by about an inch, this bird lends a charm to the Indian countryside by its agile movements and smart tail-play. It is called the Indian Robin by the English residents of

this country. The Indian name of the bird—Kāli Shama—is apparently a product of association of ideas. Any one who sees it will at once be reminded of the Shama,—so close do the two birds come as regards their movements and tail-play. It is the absence of the chestnut colour from the breast of the Indian Robin (where it is replaced by black) which distinguishes it from the Shama and bestows on it the distinctive vernacular name. The chestnut, however, is shifted down to its seat of trousers, where it becomes visible whenever its tail is thrown far up over its back. The darker tone of the general body-colour of the Indian Robin suggests a likeness to the Piddah (*Pratincola caprata*) with which it is found often in similar surroundings. The chief point of its resemblance to the Piddah is in its habit of nesting in holes and capturing its quarry on the ground, but in this latter habit, we notice some difference. Instead of quietly waiting like the Piddah for the approach of insects, the Robin hops and

runs about on the ground for catching them. The chief difference is that while the Piddah is shy and avoids the vicinity of man, the Indian Robin is quite the reverse.

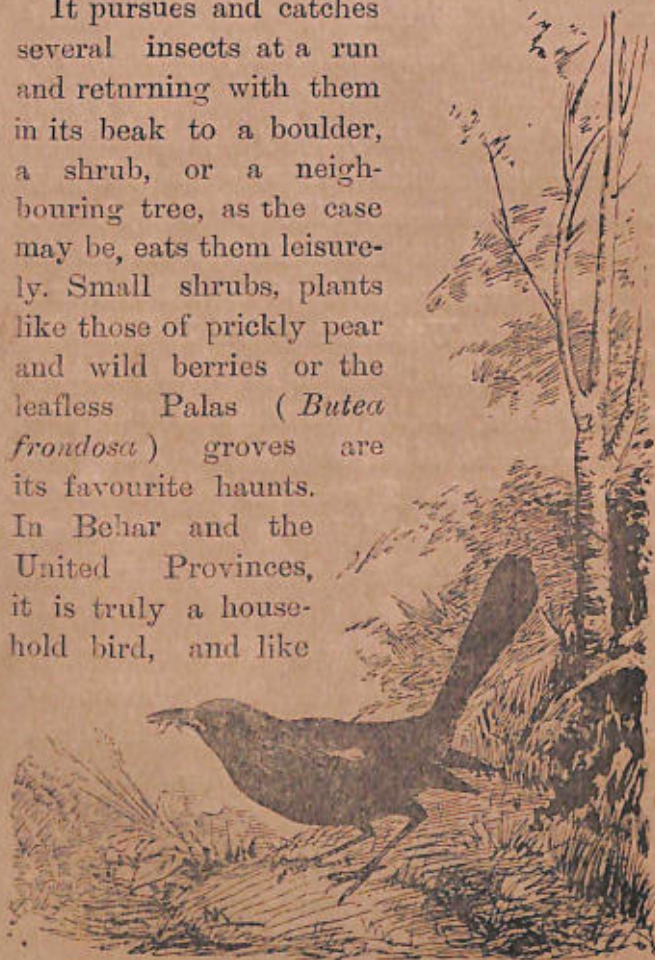
This bird belongs to the genus *Thamnobia* which contains two Indian species with distinct ranges of distribution—the species *cambaiensis* (the brown-backed Indian Robin) belongs to Northern India while the species *fulicata* (the black-backed Indian Robin) is confined to southern India. The latitude of Bombay seems to be the geographical borderland of these two species. In the tract of the country from Ahmadnagar to the mouth of the Godavari, both the birds are found, and, during the moulting season, it becomes difficult to discriminate between the two species. Both the species are resident. The Northern species is locally known as the Kāli Shama. It is not common in Bengal except in the region west of the Hooghly. It is not a bird of the plains and lives in rocky, rugged districts where the climate is

extreme. "Their idea of an earthly paradise," says Dewar, "is a flat, rocky, barren, arid piece of land".

Just as the Dhayal by its bold and springy movements and vigorous tail-play enlivens the countryside in Bengal, the Indian Robin imparts a homely charm to the rugged districts of Behar and the United Provinces. In Summer, when the blazing sun has burnt up all the grass, leaving the whole country an uneven stretch of burning, brown land—the presence of the *Thamnobia* helps to dispel the frowning looks of Nature. It may be seen sitting on a big boulder with its tail upraised in order to show off its bright colouring to advantage. The tail is sometimes flung up so far as to come over the head, making an acute angle with the back. Sometimes the bird may be seen issuing from a small prickly shrub. Then looking round, it observes an insect, after which it runs with great agility without the least clumsiness in its movements.

Field
Notes

It pursues and catches several insects at a run and returning with them in its beak to a boulder, a shrub, or a neighbouring tree, as the case may be, eats them leisurely. Small shrubs, plants like those of prickly pear and wild berries or the leafless Palas (*Butea frondosa*) groves are its favourite haunts. In Behar and the United Provinces, it is truly a household bird, and like



the English Robin, perches on walls, window-sills, housetops, and verandahs, and sometimes, even enters houses. It is a very familiar bird there, and is always to be found in gardens, and old temples and buildings, seldom straying far from human habitation. The sight of man does not ruffle it in the least. In this respect it is a more self-possessed bird than the Dhayal. The latter bird has its own ideas about the safe distance from which it will allow you to observe its graceful movements. But the Indian Robin is not so sensitive. If you stand three or four cubits away, your presence will not frighten it at all. It will, on the other hand, proudly show off its beauty of form and movement, and even display before you its red trouser-patch by continually sending up its tail over the back. It has a very pleasant warble. "Although not the peer of its English cousin, it is not a mean singer." In summer its song is vigorous. In winter its performance has little charm. It is not gregarious and lives with its mate,

a few grass-hoppers and maggots. I have seen it partake of bread and milk with evident relish. Like the Shama and the Dhayal, it is devoid of communal fellow-feeling, but it is not as peevish and fretful as they are.

To be seen at its best, the Indian Robin requires elevated places inside the aviary. Though not incapable of perching on twigs and trees, it frequents, in nature, rugged and elevated earth and rocky places which are also its resting sites during sun-bath. In the aviary the rockeries can amply serve this purpose. It will skip in and out of the holes as it does in its natural surroundings. And as it silently runs about, its tail rises up with mechanical precision. In the case of this bird, the tail-movement appears to have little or no connection with its emotions as in the Piddah, or with its voice, as in the Shama and the Blue-Jay.

Confiding and courageous, it disdains to fight shy of human intrusion. While enjoying the sun, of which it is inordinately fond,

it forgets all fear of man and allows him to come very near. If its keeper, watching in front of the aviary window, stands in the path of the sun's rays, it steps up within a few inches of his feet to get the sun and warble its sweet, merry note.

Though not dressed in gay plumage, the Indian Robin arrests our attention.

One peculiarity about its coloration is that the deeper hue is on the lower parts of its body. Ordinarily we find that, in birds which are not uniformly coloured, the colour of the upper body is deeper than that of the lower. Here, however, the colour-setting is reversed. The exception in this case cannot be without reason. The colour of its upper body is brown. Does not this colour, together with the fact that it lives in rocky districts where the landscape is also of the same colour for the greater part of the year, suggest protective coloration? And as the bird is mostly terrestrial in habits, the deeper tint of its lower body becomes less prominent.

In the Northern species, sides of the head, neck, chin, throat, breast, the upper part of the abdomen, and sides of the body are deep glossy black. This black portion appears bluish in sunlight. The whole of the upper plumage is sandy brown except a white band, as in the Dhayal and the Piddah, on the wings. The white of the Piddah in the lower part of the body is replaced by chestnut in the *Thamnobia*. The Southern bird is wholly glossy black in the upper part and has the same white wing-patch and the same chestnut vent. The males of the two species are not difficult to distinguish but the females are very close to each other. The female is a sandy-brown bird with the ventral portions chestnut like the male. The young look like their mother except for reddish edges to the wings. The chestnut in the underparts is pale.

THE HUSAINI PIDDAH

(CYANECULA SUECICA)

Blue Throat



Another Robin, known as the Husaini Piddah or Nilkanthi, is *Cyanecula svecica*—the Indian Blue-throat.

This bird is a winter visitant all over India and leaves for the far North at the end of the cold season. Return-
Field ing in September, it spreads
Notes over the whole of India as far south as Ceylon. It is extremely common in Lower Bengal. It prefers, as its foraging ground, thick grass-jungle near water and, more specially, reedy places like sugar-cane plantations, and fields with corn or long grass. In Lower Bengal, it lives on the edges of jheels and in damp paddy fields, where it is usually seen moving about under the shelter of grass growing on the *bunds* between the fields. It is terrestrial in its habits, seldom perches but remains mostly on the ground, and with an upraised tail runs about very fast, like a wagtail, with alternate steps, stopping now and then to pick up an insect. But, occasionally, it is seen to hawk flies in the air. It is very shy and when seen, disappears into low cover. Though its tail-play is not as frequent as the birds already

described, it spreads the tail wide at times like a fan and gives it an upward jerk in the characteristic Robin-like fashion.

Certain travellers have spoken very highly of the excellence of its song. It is said to be a very good mimic and, in its wild haunts, it mocks other birds. Seated in a bush with distended throat and, with its bill working rapidly, it gives out a strain of blended notes which may easily



mislead one to imagine that the whole bird-world is engaged in a musical concert. Its vocal performance reaches the acme of perfection during the mating season. It then indulges in a 'song-flight', pouring forth its piercing music not only while it flies upwards with its wings and tail outspread, but sings also while descending. Unhappily for India, the bird hies for its Northern resort before its nuptial display begins. The glints of the many colours which adorn its breast and body can only be seen at their best during this 'song-flight'; they are meaningless when in India the bird cowers, in its fear of man, in a thick cover.

This bird is caged very seldom. It has a sweet voice, and in company with wag-tails, it can, I think, add to the beauty of aviaries. It is certainly difficult to reconcile the Husaini Piddah to cage-life. On several occasions, I tried to accustom it to captivity and I was not unsuccessful. When first caught, it should never be introduced into an

aviary, for, in that case it goes on hunger-strike till it dies of sheer exhaustion. It should be lodged in a rectangular cage of split bamboos with compartments in it. A tame bird, preferably a wag-tail, should be introduced in each of the compartments on its immediate right and left, so that the free and easy manners of the tame birds will make the new bird shake off its fright due to new surroundings. The feeding cups of the new captive should be placed adjacent to those of its neighbours ; so that, when it will see the other birds taking food of their own accord, it will gradually follow suit. It should be fed forcibly by hand at first, for it refuses absolutely to take any food except insects for the first few days.

The whole of the upper body in the male is brown ; the tail is chestnut on the basal half ; the chin and throat
Coloration are bright sky-blue with a chestnut patch in the middle.
Bordering this blue is a narrow black band,

underneath which is a broader band of chestnut. The rest of the lower plumage is buffish white. But the bird is seldom to be found in full costume. The quantity of blue and chestnut in the throat varies a good deal and sometimes a few blue feathers are the only distinguishing marks of a male. The females are of a dull colour but the chestnut on the tail is always present. The young are blackish with tawny streaks.

THE COMMON RUBY-THROAT

(*CALLIOPE CAMTSCHATKENSIS*)



The Indian Blue-throat reminds us of another bird—the Common Ruby-throat—which closely agrees with the former in habits. It is also a winter visitor to the

eastern portions of India, being very common in Bengal during the cold weather. Oates says that its range extends only as far south as the latitude of Raipur in the Central Provinces.

It is shy and silent, but not devoid of pugnacity. Thickets and underwoods are

Field	its favourite resorts. In the
Notes	Deltaic portion of Bengal, rank

	grass-jungles, sugar-canes or
	reeds are selected by it as its hunting
	ground. It passes most of its time on the
	ground where it hunts up insects by
	running after them with remarkable adroit-
	ness. Extreme cautiousness, however, sends
	it into cover at the least sound and so it
	seldom "meets the eye". Its notes have
	been characterised by Mr. P. W. Munn as
	"a plaintive whistling noise". I would not
	call it a "noise"—it is far superior to that.

It is a very pretty bird. In the male the upper-plumage is olive-brown. A white line from the base of the upper bill passes over the eye, and another white streak, broader

than the last, is below the eye. The
intermediate space is black.
Coloration Throat and fore-neck are ruby-red
with silvery edges to the feathers. The



lower
body
is dull
whi-
tish.
The
female
is to be
recogn-
ised by
the ab-
sence
of the
ruby.

eastern portions of India, being very common in Bengal during the cold weather. Oates says that its range extends only as far south as the latitude of Raipur in the Central Provinces.

It is shy and silent, but not devoid of pugnacity. Thickets and underwoods are

Field	its favourite resorts. In the
Notes	Deltaic portion of Bengal, rank

	grass-jungles, sugar-canes or
--	-------------------------------

reeds are selected by it as its hunting ground. It passes most of its time on the ground where it hunts up insects by running after them with remarkable adroitness. Extreme cautiousness, however, sends it into cover at the least sound and so it seldom "meets the eye". Its notes have been characterised by Mr. P. W. Munn as "a plaintive whistling noise". I would not call it a "noise"—it is far superior to that.

It is a very pretty bird. In the male the upper-plumage is olive-brown. A white line from the base of the upper bill passes over the eye, and another white streak, broader

than the last, is below the eye. The
intermediate space is black.
Coloration Throat and fore-neck are ruby-red
with silvery edges to the feathers. The



lower
body
is dull
whi-
tish.
The
female
is to be
recogn-
ised by
the ab-
sence
of the
ruby.

patch on the throat which is dull white. The white streaks on the face are buffy white above, and olive-brown below. The young are mottled and assume full adult plumage in the very first winter after their birth. A full-grown bird is seldom larger than six inches.

The Ruby-throat is not generally caged in this country, but, in my opinion, it deserves attention. If we cultivate its acquaintance, we will not be disappointed inasmuch as it is a handsome bird possessing a charming note. I had a pair of these birds in my aviary. In company with the Chats, they lived happily enough, warbling merrily their pleasant little tune, requiring little special attention except during the moulting season.

yellow eyes *Quabolin*.

THE GULAB-CHASM

(PYCTORHIS SINENSIS)

As a bird pet, *Pyctorhis sinensis* possesses special attraction for the bird-lover. It is gifted neither with any musical skill of a superior order like the Shama, nor with the Dhayal's pugnacious vivacity or predilection for the neighbourhood of man, but it possesses the virtues of a *confidante*, appreciating caresses from its master and reciprocating them by song and dance and a free use of its beak upon his body and attire. Far from sulky, it readily courts intimacy with its keeper, to whom it unreservedly babbles forth its affection and gratitude. The amiability of its disposition, its confiding song and dance, make it a darling to its human friends. It is a perky little bird, smaller than our domestic sparrow, with a pretty long tail. Its livery of rufous brown is not without its grace, though not striking in colours. This, together

with the orange of its iris and eyelids, is a potent attraction for the Indian bird-lover, who hastens to bestow on it the endearing but well-merited appellation of "Gulab-chasm" (Pink-eyed). In wild life, it evinces traits which run counter to its behaviour in captivity. Extremely shy and nimble, it dislikes open and elevated places, and leads its life under cover of thickets, rank grass, reeds, and low bushes. It is seldom found on tree-tops. What it considers to be its vantage-ground is generally the top of a long stem of grass, from which it looks round before uttering its animated calls. The fact that these calls are often answered from amidst a neighbouring clump of reeds indicates that the bird is to some extent gregarious in its habits. But its following is never large, which scarcely exceeds three. Nor is it a party whose fussiness might easily lead to its detection. Wary and alert, it shrinks from man's intrusion and at once disappears in the tangle of thick vegetation. No sooner is

the Gulab-chasm caged than does it display a wonderful capacity for adapting itself to its altered surroundings. It shakes off skulkiness and jauntily stands at attention at its master's approach, and, confident of a dainty morsel, allows itself to be tickled by him. In captivity, it loses none of the charm and enthusiasm of its notes, nor its sprightly habits.

This bird is seen in suitable localities everywhere in the plains, but its range in the hills appears to be confined to the elevation of 5,000 ft and below. It is found in Burma, though unrepresented in Tennaserim, south of Moulmein. It is less common in the south of the Deccan. The specimens found in Ceylon, though classed as a different species called *P. nasalis* is almost identical with the continental type.

For a glimpse of this golden-eyed Babbler amid natural surroundings, we must turn to places overgrown with thick

grass,
labyrinths
of tall
reeds and



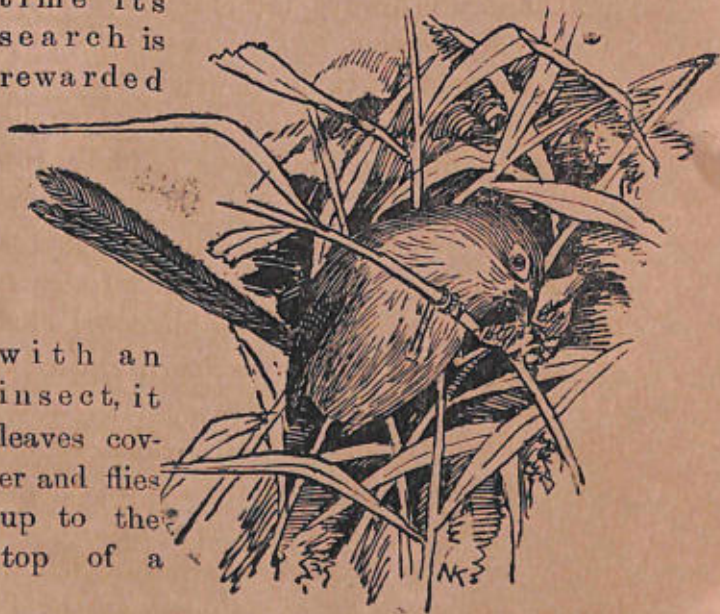
tussocky
wastes
which
abound
near
dried-up
tanks or

marshes and are sometimes found in the
borders of cultivated fields. Such
Field
Notes
fields, if they be covered thickly
with close stalky plantations, are
not disliked by this secretive bird, which
is therefore sometimes in evidence in
sugar-cane plots and fields of *rahar*—
a kind of Indian cereal. But these can

afford shelter only so long as they do not yield to the reaper's sickle. While its home is ruthlessly laid bare—and it often happens that many a grassy jungle is burnt down periodically or cut by grass-cutters—it fixes its abode in a suitable place in the neighbourhood,—thickets, hedge-rows, furzy bushes, or low jungles. Cautious and elusive, it displays a tendency to wander about like typical Babblers in search of localities favourable to its habits. But notwithstanding its shyness and extreme dislike of human observation, it never retires to the depths of forests. In the sun-bathed countryside through the long grass or tangled reeds, so quickly and cleverly does it frisk about in search of insects that not a single moving blade betrays its presence—only its recurring chatter indicates its whereabouts. These sharp and frequent chatterings are its call-notes, while its song consists of a whistle with a double note, which is not without volume and sweetness.

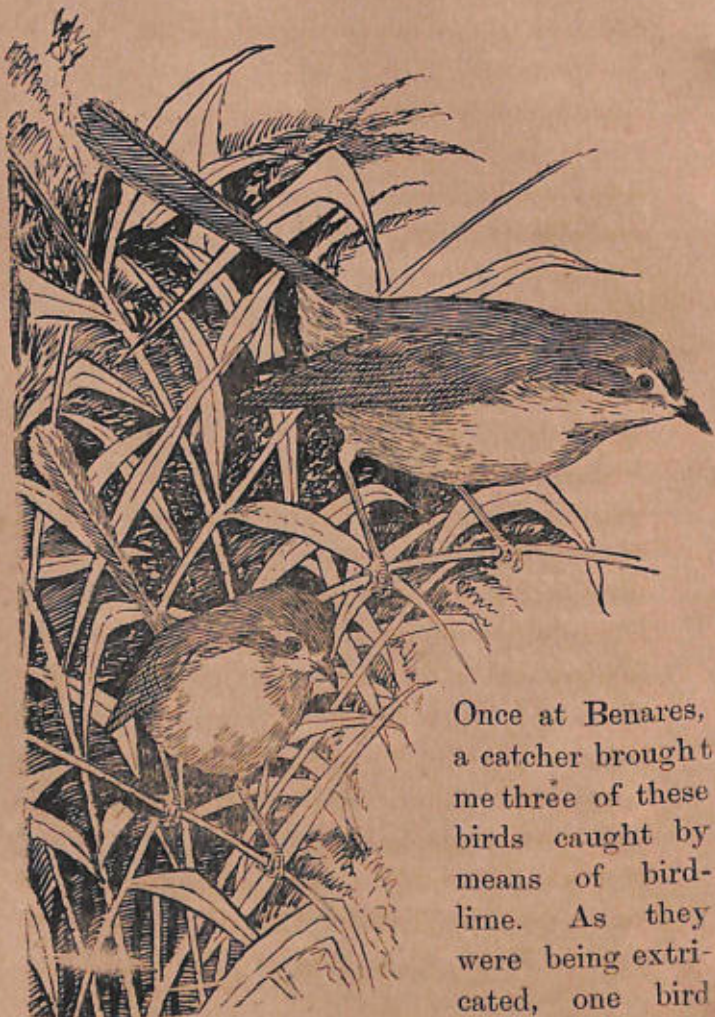
Though the Gulab-chasm is a Babbler, it differs from the typical birds of that group in the facts that it does not feed on the ground and possesses a stronger flight. While in search of food, it scrutinizes every leaf with a thoroughness surpassing even the vigilance of a party of *Lal-pugrees* raiding a suspected quarter. Every time its search is rewarded

with an insect, it leaves cover and flies up to the top of a



stem to give out a strain of happy warble. Its food consists of insects, and it takes its meal in a way of its own. It does not swallow its prey in one gulp as is usual with most birds. It places one foot on the insect and pecks at it with its bill, taking off morsels from its body like the birds of prey.

The bird is always full of animation. In the breeding season, it becomes livelier and more energetic. It is then in full song, and discarding its usual caution, perches frequently on the top of a nodding reed to warble forth its mid-day serenades. Company takes away nothing from its joyous ardour; for, not unusually, one or two of its kindred can be detected close at hand. It is not an exclusive bird like the Dhayal or the Shama; nor, on the other hand, is it as gregarious as the Seven Sisters. Whatever may be the degree of gregariousness of this bird, I can vouch for a remarkable degree of fellow-feeling and *esprit de corps* possessed by it.



Once at Benares, a catcher brought me three of these birds caught by means of bird-lime. As they were being extricated, one bird

escaped and flew to a guava tree in the compound of my house, which, I might mention, was in a populous quarter. One would have expected the bird to fly straight away to its natural haunt leaving the city and its dangers behind. But the bird clung to the guava tree calling out to its companions, who were not slow to respond to its call. Not content with only calling to its companions, this shy and timid bird became bold enough to come to the varandah where its companions had been safely lodged in a cage. It, however, eluded our attempts to re-capture it and disappeared after a couple of days.

While singing blithely from a prominent position in the most happy-go-lucky fashion, as if inviting the whole world to listen to its music, it never fails to keep a watchful eye all round. If its song draws you towards the spot where it is singing, you are not likely to see it; for, before you guess its location, it slips down into cover. Even if it happens to be visible,

hunting for food on the skirts of a reedy field, it will not remain long in sight. Go near and it will vanish in a moment. And though you may wait patiently for ever so long, it will never come out as long as you are there.

The breeding season for this Yellow-eyed Babbler extends from May to September. Living amid grassy surroundings, its ambition for housing its family seldom goes beyond grass-blades, three or four of which are usually considered sufficient to support its nest; sometimes only a single reed serves the purpose. But whenever it goes out of its way to a tree to build its nest, the fork of a lime-bush, or at most, a young mangoe-tree is all that more than suffices to satisfy its taste.

The nest is an ingeniously built cone with the apex downwards. It is always very strong and compact, never slovenly done, which bespeaks volumes about the bird's artistic ability. Broad blades of

grass are interwoven with long strips of fine fibrous bark, the inside being upholstered with extremely thin grass-stalks and fine roots. When the nest is wedged into the fork of a tree, the two adjacent twigs are enclosed as the inner walls of the nest. A closely woven outer filigree of cobwebs invariably forms the plaster-work which makes the attachments firmer, and fixes it securely to the sprigs or stems, as the case may be.

The hen comes out with a clutch of three eggs usually, though as many as five have been found in the same nest. It is rather difficult to hit off a general description of the eggs, for two clutches from two different nests are seldom similar. They are mostly broad ovals, while some are elongated. The surface has often a fine gloss. The eggs keep a uniform ground-colour of pinkish-white. The blotches and streaks of bright deep-red brick-dust are so thick in some that the ground-colour itself shows like mottling. In others, the

blotches take the form of hieroglyphic streaks sparingly cast over the whole surface.

Though in its wild state, the bird observes strict *purdah* in its relation to man, it completely shakes off its shyness when once captured and brought under his influence. From its conduct in the Cage-life cage, it is impossible to imagine that this bird, while at large, declines all advances made by man to court its friendship. In captivity, it tries to establish the closest possible intimacy with its owner. It is immensely pleased if taken up by hand, and expresses its appreciation by beginning at once a thorough search of your person. Perhaps it expects to find grubs in all the unlikely corners of your attire. In the aviary it is as sprightly as ever. There also it does not forget its old habit of prying into the leaves of shrubs for insects. If you enter the aviary with food, this brave and impatient little bird will fly up to you and snatch away one

or two insects from your hand. It is a bird with plenty of go in it, and while in a cheerful mood, it indulges in a dance which is indeed a treat to see. If two birds in two separate cages are placed near each other, they always respond to each other's call. With the first streaks of light at dawn, when one of the birds would break into soft music before the other bird is astir, the latter at once takes up the strain, and the two sing a duet for a considerable time.

The habit of responding to the calls of its kindred betrays the Yellow-eyed Babbler into bondage. As it retires into dense cover on the approach of man, it becomes difficult to locate its position. Indian bird-catchers take a caged bird to places frequented by these birds, and when the former calls out, the wild one cannot resist the temptation to respond. As soon as the catcher has ascertained its position, he uses his long poles smeared with bird-lime. At times, when a bird is lucky

enough to disengage itself from the lime-covered pole, it escapes into cover by running with extreme fleetness.

In its wild home it is an out-and-out insect-feeder, but in bondage, it is not so nice about its food and takes the soft food mixtures with relish. Insects should, of course, be provided and an occasional rationing of kidney and liver keeps it in good humour. To keep it in continued good health, a periodical supply of cockroaches and grass-hoppers is also necessary.

Too much reliance should not be placed on the sociable instinct of these birds; for, when housed together, they sometimes evince a quarrelsome temper and work mischief in the aviary.

The livery of the bird is neat and decent, if not gorgeous. The whole upper plumage, ear-coverts and sides of the neck are reddish brown, changing to cinnamon
Coloration on the wings. Lores, a short eye-brow, chin, throat, and breast are pure white shading into pale fulvous on the

abdomen and under tail-coverts. It has a very short deep bill without a notch, and a long and much graduated tail. The bill is black, the legs and iris pale orange-yellow, claws pinkish and the mouth yellow in winter, black in summer. Its length is about seven inches.

THE HAREWA

(CHLOROPSIS AURIFRONS)

Nothing more conforms to an Indian's standard of a cage-bird than that it should be tiny enough to suit a small, easily portable wicker-cage, and have a sweet voice. If these qualities be accompanied with beauty of plumage, the bird passes the highest test that is demanded of a caged pet. The Harewa, or the Gold-fronted Green Bulbul, is just the bird of this sort. Its dimension hardly exceeds that of an ordinary Bulbul. It has a varied song, with continual notes, which though not equal in sweetness and intensity to that of the Shama or the Dhayal, is yet pretty and cheerful. Its attempts at mimicry are laudable and, an untiring chorister as it is, it is put to the necessity of culling and borrowing notes from the store-houses of other birds. Its leaf-green plumage is indeed a thing of pride to its owner, and serves

as a splendid 'protective' livery. Thus equipped with the qualities of a valued pet, it richly deserves the encomiums bestowed on it by Indian bird-lovers. It lives long in captivity and its behaviour in the cage is amiable.

The appellation of 'Green Bulbul' is a misnomer, for unlike the earlier writers, modern systematists see nothing common between it and the Bulbul except their short *tarsus*, which is too slender a feature to establish their affinity. Consequently, the Harewas are placed in a distinct group, scientifically known as *Chloropsis*.

It has quite a wide range through the Sub-Himalayan regions from Garhwal to Dibrugarh. In the forests of the hilly regions of Central India and Chotanagpur, from Sirguja through Lohardugga and Manbhum to the Rajmahal Hills, this bird is very largely represented. In West Bengal, only the out-lying district of Midnapur is inhabited. It abounds more largely in

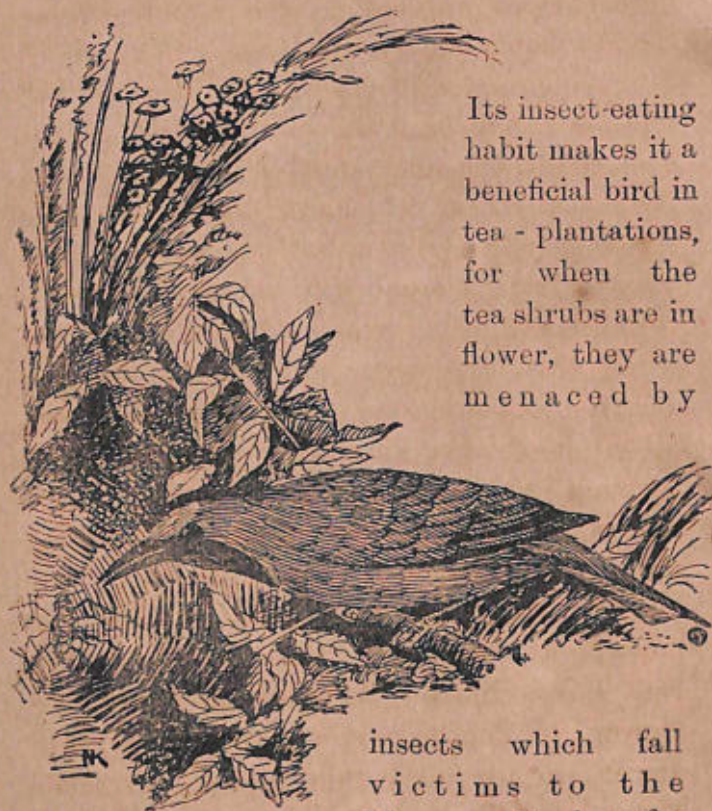
Distribu-
tion

East Bengal, the Khasi hills, Manipur and the neighbouring States through which its range extends to Burma. There is a different species inhabiting the Deccan from Khandalla southwards up to Travancore and Ceylon.

Removed though it is from the Bulbul by a wide berth, the Harewa is as fussy and active as the former in its arboreal haunts. Like the Bulbul, it is a familiar bird in the localities to which its range extends, frequenting gardens, orchards, and compounds. It is not uncommon in the forests and wooded districts, and its continual chirruping is not unrecognised along the roads which pass through heavy jungles, yielding ample relaxation to the nerves of the weary traveller tramping tedious miles without a companion. Though the continual notes of the bird betray its whereabouts, it is not easy to spot it when it is assiduously foraging among the leaves of lofty trees or flitting about among

Field
notes

the sprigs in search of insects. For so closely does its body-colour resemble the foliage amidst which it lives, that it may be said to be a typical example of colour protection in Nature. How justly does its appellation of 'Leaf-Bird' fit in with its nature ! It is essentially a leaf-hunter and affects the topmost branches of trees. It is seldom found on or near the ground, and when clinging tenaciously to its leafy surroundings, it keeps its eye not only on the insects that remain hidden among the leaves but also on fruits and nectar-yielding flowers. For they are greatly relished by the bird whose long and curved bill and protruding tongue are of great help to it in sucking up the liquid from inside those flowers, and as the latter attract various insects, the Harewa shows a preference for all large trees bearing sweet-scented flowers. Its fondness for spiders may be easily guessed by its habit of frequenting those prickly shrubs that are usually covered with a network of cobwebs.



Its insect-eating habit makes it a beneficial bird in tea - plantations, for when the tea shrubs are in flower, they are menaced by

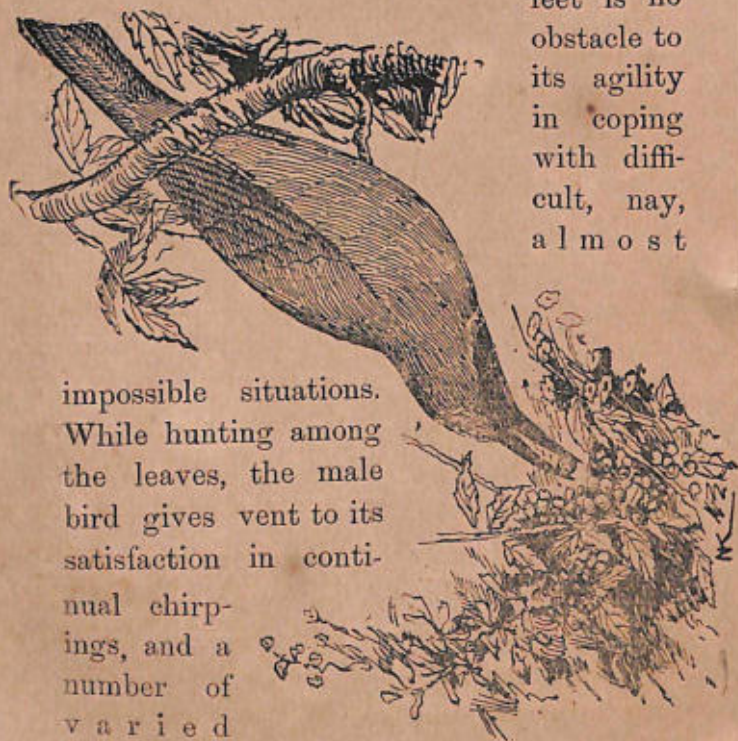
insects which fall victims to the Harewa. Its love for fruits might sometimes lead it to injure orchard-produces, but the damage is not

great as it appears to select only those fruits that burst open in riping.

A near relative of the Harewa (*C. jerdoni*) has been observed to frequent the heads of cocoanut palms which abound in many parts of Southern India. But the Gold-fronted Harewa has no such predilection, and shows its attachment generally to all fairly big trees and shrubs, though it roosts by preference in dense secondary scrub or even in long sun- or elephant-grass. There its activity knows no bounds. Watch it hop amidst luxuriant fronds or flit about among slender twigs, or cling to moving leaves like a Tit or catch insects on the wing like a Bee-eater,—the bird is always at its best. “At one moment it will hover like a Sun-bird in front of a flower, at another it clambers along the lower surface of a thin branch and sometimes it will swing itself round and round in somersaults.” It looks extremely graceful as it slips with ease through the foliage in pursuit of moths and termites.

halting occasionally to hunt up likely places for hidden insects, or cobwebs for spiders, or chasing swifter insects on the wing. The smallness of its

Bulbul-like feet is no obstacle to its agility in coping with difficult, nay, almost



impossible situations. While hunting among the leaves, the male bird gives vent to its satisfaction in continual chirpings, and a number of varied whistles.

Its serious attempts at song, however, end in the reproduction of a few Drongo-like notes in softer keys. These are probably its amorous calls to its mate. It is, however, a mimic *par excellence*, and can imitate the notes of almost every small bird around it.

Restless and vociferous, it is extremely shy and intolerant of company, and any intrusion by its kindred upon its feeding area is strongly resented and actively repelled. But it is always considerate towards its mate, so that a female Harewa proceeding at the heels of its partner is not an unusual sight. It has been observed sometimes to go out of its way to offer violence to other birds who happen to trespass on its hunting ground. Thus scuffles between the Harewas and Parrots occur not infrequently during the fruiting season of the prickly shrubs like *flacourtia ramontchi* that bear sweet berries. These shrubs, inasmuch as they harbour spiders, are specially attractive to the Green Bulbuls,

while the green parrots are drawn towards them on account of their fruits. In the second edition of the Avifauna of British India, Mr. Stuart Baker says, "The Gold-fronted Chloropsis is found in small parties, four to a dozen or so, throughout the non-breeding season". This observation appears to be completely different from that in the first edition where Oates stated that it lived in pairs or alone. Finn ascribes it a savage temper and says, "in the wild stage Mr. Baker has seen two of these birds fight to death." On the other hand, Legge says of Jerdon's Chloropsis (*C. jerdoni*) that the females collect in little flocks when not breeding. May it not be that, like the latter, the hens of the Gold-fronted Chloropsis also collect in flocks during the non-breeding season and were observed by Mr. Stuart Baker?

Little seems to be generally known regarding the nidification of this bird. But Stuart Baker gives a very full account of its house-building operations which last from May

Nests and
Eggs

to August. The nest is placed in a semi-pendant position in a horizontal fork of one of the outer branches of a tree or sapling. It is suspended like a hammock by very thin fibres which are firmly fixed to the sprigs of the fork, and these fibres support the nest more strongly by passing under the nest. Unlike the nest of its relative, *C. jerdoni*, this bird has not been observed to place its nest on the upper surface of a large bough. Its nursery is a shallow cup made of fine twigs, grass-stems, moss-roots, and fern-stalks. As the nest is a small one, it is very hard to locate it. The eggs are two in number and differ in shape and intensity of colour. They vary from pale pink, so faint as to appear white, to a rather warm pink. Most eggs are marked with small specks and spots of a deep reddish brown, and also with irregular lines and streaks of the same colour but dark. In shape, they are long but some are regular ovals, while others are decidedly pointed.

If there is any bird which can give the lie direct to the adage—*Fine feathers do not make a fine bird*—it is the Cage-life Harewa. Whether or not the Green Bulbul makes any pretensions to a monopoly of fine feathers (the hue of its livery being detectable in a few others of the avine community), there is scarcely any other bird whose plumage can transcend in magnificence the view of the *Chloropsis* as revealed in its natural setting. Indeed so majestic a sight justly deserves the appellation of the 'Ornament of the forest' bestowed on it by the people of the Deccan. But the 'fine feathers' of the Harewa are the least of its qualities for marking it out as a popular cage-favourite. Pre-eminent among its merits are its loquacity, and a remarkable power of mimicry which has earned for it the designation of 'a veritable gramophone'. Sanguine and vivacious, it has none of the morbid scruples which torment many a bird in captivity. It has a robust cons-

titution which makes it quite a hardy and long-lived specimen for the cage. Its appetite is in conformity with its sturdy physique, allowing it no time to be fastidious about its food, as is often the case with the over-punctilious. It therefore admits of easy management in captivity, and its keeper is hardly put to any trouble or anxiety except that which sometimes verges on the ludicrous and which is due to the vulgar misuse of its vocal chord in mimicking cries of distress. Little wonder, then, that it will be appreciated by bird-lovers highly enough to make its price commensurate with its worth. And its value extorts from its keeper greater and more generous care than is generally bestowed on birds in this country. It is not kept in the traditionally small, crampy cages, but is accommodated like the Shama in bigger and more roomy ones. So great is its popularity among the people of India that its demand is hardly met by its supply in the local markets.

It may occasionally be obtained in the Calcutta market, where a few are annually brought down from Midnapore and some other districts. But the principal mart where many of these birds are annually offered for sale is the Sonepur fair in Tirhut,—the largest in India. The Harewa's fame has also crossed the seas and "in London and on the continent" writes Butler, "it has always commanded tolerably high prices on account of its beauty and clear, cheerful notes."

As in India, the majority of English aviculturists are in favour of the cage as a domicile for this bird. In the aviary, it is prone to create trouble by poking its nose into the affairs of others ; and the way in which it attacks other birds is quite vicious, though this sort of bellicose disposition sometimes proves fatal to itself. Still, the aviary, if antagonistic influences are eliminated, would be a more desirable place where it can be billeted, because, brisk and restless as it is by

nature, it hankers for space to give freer play to its exuberant energies. If a cage is decided on, it should be large, otherwise its soft feathers will break and come off by brushing against the bars. The cage should be provided with a number of perches, as it will stick to its arboreal habit and seldom alight on the cage-floor. It will keep in better trim if the luxury of a bath be provided. Its manner of enjoying a bath is curious. Instead of splashing the water about by flapping the wings, as is the habit of many a bird, the Harewa makes a dash into the water, not a straight dive from above like the fisher, but in at one side and out at the other. Its soft plumage is quickly soaked, and though unable to fly, gets on to a perch to preen and dry itself, but remains on no account on the floor.

It should be allowed plenty of light, otherwise not only would it lose its usual gaiety but also its bright plumage. It has been observed that in a bird-room,

the Harewa would always seek the most lighted corners.

We have already said that its food presents little difficulty. It is a hardy bird with sound liver and adapts itself to any ration. Formerly aviculturists in Europe used to treat it, as regards its food, much like the honey-suckers because their contemporary ornithologists had wrongly classed it as such. So that it was fed on a sweetened diet. This is now considered unnecessary. Being principally an insect-eater, it will keep fit on plenty of insects and larvae—ants' eggs, grasshoppers, etc.—and fruits, of which banana is greatly relished. Rich diet like the yolk of eggs or minced meat should be sparingly used; otherwise it will bring on fits of hysteries. It would accept without the least grumbling any soft food, *sattoo* made into a pulp, or bread and milk. It will also shift for itself by capturing flies which may stray too near the cage-bars.

It is not generally subject to any

malady. According to the late Mr. Sanyal a former Superintendent of the Calcutta Zoological gardens, newly caught birds have been known to suffer from a kind of horny growth on the tip of the tongue, due to, he suggests, change of food. The growth should be gently scaled away, and some non-irritating bland oil applied. My own experience has been that in summer they are generally susceptible to fits of hysterics, to which many of my specimens succumbed.

It may not be out of place to mention another *Chloropsis* which has a name in avicultural circles, I mean *Chloropsis hardwickii*. It is a more beautiful bird, and takes to the cage easily. It is as good a mimic but its natural voice does not come up to that of its more favoured cousin. It is a bird of the hills and does not seek the plains like the Harewa.

Chloropsis aurifrons keeps a constant plumage throughout the year. Its general body colour is bright grass-green, a

THE FATIK-JAL

(AEGITHINA TIPHIA)

The "Fatik-jal" or Iora, as it is known to the Europeans, is a beautiful little bird with a sweet though melancholy note. Its plaintive cry just before the rains is so pathetic that popular imagination interprets it as an appeal to Heaven for water. This bird is happy only in Nature's bosom and becomes so morbid in the cage that it seldom lives long. Insect-feeding birds seldom thrive in captivity unless they take to artificial food. The Fatik-jal is so thorough-going an insect-feeder that it appears to derive very little nourishment from the prepared food supplied by man. Not that captivity tells upon its temper and makes it refuse food altogether. On the contrary, it greedily devours the food offered, unlike many insectivorous birds. It languishes, notwithstanding, for inexplicable reasons.

It is greatly sought after by bird-lovers who bestow on it much tender care. The reason is two-fold. It is, in the first place, a bird of beautiful plumage—an attribute not found in all song-birds. Its green, set off by yellow, makes it very attractive. Secondly, there is an irresistible charm in the appealing sweetness of its voice which ranges from a loud and clear fluty octave to a very low, tender, almost melancholy whistle.

The Fatik-jal is a resident bird all over India except Sind, Rajputana, and the Punjab. In Southern India it is numerous in the plains as also in the hills all along the Western Ghats except Southern Travancore. It does not generally ascend the hills to more than 3,000 ft., but it has been recorded in Ootacamund. Eastwards from the Northern fringes of the Western Ghats, it is found in the Central Provinces, Chotanagpur extending to Oudh, and the lower ranges of the Himalayas up to Assam in the East. It is a common bird all over

Distri-
bution

Bengal but it is rare in the immediate vicinity of Calcutta. To the West it is found in the Ajmere district



up to Mt. Abu. Here there is a break in the continuity of the distribution, for immediately east of Abu and up to Bundelkhand, the country is inhabited by another species of *Lora*.

Every orchard and garden give shelter to this active and restless bird.

Field Notes Amidst the thick foliage of the spreading mango, tamarind, and clumps of tall and nodding bamboos, the *Lora* keeps for hours

searching minutely every leaf and twig for insects. It does not, however, show any partiality for particular trees. Any leafy tree, affording plenty of shade and cover, may be its hunting ground. Gardens and orchards are not the only places where we find this bird. The edges of jungles, and trees around cultivated fields are its haunts as well, and I have noticed them also amidst roadside foliage in Deoghur. It is not easily detected amidst its haunts in spite of its bright plumage. As it selects the most leafy and luxuriant trees, which afford it the most effective cover, its green colour and small body help admirably to defy detection. Snugly concealed, it proclaims its presence only by its incessant vocal efforts. "A voice and nothing but a voice" is the aptest description that may be applied to it.

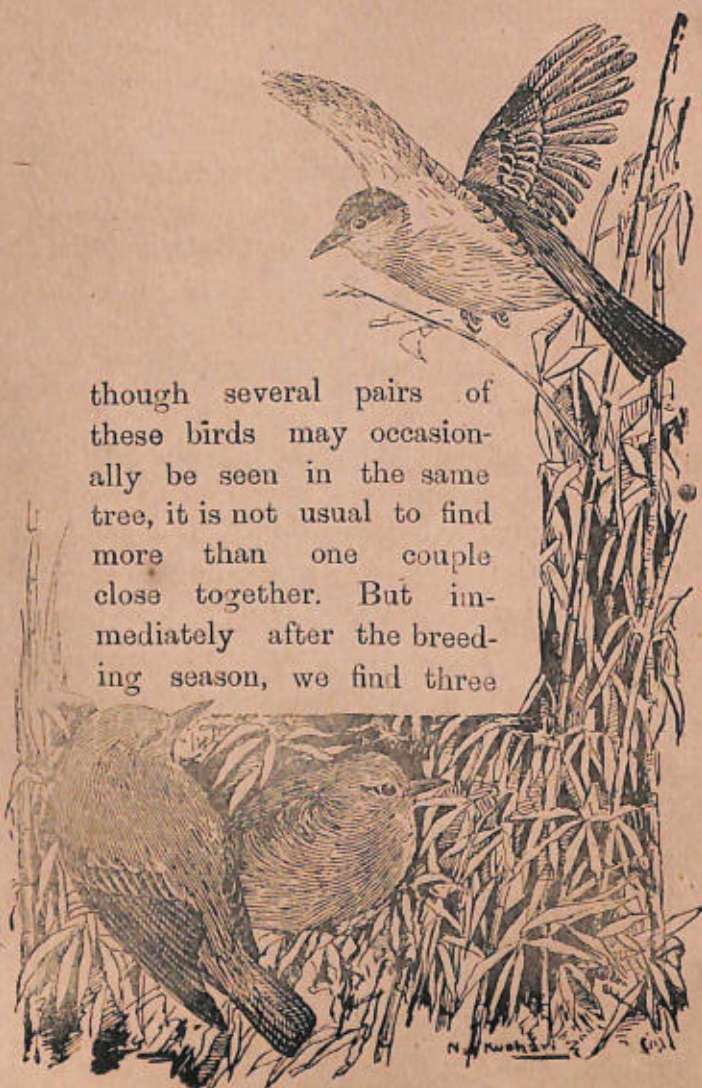
The male keeps up a continual strain of music, sometimes melodious, sometimes querulous, at others merely chattering—but each note different from the other.

Just before the rains, its cry becomes appealingly plaintive, quite powerful, and very much flute-like. Now it is raised to the highest—almost a shrill—pitch, and then suddenly it falls to a soft, mellow, and plaintive note. This last note has a sad sweetness in it which makes it the more charming. The distinguished “Eha” while admitting the sweetness and variety of the Iora’s notes, says, “It has no song.” To this Dewar retorts with this happy, if sarcastic, reply, “it continually makes a joyful noise”, and says that “it is a good songster”.

The cry of the bird sounds like *‘ta-fee-ka’* or, as rendered in Bengal, *Fa-tee-ka* (whence its name), the second syllable being deep, long and loud. Layard describes this note as a “clear bell-like whistle which can be imitated on an octave flute.” Legge renders it as ‘chee-too’. The people of Upper India interpret it as *‘Shou-biga’* which to Dewar hears like *‘So-be-ye’*. The people of Bengal identify this bird

with the "*Chatak*" of Sanskrit literature, wherein it is described as a thirsty bird, always invoking the cloud-gods in a plaintive voice for drops of heavenly water, as it refuses to quench its thirst with water from the earth. European Orientalists believe that the *Chatak* is a different bird — *Coccystes jacobinus*, which has a "rather plaintive, not unmelodious call."

It hops about the leaves with marvellous dexterity and searches them in the fashion of White-eyes. Sometimes, it may be seen hanging on, like a tit, to a slender twig scrutinizing the surrounding foliage. It seldom leaves a tree unless it has been thoroughly searched and then makes a rapid flight to another, where also it remains for hours. As it hops from twig to twig, it may be noticed that every time it utters its low whistle, there is a soft echo from the same or another tree. This is its sweet-heart which is always near or around its gallant. Sometimes two hens and a cock may be seen together; and



or four birds in the same tree enjoying a joyful dinner. This is not a social gathering but a purely family group. The one or the other of the fond parents generally looks after and, perhaps, educates the children by practically demonstrating to them how to fly and hunt—even when they are grown up and ready to take the chances of life independently. After the day's incessant hunt for food, when the bird retires to roost at dusk, it rolls itself up into a ball and tucking its head and bill under the feathers goes snugly to sleep.

The flight of this bird, though rapid, can scarcely be said to be graceful. It is a combination of quick flappings of the wings and dipping of the body, which produces a strange sound. The Iora catches its prey on the wing sometimes, but comes down to a branch or to the ground to swallow it. Larvae, spiders, caterpillars, and small insects chiefly form its food. From an economic point of view, it is distinctly beneficial, as it feeds on injurious insects.

In the nesting season, the male becomes exceedingly lively. It is supposed by many that the Iora mates for life, "till death do them part". But unlike many a human husband, the Iora's love for its lady never wanes. Every season, the cock bird tries its best to please its partner by showing off its physical charm and vocal attainments. It would indulge in short fluttering flights from tree to tree with its black tail spread out and the white plumes of the flanks puffed up. Sometimes, it rises up into the air, and when descending, it comes spinning round and round, its small body looking more like a fluffy ball of down than a bird. All the time it descends, it utters a strange protracted sibilant sound. At other times, it darts out from one tree with a moth or butterfly in its beak and vanishes amid the foliage of another. "When their nests are meddled with", says Munn, "the old birds are most vociferous, crying and fluttering about quite close, and often



IORA

making a curious buzzing noise with their wings."

The mating period of this bird extends from May to September according to locality. In our province, June-
Nests and Eggs July seems to be the height of the breeding season for this bird.

The rains commence in those months, and the bird is also in the splendour of its song at that time. The nest is generally built at a height of from ten to twenty-five feet from the ground. It is placed on the upper surface of a horizontal branch. Sometimes, a slanting bough is selected when the nest assumes somewhat of a pocket-shape. Occasionally, it is built between three or four slender twigs forming an upright fork. The nests are deep, and neat little thin-walled cups—an "after-dinner coffee-cup" as Eha puts it—made up of fibres, grass and hair, thickly coated externally with cobwebs by which it is firmly attached to the branch on which it is placed, and also to any little twig spring-

ing out of that branch that may adjoin the nest.

Three is the usual number of a clutch of eggs, which are broad ovals slightly pointed at one end. The eggs, however, vary a good deal in shape and colour. Their ground-colour is grey or dirty white, but some have a creamy tinge, with large brown or reddish-brown streaky blotches more numerous at the thick-end.

Many an honest attempt has been made to familiarise it with the cage but all attempts have so far been disappointing. When first caught, the Iora shows little shyness, utters its characteristic call, and readily takes insect and artificial food unlike many newly-caught birds that disdain prepared food. But the food apparently fails to suit the bird which pines away soon. I made several attempts to reconcile the Iora to captivity. Only a few lived appreciably long, the majority perished within a short time. Among those that lived

for sometime was only one adult which survived for two months. The others of this group were nestlings. I noticed that adult birds would show distinct signs of misery in the cage. When the bird-catcher brings one to you, it is already stripped of half its feathers, and is a pitiable object, bare and clumsy. Nevertheless, it would take its food and drink water, as if mechanically, then go to a perch where, rolling itself into its sleeping posture, it would remain quiet for hours moving down again only when impelled by hunger. In this most doleful state, it lingers for a day or two and dies a victim to the bird-catcher's thoughtless handling of a soft-feathered bird. The Iora's feathers are so soft that they come off easily by the least rough handling. In my opinion, we should begin with nestlings in our attempts to cage the Iora.

A neighbour of mine had a hand-reared Iora for a long time ; the bird was evidently happy, for it used to sing very blithely.

Its cage was kept covered with a piece of clean linen just as the Shama is treated in this country. Finn relates his experience of this bird as follows—"A tame bird I kept recalled in its actions *Chloropsis* and *Leothrix* ; it.....grasped food in one foot like the latter or a Shrike. It was shy at first, but soon got tame. I was told adults could not be kept, and mine was a hand-reared one.I did not see it show any sociability, and it seemed able to take care of itself with other birds".

Early Ornithologists classified the Iora with *Chloropsis*, while others grouped it as a Bulbul. Legge names it the "Bush-bulbul". But if, on account of its supposed resemblance, we treat an Iora as a Bulbul, we shall not get satisfactory results. For the Iora is not like the latter a fruit-eater. Oates says that the Iora shows affinities with the *Sylviidae* as it has two moults a year. I believe that if we treat the captive Iora as to its food

like the warblers, we are likely to get better results.

An interesting habit of one of my Ioras is worth mentioning. It used to drink water in a peculiar way. When the plants of the aviary were sprayed with water, the bird used to drink the small dew-like drops that remained on the leaves. Does this support the Fatik-jal's identity with the classical Chataka which quenches its thirst by catching the rain-drops as they fall from the sky?

In summer plumage, the male has a very handsome appearance, its black upper body contrasting with the vivid Coloration yellow breast. The whole upper body—forehead, crown, back, upper tail-coverts, and tail—is black, except a streak of white on the wings, and a greenish yellow rump. Chin, throat, breast, and neck are deep intense yellow; abdomen, sides, and vent are greenish yellow. In some birds the yellow bases of the feathers on the head peep through

the black. In winter the bird loses all or most of the black on the upper body and becomes yellowish green except on the tail. In Southern India and Ceylon, these birds retain, more or less, the black on the upper plumage in winter. "Throughout its great range" say Oates, "the Common Iora is subject to variations in its plumage which appear to be due chiefly, if not entirely, to climatic influences".

The black plumage is generally supposed to be the mating attire. But, "in the breeding season" observes Munn, "the males have very little black on the upper parts, being chiefly yellowish green on the head and back, and differing but very little from the winter plumage". My observations also happen to corroborate this. Legge says that he has seen the black plumage at all seasons of the year. The safest hypothesis, in his opinion, is that some breed in the green and some in the black stage. "It may be," he adds,

"that black plumage is, to some extent, a sign of age rather than a seasonal dress." In the new edition of *Avi-fauna of British India* Mr. E. C. Stuart Baker divides *Aegithina tiphia* into three sub-species, all of which become more or less black on the upper body in the breeding season. His description of the breeding plumage of the male *Aegithina tiphia tiphia* is—"Lores, forehead, crown, back, upper tail-coverts and tail black". But further down he adds, "The description of the male given above is quite exceptional, more green and much less black being the rule and many breeding males have practically no black on the upper parts other than the wings and tail". This is rather puzzling as it shakes the very foundation of his "Key to subspecies A",* where

* Key to Subspecies

- A. Upper parts greenish, more or less marked with black from crown to rump, the bases of the feathers showing through as greenish.....*E. tiphia tiphia*, ♂ breeding.

black seems to be a *sine qua non* for a breeding male. Is it not worth while to find out if these "many breeding males" are sufficiently many in number to warrant their inclusion into a fourth subspecies in which the male, whether breeding or not, has no black on the upper parts other than its wings and tail ?

The female is at all seasons green above, the sides of head and the whole lower plumage being yellow.

The young birds do not assume the full adult plumage in the first spring.

The Iora is a fluffy-plumaged bird, with a short and straight bill, and rounded wings. Iris yellowish white ; lower mandible and the margins of the upper part, almost up to the tip, blue, the remainder being black ; legs and feet weak ; tarsus lengthened and covered with smooth scales ; toes sharp.

It is quite a diminutive bird, smaller than a sparrow, being a little above five inches in total length.

THE BHARAT AND ITS KINDRED

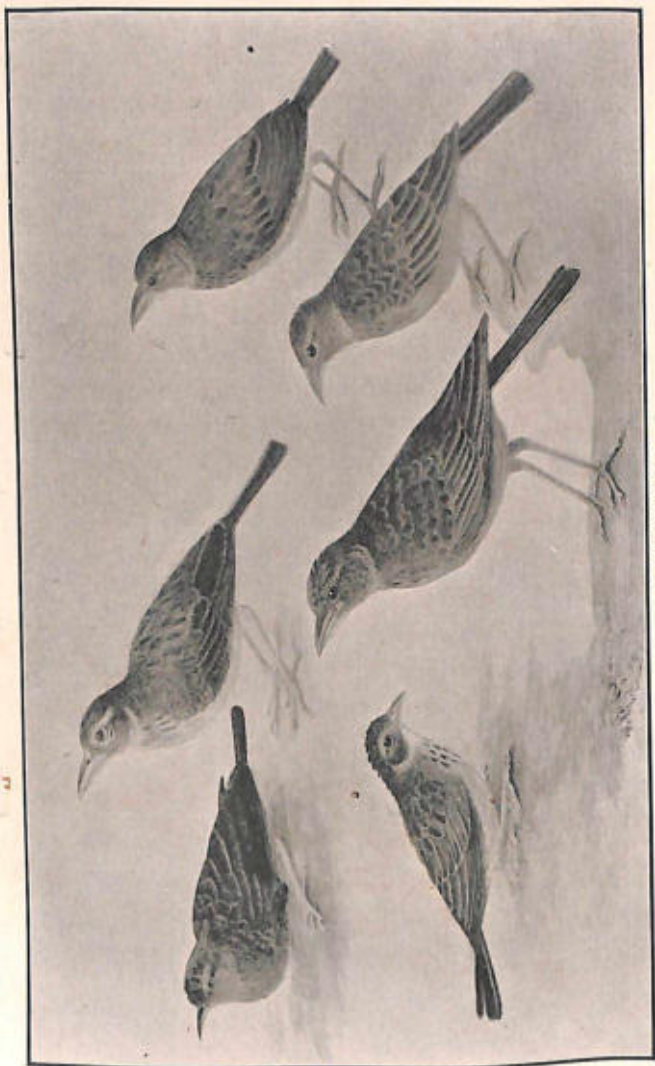
The bird, that inspired a great poet of England to break out into "harmonious madness", is not a strange figure in the sun-lit, clear, blue sky of India. The overflowing music of this mystic minstrel of the air—the Sky-Lark—comes floating down the sun-beams on a winter day. This particular Sky-Lark (*Alauda arvensis*), beloved of the English Muse, does not, however, come within the scope of this treatise, for it is only a temporary sojourner in our climes. But it has a first-cousin in the Indian Sky-Lark (*A. gulgula*) the vocal attainments of which are hardly inferior. Our Sky-Lark is the latter bird, which has, by the sweetness of its impetuous music, won the admiration of princes and peasants alike. It is known in this country as the 'Bharat'.

and we find eulogistic mention of it in our ancient Sanskrit literature under the name '*Bharadwaj*'.

Besides the 'Bharat', the other cage-favourites, among the forty species of Larks found in India, are the following—the "Aggin" or 'Aggia' comprising the singing Bush-Lark, the Bengal Bush-Lark and the Madras Bush-Lark; the 'Chendool' or the Crested Indian Lark; and the 'Retal' or the Ganges Sand-Lark. The Chendool, though not a native bird of Bengal proper, is yet a bird of many charms, and ranks very high in Bengal as a cage-favourite.

From the avicultural point of view the Lark has much to recommend it. Its greatest attraction is its gift of song. It is extremely hardy, easily adaptable to the cage and, being a seed-eating bird, its food offers little trouble to its keeper. It becomes remarkably tame and attached to its master. No wonder, then that it is so widely popular in this country.

It has been urged that to cage a lark



BUSH-LARKS

which spends so much time on the wing is the acme of cruelty". I should like to point out that we generally treat these birds from nestlings, which, being ignorant of the happiness of a free life, cannot have the morbid longing for freedom of an adult wild bird. "Acme of cruelty" is therefore not the expression for it. On such an assumption, aviculture itself would be inhuman. Our experience shows that the Lark thrives well in captivity, sings as vigorously as in freedom, and the percentage of premature deaths in captivity is negligible, proving that the bird itself does not feel its captivity as a positive pain.

The Bharat or the Indian Sky-Lark (*Alauda gulgula*) is to be found everywhere in the Indian Empire including Ceylon and is abundant in our province. It is said to be rare in the middle ranges of the Himalayas. In winter, when the European Sky-Lark (*A. arvensis*) comes down to the plains of the north-western portions of India, both the

Distribution

species are found to associate together in those parts of the country.

Of the other Larks mentioned above, Bengal is inhabited by the Aggia known to Europeans as the Bengal Bush-Lark (*Mirafra assamica*). It is to be met with in the district around Calcutta. It inhabits the north-eastern portions of India and extends through Assam southwards to Bhamo and Arrakan. Jerdon remarks that this bird is rarely met with on the table-land of South India. The Aggin or the Singing Bush-lark (*M. cantillans*) is locally distributed all over Northern India. It is found in the Punjab, Rajputana, United Provinces, and Behar. Its eastern limits extend up to a longitude six degrees to the west of Calcutta. Stray birds may, however, be obtained in the outlying western districts like Midnapore and Bankura. In the works of older writers like Ball, Blyth, and Oates, we find western Bengal mentioned as its range. But in those days Behar was included in the Bengal Presi-

dency. Since Behar has been separated to form an independant province, we can no longer with accuracy call it a Bengal bird. Its southern limits extend to the latitude of Madras. Northwards, it has been noticed as far as the Sutlej valley in the Himalayas. Bengal is the home of another Bush-Lark—the Red-winged one—(*M. erythroptera*), the eastern limits of its range reaching the longitude of Calcutta. The Madras Bush-Lark (*M. affinis*) lives in Southern India and Ceylon, its northern limit running into Midnapore in Bengal.

The Chendool (*Galerita cristata*) or the Crested Lark is a bird of Northern India. Eastwards, it is not found beyond the longitude of Madras. As it affects dry places, the damp climate of Bengal is unsuitable for it. It is therefore found in the hot, dry localities of Upper India. The latitude of the Tropic of Cancer may roughly be said to be its southern limit in this country. Occasionally, though rarely, it may be found

further south. The majority of Indian Chendools seems to migrate to Central Asia with the advent of summer, but a considerable number is resident and breeds here. Dewar notes that "it is found in Lahore all the year round, but is far more plentiful in winter than in summer, which is the only time it is seen in England". This species is, therefore, a migratory one. Beyond India, the Crested Lark has an immense range—from Spain to northern China, from south Sweden and Central Asia to Senegal in Africa. Its preference is for bare and barren countries—even for deserts—and it is found in large numbers in the warmest parts of its range.

Last on our list comes a Sand-Lark. Its vernacular name is Retal which has evidently been accepted by scientists who call it *Alaudula raytal*. "It is found", to quote Oates, "on the sand-banks of all the large rivers of the north-western provinces, the Nepal Terai, Oudh, Behar, and Bengal. This Lark is also found along the

banks of the Brahmaputra". "It abounds on the white sand-dunes, where the stream, unchecked by the tide, deposits only fine sand, and the alluvial country round (from this cause) is everywhere light and arenaceous".

Though so many species of Larks are the intimate pets of a very large number of bird-lovers, very few of these people, except a microscopic minority of scientists, can claim to possess first-hand information of the habits of these birds in a wild state, in spite of the fact that they do not inhabit unapproachable and unfrequented depths of forests as, for example, the Shama does. Even the great Eha pleads ignorance about its song and says, "I should be ashamed if I had not noticed that Jerdon and Barnes and Oates all seem to avoid saying anything definite on the subject, from which I infer that they knew no more than I do. The fact is that when the Lark is singing, it is generally out of sight, or too high

Field
Notes

further south. The majority of Indian Chendools seems to migrate to Central Asia with the advent of summer, but a considerable number is resident and breeds here. Dewar notes that "it is found in Lahore all the year round, but is far more plentiful in winter than in summer, which is the only time it is seen in England". This species is, therefore, a migratory one. Beyond India, the Crested Lark has an immense range—from Spain to northern China, from south Sweden and Central Asia to Senegal in Africa. Its preference is for bare and barren countries—even for deserts—and it is found in large numbers in the warmest parts of its range.

Last on our list comes a Sand-Lark. Its vernacular name is Retal which has evidently been accepted by scientists who call it *Alaudula raytal*. "It is found", to quote Oates, "on the sand-banks of all the large rivers of the north-western provinces, the Nepal Terai, Oudh, Behar, and Bengal. This Lark is also found along the

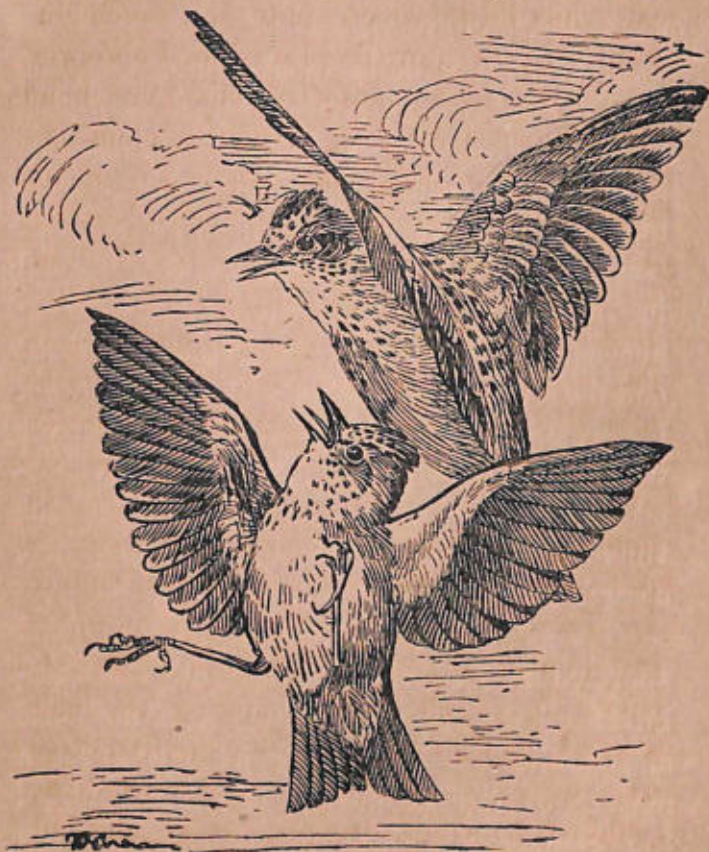
banks of the Brahmaputra". "It abounds on the white sand-dunes, where the stream, unchecked by the tide, deposits only fine sand, and the alluvial country round (from this cause) is everywhere light and arenaceous".

Though so many species of Larks are the intimate pets of a very large number of bird-lovers, very few of these people, except a microscopic minority of scientists, can claim to possess first-hand information of the habits of these birds in a wild state, in spite of the fact that they do not inhabit unapproachable and unfrequented depths of forests as, for example, the Shama does. Even the great Eha pleads ignorance about its song and says, "I should be ashamed if I had not noticed that Jerdon and Barnes and Oates all seem to avoid saying anything definite on the subject, from which I infer that they knew no more than I do. The fact is that when the Lark is singing, it is generally out of sight, or too high

Field
Notes

up to be distinguished clearly. So it is not easy to be sure which species it is". This last remark, however, puts too much discount on the powers of a trained observer, though it is to be admitted that first-hand information is meagre. But the identification of the species may not be so difficult if we take note of the manner of ascent and descent, and the environments. Indeed, if we can take a day's outing to watch the Lark amidst its native environments, a most wonderful chapter of bird-life may be unfolded to us. In the mating season specially, besides its song, the vigorous habits of this bird manifest themselves in manifold activities, its courtship being a most delicate, artistic, and elaborate affair. The Lark is a stepping and not a hopping bird, and a hop is quite foreign to its disposition. But when courting, the male seems to regard hopping as an attractive sort of gait and advances towards the female with wings drooped, crest and tail raised and with a series of impressive hops.

At this time, a very common sight is what, from a distance looks like a fight between



two birds. Selous seems to scout the

suggestion that these birds are given to regular fights with beak and talons. He says, "Larks have what, at the worst, seem to be delicate little mock-combats in the air, carried on in a way which suggests sport and dalliance between the sexes. Sometimes, rising together they keep approaching and retiring from each other. Then in one fall they sink to the ground in the grass. Or, they will keep mounting above and above each other to some height and descend in something the same way, but more sweepingly—seeming to make with their bodies the soft links of a feathered chain. In each case, they make all the time little kissipecks, rather than pecks, at each other."

Its song and vigour, its dalliance and sportive habits, do not exhaust all the attributes of the Lark. It is a bird of immense adaptability. Climatic conditions are a matter of indifference to it. Speaking of the Ganges Sand-Lark, Hume wonders how the bird exists in summer on the bare

white sand during the heat of the day. About the European Sky-Lark, Finn says, "It bears extremes of heat and cold, drought and damp". This is true of the resident Larks of India as well, because the whole of Northern India (except the Lower Gangetic Plain) and many places on the Deccan Table-land have extreme climates. It is a great pity that these songsters fall victims to the epicurean wants of mankind. In Calcutta and other large towns, numbers of these birds are killed and sold as 'Ortolans'. This sort of wholesale slaughter is to be deprecated for reasons more than one.

European writers are of opinion that the Indian Sky-Lark (*Alauda gulgula*) is scarcely distinguishable from the English bird (*A. arvensis*) in colour and is not distinguishable in habit or song. Legge, however, is of opinion that "it sings quite as sweetly as the European Lark but not so loudly, and its song is not so long-sus-

The Sky-
Lark or
Bharat

tained. Neither does it mount so high in the air". But Oates gives a note from Brooks who says, "It is quite equal to the English Sky-Lark, I think, and the song is sweeter."

Its song and manner of delivery will always remain a source of admiration to everybody. It is always poured forth while the bird is on the wing. The ascent is perpendicular, the bird veering now to the right, now to the left, rising in spiral circles, till a height of a thousand feet is reached. Sometimes, it hovers with a continued fluttering of the wings. Right through the ascent—as well as the descent—its sweet and soothing music is kept on—"singing still dost soar and soaring ever singest". The strain is maintained for a very long time and, at least in regard to the European bird, a continuous song of half an hour's duration has been recorded. When the descent begins, there is a perceptible change of tune. The bird goes down with its wings kept outspread and

without beats ; sometimes it closes its wings, a movement which causes it to dip into the air ; but suddenly it spreads them out, and by several vigorous strokes, rises again. Thus, by a series of such sudden drops and hovering after each new level is reached, as it draws near to earth, the song ceases and the minstrel drops like a stone within a few feet of the ground. Before, however, finally reaching *terra firma*, it either again shoots upwards at once or sweeps away with an almost horizontal course for a few yards, and alighting on the ground disappears in the herbage. The European Sky-Lark has been noticed "at times to sing on the ground or from a fence-rail or bush". Having similar habits, it is very probable that the Indian bird also does so. Though the Bharat frequently mounts up to an invisible height in its flight sky-wards, there is no record of the altitude to which it ascends. The European bird has been seen at a height of 6,000 feet from the

ground. The Indian bird is—as the evidence goes—a less aspiring bird.

Both its song and its flight testify to its exuberance of spirit. Watching it “soaring” upwards, one cannot fail to notice that its wings are never still; they seem to be beating time to its music, which is all the while being poured forth. In true soaring, as in *accipitrine* birds, the wings are scarcely ever moved. Day in and day out, and all through the year, it is the same lusty singer. The song never seems to wane, though it attains its maximum power during the mating season. I do not know if it sings when it is angry as the Shama does, but it seems to sing under excitement, even under the influence of fear.

The Bharat frequents the same localities as its European congener—pasturelands, stubble-fields and bare commons. It is found in well-cultivated districts offering arable land and meadows, but it avoids towns, groves, and gardens. It prefers, as a favourite resort, the grassy sides of

tanks and also the *bunds* of rice fields, on which it often breeds. Its degree of sociabi-



lity varies with the change of season. In spring and summer, it lives in pairs for breeding purposes. Towards the end of summer and during the rains, it may be found in small groups, which are probably family parties, as the young birds continue to live with their parents even after they are able to fend for themselves. As autumn advances, the bird becomes gregarious and large flocks keep together all through the winter. The Bharat roosts on the ground

and is rarely seen to perch. It is very fond of a dust-bath, but when it is raining, it may be noticed wallowing in the ground.

The Bush-Lark, as its name implies, evinces a partiality for perching on bushes, and is, to some extent, arboreal in its habits.

The Bush-Lark or Aggin It mounts up to the topmost branch of a bush or a dead tree, and from there, hurls itself up into space. It never gets up to a height greater than thirty or forty feet, nor does it remain there long. It drops down again with upturned wings, legs hanging down and singing with all its might. It would invariably descend on the perch it had left, and as soon as it comes down, its song is hushed. But not for long. A stray insect or a small grain is picked up and the flight again begins. Repeating this process, it keeps to one bush for an hour or longer, after which it moves on to another. Getting up early in the morning, sometimes even before the dawn, it makes, all through the day, thousands of musical sallies into the air without the least sign of

fatigue and weariness. In contrast with the Sky-Lark which prefers the open, it loves grassy plots sparsely studded with trees and bushes, stony ground, ploughed land, and scrubby enclosures surrounded by



trees. It is also found in the heart of the jungle, and round the borders of tanks, salt-water lagoons, and estuaries.

Its song is sweet and plaintive, specially that of the Singing Bush-Lark, which is not only a songster, but also a good mimic. The Bengal bird has a sweet little tweeting melody consisting of about eight notes, the first six uttered very quickly and the last two drawn out slowly, thus—twēē twēē

twoee twoee twoee twoee twoee twoee. The Madras bird has a prolonged "sibilant whistle—tseee-tseee-tseee".

The Bush-Lark evinces neither convivial sociability nor peevish aloofness.



During the mating season, it lives in pairs on account of the peculiar demands of Nature.

Though the Bush-Lark passes much of its time on trees and bushes, it seeks its food on the ground where it is as nimble and active as the Wagtail. When approached, it quickly hides itself by creeping under any available cover. The Madras species has been observed to come boldly on to the roads in search of food. If approached, it runs for a short distance, then squats close to the ground and flies away only when directly and very closely approached. The Bengal species, however, is a heavy and less sprightly bird.

The Chendools meet us in large numbers in winter on every bare plain and stubble-field throughout the drier and better-cultivated portions of the smiling plains of northern India and on most of the sand-banks in the rivers. It is astir with the break of day, shoots up at once into the air with a torrent of melody, and when a certain height has been reached, it begins its descent, trailing a flood of music behind. It

The Crested Lark
or the
Chendool

seems rather to be thrown upwards than to fly, and as it flings itself up perpendicularly into the air, its resemblance with the light swinging motion of a shuttle-cock is forced on the mind. Its return earthwards is as rapid as its volley upwards and, unlike the Bush-Larks, it comes down to the ground after each "song-filled flight." While carolling up and down between the earth and sky, it is fully alive to the problems of hunger, but the search for food seems to take up little of its time.

Its long, pointed crest imparts to it a grace lacking in the other Larks. But its greatest attraction is its song, which ranks it as a song-bird. Its call notes are sweet and melodious, 'not unlike the (English) Wood-Larks' but less flute-like and broken into short phrases'. The song is uttered both on wing and from ground. Besides its ordinary song, which is not more remarkable than other Larks', it possesses an unrivalled gift of mimicry. "Its song" as observed by an aviculturist,

“would commence with a plaintive warbling, soft and sweet as the breath of spring ; then the pitch would rise, and one would distinctly detect the silvery notes of a Black-cap, then it would fall and merge into the mellow lay of a Garden Warbler, changing in a single



instant to the bubbling strain of a Starling".

The Chendool is not fond of company and is therefore not seen gathering in flocks like the other Larks. It, however, does not keep severely to itself. A number of birds may be seen in the same locality, foraging each for itself in company with its mate, without gathering together on social terms. Its food is composed principally of seeds of grass, corn etc, and insects. The young are fed on insects and larvae.

The Sand-Lark is common, as its name implies, on the large sandy *churs* of all the big rivers, and Nature gives its plumage a colour approximating its environments. It runs along the edges of the sand-banks very swiftly, feeding on the minute insects which lie at the water's edge. Oates remarks, "it runs very quickly, and in poling up the river in a boat they seem to like to keep with one—I fancy to pick up insects which are disturbed by the falling sand." Its

The Sand-
Lark or
Retal

aerial flights are not as frequent or as high as the other Larks, nor is soaring one of its characteristics.

Oates has dismissed this bird with the remark that it has a poor song, though in one place he says "I do not remember to have heard it sing." Indians, however, find some charm in its notes and do not discard it as unworthy of attention. Blyth says "it ventures short snatches of song."

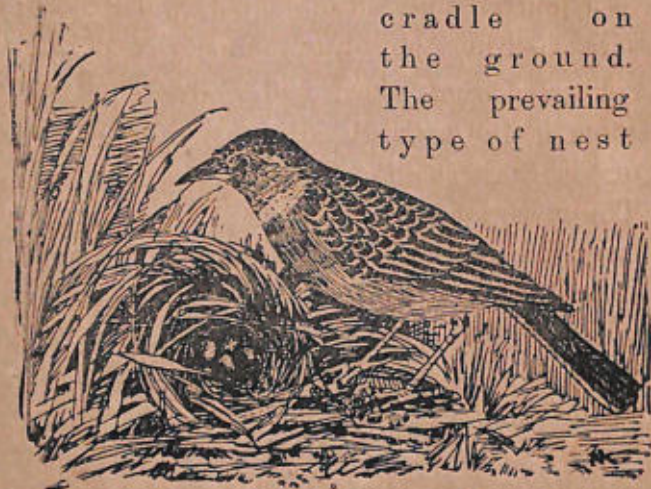
All the Larks described above are, more or less, addicted to the same sort of food. They seem to be omnivorous, consuming small insects, herbage, and seeds. The staple food appears to be the seeds of various weeds. The seed is swallowed whole, the husk being broken in the gizzard. Earthworms and insects are eaten, the young being fed on small moths, small grubs, and caterpillars. In winter, when the Larks congregate in flocks, they may do some amount of damage to sprouting corn. But they undoubtedly consume an enormous quantity of pernicious weeds and injurious

larvae and are, therefore, most beneficial to agriculture.

Terrestrial in habits, the Larks are terrestrial also in their nidification. Even the Bush-Lark has not been able to rise above the custom of its tribe and places its

Nests and
Eggs

cradle on
the ground.
The prevailing
type of nest



is a slight, open, cup-shaped one, but exceptionally, we find domed style of architecture.

The breeding season of the Indian Sky-

Lark lasts from the middle of April to nearly the end of June. Legge extends the breeding season in Ceylon up to August. They build twice in a year, sometimes beginning as early as February and continuing till May. Then again from August to October and even later. The nest is always placed in a shallow depression scratched by the birds themselves, slightly concealed from view, under the shelter of some clod of earth, large stone, tuft of grass or other herbage, or dense stunted bush. The material they use is entirely fine grass twisted round and round the hole nearly an inch thick. Three is the usual complement of eggs, the maximum number recorded being five. Sky-Larks never lay eggs twice in the same nest but always build a new one for every brood. Both parents share the pleasures of building, hatching, and feeding the young. Even long after the latter leave the nest, they are fed and watched by their parents, and return at evening, for a week or so, to sleep in the nest.

Some of the eggs are of greyish or yellowish-white ground-colour; some have a cream colour, while others a pure white ground. "All are densely speckled, spotted freckled and even blotched with pale yellowish and purplish brown or very pale inky purple." Most eggs are more or less glossy.

The Bush-Larks build domed nests. Their nesting operations last from March to August. The Bengal species lays from the middle of May to the middle of June, as also does the South Indian bird. As all the *Mirafra*s have two broods in the year, Oates suspects that it is for the second brood, when rain is apprehended, that the dome is put up with the entrance at the top or sometimes at the side. The nest is composed of fine dry grass and grass-roots with or without lining. It is usually placed in a depression, well-concealed and overhung by tufts of grass. During the rains, it is placed on heaps of *kankar* on roadsides or the permanent way between the railway lines. The eggs of the *Mirafra*s have grey-

ish, yellowish-white, or stone-cloured ground, very thickly freckled and spotted, and sometimes finely streaked with yellowish or pale purplish brown. The young are able to fly in about a fortnight after hatching. Their parents have the habit of trying to draw off intruders from their nest by feigning injury and inability to fly by running along the ground with drooping wings.

Though the majority of the Crested Larks are migratory, a certain number remains to breed in India. Their nests are to be found mostly in the Punjab and United Provinces, specially in the Salt Range and about the Sambhur Lake. They place their nests, like other Larks, in hollows in the soil under the cover of some bush, a tuft of grass or an over-hanging stone. The exterior of the nest differs little from that of other Larks but the interior has a lining of fine grass, cotton, wool, hair or feathers. This lining marks out the nest of the Chendool from that of other Larks. The number of eggs in a clutch varies from three to five.

They have a strong family resemblance to the Larks' eggs already described but are larger than most of them. The markings also are larger and more conspicuous. The ground-colour is the usual greenish or yellowish-white, and the specks, spots and blotches are yellowish or greenish brown and pale purple.

The Ganges Sand-Lark breeds along the sandy dunes that fringe this great river and its affluents. A broad and tranquil stream with wide bare banks of sand is what it loves and there, amid a few stunted straggling shoots of tamarisk, it builds its nest. It lays in March, April and May, making a tiny circular nest in some little hollow under a tuft of grass or tamarisk or beside and partly under a stranded log, the fragments of some old boat, or a large stone. The nests are small pads composed of fine grass or tamarisk leaflets. Two is the normal number of eggs. The ground-colour is greyish or yellowish white and very minutely speckled all over with yellowish brown.

It would seem at first that a bird, which seldom sings unless when soaring, will refuse to sing if confined within the uncomfortable limits of a small cage. It is undeniable that a cage is a pitiable substitute for the open fields and meadows. But the experience of Indian bird-fanciers negatives the above assumption. In captivity, it sings not a whit with less vigour and spirit than it does in freedom. To the Lark its natural song seems to be hereditary. In India nobody cages adult birds. It is generally hand-reared from a nestling, which does not give it an opportunity of learning its song from its parents. Yet its song seems to come to it instinctively.

It sings better in the cage than in the aviary. In India small wicker-work cages with brass handles are commonly used. Rich people provide cages made of brass wires and silver handles. Most of our inevitable *pan* and *biri* sellers always have this bird hanging in front of their shops in

a covered cage. The English reader would be startled to hear this ; but it is a fact, that these favourites of sun-shine and the blue sky, are kept covered up day and night except for the few minutes the cage is cleaned. Sometimes, a kindly owner would put it out in the sun to give it a taste of a long-lost joy. God knows whether it possesses an yearning for its native element. The owner knows, at least, that the bird sings quite lustily in its circumscribed surroundings. Every evening, these covered cages are taken out for an airing to a field or a park, and a number of cages is placed side by side. When one bird breaks into song, the others join in a hearty chorus, and a most delightful competition goes on for a long while. The Indian bird-lover, possessing little scientific curiosity, seems to be anxious about the comfort of his charge. He fits up the cage with a tight and strong piece of canvas as a floor for the bird to exercise its legs ; and in order that the bird may have

sand-baths, he places a quantity of brick-dust in it.

Amidst all these comforts, the bird grows very tame, and comes to know its master, before whom it is seldom bashful. At the sound of his fingers, it stands up, and puffing out its feathers, looks up with a knowing wink. Sometimes, it becomes so tame that its owner leaves the cage-door open, allowing the bird to walk around him. Grains and few insects with *Satoo* are given as its food in India. But in England, an immensely varied diet is prescribed—a mixture of canary-seed, some meal-worms, smooth caterpillars or spiders, fresh clovery turf and some fresh and chopped lettuce,—regard being had to the kind of food it gets in nature.

In India, Larks are kept singly and never in pairs ; so that there is no instance on record of the bird breeding in captivity. In England, where Aviculture is regarded as a handmaid of Ornithology, many an honest attempt has been made to induce

the Larks to breed in captivity. Below is reproduced an account of the Crested Lark breeding in an aviary. It is as interesting as it is instructive.

"The two birds at once made themselves quite at home in the large aviary. About the beginning of May, the smaller bird, which was the male, began to carry large beakfuls of grass and did his best to induce the female to build in a secluded corner. The female decided to build in the most open part of the aviary. They used to flirt most outrageously.

"The birds dug out a circular cavity with their stout beaks and lined the cavity with grass. The nest was completed on 8th June; the first egg laid on the 10th. The clutch of four eggs was completed on the 13th but incubation commenced on the 12th. The female incubated and she was the most unsteady sitter that I have ever seen, in fact it seemed to be impossible that the eggs should hatch in view of the length of time that they were left every

day uncovered in a thinly lined nest on the cold ground and in wet and chilly weather. The only day without rains was the 22nd. However, on the 24th two young hatched and the remaining on the following day. The male used to keep watch and ward from certain coigns of vantage and pass the word to the female when anyone approached the aviary and the latter would at once spring from her nest. I noticed that she never adopted the precaution of running some distance through the grass before taking wing. Probably on the bare, open stretches of country affected by this species the ruse would be of no avail.

“The young did not show any protective coloration and were conspicuous objects among the green grass. They tried to neutralise the effect by flattening themselves down as if a garden roller had been passed over the nest. They grew fast inspite of little brooding and bad weather. For instance, on the 1st of July at 6.30 A.M. the rain was coming down in torrents, the

wind blew hard and it was very cold. I wanted to ascertain how the young of ground-nesting birds manage to survive a continuous downpour of rain in open nests. I went and was rewarded by one of those rare peeps into the mysteries of bird-life which are the special privilege of the aviculturist. The three little Larks were sitting in an almost erect position facing one another with their breasts pressed closely together. Their beaks, pointed upwards vertically, formed the apex of a cone. Their necks were retracted, thus bringing the thick tufts of down and feathers on the crown and back together, and their wings were held closely to their sides. You will at once grasp the meaning and object of those tufts, you will realize that each little back formed a cleverly designed water-shed and you will understand why rain does not kill young Larks.

"The parent birds would feed their young diligently and were extremely careful never to approach the nest when anyone

was near. Once or twice I waited as long as half an hour to see the young fed, but in vain. I was much amused by the extremely sensible patient and methodical way in which they faced the situation. They simply retired to a little distance, taking a plump maggot with them, squatted down on a convenient ledge and waited. The expiration of half an hour would find them in the self-same position still treasuring the same maggot. On the 6th July, the young Larks left the nest and in a wonderfully short time they became independent and learnt how to dig for a breakfast".

The Larks are birds of sober coloration. This want of brilliance in their plumage is explained if we remember that Coloration they are dwellers of the open, some even affecting deserts and barren tracts. Nature has provided them with a body-colour which serves the purpose of a mantle of invisibility. Some of the Larks have to live in constant terror of

birds of prey, and the presence of any conspicuous colour on their body would have placed them at a decided disadvantage. The sexes are always alike.

The Indian Sky-Lark (*A. gulgula*) is a dark brown bird, each feather being broadly edged with white. There is a deal of white in the tail, visible only during flight. The lower plumage is pale fulvous, the cheeks and throat slightly and the breast boldly streaked with black; the remainder of lower plumage is very pale fulvous, and at times almost creamy white. The bill is dusky above, lower mandible being greyish horny, faintly yellowish at the tip; iris dark brown; legs and feet brownish fleshy.

Its length is about seven inches, being smaller than the English Sky-Lark. Its size, however, is as variable throughout its great range as the shades of colour which compose its plumage.

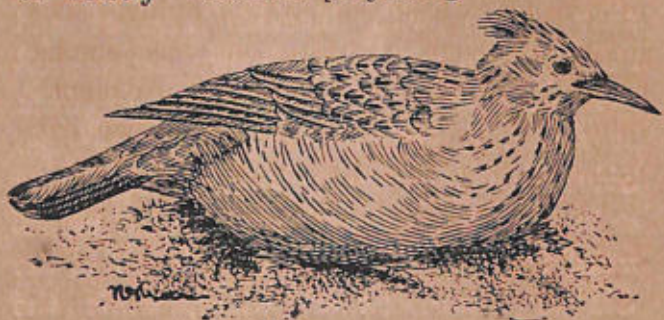
The Bush-Larks are brown birds without any white on their tails. The Singing

Bush-Lark has rufous lateral margins to each feather of its upper body and a whitish terminal band. Shortly after the autumn moult, the whitish fringes of feathers wear away. The Bengal Bush-Lark and the Madras Bush-Lark are respectively dark ashy brown with blackish streaks and rufous brown with dark brown streaks all over. The wing-coverts and quills are dark brown with rufous or chestnut margins. Sides of the head are mottled with fulvous or brown. The tails are brown with rufous margins. The chin and the throat of the Singing Bush-Lark are white, while the Bengal bird has fulvous white and the Madras bird pale fulvous on these parts. The remainder of the lower plumage is, in all cases, fulvous, the breast being streaked with brown triangular marks.

The iris in *Mirafra* is brown, the Bengal species having an yellow shade; legs, feet and lower mandible fleshy white, the upper mandible being horny brown; the bill is thick and short; the wings are moderately

rounded; the tail is short, the lateral feathers longer than the central pair. *Mirafra*s are smaller than the Sky-Larks, being about six inches in length.

The Chendool differs in having a tuft of bristly feathers projecting as a crest



from the back of the head. It is an earthy-brown bird with blackish streaks to most of the feathers. The wing-coverts have sandy margins as have the tail-feathers also. The entire lower plumage is pale fulvous with brown spots on the cheek and a deal of brown streaks on the breast. The bill is yellowish, feet pale brown, and iris dark brown. It has a long thin but very strong bill and a short tail. The Crested

Lark is longer than the Bush-Lark by about an inch.

The Sand-Lark is a greyish brown bird with dark brown shaft-streaks. Its wings are dark brown tending to be greyish on the edges. The tail is brown but has white in it visible when the bird is flying. The lower plumage is white but has strong brown streaks on the breasts, more plentifully on the sides. It possesses brown iris, fleshy yellow legs and horn-colour claws and bill, the latter having a greenish tinge. In size, it is as large as the Bengal Bush-Lark, being about five inches and a half in length.

THE DĀMĀ
(*Geocichla citrina*)



A bird possessing a strikingly handsome appearance and a pretty song can never escape the notice of aviculturists. If it has at the same time a perfectly harmless disposition, it at once becomes their pet. Such, indeed, is *Geocichla citrina*. A school-master would award it the first prize for good conduct, because to him it would be a marvel of ideal behaviour. It is a shy and unobtrusive bird ; not in the least garrulous, being generally silent throughout

the year. But during the breeding season, the spirit of romance finds expression in its song which is its only means of courtship. Its notes, so far as I have heard, are only whistles, subdued but sweet. Foreigners have spoken highly of it. Dr. Amsler wrote in the *Avicultural Magazine* that its "song is much sweeter and softer than that of our Thrush, but is more reminiscent of that bird than of the Blackbird". In the United provinces specially, and in Northern India generally, this bird is greatly prized as a cage-favourite. It is a pity that in our province, Bengal, it has received scant notice. I strongly recommend it for better consideration, and I am sure that those who take interest in birds will come to love it, specially as it can very easily be induced to breed in captivity. Though it is shy and secretive, it gradually shakes off fear and becomes quite bold.

In Bengal, it is known as the *Dāmā* and its *Hindustanee* appellation is *Puttoo*. From the colour of its crown, it derives its

English name of the Orange-headed Ground Thrush.

The Dāmā is a migratory bird within the bounds of British India. In winter it is found throughout the plains, hills and jungles of Northern and Central India, Chota Nagpur, Rajmahal Hills, and is not uncommon in Bengal. But in Burma, Oates did not find it to be migratory. It is not a stranger in the districts around Calcutta. In summer it is found all along the lower ranges of the Himalayas from Murree to the eastern end of Assam. In Nepal and round about Darjeeling, its presence is frequently noticed. In Sikkim its movements are reported to depend on circumstances connected with the vegetation of the various districts. It has not been known to occur in the Punjab, Rajputana, Sind, and Guzerat. It is also rare in the West and South of the Deccan but more numerous in the Eastern Ghats. In Ceylon, only a few specimens have been obtained, and probably it is

Distribu-
tion

migratory there. Legge says that in his constant search for this bird for five years, he was most unfortunate in not having met with a single specimen.

The English name of the Dāmā is a misnomer and gives a wrong idea of its habits.

Field Notes	It is not strictly a ground-bird.
	The connotation of the qualifying word is that such a bird should not

only seek food but also live on the ground.

A true ground-bird would possess greater powers of running or fleetness of foot. The Dāmā can hardly be said either to run or to walk in the manner in which a wagtail does. It does not confine itself solely to the ground. It is fonder of bushes and boughs of trees at a medium and moderate height from the ground and, very often, it mounts higher branches. It is true that the Dāmā forages on the ground and may be seen hopping along. But it prefers being off the ground except when feeding. It does not even build its nest on the ground which all true ground-birds do, but as a true perching bird it sets up

its temporary home on fairly big trees. As this bird is spread over the plains in certain seasons and moves to the hills as the sun approaches the Tropic of Cancer, it is no wonder that different people have observed it in different surroundings. Those who have watched it in the hill-districts in summer would say that it is a denizen of heavy jungles where it keeps to the more open portions along the beds of streams near the forest paths, or in bamboo jungles. Others, who first made its acquaintance in other seasons, would assert that it does not fight shy of human environment altogether; and therefore, it is not an unfamiliar sight in shady gardens, bushy outskirts of villages or lonely village bye-lanes. It hops sedately and leisurely from branch to branch. In fact, when undisturbed, its movements are slow, measured and dignified. All this while, it would indulge in gentle whistles, occasionally throwing out a louder note of defiant song. The approach of man puts an end to all this. From a dignified philosopher, the bird

at once descends into a coward. It is marvellously cautious in detecting dangers, and the least sign or sound frightens it into concealment. In my country-house, I have many a winter noticed it feeding in bush-covered drains. If approached, it would take a short flight to a stump or a bush where it would sit immovable like a rock and watch my movements. If further intruded on, it would scuttle along under the bushes with great rapidity, but, without going very far, try to take shelter under a dense under-wood. If further pursued, it takes to flight. As in the case of *Thamnobia*, the Dāmā also has the brighter colour on the lower body. This arrangement is certainly safer in the case of birds that feed on the ground. When the Dāmā is on the ground, the colour of its upper body lends itself well to concealment in the gloom of the forest or garden where its silent immobility would deceive the eyes of the keenest scout in His Majesty's army. The bird, too, seems to

know full well the use and value of its protective colour. While perched on a tree, it instinctively drops down to the ground, at the slightest sign of alarm or intrusion, to hide the brighter tinge on its lower body ; and before you catch a glimpse of the bird, it puts every available bush and tree between it and yourself, silently taking shelter in the darkness of a thick foliage. Reginald Phillips says, "it is probably from its customary habit of seeking concealment on the ground at the approach of man that it has unfairly earned the reputation of being a ground-bird". Sometimes, however, it would hide itself away in the hollow of a tree. I have already said that this bird neither runs nor walks. Its method of progress is by means of very rapid hops. But though it does not use its legs alternately like true running birds, it can progress with a swiftness and rapidity remarkably astonishing. When on the ground, it proceeds rapidly forward and then stops, makes another advance and

again pauses. Each time it takes a short run, it lowers its head, so that the body becomes parallel with the ground, but at each halt, it stands erect, keenly alert and watchful.

The Dāmā has a peculiar way of its own in looking for food. It does not catch insects while on the wing, nor does it pick them off from trees. If it happens to detect any quarry from a distance, it betrays no hasty eagerness by immediately running to pick it up. Sedately and leisurely it hops up to the object, and pauses as if to study its entomological qualities. After some time the object of curiosity is picked up and despatched. As a rule, it searches for insects on the ground among withered leaves, every one of which is assiduously turned over with its beak. In thickets or shrubs, it carries on its untiring search in a quiet fashion,—insects and small worms being the objects of special attention, though tiny berries are not neglected. It has also a habit of digging for worms into

the hard dry earth. For this reason, its bill is generally noticed to be clothed with mud and, during the moulting season, the portions of face and forehead near the base of the mandibles become bare and shorn of feathers. From an examination of the stomach of these birds, it has been found that it eats injurious and neutral insects and therefore from an economic view-point, it is regarded as a beneficial bird.

This shy bird passes its unadventurous life in the solitary companionship of its mate. There is nothing in the Dāmā's appearance which may denote the presence of martial ardour in its character. But this unostentatious, inoffensive-looking bird does possess strength enough to protect its female from the objectionable advances of other males. In this respect, it is like the Shama or the Dhayal; but it does not possess their cheerful spirit, and never betrays enthusiasm by breaking into vigorous song and, except in the breeding season, passes its time in the most severely

puritanic silence. It is quite probable that as a great deal of the sweetest song is uttered in a low tone from a cover, it can not be heard from a distance. The louder notes are unmusical, uttered from higher perches, and are probably notes of defiance.

A near cousin of the Dāmā, *Geocichla cyanonotus*—the White-throated Ground-Thrush—is a happier bird not obsessed by any morbid and disturbed outlook of life. This bird sings nine months out of twelve and its vocal performance is not indifferent. About its song Reginald Phillips says, "Standing tight and upright, wing-butts hunched, primaries pointing straight downwards with the points touching the toes, head drawn up but with the bill close against the chest and pointing straight down," it pours out its merry warble. It is like *G. citrina* in all other respects; even the coloration is the same, except that it has a splash of pure white on the throat, whence its name.

The Dāmā begins to mate as soon as it

returns to the hills in summer. From the end of April to the end of June, it gives up its nomadic existence and goes temporarily into camp. Forky branches of lofty trees, like Oaks, *Sāl* and wild Cherries, are its favourite sites for bulding purposes. Nests have also been found in forks in bamboo clusters, shrubs, and low trees. The rest-house or strictly speaking, the lying-in-room of its mate is a big saucer of coarse dry grass with a layer of green rock-moss within. The exterior is sometimes composed of dead leaves, a few twigs, pieces of decayed bamboo, all knit together with vegetable fibre. Very often, long dry grass is skilfully inter-woven on the sides and the stragglng ends of these hang down from the bottom giving the nest a shaggy appearance. From its life in the aviary, it has been observed that the incentive to building operations is given by the male, and the female finishes off the lining. During the last few days of building, and during

Nests and
Eggs

incubation, the male collects and gives every insect to the hen. It takes no part in incubation which lasts for twelve days.

The female lays three or four eggs which are broad ovals, much pointed towards one end, and have a very fine glossy surface. The ground-colour is greenish white, or dull greyish. Specks and minute streaks of red-brown extend more or less all over the surface.

As already said, this bird meets with greater consideration in Northern India.

In Bengal, it is not absolutely
Cage-life unknown in the cage. Quite a respectable number of birds is placed on the market in Calcutta—being generally imported from U. P. The birds in my aviary, however, were caught in the neighbourhood of Calcutta. In the United provinces of Agra and Oudh, it is carried about in a small covered cage—a practice already noticed in connection with the Shama. In that province the birds are generally reared up from nestlings by

means of hand-feeding ; wild adult birds are seldom caught and caged. The steadying of adult Dāmās is not a difficult affair. My specimens were all adults, and none of them is languishing. They do not seem to feel their loss of liberty as keenly as some birds. If insects be mixed in the *sattoo* given to them, they will take to it in a short time. Fruits would be beneficial. They are inordinately fond of ripe bananas and eat guavas with relish. As soon as the bird takes to artificial food, it should be introduced into an aviary for, as it is naturally morose and quiet, in a small cage it becomes susceptible to indigestion for want of exercise. And as it is not a very diminutive bird, it will be a cruelty to confine it in a small cage. It can safely be lodged in a mixed aviary with the tiniest of birds, because it is inoffensive and never meddles in the affairs of others.

The pleasing colour of the Dāmā adds to the beauty of its aviary. Foreign aviculturists testify to its genial bursts of song in

the cage and in the aviary. It is undoubtedly a 'beautiful songster'. Unfortunately for me, the birds in my possession seldom indulge in ecstatic utterances, though they have often regaled me to soft, mellow, almost whispering whistles. It is quite possible, as suggested by Astley, that vocal powers vary according to individuals. Like this bird, its cousin, the White-throated Ground Thrush, has also found admirers in Europe. There the Dāmā is easily acclimatized, and breeds freely in the aviary. There are numerous instances of its successful breeding. My specimens, until recently, were confined in a small and congested aviary. In July last, they were introduced into a bigger bird-house. Here they made an attempt to build a nest, but nothing came of it because their breeding season had been over.

This year, I had recently the good fortune to notice in my aviary how the Dāmā makes love to its mate. Though in other seasons the male seems to ignore

the existence of its mate, it has lately begun to take interest in her. March is drawing to a close as I am writing. The male now-a-days has become gallant enough to feed the female as if she were a baby. It hops round the aviary in a very grave manner, showing itself off to its partner who is sitting silently under a hedge. It



then slowly hops up to the female and stops at a little distance. Then it retreats and goes round behind the hen, stops there, and after a jaunty run round the aviary comes and stands again in front. Some-

times it goes close up to the hen and makes her a present of an insect picked up on the move, which the hen snatches from the male. Or, when the hen is sitting on a low branch, the male flies up to her with the love-offering. The hen begins to flutter her wings as if seized with a tremor, raises her tail and utters a low whistle. After indulging in a few kissipecks, they sit close to each other in silent reverie. Such is their tender method of courtship as noticed by me. The Dāmā does not indulge in flirtations like other birds. I have also seen them mating, no restlessness or coquetry takes place before the act. It is suddenly done, and then both remain for some time facing each other, still and erect.

Two male birds should not be kept together because they are likely to go for one another at sight. Reginald Phillips says, "Those who can do so should keep such birds apart, even separating the sexes during non-breeding season. I was told last summer, a male orange-headed Ground

Thrush at the Zoological Gardens, on being loosed into the same aviary with a female, killed her before they could be separated." But such squabbles never occurred when all my Dāmās—I possess two pairs—were housed together in the same aviary. Afterwards when I made an arbitrary selection of pairs and lodged them in different aviaries, even then there was no quarrel. But now, when each pair has lived together for sometime, I find that if I try to interchange partners, it is not tolerated by the birds.

The Dāmā is probably a mimic. I cannot speak from experience. But Reginald Phillips declares that its white-throated cousin is. Finn also, in his "Bird Behaviour" says, "I have heard the Indian Orange-headed Ground Thrush, a species which combines the excellences of the Song-thrush and Blackbird, irritatingly repeat a most trivial and monotonous note it had picked up in the Zoo Gardens".

The male Dāmā is a decently clad

person. Its attire does not consist of any blazing colour but the perfect harmony of colours makes it very attractive. The whole

head, neck and the lower body
Coloration as far as the vent are orange-
chestnut, deeper on the crown
and paler beneath. The rest of the lower
body—vent and under tail-coverts—and
the thighs are pure white. Back, scapulars,
rump, upper tail-coverts and lesser wing-
coverts are bluish grey. The broad white
tips to the median coverts form a very
conspicuous wing-patch. The remaining
coverts and quills are dark-brown. The
tail is ashy brown, faintly cross-barred.

The hen is paler chestnut throughout
and olive-coloured on the upper surface. The
outer webs of the tail and wing-feathers and
the under tail-coverts are suffused with green.

An example of an abnormal form of
Geocichla citrina was reported by Mr.
Inglis in the Journal of the Bombay
Natural History Society (Vol. xii, p. 44).
He wrote, "I shot a male of the above

species and noticed several long hairs springing from the nape, in much the same way as they do in the White-throated Bulbul (*criniger flaveolus*). Also the feathers on the cheeks and sides of the chin have lengthened shafts of a black colour."

The bill of the Dāmā is very dark brown. It is short, straight, and compressed towards the tip which is more or less notched. The culmen is gently curved. The tarsus is smooth; the legs are fleshy pink, and the claws pink; iris dark hazel. In size it is nearly nine inches.

Indian bird-nomenclature is very loose and imperfect, and very confusing to foreigners. There is a bird in the central portions of the Indian continent, the native name of which also is Dāmā. It is smaller than *G. critina* by three inches and is quite different in colour. I am referring to the Brown Rock-chat—*Cercomela fusca* which is a permanent resident of Central India and the United Provinces.

A So-called
Dama

Its southern boundary is the latitude of Jubbulpore and its eastern boundary is the longitude of Benares, and in the west I myself saw it as far as Muttra, while Dewar declares it plentiful in Lahore. From April to July, which are its breeding months, it makes very sweet music. It is found singly or in pairs upon buildings, stone-walls or rocks in the vicinity of human habitations. I once noticed it nesting in a building adjoining my place of residence in Benares. In Muttra and Brindadan, I found them to be household birds like sparrows, feeding on the crumbs and leavings thrown out from kitchens. When nesting, both the male and the female become very pugnacious and fiercely attack the small birds, rats, and squirrels that approach the nest. It nests in holes, rocks, buildings, walls, and banks. When it selects a hole in a rock or cliff, and finds that the entrance is too wide, it puts up a wall of small stones and pellets of dry mud. The female alone incubates while the male sings to her. The former lays

four pretty pale-blue eggs with reddish-brown spots thinly sprinkled over the whole shell. It is a brown bird, with a dark-brown tail and resembles a hen robin. In many of its characteristics, it runs close to Redstarts. Like them, it continually bobs and nods its head and flutters the tail. It is a lively little creature with a passably good voice. As an aviary bird, I think it will be a success. It is not a total stranger to bird-fanciers in India, for, sometimes, though on extremely rare occasions, we notice it in the cage.

So dissimilar from the Orange-headed Ground Thrush, it is impossible to say why it is called Dāmā. In certain parts of the Central Provinces, it is termed the Shāmā.

THE KASTURĀ

Two more Thrushes are favourite cage-birds for their song and beauty. They are to some extent alike in appearance and habits. They are also both dwellers of the same localities—the Himalayas. Their notes are the sweetest bird-music that will reach the ears of a visitor to the Himalayan hill-resorts. They are both livelier and more vivacious than the Dāmā (*Geocichla citrina*). Both grow very tame in captivity. To the Indian, both these birds are known by the same name—Kasturā. The scientist would class them stages apart, calling the one *Myiophoneus temminckii* (the Himalayan Whistling Thrush) and the other *Merula bouboul* (the Grey-winged Ouzel). Those who follow Oates may not like to accept the former as a Thrush; but a Thrush it is, and, as its common English name implies, the ornithological

laity also have always regarded it as such. The source of confusion, however, is the native name. The Himalayan Whistling Thrush may be called the true *Kasturā*, for it is known only by that name throughout its long range of distribution. The Grey-winged Ouzel, bears the following local names—*Kasturā*, *Kasturi*, *Kuljet* and *Patariya masaicha*. For the sake of convenience I shall call the former (Himalayan Whistling Thrush) *Kasturā* and the latter (Grey-winged Ouzel) *Kasturi*.

Mingling its liquid voice with the laughing music of springs and cascades, the *Kasturā* lives in the valleys of the Himalayas. The Englishman calls it the Himalayan Whistling Thrush. The pre-dominant note in its song is a very fine, clear and powerful whistle—plaintive but loud. Its outward appearance is in keeping with its excellent voice. Amidst the luxuriant flora of the Himalayas, Nature has added to her own glory by providing this bird with a

Hima-
layan
Whistling
Thrush

bright metallic blue plumage. A momentary glimpse of the Kasturā may easily give an Englishman the impression of an English cock Blackbird, its yellow bill adding to the similarity. It is only when sunshine falls upon it that the glistening blue of its plumage dispels the mistake.

A close kindred of the Himalayan Whistling Thrush is the Malabar Whistling Thrush, which is to be met with in the Deccan wherever the oppressive severity of the Ghats is relieved by verdant woods and murmuring rills. It is a cage-favourite in the Deccan. This species is but the southern representative of the Himalayan bird and differs not the least in song and habits, and has obtained from English residents the sobriquet of the 'Idle Schoolboy'. Though the Kasturā is a Thrush, Oates, in the first edition of *Indian Avifauna*, placed it among babblers because its young have emancipated themselves from the mottled plumage of thrushes. But he admits, it retains, in great measures,

the habits of thrushes. Modern ornithologists have assigned to the *Kasturā* its rightful place and in the next edition of *Avifauna* we will find the *Myiophoneus* shifted to its proper classification.

As its name implies, the *Kasturā* lives in the Abode of the Gods—the Himalayas.

It is to be found from Gilgit to Assam and is common, except in the breeding season, at all

Distribution heights up to the Snow-line. During the cold weather it moves down to the plains and may be met with here and there as a straggler throughout northern Behar, northern Oudh and northern Rohilkhund. But it never comes down to the plains of Bengal. It is also not very rare in Saharanpur and in the plains districts westwards of the Jumna. It has been noticed in Attock and the Salt Ranges. In the breeding season it confines itself to the deep glens and valleys wherever there is running water below 6000 ft. and above 2000 ft. It is also to be found in the hill ranges of South

Assam, Manipur and Cachar—in the last place it is reported to be a winter visitor. It inhabits also the eastern ranges of Burma. But to the west of the Irawaddy there is a different species—*Myiophoneus eugenii*—which resembles the northern bird very closely and has the same characteristics. The Malabar species—*M. horsfieldi*—inhabits Southern India up to Travancore but does not cross the straits to Ceylon. Its favourite resorts are those spring-fed streams that leap in torrents from step to step down the steep side of the plateau. In summer when the rivers below dry up, the bird is forced into the higher ranges of the Pachmari, the Vindhya or the Nilghiris. It is found also in Chota-Nagpur and Orissa hills. It differs slightly in coloration and size from *temminckii*, but in habits and disposition, is in no way dissimilar.

In the lonely glens and gorges, or by the side of a mountain torrent, the limpid, almost human, whistles of the Kasturā

will deceive a sportsman into the belief that he is in the proximity of a fellow-being.

Field Notes Miss Fitzgerald says that its whistle is exceedingly like that of an idle schoolboy wandering through the woods, whistling no particular tune. Some people assert that its whistle is like that of an organ, very rich and mellow. These whistles are sent forth with such energy, in such a torrent-like unceasing strain, that it seems as if the bird is putting forth its last efforts and is going to choke straight away. The song becomes most musical and alluring in the spring and is often indulged in while on the wing. Both the male and the female begin to sing a duet early at dawn, when it is still dark, from some stream-overhanging rock, continuing till day-light appears, when they fly off to some torrent-girdled stone in search of a breakfast. During the rains Darjeeling and all other hill stations are kept ringing with its never-failing melody.

It is found in open rocky spots on the skirts of forests as also among the forest-depths. But it is partial to *Jhoras*—i. e., the sides of mountain streams, torrents and waterfalls which descend in cascades down the hill-sides. The explanation to this partiality lies in its carnivorous taste,—



shells, snails, crabs and tadpoles being its fond

dishes. It seizes a shell between its bills and flies to a stone or rock on which, as on an anvil, it batters the thing into fragments and then picks out the animal within piecemeal. The regular 'tap, taps' of the operation can be heard from a distance. The smaller shells instead of being hammered on stones, are broken open by blows from its stout beaks. The piles of broken shells often seen on and around boulders and stones by the side of hill-streams are generally the relics of many a such merry feast. It is so enterprising a bird that it sometimes departs from the custom of its tribe and turns a fisher. The lively shrimps become the objects of its special attention. Dashing into the shallow water at the edge of a stream or in a rock-bound pool, it snaps up an unwilling individual, lands with it on a stone and swallows it after pecking out its animation. Sitting on a torrent-girdled boulder it always picks off water insects, when bigger game is not handy. Not unusually, the bird may be

noticed skimming above the water in pursuit of a particularly swift insect which has eluded capture.

It loves to jump from rock to rock while giving out many an extempore vocal performance, and when a good morsel of food has been gathered and disposed of, it flies away, with an up-jerk of the tail, piping out its loud and long-drawn whistle. Its tail-action is most peculiar and characteristic. Upon alighting on a seat or a perch, or on being startled, the tail is jerked up and down several times. It is then spread out laterally into a broad fan-form and immediately shut up again, just as a lady's fan is quickly opened and shut. This action is repeated several times. The Kasturā is very cautious and secretive. At the least sound, it is so scared that it dashes, as if for very life, into thick cover where, surrounded with thick foliage, it is effectively screened out of sight. It would not, like the Dāmā (*G. citrina*), drop down to the ground, pause and quietly regard you from a distance in order to be

sure of your intentions before moving out of the range of your vision.

It is completely innocent of social instincts and never tolerates the presence of any of its own tribe in its territory. Each *Kasturā* confines itself within a certain area, perhaps within a radius of two hundred yards of a *Jhora*. Beyond this limit is usually the domain of another member of the same species. On no account will one trespass into the realms of another. These birds possess a method, unintelligible to man, of determining the de-limitation of their territorial boundaries. It is only occasionally that a bird finds itself within the territories of its neighbour. This happens more unconsciously, and by inadvertence or mistake, than from any aggressive spirit of conquest. Not that it is afraid of legal proceedings, for instances of breach of neutrality, are punished more swiftly and effectively, but it seems to follow a natural instinct; and therefore these exclusive birds, living in adjacent territories, rarely find themselves at logger-heads over

questions of territorial possession. The Kasturā's household consists only of its mate. A party of four or five is not an unusual sight but it is only the year-old youngsters receiving field-training under parental tuition, to be soon dismissed to shift for themselves. Though the Kasturā stoutly refuses the society of its kindred, it seems to be little afraid of the usurpation of its territorial rights by other birds. In the *Jhoras* it may be seen feeding amicably with the small plumbeous Red-start (*Rhyacornis fuliginosus*) and its bigger congener, the dignified White-capped Redstart (*Chimarrhornis leucocephalus*). This triumvirate seems to live on extremely good terms, notwithstanding the great difference in their size.

In its wanderings the Kasturā ranges all elevations up to the snowline. In spring biological necessity drives it down to the depths of the glens and valleys where invariably by the side of a stream or cascade, it keeps home for the few months from April

Nests and
Eggs

to June. In architecture this beautiful bird betrays a total want of all aesthetic sense ; for it builds a coarse and clumsy structure, very big in size,—too large, in fact, considering its own dimension. The nest is generally placed on some rocky snag or projecting ledge overhanging a stream or waterfall. Nests have also been found on trees. Mr. Basil-Edwardes writes to me from Simla that it comes back to build its nest in the same place every year. The sagacity it displays in site-selection and concealment is a proof of its natural wariness, for it generally fixes upon the most inaccessible places to build its nest. If a tree is chosen, it singles out the tallest and most towering one, where in an inaccessible hole, it places its cradle. If the crevice or ledge of a rock is preferred, the rock is generally steep and precipitous so as to eliminate all chances of intrusion. When the nest is not placed in a sufficiently safe and inaccessible place the builder tries to conceal it by choosing materials which would harmonise with the

colour of the site. If an easily accessible spot on a sloping mossy bank is selected, the nest is so worked into and woven with moss as to be absolutely invisible both from above and below. But built on a rock, in the midst of a roaring torrent, not the least attempt at concealment is made; the nest lies open to view,—not even the materials are adapted to the surroundings. The nest is made of coarse fibre intermixed with a little green moss. When the nest is so placed that it is entirely concealed from view, the external coating of green moss is discarded, being unnecessary. Birds, it seems, exercise not only ingenuity but intelligence also in such activities. The interior lining is composed of dry roots, dead leaves and all sorts of decaying vegetation. The egg-cavity is saucer-shaped and shallow. The female Kasturā lays two to three eggs, and the male has courtesy enough to assist her in incubation. The eggs are the largest of Indian Thrushes' eggs. They are long ovals and possess no gloss. The colour is

difficult to describe. The ground is pale-greenish or greyish-white, freckled, either thinly or thickly, with various shades of pinkish-brown specks. Most eggs have a cloudy purplish-pink zone or cap at the large ends.

This *Kasturā* is not easily available in Calcutta. It is a big bird and best housed in an aviary, but never with smaller birds. For it is a flesh-eater, and though in its wild life it does not generally prey upon small birds, it develops in the aviary (it is invariably so if the bird is hand-reared from a nestling) quite a murderous propensity against them. In the absence of an aviary a big cage is always preferable.

The best food for it would be insects, shrimps and crabs. Snails and cockroaches are regarded by it as dainties. The ordinary *Satoo* mixture, too, is not disregarded. Occasional fruit-rations are highly appreciated. It enjoys a dip in water immensely and a bath in the aviary will help to brace

it up. It accepts a life of captivity quite philosophically and never deplors the loss of liberty by ineffectual moping and sulking. It is quite bold and free in its movements and its graceful Thrush-like pose in addition to its beautifully coloured body lends a charm to the aviary to which it belongs. It is also a good mimic and mocks other birds to perfection. "The young birds", says Miss Fitzgerald, "are very difficult to rear, being very delicate and require to be fed on worms, land-crabs and tadpoles. The only person I have ever known who has reared them is a coffee-planter in the Nilgiris. He taught them to whistle tunes beautifully with the help of a flageolet; among other tunes he taught them 'Merrily danced the Quaker's wife' and 'Ehren on the Rhine' which they whistled very well."

A great feature of the Kasturā is its tameness in captivity. I give here a brief account as recorded by Astley in the Avicultural Magazine. He writes:—

"Through Mr. Phillips' courtesy I became the possessor, last September (1902) of two Blue Whistling Thrushes (Temminck's) which at that time, and indeed it may still be the case, were, I believe, the only specimens in Europe.

"Both birds were in a precarious condition. Mr. Phillips wrote to me that the bird he considered the male was less shy than the other (whose sex he was doubtful about), which was terribly timid and suffered from fits. Both the birds underwent rapid recovery to robust health. The bird which was evidently a male had a half-inch of broken stump instead of tail. I removed these stumps.

"On the following day, he very much enjoyed a bath in the sunshine. I had named him Tommy. Two days after they arrived, I let Tommy come out of his cage in the dining room. He hopped about the floor as if he had been there all his life. A small piece of cheese was thrown to him, which he at once swallowed. After

lunch his protector (on the journey) sat down on a sofa and placed a piece of cheese on his knee. Tommy, from the floor, stretched himself up on tip-toe, peered about, and without more to-do hopped on to the sofa by his side and thence on to his arm where he very quickly seized the piece of cheese. After a fortnight I hardly dared let him out, because he had become so arrogant and autocratic that he flew at me like a furious game-cock, settling on my hand and pecking till he drew blood. In three days' time after arrival he began to sing *sotto voce* ; to record, as they say, and a very pretty warble it was, sometimes like a Black-bird's, but intermingled with curious bubbling and guttural notes which remind me of the manner in which a Blue Rock-Thrush sings. By the 10th November his new tail was full-grown, and his whole plumage, from daily baths, wholesome food and fresh air by day and night, in beautiful condition.

"A more charming pet I have never

possessed, for it combines great beauty, audacious tameness and a charming song.

"I feed these two on Abraham's egg-bread, ants' cocoons and silkworm cocoons (chrysalides or pupæ). In Italy the last is sold pounded up and dry, and is given with a mixture of ground maize. The birds are very fond of fruits. They are birds that love their baths very much and fine splashing they make in a fair-sized pie-dish."

The *Kasturā* retains a constant plumage throughout the year. The sexes, being alike, are not distinguishable. The
Coloration whole plumage is rich deep-blue, each feather being tipped with glistening blue. The lesser wing-coverts are black, while the median ones are tipped with white. Lores and base of forehead are black; forehead higher up bright cobalt-blue. The wings and tail, which in the shade appear to be almost black, flash out into superb and brilliant deep blue in the sun-light. The general appearance is black

with azure reflections. The feathers on the back and chest, being glazed along the centre, produce a metallic lustre. The bill is stout and considerably hooked at the tip. It is yellow in colour, but the culmen and the base of the upper mandible are black. Iris brown, the legs and feet are remarkably strong and are coloured black. The young bird is dull blue above and dull black beneath without the glazed tip to the feathers. It is a fair-sized bird being as large as thirteen inches and a half.

THE KASTURI—The Grey-winged Ouzel (*Merula bouboul*) counts many an English resident of this country among its admirers, some of whom regard it as the finest songster in the Himalayas. It is a very great cage-favourite among the people of the Himalayan districts, who are so fond of their pets that they are rarely persuaded to part with them even for highly tempting offers. In Bengal it is sold as the Kasturā and

The Grey-winged
Ouzel or
Black-bird

is a high-priced bird as very few are available for purchase.

This sable bird has no mournful associations about it. Its black colour, relieved by grey on the wings, possesses gloss enough to make it handsome and give its attire a dainty finish. Its vocal attainments, if not superbly enchanting, are yet of a high order. Possessing a sweet and powerful voice, it is always trying its vocal strength against the music of the rills, brooks and cascades. In fact, there is a very close connexion between its song and the melody of running water, which seems to give the bird an impetus to sing.

The Kasturi is a resident bird of the Himalayas, its range varying according to season up to the snowline. It

Distribu-
tion

occurs wherever the Whistling Thrush is to be met with. Its range also extends through the Bhutan Doars into Assam and Manipur. In Southern India it is represented by *Merula simillima*, which is a bird of the Nilghiri Hills and

M. bourdilloni, which is confined to Travancore.

Almost with the first streaks of daylight, the Kasturi breaks into song and makes the hill-sides ring with its melodious whistles. Its song consists of a very clear loud whistle, running down the scale of four notes with a sudden break. The variety and mellowness of its notes are remarkable. Sometimes it discards its own beautiful whistle and takes to imitating the notes of other birds. It possesses a perfect power of mimicry.

It does not like open rocky spots like the Kasturā (*M. temmincki*). It seems to prefer tree-forests on the hill-sides and passes its existence among the lower branches and in thick under-growths, searching for insects and berries. It repairs to the higher branches for relaxation and for indulging in its song. It has a very vigilant way of looking for prey. It suddenly makes a short

is a high-priced bird as very few are available for purchase.

This sable bird has no mournful associations about it. Its black colour, relieved by grey on the wings, possesses gloss enough to make it handsome and give its attire a dainty finish. Its vocal attainments, if not superbly enchanting, are yet of a high order. Possessing a sweet and powerful voice, it is always trying its vocal strength against the music of the rills, brooks and cascades. In fact, there is a very close connexion between its song and the melody of running water, which seems to give the bird an impetus to sing.

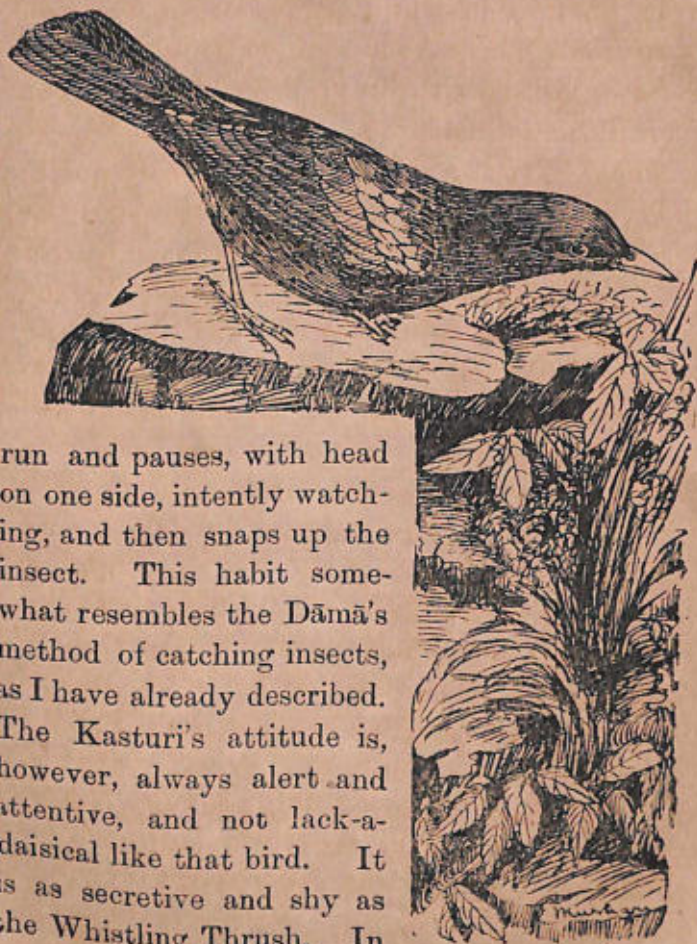
The Kasturi is a resident bird of the Himalayas, its range varying according to season up to the snowline. It occurs wherever the Whistling Thrush is to be met with. Its range also extends through the Bhutan Doars into Assam and Manipur. In Southern India it is represented by *Merula simillima*, which is a bird of the Nilghiri Hills and

Distribu-
tion

M. bourdilloni, which is confined to Travancore.

Almost with the first streaks of daylight, the Kasturi breaks into song and makes the hill-sides ring with its melodious whistles. Its song consists of a very clear loud whistle, running down the scale of four notes with a sudden break. The variety and mellowness of its notes are remarkable. Sometimes it discards its own beautiful whistle and takes to imitating the notes of other birds. It possesses a perfect power of mimicry.

It does not like open rocky spots like the Kasturā (*M. temmincki*). It seems to prefer tree-forests on the hill-sides and passes its existence among the lower branches and in thick under-growths, searching for insects and berries. It repairs to the higher branches for relaxation and for indulging in its song. It has a very vigilant way of looking for prey. It suddenly makes a short



run and pauses, with head on one side, intently watching, and then snaps up the insect. This habit somewhat resembles the Dāmā's method of catching insects, as I have already described. The Kasturi's attitude is, however, always alert and attentive, and not lackadaisical like that bird. It is as secretive and shy as the Whistling Thrush. In

its hunt for insects it always pauses between runs and hops, erect and watchful, fanning out the tail with an up-jerk and appears to be intently listening. The slightest rustle would give it a scare and it would fly quickly through thick bush-jungles stopping far away from the spot where it was frightened.

In Sikkim and in the district around Darjeeling it is usually met with near solitary *Lepcha* homesteads where it seems to be semi-domesticated, but retains its shyness and fear of man. What it seems to fear in him is not his sight but his proximity.

Though it does not pass its days in and around the *Jhoras* like the *Kasturā*, it keeps to woody places not far from a *Jhora*. For it is very fond of bathing and daily repairs for this purpose to a stream or cascade with marked regularity as soon as the sun becomes fairly hot.

Like the Whistling Thrush, again, it is not fond of company. It is generally seen singly except in May and June when it keeps in pairs. During the nesting season

its temper becomes high-strung on account of its anxiety for the safety of its children. Like the Englishman it believes its home to be



its castle ; if any bird, whose presence is not welcome, pays an

unwanted call, it is forthwith taught to respect the alphabet of etiquette. This is what an observer writes, "I was watching a male bird singing while his mate sat on the nest close by, when an inquisitive Black-throated Jay (*Garrulus lanceolatus*) invaded the precincts of the nest. With an angry 'churr' the male bird hurled the Jay into the *Viburnum faetens* scrub below and, to judge from the sounds that issued therefrom, 'boulboul' was having all the fun. Presently the combatants separated and the Jay reappeared flying unsteadily down the khud and minus some of his pteryllic adornment, while gallant Ouzel returned to his perch and resumed his song. At Dunga Gali I saw a Himalayan Whistling Thrush attacked in much the same way for unwittingly venturing into the vicinity of a nest of the present species."

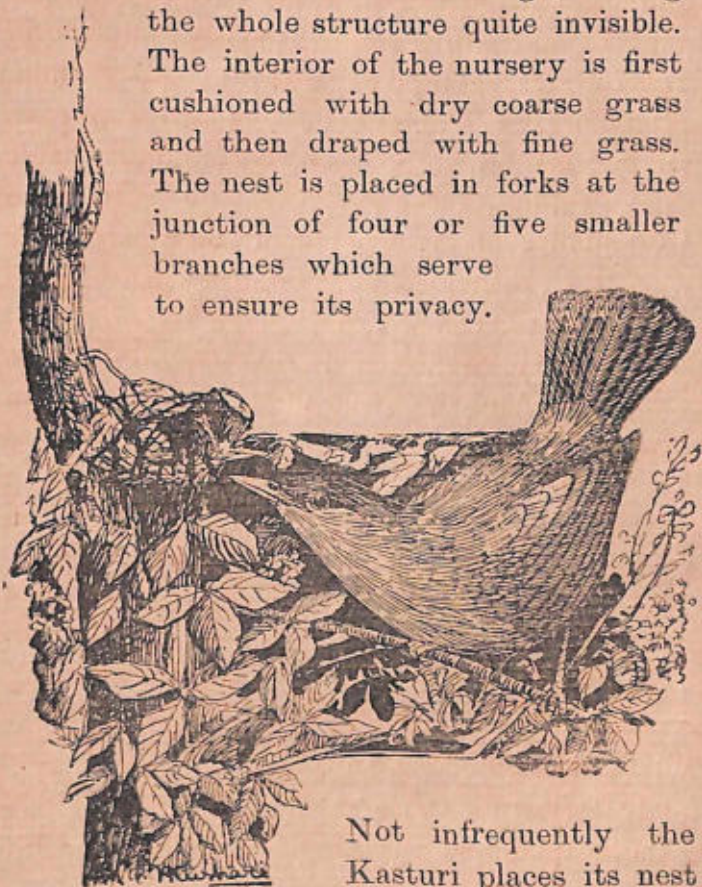
The South Indian Black-bird is not as exclusive as its northern cousin. In winter it meets in flocks. The Ceylon

Black-bird (*M. kinnisi*) occurs in larger parties for we find it described as "collecting in considerable flocks in the loftiest trees, and while some greedily pluck the berries from the top-branches, others remain in the underwood beneath and reap a harvest on those that fall." This habit of flocking is probably due to the abundance of favourite food in a particular locality rather than the presence of any social instinct.

The Grey-winged Black-bird nests from April to August, throughout the forest-clad ranges of the Himalayas, at elevations ranging between 5000 and 8000 feet. In Kashmir it is known to breed almost on snowline. On a foundation of dead leaves or fern it sets up a skeleton nest by twisting together a few coarse grass-roots thickly plastered with mud. The outside wall is then covered up thickly with a mass of dry slender ferns and grass or other roots. Over this, as a sort of paint, is used

Nests and
Eggs

some soft green moss which becomes a most effective camouflage, making the whole structure quite invisible. The interior of the nursery is first cushioned with dry coarse grass and then draped with fine grass. The nest is placed in forks at the junction of four or five smaller branches which serve to ensure its privacy.



Not infrequently the
Kasturi places its nest

at a height of twenty or thirty feet from the ground on the stump of a tree, from which the top has been cut. The new shoots springing up from below the stump serve as cover. Other sites known to be selected by it are the roots of a tree or the ledge of a rock.

The number of a clutch of eggs seems to be four. The ground-colour is a pale dirty green, so thickly streaked and blotched with dull brownish red that sometimes the ground colour becomes invisible. The blotchings form a cap at the large end.

The Kasturi is a very attractive cage-bird. It has a striking appearance, a beautiful voice, bold demeanour and graceful movements and an admirable power of adaptability. It develops into a very tame pet and has been known to live as long as nine years in the cage. In India it is kept in a large dome-shaped wicker-cage, always covered up with a piece of cloth. In spite of this covering it sings splendidly. The food that is given to it

is entirely *sattoo* and a few maggots, and it seems to thrive quite well on that diet. It has a vulgar way of feeding,—it never eats from the pot but scatters the food all over the cage and then begins to eat leisurely. It would make the cage most inconceivably dirty as soon as the food is placed in. Besides *sattoo*, it may be given *chhena* (soaked gram), bread-crumbs and, occasionally, scraps of banana and shreds of meat or a few earth-worms. This bird, too, is very fond of bathing for which provision must be made. How fond it is of a bath may be gathered from Butler's account of his specimen which used to bathe even in mid-winter.

It is a very early riser and begins its song with the first glimmerings of day-light. At noon it becomes comparatively silent. My bird used to arouse me from sleep with its trilling notes every morning as soon as the eastern sky became splashed with vermillion and pink. The sound of falling water seems to me to be in some way connected with this bird's impetus to sing.

During the monsoon the bird used to sing lustily whenever there was a heavy down-pour. Not only this ; the corridors on my first floor were occasionally washed with water and, I used to notice that, as the water was swept down and fell pattering on the court-yard, the bird used to break into song. Its native pugnacity lingers even in captivity and develops into strange conduct. Major Magrath writes of his bird, — “A tame one I have possessed for some years, used when allowed out of his cage, to “go for” the bare toes of the native servants and on one occasion he fairly put a man to flight. Curiously enough, a pair of boots or shoes invariably excited his ire and it was most amusing to see him worrying the laces, the only part where he could get a good grip of. He is always ready to “square up” to one’s finger if introduced between the cage-bars and, as he daily devours almost his own weight in earthworms, he keeps in beautiful feather and fighting trim.”

Dr. A. G. Butler once raised hybrids by crossing a male Grey-winged Ouzel with a female English Blackbird. The birds paired up very soon after their introduction. The Ouzel took the initiative in building the nest and induced the hen Blackbird to join in. The nest was built high up in a well-sheltered corner, the structure being composed of hay and twigs with a mixture of mud and dead leaves and an inner lining of finer hay. Three eggs were laid and hatched, and the young were fed with the yolk of egg selected by the cock. Later they were given worms and cockroaches. Two of the young died, the third grew up and proved to be a hen. Next year the same pair raised again a brood of three which were completely reared. Two of these were males and the other a female. The males were black but much browner than either of the parents, specially on the lower body and the grey wing-patch of the male parent was replaced by red-brown. The first year's female was almost of uniform

olive-brown colour, the second year's hen was almost like a typical hen Grey-winged Ouzel. The voice of the young hybrids was harsher than that of the male parent.

The male Grey-winged Ouzel puts on a livery of deep glossy black on the upper body except the tips of wing-coverts which form a silvery ashy-grey wing-patch. The lower plumage, breast downwards, is dull black—each feather narrowly margined with white.

The female is brownish ashy, the wing-patch being buff instead of grey.

The bill of the male is coral-red with a black tip; that of the female, orange with horny tip; the legs of the male are brownish in front, yellow behind; of the hen, bright sienna; iris brown in the male and hazel-red in the female. The Kasturi is quite a big bird, being almost one foot in length.

Yet another Thrush with a very good voice is what systematists call Tickell's Ouzel *Merula unicolor* or Tickell's Ouzel. This bird has had to change its technical name many times and, we fear,

in the next edition of *Avi-fauna* under preparation, it will assume a new *alias* making, we hope not, the confusion worse confounded. Jerdon classed it under the genus *Geocichla* and called it the Dusky Ground-Thrush. It is not as chubby as the *Dāmā* but is slim-built and in its movements and habits, approaches Blackbirds. It has a fine sweet song much resembling the Blackbird's, but the notes are short, few and without any variety. In winter it is found throughout the whole range of the Himalayas from Kashmir to Sikkim up to an altitude of 7000 ft. It is the Song-Thrush of Kashmir, where its voice is heard in every garden and grove. It does not stray very far from human dwellings but lingers around villages. It never penetrates into deep forests but keeps generally to the outskirts of woods. It seems to prefer places with big trees growing over bushy under-growths. For it seeks its food on the ground under cover of bushes where it runs and hops about with extreme quickness. Like the *Dāmā*

it has the habit of digging into the earth for worms and therefore it likes feeding on damp spots. When inclined to sing, it flies up to the topmost branches of big trees. In the mating season its liquid notes gush out at regular intervals every morning and evening.

This Ouzel is not rare in Lower Bengal. In early autumn it migrates from the hills to the plains and spreads over the whole of the Indian Peninsula except the southern parts of Deccan.

It breeds in May and June, laying three or four eggs in a cup of green moss and roots, lined with finer roots, placed against the trunk of the tree at a place from which two or three twigs spring, serving to conceal the nest. The eggs are greenish or greyish white, more or less thickly streaked or irregularly blotched with dull reddish brown.

The bird is not a very common cage-favourite. But it is not altogether unknown in the bird-market of Calcutta. It is as hardy as its grey-winged cousin and thrives

well on the same dietary. My pair pass much of their time on the ground under the living shrubs in my aviary. When loitering about in the open they quickly fly under cover, whenever anyone approaches the aviary.

The colour of the bird is ashy-grey throughout the whole upper body. Its lower plumage is slaty grey, paler on the chin and tending to become white on the abdomen and vent. The female differs in having an olive tinge on the upper body, and a white chin and throat with their sides streaked with black. It has yellow bill and legs and is nine inches in length.

THE BHIMRĀJ

(DISSEMURUS PARADISEUS)

It is strange that some of the forest birds, properly so-called, living far away from the haunts of man, are our dearest and most loving pets. The Shamā is one of this class, the Bhimrāj or the Racket-tailed Drongo is another. The perfect *sang-froid* with which both these birds accept the fellowship of man is remarkable. Both seem to regard the love and confidence of their keeper as sufficient compensation for their loss of liberty, and both become most intimate with their master. To win the confidence of naturally shy birds, no little tact is required. Great credit is therefore due to the Indian bird-fancier who accomplishes this feat. He is unacquainted with the modern process of bird-keeping, yet he seldom fails in his attempts to bring up the most delicate birds, the rearing of which baff-

les the skill of even an up-to-date aviculturist. His lack of scientific knowledge is counter-balanced by a loving heart, patient care, and the wisdom of following the traditional methods instead of hazardous innovations. He, at times, works wonders by his primitive methods. His protege is often as tame as a cat or a dog.

The Bhimrāj is quick in reciprocating the caresses bestowed on it by its master. Under the latter's guidance, it grows to be a most alluring pet. Nature has endowed it with a boldness of spirit, a sense of aggressive self-defence, a charming song and an unlimited power of mimicry,—traits which become prominent even in captivity. The peculiarities of its body are found at the head and the tail. The head is ornamented with a raised and somewhat incurved crest, while the posterior appendage has two of its feathers unusually exaggerated to a length of over a foot and a half, the shaft being bare for a few inches and ending in a racket-shaped

expansion. Its dense black colour with dark steel-blue sheen makes it a very handsome bird.

A bird of many qualities, can scarcely fail to attract notice. The Bhimrāj's fame has crossed the seas, and foreign writers have spoken of it in superlative terms.

To the scientist, the Bhimrāj is known as *Dissemurus paradiseus*. On the mainland of India, two types of the Bhimrāj are seen,—the continental and the peninsular, the latter having the crest and tail shorter. Scientists had a controversy over its division into more species than one. But Oates, in the *Fauna of British India*, rather arbitrarily included both the types into one single species under the genus *Dissemurus*. Mr. Stuart-Baker, who is at present editing the second edition of the *Avi-fauna* of British India, in his *Hand-list of Indian Birds*, published recently in the Journal of the Bombay Natural History Society, has split up the genus

into seven species. Under the trinomial system of nomenclature adopted by him, the bird known as Bhimrāj in Bengal has received the appellation *Dissemurus paradiseus grandis*.

Its range may roughly be said to extend over all the forest-regions of India, Burma, and Ceylon. All the birds have a crest, and two racket-like tail-feathers, but both are shorter in the South-Indian and Tenasserim specimens.

Distribu-
tion

The Bhimrāj is found in lower Bengal and the Sunderbans, in Central India, Orissa, Chota Nagpur, and Assam. From Khandesh all along the Western Ghats up to Travancore it is numerous, but the birds of the Deccan are smaller than those of Northern India. Along the Eastern sides of the Peninsula, however, the Bhimrāj is comparatively rare. Ceylon is inhabited by the Peninsular form of the bird. From India its range extends eastwards to Burma, and through Tenasserim to Siam

and Malaya, but here again, the continental type is replaced by the Peninsular.

Thick and luxuriant forests or jungles, jungle-clad river-sides or low hills which are full of tall trees are the favourite resorts of this bird. In certain localities, for example in Burma, it does not absolutely avoid the neighbourhood of man, straying sometimes into the outskirts of villages on the borders of a jungle. In the outlying groves of the villages or in the trees bordering an unfrequented tank, it may be seen chasing an unfortunate Woodpecker which had the audacity to trespass into its domain. The Bhimrāj has a special dislike for the Woodpeckers. It is not an unusual sight to see these short-tailed, many-coloured birds dashing, as if for very life, with a long-tailed swarthy Bhimrāj in hot pursuit. Even the hen Drongo is a perfect amazon and heartily joins in the chase. This Drongo is a highway-man of the bird-world and a veritable swash-buckler.

Field
Notes

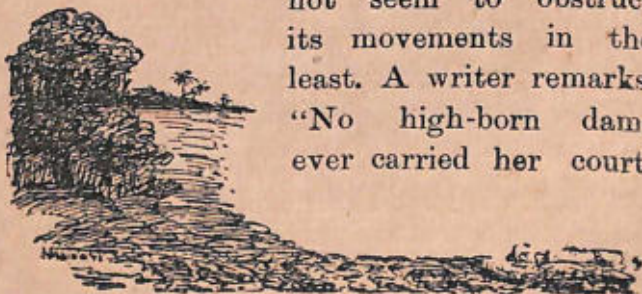
It seldom allows its neighbours a peaceful life. As soon as it notices a smaller bird from its lofty perch, it charges down to secure perhaps the insect which the latter has in its beak. Robbery is not always the purpose in its pursuit of other birds. It often would give chase in sheer mischief, only to enjoy the discomfiture of the frightened birds. For it has been noticed that though the Bhimrāj sweeps down on other birds, it does not always follow them upwards. Its boldness increases during the nesting season when, with its mate, it attacks and drives off, from the neighbourhood of its nest, preying birds like Harriers or Eagles. Its anxiety for its brood would even lead it to attack quadrupeds. Major Bingham, when out for an excursion in a jungle in Burma, passed close to a tree in which a pair of Racket-tailed Drongoes were nesting. Says he, "I was wading across the mouth of the Theedoquee, when my attention was attracted by seeing a pair of above

birds dart from a small tree and sweep down at my dog, not actually striking him, but nearly doing so."

Its predatory nature, however, does not make it an unsociable bird with its own kith and kin. The Drongoes as a class are not over-fond of company. It is otherwise with the Bhimraj. Generally, it goes about in pairs. But it is not unusual to see parties of four or more together. These birds seem to care little about territorial possessions and never restrict their movements to any limited area. Flying from tree to tree in search of food, they cover daily a wide range of ground. Occasionally, one sweeps down and picks up an insect on the wing swallowing it as it mounts up again. Sometimes the prey is carried to a branch to be eaten. It seldom alights on the ground for its prey. It is an excellent catch and is very clever at taking flies on the move. Frequently, it feeds like the common king-crows ..



from a fixed position on a branch whence it whips up insects or makes swoops at those flying past. Its flight is usually undulating, when proceeding any distance, but when making short sallies after insects, they shoot up rocket-like. At such times, one cannot help admiring the ease with which it uses its long tail which does not seem to obstruct its movements in the least. A writer remarks, "No high-born dame ever carried her court-



train with greater grace". The food of the Bhimrāj consists of large bees and wasps, locusts and dragon-flies. Lizards and rats also occasionally form its menu. It is always restless, flying from branch to branch, jerking up the tail and making frequent plunges for insects from its elevated position. Between these movements, it is repeatedly calling to its mate who is engaged in similar activities in a tree close by.

Its notes deserve mention, though it is difficult to hit off an exact description in a few words; for it can produce an immense variety of sounds from *bass* to *soprano*, some of which are beautifully clear and melodious. Oates gives it the premier place among the song-birds of India. Its general note is a deep sonorous cry like *tse-rung, tse-rung, tse-rung*. Jerdon describes it as "consisting of two parts, the first, a sort of harsh chuckle ending in a peculiar metallic sound, something like the creaking of a heavy wheel." It

indulges in these metallic calls early in the mornings and evenings. A favourite pastime with the Bhimrāj is mocking all sorts of birds around it. It has been heard to imitate perfectly such different birds as the Malabar Black Woodpecker, Malabar Grey Hornbill, *Cuculus micropterus* and *Eudynamis honorata*.

This stalwart bird breeds and rears up its young between the months of April and June. It always selects big trees for nesting, and the nest is built at inaccessible places. The extreme tip of a branch, on the top of a tree about 20 to 25 feet from the ground, is the place generally chosen. Here in a fork, the cup-shaped nest is clumsily built up of twigs and creepers, with an inner lining of dry grass. The nest hangs like a cradle below the fork to which it is strongly attached. Three is the usual number of a clutch of eggs, which are long ovals, pointed towards the small end and without

Nests and
Eggs

any gloss. These eggs are seldom uniform in colour, varying from white to a rich pink and spangled with markings of red, purple, reddish brown or inky grey. These marks are in some cases large blotches, while in others mere specks sprinkled over the surface thickly in some, thinly in others, but as a rule, the largest blotches are about the large end.

A large cage, at least three feet square, is the most suitable dwelling for the Bhimrāj. In an aviary, it would
Cage-life no doubt thrive splendidly, but if it be a mixed one, this ruffian would make the place hot for the less sturdy inmates. With pigeons and chukor partridges, it will readily form an *entente cordiale*; but if other species of Drongoes or smaller birds like Magpie-robins be there, bloody strife is sure to occur. Therefore, this Knight-Templar should be housed with such birds as can hold their own against it.

Though its behaviour towards its kin-

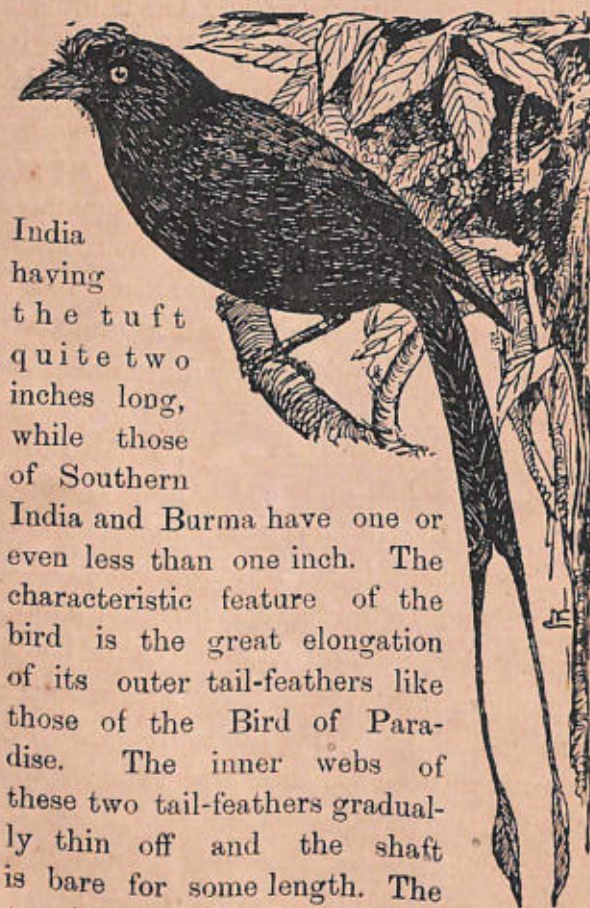
dred is typically hunnish, it is a marvel of good conduct with its keeper. With him, the bird is perfectly sociable and its knowing and intelligent ways afford him a great deal of amusement. It loves to be noticed and fondled and is never so happy as when carried about on the finger and petted. Under the fostering and almost paternal care of its keeper, its naturally robust disposition gets full play to develop all its good points. A life of captivity does not at all dull its talents. Its power of mimicry not infrequently enables it to indulge in fun at the expense of other birds. A Bhimrāj was known to frighten a Shama by mew-ing like a cat. As a ventriloquist, it gives the palm to no Indian bird. It can render with perfect fidelity, and perhaps with added charm, not only the songs of other birds within hearing, but various other sounds. It can yelp like a puppy, mew like a cat, bleat like a lamb, and imitate the voices of poultry.

The Indian bird-keeper does not find much difficulty in steadying the Bhim-rāj. The ordinary *sattoo* mixture with a constant supply of insects, maggots, and a few cockroaches keeps it fit. In the Calcutta Zoo Gardens, it was noticed to hawk upon rats and lizards straying into its aviary. It will never come down to the ground for picking up its food. So its food-cups must be tied high up near its perch. Occasionally, but sparingly, very finely minced meat may be given. Too much of this food may bring on indigestion. It is not a frugivorous bird, though it has been, in captivity, noticed to take fruit. It loves bathing and should be provided with a fresh-water bath. It does not ail much in our climate except for bad moult. The only treatment for this seems to be good food and cleanliness.

In England, successful attempts have been made to acclimatize the bird. There it requires a good deal of careful

treatment. It cannot stand cold at all, and so, except in summer, artificial heat is necessary to keep it warm. Reginald Phillips prescribed for it the following diet—"cockroaches, earwigs, chafers, wood-lice, flies, beetles, grasshoppers, grubs, almost any living creature. Naked nestling canaries and sparrows would form a valuable change, also baby mice cut up would help. Mealworms are indigestible. A grape or two may be placed within the reach of the bird as medicine."

The Bhimrāj is the finest and the most sightly bird of the Drongo family. Its whole body including the bill, Coloration feet, and claws, is clothed in sable, but the colour is not the funeral black of *Il penseroso*. Except the throat, lower abdomen and vent, the rest of the body is glossed with blue, which shows brilliantly in sunshine. Its forehead is tufted with feathers of varying length,—the birds of Northern



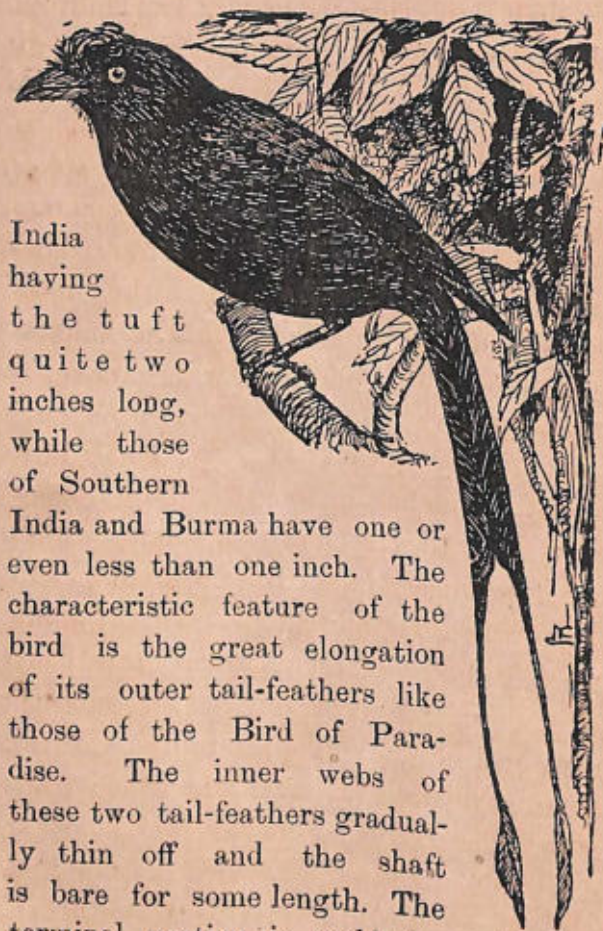
India
having
the tuft
quite two
inches long,
while those
of Southern

India and Burma have one or even less than one inch. The characteristic feature of the bird is the great elongation of its outer tail-feathers like those of the Bird of Paradise. The inner webs of these two tail-feathers gradually thin off and the shaft is bare for some length. The terminal portion is webbed and twisted

upwards. The web on the inner side of the shaft is very narrow. The bill is large, strong, and compressed towards the tip. The culmen is well-curved, hooked, and distinctly notched. Iris is red in the adult and brown in the young. The crest of the young birds just after leaving the nest (in July) is not long enough to curve backwards, the long tail-shafts are not denuded in the middle as in adult birds, and the wings have a green tinge.

From tip to tip, the Northern bird is about 26 inches in length. This dimension is due to the long tail-shafts which alone sometimes extend up to twenty inches. The middle tail-feathers are not more than five or six inches, and the body proper does not exceed a foot.

In Vol. XIII of the Journal of the Bombay Natural History Society, Finn records a case of albinism in the present species. In the specimen, the upper and lower wing-coverts except the primary



India
having
the tuft
quite two
inches long,
while those
of Southern

India and Burma have one or even less than one inch. The characteristic feature of the bird is the great elongation of its outer tail-feathers like those of the Bird of Paradise. The inner webs of these two tail-feathers gradually thin off and the shaft is bare for some length. The terminal portion is webbed and twisted

upwards. The web on the inner side of the shaft is very narrow. The bill is large, strong, and compressed towards the tip. The culmen is well-curved, hooked, and distinctly notched. Iris is red in the adult and brown in the young. The crest of the young birds just after leaving the nest (in July) is not long enough to curve backwards, the long tail-shafts are not denuded in the middle as in adult birds, and the wings have a green tinge.

From tip to tip, the Northern bird is about 26 inches in length. This dimension is due to the long tail-shafts which alone sometimes extend up to twenty inches. The middle tail-feathers are not more than five or six inches, and the body proper does not exceed a foot.

In Vol. XIII of the Journal of the Bombay Natural History Society, Finn records a case of albinism in the present species. In the specimen, the upper and lower wing-coverts except the primary

coverts, inner scapulars, axillaries, upper tail-coverts and the lower plumage from breast downwards were white, edged with black; the rump and the under tail-coverts were entirely white. There were also some white streaks on the lower breast and a shading of white on the inner webs of the tail-feathers and innermost secondaries, and on the outer webs of the outer secondaries. The bird was obtained from a bird-dealer of Calcutta. Finn was not inclined to accept it as an aberration. He writes, "Taking into consideration the extreme rarity of symmetrical albinism (except in the case of albinoid or pallid varieties) and the fact that the appearance of this specimen is not suggestive of ordinary albinism, but rather of specific difference, I venture to characterize it as new, and name it *Dissemurus alcocki*."

Birds with black plumage are not infrequently prone to albinism. But a symmetrically albino specimen is a case of

extreme rarity. Finn says that he was informed of three similar other birds having passed through his bird-dealer's hands, all of which were procured from Sigowli in the Gorakhpur district. I am inclined, however, to put little trust in the testimony of his bird-dealer, and in the absence of sufficient data, I cannot but regard Finn's specimen as an aberration. The occurrence of a couple or two of birds with symmetrically white parts (even if we believe the bird-dealer) is not sufficient, in my judgement, to warrant the haste, as Finn has shown, for species-making.

THE KHANJAN

(MOTACILLA MADERASPATENSIS)

The term Khanjan loosely denotes Wagtails, though it has a restricted application to a particular Indian species. The Khanjan has always been a favourite bird with the old Sanskrit authors, who never lost an opportunity to portray it in their descriptions of natural scenery. In describing the eyes of their heroines, they always found in this bird a pet simile. "Khanjan-eyed" connoted in their phraseology one of the best excellences of the human eyes ; but it is a moot point whether the sparkling gaiety of the eyes suggested their resemblance with the restlessness of the bird or whether the anatomical likeness between the shape of those eyes and the body-contour of the bird was the subject of comparison. Having a wide distribution, the Wagtails are so very familiar to the people of

this country that the latter feel prejudiced against caging them, and whenever any such bird is put up in the market, it is not unusual to find a benevolent person losing no time in buying it up or, if there be more, the whole lot, simply for liberating them. Consequently a Wag-tail is not a common cage-bird in any part of India. The Large Pied Wag-tail, however, is sometimes caged, and is considered a respectable bird in Behar and some parts of the U. P., where it is specially known as '*the Khanjan*'. This bird is much larger for a Wag-tail and closely resembles the Dhayal as regards the arrangement of the black and the white colours upon its body. It has a superbly beautiful canary-like song which, if widely known, would earn for it a popularity that would probably be in an inverse ratio to the undeserved neglect in which it has hitherto been held. In Bengal, few people can make its acquaintance even in nature, chiefly on

account of its restricted range which, if not altogether outside Bengal, merely touches the western fringe of its present political boundaries. As Wagtails are never popular cage-birds, they are seldom caught and are hardly available for exportation. Consequently, the qualities of *Motacilla maderaspatensis* are a sealed book to the European aviculturist, who has thus been deprived of the acquaintance of a really efficient singing bird. For, as a chorister, the Khanjan in question is as much superior to its kindred as the canary to the sparrow. Its notes possess a sweetness and cadence like those of the Dhayal, though without the latter's variety. An English gentleman says, "A more cheerful and engaging little pet it would be difficult to imagine, to say nothing of its singing powers which, in my opinion, excelled those of a canary." It is such a charming bird that it can not fail to recommend itself to the most fastidious of avicultur-

ists. It has the requisite qualities of the cage-birds of a high order, and without it, no book on cage-birds would be complete.

In the *Fauna of British India*, Oates recognises *Motacilla maderaspatensis* as a species. But Mr. Stuart Baker regards it as a sub-species and calls it *Motacilla alba maderaspatensis*. According to him, this Wagtail belongs to the *alba* group. Mr. Claud B. Ticehurst justly criticises this grouping in the Journal of the Bombay Natural History Society (Vol. xxviii, p.1090)—“Mr. Stuart Baker puts this wagtail as a race of *alba*: with this I cannot agree. In many points this species differs from the *alba* group. Firstly, this bird is in habits unlike the latter in being practically confined to water-courses. Secondly, it is resident throughout its range, while all the *alba* are migratory. Thirdly, its very superior size. Fourthly, total absence of white forehead which all *alba* show in winter. Fifthly,

summer and winter plumages are alike in this bird. Sixthly, this bird has no spring moult."

Motacilla maderaspatensis, is the largest bird of the Wagtail group in India.

Distribu- While all the other
tion species of Wagtails move out
of India with the advent of

summer, this bird has made this country its permanent home, adding its merry and musical voice to the minstrelsy of the Indian countryside. Its range extends from Sind and Kashmir in the west to Behar and Chota Nagpur in the east, and from the lower ranges of the Himalayas in the north to Ceylon in the south. Though one is likely to meet with the bird everywhere in India, it is more locally distributed than many birds with as wide a range. In certain places they are to be found in large numbers, while in others only a few stragglers are to be seen. For example, in the town of Poona, large numbers of the Large

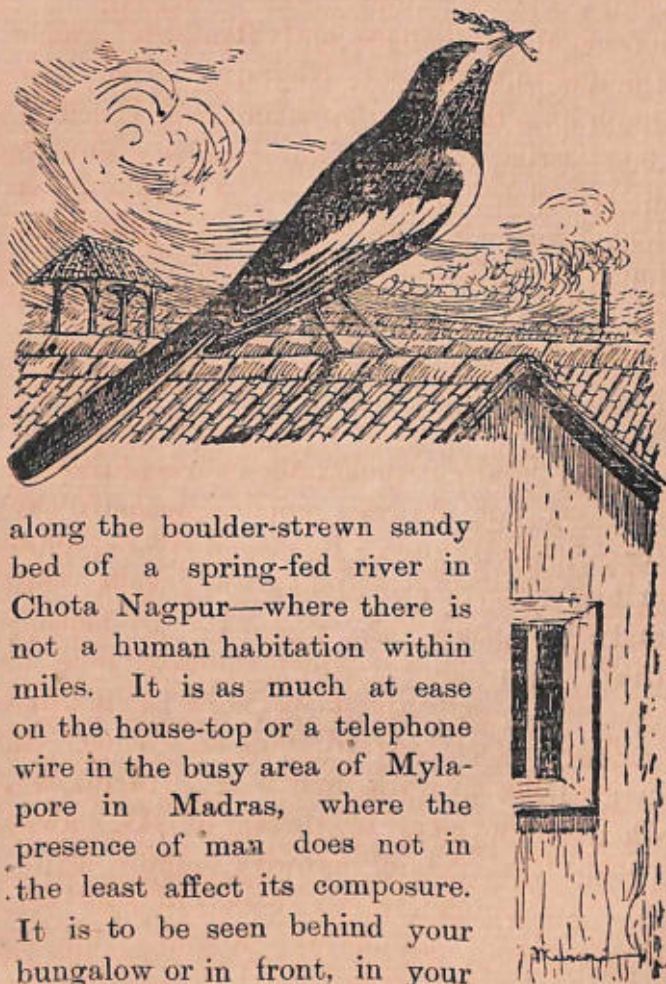
Pied Wagtail live and breed in and around the river Sangam which flows past that city, while ten miles out of it, you will have to search hard to find a single bird. The city of Madras, for some reason or other, attracts large numbers of these birds, while many other towns of the Madras Presidency are not as lucky in harbouring these lively creatures as that city. This bird is very common on the shrunken river-beds of Chota Nagpur. In the Himalayas, it does not range very high up, though it has been noticed in Sikkim and Musorie. It is rare about Darjeeling. In the hills of the Deccan, it has been found as far up as 8000 ft. It is scarce in the desert-lands of Rajputana, but a few live and breed about the lakes of Mount Abu. It is plentiful in all the well-watered portions and the great river systems of Northern India. In Bengal, a few stray birds are likely to be met with in those portions of the border dis-

tricts of Midnapore and Bankura which wedge into Chota Nagpur. Finn saw only one bird in the vicinity of Calcutta but perhaps it was an escaped convict. It is plentiful in Orissa. I have heard its melodious notes mingling with the music of the sea at Puri.

Legge characterises the Large Pied Wagtail as "essentially a water Wagtail—rarely found away from water".

Field
Notes

I have never noticed it far away from water-courses, though it may not always remain actually by the water's edge. Banks of rivers, sides of brooks, ponds, tanks or wells are where it may be seen. It is neither like those birds which always love to be within sight of man, nor is it like others which regard human beings as repugnant creatures and betake themselves to solitary glens or dense forests, away from 'the madding crowd's ignoble strife.' It is completely at home by the side of a thin, meandering stream, rippling



along the boulder-strewn sandy bed of a spring-fed river in Chota Nagpur—where there is not a human habitation within miles. It is as much at ease on the house-top or a telephone wire in the busy area of Mylapore in Madras, where the presence of man does not in the least affect its composure. It is to be seen behind your bungalow or in front, in your

courtyard or in the garden, and may also be found feeding in a field close by. In the month of November, I have seen in Madras a few cock Wagtails perched, on the parapet of a house, at a little distance from a very serious-looking hen and pouring out their impetuous love-songs with that hypnotic ardour which only the longing for possession and spirit of rivalry can give. These song-contests reminded me of the ancient Indian ceremony of *Swayambara*. At the approach of the marriageable age of a particularly accomplished princess, for whose hand aspired many eligible suitors (among whom it was difficult to make a selection), it was usual to allow the bride to choose her consort. Invitations used to be issued to all royal houses. On an auspicious day the suitors used to gather in the audience-hall when the princess came out with her attendants, passed through the ranks of the expectant guests, stopped before each

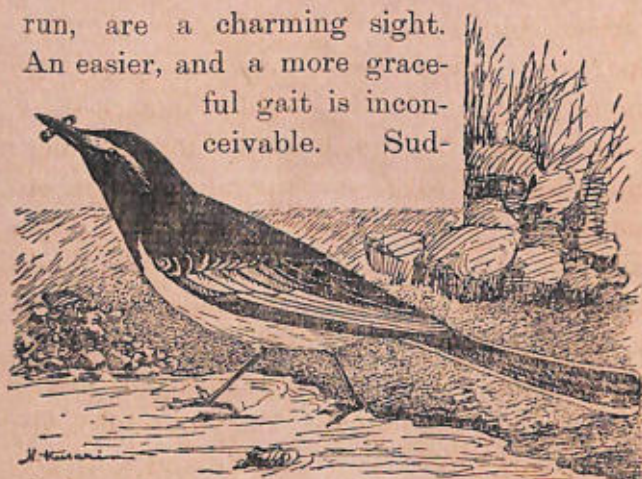
to hear the heralds recount the great deeds done by him. She carried a garland in her hands for placing it over the head of the person of her choice. When the selection was over, it was sometimes necessary for the successful suitor to defend himself against the combined attacks of the disappointed aspirants. I cannot say that the Wagtails are so methodical in selecting their mates, but they are no less artistic. Many species of Wagtails flirt outrageously to capture the imagination of the hens of their choice. They generally puff out their feathers and indulge in various acrobatic flights. The Khanjan, however, appears to trust to its vocal power as its greatest amatory asset to win for it the favour of its mate. In the mating season it becomes gregarious to some extent, though at other times it prefers to live in pairs. In the river that runs past Poona, large numbers breed in the small rock-islands below the

embankment. Some half a dozen males regularly run after a hen, trying to hypnotise it with their songs. Perhaps a cock has found a mate and is happily engaged in professing its love in melodious tunes, when suddenly there arrive a few other males who begin their song with a loud defiance. The first cock ill affords to bear such interference in silence, and therefore duels, which are never out of date in the bird-world, frequently occur. The jilted suitors do not take their disappointment lying down, but make every attempt to justify the time-worn adage, *Might is right*.

The writer who described *Motacilla maderaspatensis* as the most lovable species among wagtails was not at all hyperbolic in his admiration. I have seen this bird at Puri, sitting on the top of a tiled house and singing most gloriously, while its mate was engaged in epicurean hunts a little ahead on the beach. As the hen moved on, the

male also followed in a parallel line, keeping to the house-tops. Occasionally, the cock flew down to the female to share with her a particularly dainty eatable. Suddenly, the female left the beach and made straight for the city. The cock noticed this in the midst of its song which came to a sudden stop. It turned its head this side and that, probably to find out the cause of its wife's sudden flight; and unable to catch sight of any disturbing element anywhere, it looked straight ahead at the receding figure of its companion. Then uttering a sharp chirrup, which might have denoted 'Eccentricity, thy name is woman'—it left the place. Its flight was most charming and graceful. It scudded along in undulating curves, as if progressing on the crests of waves, closing the wings on the downward motion and spreading them out while swinging up. On the ground, its lightning movements, as it catches insects most deftly on the

run, are a charming sight. An easier, and a more graceful gait is inconceivable. Sud-



denly darting forward, it twists and turns with wonderful agility in pursuit of an insect. It is so quick-sighted that though incessantly moving, the slightest stir on the ground ten feet ahead, which would escape our most searching gaze, would draw its attention. Before you could say Jack Robinson, the bird has run up to the spot, caught the insect, and moved away with its tail see-sawing in a most self-satisfied manner.

Its supreme agility is in keeping with

its indefatigable activity. But it is not a fussy bird like the Mynah or the Sparrow, and does not dissipate its vigour by useless and unnecessary restlessness. Nature has not for nothing endowed it with a superabundance of energy; it is necessary for its very existence. And therefore we never find it at rest for any two seconds, and it is busy hunting for food from sunrise till sunset. And what a feed it has! "Live to eat" is perhaps the philosophy of life of this bird. The number and variety of insects devoured by it in a day is appalling. It is keen on catching very minute winged insects, large numbers of which daily fall victims to the Khanjan's appetite. Of the large insects, grasshoppers, mantidæ, caterpillars, crickets, flies, butterflies and wasps are considered edible. It seems to avoid harder insects like metallic coloured wasps and beetles, nor does it touch bugs or cockroaches. If it happens to catch a particularly fris-

ky or a big unmanageable creature, it never uses its claws to tear the prey into pieces, but hammers the object with its beak till portions give way. It catches many insects in quick succession and does not stop to swallow one before it bags another. What it does is to stow them away in its mouth till a dozen or so are caught; these are afterwards leisurely swallowed. When feeding its young, it has to bring as many insects at a time as possible to satisfy the ravenous hunger of its youngsters, because the insects caught by it are mostly minute. It is this preference for minute insects that leads it to frequent water-sides which abound with them.

In its own particular feeding area, the Khanjan refuses to concede to others of its ilk the privilege of even an occasional visit. It is fully conscious of the circumscribed supply of its food. This fear of short rations makes the Khanjan

a cruel parent. It is loving and considerate as long as its children are helpless and unable to hunt on their own account. But as soon as the youngsters are able to do so, they are mercilessly driven out of their paternal territory.

The Khanjan takes to its domestic duties in March and its family cares last generally till May and sometimes later. It raises several

Nests and
Eggs

broods in a season. In Southern India, these birds nest during the North-eastern Monsoon, which gives rain to the eastern portions of the Deccan Peninsula between the months of November and January.

The Khanjan is not at all fastidious about its nesting site. The neighbourhood of water and something solid to place its nest on, appear to be the two sole reservations for which it cares, and if these are available nothing else matters. Its nests have been found in holes in banks and walls, crevices in rocks, under

stones and clods of earth, in the timber of bridges, in drains, on roofs,—in fact, “anywhere except on trees, shrubs, and bushes.” “When this bird makes up its mind to build in a particular spot, no amount of adverse circumstances will deter it from carrying out its plans.”

A friend of Legge wrote to him that at Futtehgur, a favourite situation was the bridge of boats, the nests being placed inside a pigeon-hole either at the bow or stern of a boat. A pair of large Pied Wagtails nested for several successive seasons in an iron ring attached to the top of a buoy in the middle of the river Jumna at Agra. Another pair built their nest in a ferry-boat which daily crossed the Chumbal. The female used to sit on its eggs most non-chalantly when the boat plied across the river. The male entertained the passengers the while by its song, sitting on the gunwale, occasionally taking short jerky flights over the water. Here is a note on its nesting from

Poona—"Very favourite places are the little islands which stud the river (Sangam) below the *Bund*; to obtain the nests one has to wade out. The nests are very massive structures, usually having large foundations of all sorts of rubbish, on which the nest proper is built."

The European representative of the Pied Wagtail—*M. lugubris*—has been known to utilise the nests of the Swallow, Robin, and Blackbird for its own purposes. Its Indian congener, however, has not been known to do any such thing. But in Hume's *Nests and Eggs of Indian Birds* (edited by Oates) we find a solitary record of a Grey Wagtail—*M. melanope*—using a Finch's nest for the foundation of its own building.

The character and materials of its nest are as various as the site chosen for it. The nest varies from a mere pad to a neat well-formed saucer or shallow cup. As for materials, it would pick up anything that is soft,—fine twigs, grass, roots,

wool, feathers, hair of either horse, cow or man, string, coir, rags and all sorts of vegetable fibres.

Three or four eggs usually form a clutch but five also have been found. In size and shape, they are widely different, but most of them generally resemble Larks' eggs. They vary from a long to a rather broad oval, but as a rule, all are more or less pointed towards the small end. Their ground-colour varies from brownish to greenish white, and the marks thereon are clouds, smudges, streaks, spots and specks. The colour of these markings is sometimes earthy brown, sometimes dark olive-brown, and sometimes purplish-brown. In some eggs the markings are uniform, while in others they are more dense on the large end and comparatively sparse elsewhere.

Gay, bold, elegant, and engaging, the Khanjan possesses the requisites of an ideal aviary bird. Butler considers that Wagtails are far more pleasing when kept

in aviaries than in cages. The Indian bird-lover never dreams of accommodating his pets in aviaries. He thinks that anything bigger than his traditional cage is a superfluity. Yet, the wonder is that birds do thrive under the conditions provided by him. Take the case of the Large Pied Wagtail or the Lark. One naturally thinks that the cage is the most undesirable place for such restless birds; they require plenty of space for their very existence and the Wagtail, in addition, needs water to paddle in. But in the small, cramped, and covered cages in which these birds are kept in India, they sing with all their natural vigour and sweetness. However successful the ordinary bird-keeper may be, I would recommend for the Khanjan a large cage in which it can freely run about.

I possessed, at different times, only two specimens of the Khanjan, one of which came to me in a very bad condition

and died shortly after. The other lived with me for sometime but as I could not keep up a sufficient supply of insects, it eventually died. In India, adult birds are seldom welcomed, because they are far less adaptable than nestlings. But wild adult Khanjans, caught by bird-lime, are less shy than many other birds; for they begin to sing quite freely a day or two after their capture. And they do not take long to adapt themselves to artificial rations. The Khanjan is intolerant of the company of its kind and of other wagtails. So it is never wise to keep more than a pair together. A Khanjan, in my aviary even when it was a very young bird, showed fight with a perfectly healthy and adult White Wagtail (*Motacilla alba*).

Butler prescribes biscuits, eggs, ants' eggs, and dried flies, and adds that a small quantity of ground lentils would not be injurious. He understands that the Pied and Grey Wagtails successfully.

crossed at the London Zoological Gardens and the hybrids proved to be fertile. If this be the case, I believe the Large Pied Wagtail of India might prove an interesting study for the mule-breeder.

Below I give an account of this Wagtail in captivity as recorded by an European in the Journal of the Bombay Natural History Society—

“One day I saw hung up in a cage in the Neemuch Bazaar two half-fledged specimens of the bird. They were being fed on a mixture of ground parched gram (*satoo*) moistened with *ghi*. I was informed that they had been taken from their nest only a few days before, and fed on nothing else. I passed on thinking that of course such a purely insectivorous bird would never flourish on this diet. However, a fortnight after I found one still living, the other having died. The owner seeing me interested in it offered it to me, so I took it home and had a spacious wicker cage made for it.

"It became, or rather it always was, excessively tame, not to say fearlessly contemptuous of man, and would at any time take insects from one's fingers, or if it found them empty attack them with mock fierceness, opening its beak, ruffling up its feathers and drooping its wings. I found that an effectual way of feeding it was to sweep with a large net in long grass and then place the cage over the mouth of it. As the insects gradually extricated themselves and struggled up to the light they were pounced upon and captured by the Wagtail. The quickness and accuracy of its movements were something wonderful. It was a most indefatigable songster, with loud clear pipe and considerable variation of song. On being transferred to this barren rock (Aden) I found it impossible to procure insects in sufficient numbers, so tried giving it sand-hoppers, annelids, small crustacea but nothing came amiss to this most accommodating little bird who ate

these readily, occasionally varied with plum-pudding, raw meat, and chopped egg, though *sattoo* continued to form the basis of its meals. I had had it for two years, but the climate proved too much for it and it died."

Black and white are the only colours that make up this bird's dress, much after the fashion of a Dhayal.

Coloration The sexes have different attires.

But the male does not put on a new dress when it goes courting. *Motocilla maderaspatensis*, unlike other Pied Wagtails, has no seasonal change of plumage. It has a broad supercilium from the nose to the end of the ear-coverts. The whole head, neck, upper plumage, the lesser and median coverts are black, while the greater wing-coverts are entirely white and the quills black with white edges. The middle four pairs of the tail-feathers are black with narrow white margin, while the other two pairs are white. The breast and the lower pluma e

are white ; the sides of the breast and upper body are infuscated.

The female differs in only having the upper plumage more or less greyish.

Young birds have an adult pattern of plumage, but in the place of black, the colour is everywhere greyish brown. The supercilium again is not indicated in front of the eye, and the white portions are fulvous. Some black plumes on the head in the first spring herald the assumption of adult plumage, but the full livery is not assumed till the next autumn moult.

Legs, feet, and bill are black. The bill is long and slender ; feet scaly ; iris dark-brown. The male is generally about nine inches in length, the female being much smaller.

THE TUTI

(CARPODACUS ERYTHRINUS)

The Finches are a big family of birds. Many of them find their way into man's home. They are all hardy, little, seed-eating birds giving no anxiety to their keeper as regards their food. Cheap as they are, they are as common cage-favourites in this country—specially among poor people,—as in England, where, however, many of the Finches e. g., the Gold- and Bull- Finches possess a good voice and are kept for that reason. India is visited, no doubt, by many species of Gold- and Bull- Finches, but they are different from those obtaining in England, and make no pretensions as choristers. The only individual among our *Fringiline* guests, that has a claim to our admiration as a song-bird is the Tuti or Hodgson's Rose-Finch known in science as *Carpodacus erythrinus roseatus*.

This bird is a general favourite, a bird preferred and kept by all people, rich or poor. In India there are roughly speaking two classes of people infected with the hobby of caging birds viz., those who form the top and the bottom of the social edifice. The ordinary middle-class man is too busy with bread-earning to give any thought to the pleasures of aviculture. The life of the Indian Plebeian may not be an object of envy but yet he is a contented person, possessing no disturbing ideas about a standard of living and cherishing no unholy sentiments against the better-placed and better-fed members of his society. He has his small joys of life, one of which is the care of birds. If you take a stroll through the slums of an Indian city, or the *coolie* lines of an industrial centre, or the *bazaar* of a cantonment station, you will never fail to see birds of some kind or other hanging in cages, covered or uncovered, in front of small shops, bar-

racks and huts. These birds come from bird-catchers and often direct from the nests when very young. The ordinary Indian is a good judge of birds and appreciates merit when found. So, we find the Tuti—a perfectly lovely bird like a 'red, red rose'—to be as popular with the artisans and labouring classes of this country as the canary is in England.

The Tuti is a bird with possibilities. By means of artificial selection, more beautiful or completely scarlet types may possibly be produced, as has been done with the finches and canaries in Europe. But in India the bird-lover is not a fancier in the English sense of the word. He is not willing to take the trouble of inducing his pets to breed under his care. He would hardly believe, if told, that many birds breed in captivity under favourable conditions. The production of hybrids and mules is altogether beyond his imagination. But considering how adaptable the Tuti is, it is strange that

no attempt has been made in Europe in this direction with this bird.

Distribu-
tion All the species of Indian Rose-Finches, except one, are found in the Himalayan districts only, and never in the plains. The one exception is the Hodgson's Rose-Finch which winters in the plains as far south as the extreme Southern end of the Western Ghats. In summer, it moves up to the western Himalayas, the Karakoram, the Hindukush and Tibet at an elevation of 10,000 feet for the purpose of raising its brood.

The Tuti arrives in the plains in September and large numbers continue to pour in up to October. Different parties follow different routes. The birds that breed in the Hindukush regions enter India through the Kurram and Kabul Valleys and through the Afridi territories; those that summer in Kashmir and Western Tibet come straight down to Punjab, where lingering a few

days in the various towns and villages they probably pass on, either towards the United Provinces or to Central India and the Deccan. They do not seem to prefer the plains of North Western India and the neighbouring arid districts of Rajputana and Sind. The birds that breed in Tibet appear to enter India across Nepal and Sikkim, but they do not tarry there long. Parties arrive at short intervals and after a very brief sojourn in Jalpaiguri and Northern Assam, pass on to the plains of Bengal below, or to Burma. In winter these birds spread over the whole of India extending up to the Nelliampathy hills, the southern boundary of the Palaghat Gap, but their range does not cover Cochin and Travancore. During the autumn migrations, the arriving flocks are mostly composed of young birds. The exodus begins early in March and continues throughout April. The birds of the Gangetic

plains begin to depart in the latter month, and in May the last bird has left the plains. Hume and Henderson, during their famous expedition, found the birds breeding in Kashmir and Ladak in the months of June and July. And, during their return journey in September, they failed to notice a single bird in those regions. At this time of the year, these bright scarlet birds appear for a few days in those northern districts of the Punjab, U. P., and Bengal which are immediately to the south of the Himalayas.

The Tuti is a gregarious bird, and no wonder. It has to cross hundreds of miles over unknown countries twice every year. Such journeys are not possible for solitary birds and Nature therefore has ordained that migratory birds should live in flocks. The Tuti is not only small in size but is wanting in courage which one naturally expects in a bird which makes,

Field
Notes

every six months, a dash of considerable length across the country. The long and arduous journeys undertaken by it do not imply that it possesses an intrepid nature like the Bhimrāj or the Kasturā. The bird is, on the contrary, a bundle of nerves. When it is feeding in a field on the fringe of a grove or wood, it takes alarm at the least sound and the whole flock flies helter-skelter into the neighbouring shrubs for concealment. The screech of some bird or the shadow of a large bird flying overhead gives the Tutis the blue funk and sends them into the shelter of trees. After a minute or two when they see that there is no real danger, they again noiselessly drop down like falling leaves to the ground in fours or fives. Their existence seems to be one of constant terror. They hide themselves more than a dozen times in an hour and most times for no apparent reason. The much criticised 'protection' theory will probably explain

the cause of this nervousness. The Tuti cannot be said to possess a 'protective coloration'. Its brilliant crimson colour makes it a very conspicuous target for any bird or animal that may be inclined to investigate its dietetic value. This bird in the remote past possibly, led as tormented a life as that of a new celebrity who suffers in modern times, untold agony in trying to dodge innumerable autograph-hunters. The primitive Tuti's habit of being always ready against the attacks of dangerous creatures was probably transmitted to its progeny in whom it appeared in the form of a latent nervous feeling in its sub-consciousness. The nervousness of these birds was accentuated by their experience of constant dangers all through their life. The instinct of self-preservation taught them to be suspicious of every shadow and sound; and by hereditary transmission suspiciousness has now become part of their nature. The defensive armour of some



birds is the colour of their body, which by making them invisible amidst their surroundings protects them from danger. But as the Tuti possesses no mantle of invisibility, it is endowed with timidity and alertness which are positively "protective" characters.

But the Tuti seems to

carry things with a high hand among its own tribe. It is as quarrelsome as the house-sparrow, and squabbles are very frequent among its kind. That these quarrels are not due to amatory reasons is certain, because they occur even in the non-breeding season.

This timorous bird frequents groves, jungles, and gardens. Davison writes, "I have never seen it feeding except when there was a good deal of cover close at hand to which it could easily retreat when alarmed". In Southern India, its favourite resorts have been noticed to be bamboo jungles, the seeds of which are regarded by it as a delicacy. The Telegu name of the bird, translated into English, means "bamboo sparrow". It loves to be in the vicinity of grain-fields, where it feeds all through the day on rice and other grains and seeds. Flower-buds and tender leaves are also included in its dietary. During its migrations in Spring and Autumn, it has been known

to do some damage to fruit trees by eating up the buds. In autumn, it eats berries, and other fruits. It is, however, not a vegetarian all through the year. In spring, it takes to eating insects. The food of the family *Fringillidae* as a whole consists of both seeds and insects, the latter being the main food during the nesting season when the young are reared on an insect diet. Several English Finches feed their young with insects. Field observation on the Tuti in this respect does not exist at all. Very likely the Tuti also brings up its young on an insect diet, for at the altitude where it breeds in the Himalayas, grains or seeds are not available. The vegetable food found there is possibly unsuited for the stomach of the young and hence necessity drives the Tuti to be exclusively insectivorous during a part of the year.

I have already said that the Indians admire its soft and thrilling song but there seems to be a difference of opinion

about it among English observers. Blyth says—"The Tuti has a feeble twittering song, but soft and pleasing—being intermediate to that of the Gold-Finch and that of the Redpole-Linnet, the call note much resembling that of a canary." Seeböhm's testimony is as follows:—"The song of the Scarlet Rose-Finch is a very striking one and not to be confused with that of any other bird. It is a loud, clear whistle—tu-whit, tu-tü-i. It does not require a great stretch of imagination to fancy the bird say—'I am pleased to see you', the word 'see' being strongly accented and slightly prolonged. The song is never varied but is sometimes repeated twice in rapid succession". But that great aviculturist Dr. Butler seems to have been disappointed in this bird. One of his remarks against the Tuti as a cage-bird is that "there is nothing specially beautiful in its song." "A specimen" he adds, "my sister Dr. Fanny Butler, brought me from India

never got beyond its rather plaintive, though musical call-notes". I am quite sure, if Butler had tried more specimens, his verdict would have been different. That was perhaps the first attempt to acclimatise the bird in England and from his account it seems his bird never got on well, and failed to make an impression on him.

The Tuti is a bird which combines a beautiful body-colour with a fine song. Vocal and artistic charms in the males of many birds have great amatory significance. But some people are of opinion that birds that possess the one can dispense with the other and, therefore, the combination of both those qualities in one bird is scarce in Nature. It has for long passed as an axiom that these two means of attraction are not found in a high or an equal degree united in any bird. But this is a mistake. Leaving aside many other birds that possess a very gaudy plumage with melodious and soul-enchant-

ing song, the birds of the family *Fringillidae* alone can give the lie to the theory. Many species in this family combine vocal and artistic charms, proving that, to quote Selous, "there is necessary antagonism between the one and the other."

The Tuti nests in remote mountain regions far away from civilisation. Its

Nests and
Eggs nests and eggs have been collected through the enterprise of

the Europeans. It fixes up its nest either in the fork of a low bush among stems of coarse grass in scrub-jungles, or amongst climbing plants within a foot of the ground. Sufficient information about the architectural design of the nest is not available. The few nests discovered were neat and rather deep cup-shaped structures of grass, lined only with finer roots and stems. Sometimes a good deal of hair is used as lining. It seems that the Tuti regards hair as a desirable material for upholstery

and uses it whenever available. In the aviary of Dr. Russ, the Tuti once reared a brood. The nest was placed tolerably high up in a thick bush against the wall, and was formed of flowering heads of reeds, soft strips of paper and thread with a lining of horse hair. The nests are so slender as to be semi-transparent when held up to light.

The bird sometimes lays four eggs, usually five, and occasionally an additional egg goes to form the clutch. The eggs hatch out in twelve days. They vary a good deal in shape from regular to broad ovals, but all are a good deal pointed towards the small end and there is little gloss on them. The ground-colour is a pale clear blue—of a deeper hue than the colour of the eggs of an English Bull-Finch. The markings are few and wholly confined to the broad end; these are either good-sized spots and specks or a few hair-like lines, their colour being either chocolate, inky

purple, reddish brown, blackish brown, or black.

The bird is brought down to the Calcutta bird-market in large numbers and finds a ready sale here. It is also frequently exported to Europe. It is a very great favourite among all classes of people in this country and no one has anything to say against it. But Butler writes, "After the first moult, all the rose colouring disappears and is replaced by yellow; and there is nothing specially beautiful in its song." I have already said much about its song. As to the first point I must say that Butler's specimens were either unhealthy or aged, for in such birds, I have noticed the fading away of the brilliant tints. He should not have laid down a proposition from the study of only two birds. If it were true that all Rose-Finches lose their brilliant colour in captivity and that they have nothing specially beautiful in their song, I do not

think these birds would have been so largely imported to England. In our country, the Tuti retains its brilliant plumage for a long time. Roughly speaking, its longevity in bondage is four or five years, but with care and attention, it may live longer.

The Indian keeps his Tuti much as he does a Munia on *Kangni* (*Setaria italica*) and various other seeds, such as millet and canary seeds. It will eat berries and fruits and is fond of nibbling cabbage leaves. In its wild state, the Tuti has been known to devour *Jowaree* (*Andropogon sorghum*) and rice and various other grains and seeds. Jerdon says, "This gives a clue to the best seeds on which to feed the Scarlet Rose-Finch in captivity—white millet and paddy rice; to these, canary-seed makes a good addition and I should include oats and sunflower seeds. Unless the bird can be turned loose in an aviary, no soft food should be regularly supplied, as it then

tends to produce an excess of fat."

It is a very tame and gentle cage-bird. A cage is economically the best place for this nervous and timid bird. An aviary will suit if only the other inmates are as gentle and well-behaved as itself.

Butler says that he paired it up with a hen canary in the hope of breeding mules but unfortunately he lost his specimen.

When the Tuti arrives in India in the months of September and October, it has already discarded its summer suit.

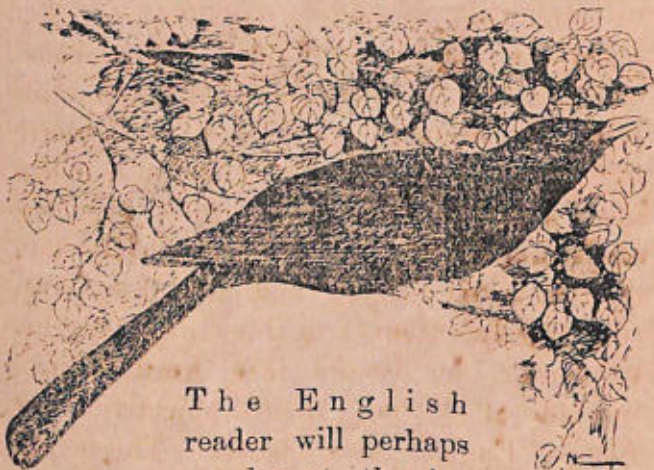
Coloration Its forehead, crown, and neck are then dull crimson ; wings and tail brown ; lower back rosy red ; cheeks, chin, throat, and upper breast beautiful rose-colour ; lower breast pale rose, fading off into albescent on the abdomen and under tail-coverts. After Christmas, owing to the wearing away of the margins and *the deepening* of the colour of the feathers, the whole head, neck, chin, throat, and upper breast become bright

crimson; the back, wings, rump, and upper tail-coverts become very dark crimson.

The hen is an olive-brown bird with brown streaks, the wing-coverts being broadly tipped with yellowish. The youngsters are like their mother in appearance and retain such looks during the first summer.

The Tuti's iris is dark brown; legs and feet are dusky brown, and the bill is dark horny brown. The bird is a little above six inches in length.

THE KOEL AND ITS ALLIES



The English
reader will perhaps
wonder at the in-
clusion of the much-

despised Koel (*Eudynamis honorata*) among song-birds. But as I am writing of the song-birds that are common cage-favourites in Bengal, I cannot but include this bird in my list. Indian poets, ancient and modern, have immortalised this bird in their writings. They like to paint how the cuckoo's

notes are most tantalizingly pleasant to the over-wrought imagination of a pining lover. The Indian thrills at the high-pitched call of the Koel and gives himself up to the sweetest day-dreams. The European staying in India, on the other hand, has not a single good word for this bird. In summer, when the cool morning is trying to soothe him into sleep after a night's restless tossing in bed, the koel's sudden torrent of loud hilarity jars on his tired nerves and fills him with resentful intentions; unable to get at his tormentor, he breaks into words which, instead of hitting their objective, hit King's English very hard. These unpleasant associations have lowered the cuckoo in his estimation. The deliberate opinion of an English writer is, "The villainy of the cuckoo is most thorough-going and consistent...He begins his days with a sin and passes through life steeped in iniquity." * This judgement is not likely to be reconsidered, since the Koel will lead

an absolutely Bohemian life in utter disregard of all public opinion. Its iniquitous life did not escape the notice of the Sanskrit poets, who expressed their convictions in no less uncertain terms. But with all its faults, the Indian loves it dearly, and will continue to do so.

Four species of the *Cuculidae* are commonly caged in India. These are— (1) the Koel (*Eudynamis honorata*), (2) the Pāpiyā or the Hawk-Cuckoo (*Hierococcyx varius*), (3) the Bou-Kathā-Kao or the Indian Cuckoo (*Cuculus micropterus*) and (4) the Shāh-bulbul or the Indian crested Cuckoo (*Coccytes jacobinus*). Among these, the Koel and the Bou-kathā-kao are the most popular cage-favourites, the other two being next in importance.

The Cuckoos form a large community among the aves of India. The total number of the various species of the cuckoo is more than fifty. Many of them have a wide range of distribution, while some

are locally distributed. The four species mentioned above are *Partial* Distribution *migrants*. This expression has a specific application in Indian Ornithology. Migratory birds have been placed in three classes—(1) The *True migrants*,—those palæarctic species that chiefly breed beyond Indian limits; (2) *Migrants*,—those Palæarctic species that chiefly breed in the Himalayas; and (3) *Partial migrants*,—those that confine their movements in India. It is to the last class that the cuckoos described here belong, but the Hawk-cuckoo or the Pāpiyā (*Hierococcyx varius*) appears to be a resident bird throughout its range except in Ceylon, where it goes in November and whence it comes back to the continent with the approach of summer. It is found everywhere in India up to Rajputana in the west and East Bengal in the east. On the one hand, its range does not reach the Punjab and Sind, on the other, Assam and Burma. Instances of its occur-

rence in Burma have been reported, but they are, as Blanford says, "probably due to error." The Indian Cuckoo (*Cuculus micropterus*) is commonly found all over continental India except the driest provinces of the Punjab, Sind, and Rajputana. In Peninsular India, it is not uncommon. Stuart Baker says that "it doubtless breeds over the whole of its habitat, ascending higher up at the breeding season and migrating locally from places where there are no suitable forests or hills." In Ceylon it is a winter migrant. Oates supposed that it went to China, Japan and Eastern Siberia in summer. But it has been reported from Travancore in April and May, and has been noticed to be very common all along the Sahyadri Range, where also it is supposed to be a resident bird.

The range of the Koel—*Eudynamis*—is much wider. Six species of this bird inhabit the oriental regions. India possesses one of them—*Eudynamis honorata*—

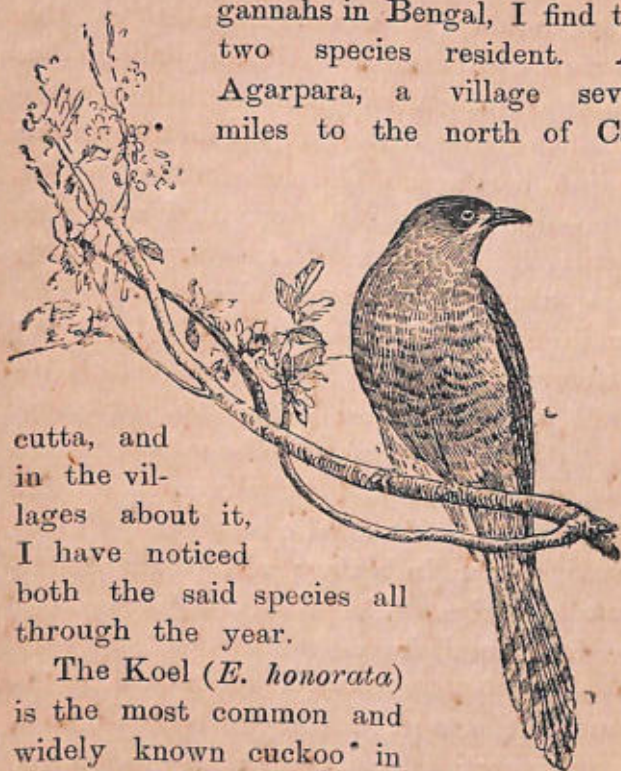
which, though the English residents of this country would be inclined to consider to be one too many, is yet the bird of Indian romance. Its range extends all over India except the western provinces of the Punjab and Sind, where it is very rare. It is not known to occur farther west. Eastwards, however, its habitat includes China and the Malay Archipelago.

The most handsome of the four Cuckoos is the Pied Crested Cuckoo or Shāh-bulbul (*Coccytes jacobinus*) which also has a range all over India. In Bengal and other parts of Northern India, it is common during the rains. Oates says—"Although there is no reason to suppose that it migrates out of India, it moves about a great deal at different seasons; and in some parts, e.g., in Sind, Indore, parts of the Deccan, around Calcutta, at Faridpur and at Shillong, it is either met with only during rains or more abundantly in that period." It

is no doubt a partial migrant in this country. It visits the Deccan only in the rains. It is generally distributed throughout that region but is much more common in the north than in the south. In fact, in many of the southern districts e.g., Ratnagiri, Belgaum etc., it is found only as a straggler. Fergusson, however, writing in the Journal of the Bombay Natural History Society (Vol. xv, p. 655), of the birds of Travancore, says—"*C. jacobinus* is a resident and is fairly common in the low country, more specially in the extreme south." In Ceylon also, it is resident, but its movements about the island seem to depend on the rains.

Sometime back, the Bombay Natural History Society issued an appeal to its members to note the movements of birds in this country. They appended thereto a list of migrants in which we find that the Koel and the Pāpiyā have been placed among partial migrants. But in some places in the district of 24 Per-

gannahs in Bengal, I find the two species resident. At Agarpa, a village seven miles to the north of Cal-



cutta, and in the villages about it, I have noticed both the said species all through the year.

The Koel (*E. honorata*) is the most common and widely known cuckoo* in India, and it is also the most vociferous.

There is perhaps not a garden, grove, avenue or jungle in India where this bird is not found.

Field
Notes

Of course its presence depends on the nature of the trees constituting the groves and gardens. Leafy trees affording effective cover are necessary for protection against the wrath of crows. And as it is pre-eminently a frugivorous bird, with a predilection for *ficus* fruits—these trees also are indispensable. If these conditions are fulfilled, the Koel will feel itself quite at ease. During a certain part of the year, another condition has got to be fulfilled—the existence of a goodly number of corvine households. The crows have an instinctive aversion to the Koel and always give it chase but they are never able to come to grips. The Koel's cleverness in dodging pursuit increases its impudence, and all through summer, it laughs merrily from thick covers, booing derisively at all the grey-necked crows that happen to be busy with their domestic duties in the neighbourhood. From man's standpoint the crow is perhaps the most clever and the most nefarious bird in existence. But the

Koel out-crows the crow in cunning and stratagem : and its iniquities seem to be a sort of nature's revenge on the iniquitous life of the crow. While all other parasitic cuckoos select weaker and inoffensive birds on which to foist off their eggs, the Koel only finds delight in incurring the risks of imposing on a large, and more vigorous bird. In spite of all their faults, the crows are fond parents and devote themselves heart and soul to the nursing of their children, only to find out that all their labours have been in vain, that those they were nursing and feeding with so much care and attention, are not their own flesh and blood but the offspring of their detestable enemies. They are unable to fathom how this calamity comes to pass and how they are tricked into bringing up the children of others. They, therefore, nurse in their bosom bitter hatred against the Koel, which they pursue in rage at the very sight. The cuckoo never tarries to make a stand but

takes to its wings. Though the ordinary flight of the Koel is slow, clumsy, and shuffling, it always evades purspit. The crow's habit of pursuing the Koel at sight affords the latter the opportunity to hoodwink the former. In the nesting season, the male cuckoo tries to become very prominent. When the female Koel feels like laying, the male presents itself before a crow's nest and flings a volume of outrageous vocabulary at the corvine pair, while the soberly clad female lurks in some neighbouring leafy cover. As soon as the crows catch sight of the Koel they start out in hot pursuit. The male Koel flees before them, keeping a very slight lead. The crows, hoping soon to overtake their enemy, dog its heels and are thus led far away from their nest. This gives the female the desired opportunity to carry out its nefarious scheme. The male Koel seems to possess a precise idea of the time the female will require to accomplish its purpose, for it invariably

keeps the crows engaged just sufficiently to allow the female to finish its job. When it thinks that the chase has been sufficiently long, it swerves to one side and takes cover in a thick foliage, whence it quietly escapes. The baffled crows return to their nests to hatch to life the eggs of their arch-enemy. Sometimes it happens that the crows return before the female Koel has finished its task and it is then that the crows get their opportunity for wreaking their vengeance. The female Koel is not as swift a flier as its husband, and has occasionally to pay with its life for its foul deed. Col. Butler once saved a fugitive female Koel from a pair of crows. Other observers also have recorded instances of similar catastrophies.

When the male Koel has enticed away the crows, the female bird, while depositing her own eggs, destroys the eggs of the nest-owners. Blyth held to this view, while Oates denied that the Koel did anything

of the kind. But since then, so many observers have seen the female Koel actually committing the felony that no ground for doubt remains any longer. Dewar says, "I consider it proven that the Koel undoubtedly destroys or tries to destroy some of the crow's eggs it finds in the nest. My idea is that, given the opportunity, the Koel will destroy all the crow's eggs." It is not the Koel alone that does this. Other cuckoos also have the same habit. The Shah-bulbul or the Pied Crested Cuckoo has also been known to act similarly. At Durbhanga, Lindsay Harvey once noticed a Babbler's nest which contained three eggs of the bird, all of which he marked with pencil and retired to a distance to watch another bird. Suddenly he heard the Babblers making a tremendous noise. Turning round he saw a *Coccyzus jacobinus* seated on a twig near the nest and the poor owners of the nest hopping around it, chattering. The cuckoo hopped on to the nest and after a while flew down to

the foot of the tree where the observer lost sight of it in the long grass. Almost immediately after, it flew up again to the nest and remained about half a minute, and then flew away. Mr. Harvey walked up to the foot of the tree and looking down to where the cuckoo had settled, saw an egg on the ground; it was one of the Babblers he had marked. He got up to the nest and found three eggs; the third, a large one, was unmarked. It may, therefore, be presumed that destruction of the eggs of the host is a common habit with the parasitic cuckoos.

It has been asked whether the Koel lays its egg elsewhere and carries it in its beak to place it in position. This question has yet to be definitely answered from actual observation. Except the Koel, the other cuckoos select nests which are too small for them to sit comfortably without damaging them to some extent. So, as Stuart Baker puts it—"We must take

it for granted that the cuckoo lays its egg on the ground and then places it in the nest selected for its reception. In no case have I found a nest in any way damaged by the cuckoo and often the only way it was possible for the egg to have been deposited in the nest, without considerably spoiling it, would have been in this manner." The Koel, we must remember, victimises a strong and vindictive bird. The fear of being caught at the game is always present in its mind and the only way in which it can hurry through the operation is by bringing the egg in its beak after laying it elsewhere on the ground.

Another matter of controversy is whether the young Koel ejects the children of its foster-parent. Oates thought that the young crows are probably got rid of by the young Koel. The young of the Common Cuckoo (*Cuculus canorus*) is in the habit of doing this. Stuart Baker says that "it has practically been as-

certained that the young cuckoo turns out the fellow nestlings." Cuckoos are generally brought up in nests which are too small for their body. It is quite possible that being sardine-packed into a small nest, the nestlings struggle for room, and the cuckoo nestlings being the stronger and generally earlier-born win the day and the others are thrown out. That this is not invariably the case is proved by the fact that in the majority of instances both the cuckoo and the children of the real owner of the nest successfully grow up to be reared and fledged. People have urged that the parasite youngster has a sensitive back, and when its foster-brother comes to sit on it, the former instinctively pushes out the latter. This may be true in the case of *Cuculus canorus* but, according to Dewar, not true of the Koel. He says, "The young Koel does not eject its fellow nestlings. It is true that many young crows disappeared but in every case this

disappearance can be otherwise accounted for."

With regard to the nursing of young Koels, Oates writes, "I have never seen crows feeding fully fledged Coels out of the nest, whereas I have repeatedly watched adult female Coels feeding young ones of their own species. I am pretty nearly convinced that after laying their eggs the females keep somewhere about the locality and take charge of the young directly they can leave the nest." This supposition can be true if the female lays only one egg in only one nest, so that it may be on the look-out for that one alone. What actually happens is that the female Koel lays more than one egg in more than one nest. Does it keep an eye on all the nests? What Oates says cannot be accepted as a general rule but only as an exception. It is a wonder that Oates never saw crows feeding fully fledged Koels out of the nest. I have and many others also.

But neither any one else, except Oates so far as I know, nor myself have yet seen a female Koel feeding her nestlings. I have seen young Koels fed assiduously by their foster-parents at a time when they are just begining to fly from tree to tree. The young Koels keep up an incessant whimpering for food and more food. They do not allow their foster-parents, the crows, a minute's rest, and probably the latter have to deny themselves many a tempting morsel to quiet the unruly children. It is a wonder that the crows continue to feed the Koels even when the latter are in full plumage and have developed the characteristic *cuculine* movements and even their specific calls. Dewar says that when the young Koel first leaves the nest, it tries to imitate the call of its corvine fellow-nestling, but this has never come to my notice, nor have I found it recorded anywhere else.

The difference in the coloration of the male and the female Koel is connected,

according to Cunningham, with their parasitic tendency. Says he, "The possession by the male cuckoo of an insistent and distracting call is not enough to give the female such a good chance of doing her part, as it will where she has to deal with birds of lower mental and physical power; and it has accordingly been reinforced by the evolution of differences in plumage, serving to render the one sex very conspicuous, and the other protectively obscure. The shining black plumage and bright red eyes of the male Koel are specially adapted to attract attention in the sites he chooses to call from, while the subdued greenish-grey tints and white spots and bars of the feathering of the female serve to make her almost invisible among the broken lights and shades of the coverts in which she lurks when awaiting a chance for depositing her eggs".

If this sort of 'adaptive' coloration be true of the Koel, it is not true of the common Hawk-cuckoo—our Pāpiyā (*Hiero-*

coccyx varius) which is the "Brain-fever bird" of Europeans residing in this country. When on the wing, it looks like a Shikra (*Astur badius*) but its *accipitrine* looks do not save it from being pursued and mobbed by smaller birds, specially by Babblers who have an innate repugnance for it, just as the crow has for the Koel. But the wary and alert Babblers, though they move about in flocks and parties for the sake of safety, are outwitted by this double-faced cuckoo. This bird keeps to our gardens and avenues and its presence in any locality depends on the number of Babblers there. However much it may ape the hawk in looks while flying, it cannot keep up the deception when it comes to perch. "It has all the furtive, peering ways of common cuckoos when it sits down, constantly jerking itself from side to side as Koels do and, at the same time, puffing out its throat in a strange way. The Common Indian Cuckoo or Bou-kathā-kao

according to Cunningham, with their parasitic tendency. Says he, "The possession by the male cuckoo of an insistent and distracting call is not enough to give the female such a good chance of doing her part, as it will where she has to deal with birds of lower mental and physical power; and it has accordingly been reinforced by the evolution of differences in plumage, serving to render the one sex very conspicuous, and the other protectively obscure. The shining black plumage and bright red eyes of the male Koel are specially adapted to attract attention in the sites he chooses to call from, while the subdued greenish-grey tints and white spots and bars of the feathering of the female serve to make her almost invisible among the broken lights and shades of the coverts in which she lurks when awaiting a chance for depositing her eggs".

If this sort of 'adaptive' coloration be true of the Koel, it is not true of the common Hawk-cuckoo—our Pāpiyā (*Hiero-*

coccyx varius) which is the "Brain-fever bird" of Europeans residing in this country. When on the wing, it looks like a Shikra (*Astur badius*) but its *accipitrine* looks do not save it from being pursued and mobbed by smaller birds, specially by Babblers who have an innate repugnance for it, just as the crow has for the Koel. But the wary and alert Babblers, though they move about in flocks and parties for the sake of safety, are outwitted by this double-faced cuckoo. This bird keeps to our gardens and avenues and its presence in any locality depends on the number of Babblers there. However much it may ape the hawk in looks while flying, it cannot keep up the deception when it comes to perch. "It has all the furtive, peering ways of common cuckoos when it sits down, constantly jerking itself from side to side as Koels do and, at the same time, puffing out its throat in a strange way. The Common Indian Cuckoo or Bou-kathā-kao

(*Cuculus micropterus*)
 avoids inhabited local-
 ities and confines itself
 to jungly tracts or to
 large unfrequented gar-
 dens. It is more
 shy and retir-
 ing than the
 two foregoing]



birds, ; and

hence in our country-
 side, it is rarely seen.

It generally selects the
 top-most bough of a
 large tree and keeps calling for a quarter of
 an hour or more. Both this bird and the
 Pāpiyā dislike conspicuous positions. The
 Shāh-bulbul or the Pied Crested Cuckoo
 resembles the Koel in this respect. In

Bengal it arrives in May and is in evidence up to the rains, after which, in September, it moves down probably towards the south. I have noticed that grassy and cultivated plains with small trees and bushes scattered about are its favourite resorts.

But Stuart Baker writes,
"It haunts indifferently loftiest of trees,



secondary growth and small saplings or mere scrub jungles". It is most numerous in the more wooded districts. It hunts singly or in pairs, and unlike the last three Cuckoos, it generally feeds on the ground. Somehow or other, *Coccystes jacobinus* also is an eyesore of the crows, though they

have no real grievance against it, and is persistently attacked by the latter. Even Bulbuls dislike it and raise a hubbub at its approach, probably with a good reason.

The Koel or, as it is called in Bengal, the Kokil is a very insistent caller; it calls at all times, by day and by night, as also does the the Pāpiyā; and we, in Bengal, hear it in most seasons, even in winter. Generally it begins as early as February to find its voice which from March onwards works in full swing and breaks in September and then gradually ceases. Englishmen do not like its music, which some characterise as 'an introductory poem to Hades!' But many of them have to admit that 'when heard sufficiently far off it is not unmelodious'. It has three distinct calls. One is what Cunningham chooses to style its 'nest-note' or name-call, i.e., from which it gets its name. This rises in a slow crescendo and when the highest pitch has

been reached it is finished off in a rapid downward scale, thus— $\overline{\text{Kū-ooo}}$, $\overline{\text{kū-ooo}}$, $\overline{\text{kū-ooo}}$, $\overline{\text{kooo}}$, $\overline{\text{kooo}}$, $\overline{\text{kooo}}$ and so on. If this note is mimicked the bird answers with gusto, and our village boys often tease it by so doing, with the result that it becomes more insistent and vociferous. Its second note is a series of shrill unmelodious $\overline{\text{kūk-kūk-kūk-kūk}}$ which is generally to be heard at dawn. The third is an ear-splitting shriek of terror, uttered by both sexes, specially on the wing when pursued by the crow.

The Pāpiyā has two distinct notes, one of which is its name-call, which has earned for it the name of "brain-fever bird". This sounds like $\overline{\text{pā-pee-hā}}$. This trisyllabic cry is "repeated many times in ascending semitones until one begins to think that the bird is going to burst". The other call begins with one or two of the trisyllabic utterances and then passes on into a volley of single descen-

ding notes, or sometimes consists of the latter alone. The cry of the above two birds is connected with the spring season from which Indian poetry weaves a halo of romance round them and, Mrs. Sarojini Naidu, the Indian poetess of European fame, has immortalised the "Brain-fever bird in English poetry in one of her loveliest of love-songs—*Pāpeehā*.

The call of *Cuculus micropterus* is regarded by all as sweet. According to Stuart Baker, "it is very melodious and distinctly cuckoo-like in sound but the bird reiterates it with so great perseverance that it becomes monotonous. Boukathā-kao in Bengali and 'Broken-pekoe' in English are two of the best representations." According to Tickell, its note may be styled a melodious deep-toned whistle, agreeable to hear despite its monotonous reiteration.

While all the above Cuckoos utter their characteristic calls from a fixed position, the Pied Crested Cuckoo becomes

silent when it finds a perch, and constantly calls only when flying. Its flight, on account of its long crest, beautiful pied coloration, and its long tail, is very graceful. Its cry is a whistling sort of trisyllabic pee-pee-pee which, being delivered from a pretty great height when the bird flies through space, hears quite melodious.

All these birds, except the Koel, are regarded as economically very beneficial; they need all the protection we can give them. The cuckoos of the *Cuculinae* group are the only birds that habitually eat hairy caterpillars which, being mostly defoliators, are very injurious to crops. The Hawk-cuckoo is undoubtedly beneficial. Only a few, if at all, beneficial insects are taken by this bird, its food consisting almost entirely of injurious insects or those allied to them. The fruits that are eaten are mostly *fici*. By the examination of the stomach of seventeen specimens, it was found that, of 300

ding notes, or sometimes consists of the latter alone. The cry of the above two birds is connected with the spring season from which Indian poetry weaves a halo of romance round them and, Mrs. Sarojini Naidu, the Indian poetess of European fame, has immortalised the "Brain-fever bird in English poetry in one of her loveliest of love-songs—*Pāpēehā*.

The call of *Cuculus micropterus* is regarded by all as sweet. According to Stuart Baker, "it is very melodious and distinctly cuckoo-like in sound but the bird reiterates it with so great perseverance that it becomes monotonous. Boukathā-kao in Bengali and 'Broken-pekoe' in English are two of the best representations." According to Tickell, its note may be styled a melodious deep-toned whistle, agreeable to hear despite its monotonous reiteration.

While all the above Cuckoos utter their characteristic calls from a fixed position, the Pied Crested Cuckoo becomes

silent when it finds a perch, and constantly calls only when flying. Its flight, on account of its long crest, beautiful pied coloration, and its long tail, is very graceful. Its cry is a whistling sort of trisyllabic pee-pee-pee which, being delivered from a pretty great height when the bird flies through space, hears quite melodious.

All these birds, except the Koel, are regarded as economically very beneficial; they need all the protection we can give them. The cuckoos of the *Cuculinae* group are the only birds that habitually eat hairy caterpillars which, being mostly defoliators, are very injurious to crops. The Hawk-cuckoo is undoubtedly beneficial. Only a few, if at all, beneficial insects are taken by this bird, its food consisting almost entirely of injurious insects or those allied to them. The fruits that are eaten are mostly *fici*. By the examination of the stomach of seventeen specimens, it was found that, of 300

ding notes, or sometimes consists of the latter alone. The cry of the above two birds is connected with the spring season from which Indian poetry weaves a halo of romance round them and, Mrs. Sarojini Naidu, the Indian poetess of European fame, has immortalised the 'Brain-fever' bird in English poetry in one of her loveliest of love-songs—*Pāpeehā*.

The call of *Cuculus micropterus* is regarded by all as sweet. According to Stuart Baker, "it is very melodious and distinctly cuckoo-like in sound but the bird reiterates it with so great perseverance that it becomes monotonous. Boukathā-kao in Bengali and 'Broken-pekoe' in English are two of the best representations." According to Tickell, its note may be styled a melodious deep-toned whistle, agreeable to hear despite its monotonous reiteration.

While all the above Cuckoos utter their characteristic calls from a fixed position, the Pied Crested Cuckoo becomes

silent when it finds a perch, and constantly calls only when flying. Its flight, on account of its long crest, beautiful pied coloration, and its long tail, is very graceful. Its cry is a whistling sort of trisyllabic pee-pee-pee which, being delivered from a pretty great height when the bird flies through space, hears quite melodious.

All these birds, except the Koel, are regarded as economically very beneficial; they need all the protection we can give them. The cuckoos of the *Cuculina* group are the only birds that habitually eat hairy caterpillars which, being mostly defoliators, are very injurious to crops. The Hawk-cuckoo is undoubtedly beneficial. Only a few, if at all, beneficial insects are taken by this bird, its food consisting almost entirely of injurious insects or those allied to them. The fruits that are eaten are mostly *fici*. By the examination of the stomach of seventeen specimens, it was found that, of 300

insects taken by them, 253 were injurious and only 1 beneficial. Both *Cuculus micropterus* and *Coccystes jacobinus* are similarly beneficial. The young of the latter bird have been observed to be fed on caterpillars by its foster-parents, the Babblers. How is it that the foster-parent selects insects suited to the stomach of its foster-child instead of selecting those that are agreeable to itself? The Koel, however, is not insectivorous, but lives exclusively on fruits. It generally feeds on *figus* fruits, specially those of banian (*figus indica*) and peepal (*figus religiosa*), *Ficus nitida*, *Ficus comosa*, wild date palms, berries of various species of *Livistona*, red-coated seeds of *Amoora rohituka*, and berries of Bökul (*Mimusops elengi*). Of cultivated fruits it has been known to devour Litchies, Mulberries and Guavas. Mason is of opinion that "it is only of economic importance in that it has the habit of depositing its eggs in the nest of the common species of

crows and may thus help to limit their numbers to some extent".

Nests and
Eggs All the Cuckoos under review shirk parental duties and get other members of the bird-world to bring up their children. Parasitic Cuckoos are therefore regarded as social pests by other birds which, though fully conscious of the stratagem played on them, are yet helpless and become unwilling dupes at the hands of the Cuckoos. Birds are strangely lacking in a sense of proportion and, unable to discriminate between their own eggs and those of their deceivers, unconsciously rear up the children of the latter. Nesting operations and the nursing of the young are a blind instinct with birds. They are impelled to these actions by Nature, and engrossed in them, they never stop to see whom they are bringing up. Otherwise, how can the crow which is otherwise a very clever and cunning bird fail to notice its mistake and feed the young

Koel even when the latter has attained full plumage? The Koel victimises the two common crows—*Corvus splendens* and *Corvus macrorhyncus*. *Cuculus micropterus* uses the nests of the Indian Blue-chat (*Larvivora brunnea*), the Himalayan Streaked Laughing Thrush (*Trochalopteron lineatum*) and the Western Variegated Laughing Thrush (*T. simile*) as also those of the Brown Hill Warbler (*Suya criniger*), the Golden Bush-Robin (*Tarsiger chrysocus*) and *Niltava sundara*. Both the Hawk-cuckoo and the Pied Crested Cuckoo invariably deposit eggs in the nests of the *Argya* or *Crateropus* group of Babblers, the species being apparently a matter of indifference. Eggs of the latter bird have also been taken from nests of Bulbuls (*Molpastes bengalensis*), the Iora (*Aegithina tiphia*) and of *Alcippe nepalensis*.

The eggs of the Koel roughly resemble crow's eggs, but are smaller and broader. The ground-colour is a tint of green or greenish yellow, densely marked

In India there is perhaps not a more common cage-bird than the Koel. As with the Tuti, the food problem of the Koel is not a problem at all. Boiled rice in milk with a few bananas is all that is required to satisfy its taste and keep it in health. Being as inexpensive to keep as the bird described in the last chapter, it has a favoured place in the home of the poorest of the poor. Though a favourite of the proletariat, the doors of the rich are not closed on it. Its presence is welcome everywhere.

Indians do not generally catch adult birds for caging them. They know from experience that such birds refuse to reciprocate the kind attentions of the keeper, and most of them pine away in a short while. Therefore nestlings are preferred almost in all cases, as they grow up into very confiding pets. The Koel fed on *Sattoo* pulp developes into a very bold and faithful creature. Young Koels re-

quire hand-feeding for a longer period than other birds. As they grow old, their food is varied with various *fici*, the fruit of Bokul (*Mimusops elengi*) and Telākuchā (*Momordica monadelphica*),—a sort of creeper which grows wild in this country during the rainy season and the fruits of which become cherry-red when ripe. The Koel is a perfect gourmand and, when feeding, devours more than the capacity of its stomach. But as it soon disgorges much of what it has eaten, the habit results in little harm. The Cuckoos are kept in this country in large, round, bamboo cages, which are generally covered up. In the case of the Pāpiyā (Hawk-cuckoo) or the Bau-kathā kao (Indian Cuckoo), this covering is a necessity, for they are delicate birds and, unless kept warm, are not able to bear the extremely humid atmosphere of this country during the rains. The Koel, however, is a wonderfully hardy and long-lived bird and has been known to live up to

In India there is perhaps not a more common cage-bird than the Koel. As with the Tuti, the food problem of the Koel is not a problem at all. Boiled rice in milk with a few bananas is all that is required to satisfy its taste and keep it in health. Being as inexpensive to keep as the bird described in the last chapter, it has a favoured place in the home of the poorest of the poor. Though a favourite of the proletariat, the doors of the rich are not closed on it. Its presence is welcome everywhere.

Indians do not generally catch adult birds for caging them. They know from experience that such birds refuse to reciprocate the kind attentions of the keeper, and most of them pine away in a short while. Therefore nestlings are preferred almost in all cases, as they grow up into very confiding pets. The Koel fed on *Satoo* pulp develops into a very bold and faithful creature. Young Koels re-

quire hand-feeding for a longer period than other birds. As they grow old, their food is varied with various *fici*, the fruit of Bokul (*Mimusops elengi*) and Telākuchā (*Momordica monadelpha*),—a sort of creeper which grows wild in this country during the rainy season and the fruits of which become cherry-red when ripe. The Koel is a perfect gourmand and, when feeding, devours more than the capacity of its stomach. But as it soon disgorges much of what it has eaten, the habit results in little harm. The Cuckoos are kept in this country in large, round, bamboo cages, which are generally covered up. In the case of the Pāpiyā (Hawk-cuckoo) or the Bau-kathā kao (Indian Cuckoo), this covering is a necessity, for they are delicate birds and, unless kept warm, are not able to bear the extremely humid atmosphere of this country during the rains. The Koel, however, is a wonderfully hardy and long-lived bird and has been known to live up to

fourteen years in captivity. It seldom suffers from any disease. The Pāpiyās, on the other hand, generally suffer from cold and rheumatism—the results of careless feeding and exposure.

The Pāpiyā and the Bau-kathā-kao are not frugivorous like the Kōel. They are delicate birds and their diet-supply becomes a problem to their keeper. Grass-hoppers, insects and *Satoo* form their menu, the basis of food being the insects. They are kept in large and costly cages. Both these birds call freely in covered cages but as the Bau-Kathā-kao has a sweeter voice, it is held in greater esteem. The Koel is a vociferous singer and sings in all seasons. When it begins calling, conversation becomes impossible in the house. The Shāh-bulbul (Pied Crested Cuckoo) is never available for sale in this province in large numbers, and is, therefore, less commonly seen as a captive. For that very reason it is a bird for which

one has to pay a handsome price. However much ordinary people may covet to possess this bird, its high price serves as brake on their inclination. It is besides an insectivorous bird and as it does not take to *Satoo* as kindly as the other Cuckoos, it is difficult to keep it alive. If a proper and constant supply of insects can be maintained, these Cuckoos turn out to be excellent cage-birds.

The Koel is probably a bird fit for aviaries; but in India it is so common that it is a superfluity to keep it confined for show purposes in the aviaries of the Zoological Gardens. The Pāpiyā has the risk of being harassed by other birds on account of its unhappy resemblance to a hawk; its presence in a mixed company may also lead to the disquietude of very small birds. The Bau-kathā-kao is too secretive for open aviaries. But if proper arrangements are made according to the habits of these birds, providing thick cover and choosing for their com-

panions a few of the hosts upon which they usually foist off their eggs, I expect that much about their life may be revealed to us.

The Pāpiyā and the Koel are poles asunder in plumage. In the case of the former the sexes are like ; but Coloration male and female Koels have different dresses. The male Koel is altogether black with a bluish-green gloss, a stout bill, and a bright crimson iris. The female is less showy, being of brown body-colour with white spots on head, neck, back, and wings. Its quills and tail are barred with white, with similar bars on the glossy brown surface of the breast and abdomen. The common folk of this country are under the impression that the female is a different bird, and call it "Tilia-kokil" or the "Spotted cuckoo".

The nestling Koel is born with a black skin. According to Dewar, its earliest feathers are tipped with white or a kind

of reddish fawn. Those with white tips are females. But he is not sure if the reverse is true viz., whether all birds, whose early feathers are tipped with reddish fawn, are females. It seems that the nestlings assume the adult female coloration from which both sexes pass into adult plumage without moulting. A full-grown Koel is seventeen inches in length, of which about half is taken up by the tail.

About the coloration of the Pāpiyās, Oates says, "The coloration is remarkable even amongst cuckoos for its close imitation of Hawks and Falcons.The resemblance is quite unexplained, though, as it is sufficient to cause great alarm to small birds in general, it is probably connected with breeding habits." Grey predominates in its upper plumage. Sides of head are ashy with whitish lores and cheeks ; chin and throat white with an ashy tinge ; foreneck and breast rufous with an ashy admixture ; lower breast barred. The abdomen is white with bars,

and the under tail-coverts, like the edge of the wings, are white. Quills of the upper plumage are brown with broad white bars on the inner webs. The tail is grey with rufescent tips and with four or five bars beyond the upper tail-coverts, where there is some white.

The young are dark brown above with rufous cross-bars and white below, tinged with rufous and spotted brown; but the tail is barred as in the adult. The bill of the adult is greenish except the tip which is black; iris yellow or orange in the adult and brownish in the young; feet and claws yellow, pale or bright according to age. The Pāpiyā is thirteen inches in length, the tail taking up half that length.

The Bau-kathā-kao—the Indian Cuckoo—is a rich brown bird with a dark-ashy head and neck. The tail has a broad sub-terminal band of white, and white tips. Chin, throat, and upper breast are pale ashy, the rest of the

lower parts being creamy white with black cross-bars. The female differs only in having the throat and breast browner.

The young have head and neck broadly barred with reddish white or white; feathers of the upper plumage are tipped with rufescent; the lower plumage is buff, barred broadly with dark-brown. The tail of the young has more rufous spots than there are bands in the adult. Nestlings that leave the nest in May get full plumage in October. The upper bill of adult birds is horny black, the lower dull green; iris rich brown; legs yellow. The size of the Indian cuckoo equals that of the Pāpiyā.

The Shah-bulbul is so called because of its beautiful pointed crest. As our common bulbuls have crests, ordinary folk are under the impression that all birds with a crest are Bulbuls. The colour arrangement of this bird is much as in the Dhayal. Its upper plumage is throughout black with a greenish gloss. The

quills are dark brown with a broad white band near the base across the inner webs of all except the innermost and across the outer webs of all except the first. The tail has white tips, these being very broad on the outer feathers, and narrow on the middle pair. The lower parts are white.

The young are brown above, buff below, the chin and throat being grey. The bill of an adult bird is black; iris red-brown; legs leaden blue. Sexes are alike. *Coccytes jacobinus* is of the same size as *Cuculus micropterus*.

APPENDIX



Shama and nest

Additional aviary Notes

I. THE SHAMA

A male and a female Shama were inmates of adjacent aviaries. They were kept separate because I found that in the non-breeding season the male refused to keep company with the female. In March 1923, noticing an amorous change in their attitude, I brought them together in the hope of raising a brood of young Shamas. The hen showed no fear of the male; on the contrary, in a few days she seemed to order the cock about. The latter had evidently lost all his imperiousness. But, however gentle he was to his mate, he was most overbearing towards strong-charactered and sturdy birds like the Dhayal, Chats also and even the gentle Dāmā—Orange-headed Ground Thrush—seemed to irritate him and had to be removed elsewhere. But smaller birds like the Finches were never molested. The male was a very jealous husband, and

if he heard, or fancied he heard, the voice of another male Shama close by, he worked himself up into a great fury. A friend of mine took it into his head to whistle the Shama's love-notes when he came to my aviary. Whenever he did this, the cock Shama would at once stand up alert and give out his peculiar notes of anger—*t'chat t'chat*. As my friend continued, the anger of the bird increased. It puffed out all its feathers, furiously worked its tail up and down and peered around for the supposed rival. The first day my friend began the game, he was outside the aviary and noticed that the bird became very restless and flew about the aviary occasionally going to the female, as if, to protect her from the advances of the invisible lover. The next day he went into the aviary and the Shama was not long in finding out whence the notes proceeded. But the bird's uneasiness was not removed. It probably thought that my friend had a male Shama concealed somewhere on his person and flew up to very near him and stood in an attitude of defiance, calling as loudly as it could in order to outdo my friend. Not satisfied with wordy combats, it began to sweep down on my friend trying to

peck at his head as it flew past. My friend had to throw up his hands to save himself from being scratched by the bird. At times he would extend his hand towards the bird which spent its fury on the fingers of my friend by pecking them with all its might.

But to return. When the hen was introduced into the aviary, the cock began to court her favour in right earnest. His song became loud and insistent. Besides the usual call-notes, he used to utter a very loud *tremolo* whistle with a sharp and sudden ending. This evidently used to excite sexual inclinations in the female; for these calls generally excited the latter very much. At the time of pairing, the male used to shoot down like an arrow from a high perch with such a call, and then uttering a short, sudden whistle, he sprang upon the hen. Among his coquetish displays, one of the attitudes was to drop suddenly down in front of the female (if she were on the ground) with a loud whistle. Then he would stretch out his head and gradually bend it till the chin and bill rested on the ground while the hinder parts went up, the tail being held straight uplifted. The hen would remain still all the while.

To afford them a suitable nesting site I nailed up in the wall a long piece of very fat bamboo with three holes in it, one above each joint. The male bird, after inspection, fixed upon the middle hole and invited the female to have a look at it. In a short time I noticed the latter carrying nest materials which consisted of fine cocoanut fibres. The upholstering of the cavity began on the 25th March and continued till the 30th. The hen Shama became so bold as to accept cocoanut fibres from my hand. If I gave a rough one, she would smooth and clean it by beating it on the ground. She would carry to the nest four or five fibres at a time and, after arranging them in the hole, invariably came back with one in her bill.

On the 31st the hen laid the first egg and on the 4th April she completed a clutch of five. I removed one and left her four to hatch. She alone incubated. The first egg was hatched out on the 14th and the rest by the 16th April. After this the behaviour of the female was most unmotherly. She beat one nestling to death and killed the others by dropping them from a height.

On April 22nd the hen began nest-building

again. Strangely enough, she carried materials to three different holes in none of which a nest was completed. On the 27th I found two eggs in two different holes and another lying broken on the floor. I placed the eggs together but the next day, they were thrown out by the bird!

I gave the bird one more chance to raise a brood, as, even after the above two abortive attempts, the hen still seemed to possess a strong inclination for nesting. But, this time again, the eggs were destroyed as on the previous occasion. Thereupon I locked the female bird up in a cage. I had another hen which had come to me as a nestling. I introduced her to the cock bird's aviary on the 9th May.

This bird was able to rear up two young ones successfully. It was a better-behaved bird, sat on the eggs more closely and took greater care of its children. It laid twice,—the first clutch consisting of four and the second of three eggs. The first clutch began on the 13th May. One egg was destroyed. On the 27th the first young came out and two more followed the next day. One of these died and was removed from the nest by the mother. On the 8th June, the two surviving nestlings were completely

feathered and the next day they left their nest. I confined them in a large cage with the mother-bird. On June 12th, the youngsters began to feed themselves, and I observed that thenceforth their mother occasionally fed them on egg-food and *satoo*. Before this date no artificial food was given. The hen used to show great care and discrimination in feeding the young. For the first two or three days after birth, the mother fed them only with ants' eggs. Then for a few days beetles, ants' grubs and a few grasshoppers were given. As the chicks grew older, ants' eggs were discarded and grasshoppers and beetles only composed their diet. Not until a fortnight after their birth did the mother give them prepared food.

From the 14th June, the youngsters began to emit *t'chat t'chat* sounds. At this time the cock began to court the hen again and the latter responded from within the cage. So, I let her loose with the children. On the 15th she began nest-building. The youngsters fed themselves but were still importunate. So, the cock used to feed them at times. The youngsters used to sit on a high perch crying for food. The cock used to fly up with a grasshopper and as there was no



Shama feeding young



Shama nestling

room beside the young birds for him to sit, he thrust insects into the baby's mouth as he flew past. How deftly he did this!

On June 19th the hen began her second clutch. On July 3rd, one young appeared and two more on the next day. Unfortunately all the nestlings died for some unaccountable reason. This catastrophe marked a distinct change in the conduct of the female. Up till then she was bold and fearless, taking food from my hand. Now she suddenly became morose, retiring and shy, shunning human proximity. She also ignored all the amorous advances of the male and soon after began to moult.

Elsewhere I have noted that according to Mr. Reginald Phillips the incubation period of the Shama was twelve days. But I find that with my birds the period was *fourteen days* each time, neither more nor less.

2. THE DHAYAL

Two pairs of Dhayals in my aviary raised a brood each. The nestlings, unfortunately, did not live long. One of the pairs was lodged in the same room with the Shama and another in an adjoining room. The hen of the first

pair was rather shy and, though the breeding season was on, showed no sign of taking advantage of the cock's restlessness to become a mother. But I noticed that the hen of the second pair in the adjoining room frequently flew up to the wire-netting separating the two compartments; and her behaviour clearly showed that she wanted the company of the first cock-bird more than that of the one with which she was lodged. Thinking they might pair up, I let this flirt into the first cock's room. It seems that a female bird occasionally declares her love to a cock and persists in it even though beaten and insulted. The cock seemed in no mood to respond to the advances made by the forward female and became more irascible. Fights with the Shama became very frequent, and so I moved the three Dhayals into the second compartment which now contained two pairs of these birds. This arrangement led to more unpleasantness. The two cocks frequently indulged in free fights with serious consequences to the original occupant of the room—the second cock. The first and sturdier cock, furious with jealousy, began also to chase both the hens. The second cock was therefore removed to a third compartment which adjoins the second one. The first cock showed his

favour to the shy hen by displaying before her and singing at his loudest. But the hen held him in dread and always fled in terror whenever he approached. She was in evident danger of losing her life from extreme exhaustion. Therefore, I shut her up in a cage.

Her rival being thus confined, the other bolder hen now had the cock all to herself. The cock tried to handle her also roughly. But this wily bird stood the cock's browbeating admirably, eluded all attacks and even freely indulged in coquetry, whistling persistently all the while. As the cock evidently paid no heed to her overtures I re-introduced the shy hen to see if she could shake off her fear. As soon as she was let loose, the cock flew towards her with a joyful whistle; but the hen fled in sheer funk and, after being pursued around the aviary, fell panting to the ground. I had no alternative now but to take her out of the room and try if she could pair with the other cock.

After her removal the first cock would frequently cling to the wire-netting separating him from the shy hen and burst into rapturous melody. This naturally provoked the wrath of the second cock which also would fly up to the wire-netting and sing defiantly; and the two spent their

time in hurling loud abuses at each other. Whenever the first cock bird flew to the wire-netting, the bolder female would fly up to its side and whistle, as if to attract it away from its rival hen. At last the persistent attentions of the bolder female overcame the cock's dislike for her. The shy hen in the adjacent compartment responded, in the meantime, to the second cock's wooing and made up a good match. In a short while both pairs began to build nurseries for their coming offspring.

The first cock chose an aperture in the wall and began to enter it frequently on the 22nd April 1923. On the 3rd May the hen was noticed to follow suit. On the 14th she began to carry cocoanut fibres. A semi-circular wall of these fibres was built up around a corner of the selected aperture, leaving some space in the middle. The eggs were laid here on bare floor, no padding being used.

The cock used to indulge in frequent displays about this time. He would crane his neck forward and sing with all his might after swelling himself out. On the 13th June the hen laid the first egg. In the next two days she completed a clutch of three. I left her two eggs to hatch. On the 27th the first young came out and the

other on the following day. The period of incubation was 14 days. Two days later one youngster disappeared and on the 2nd July the other was found in a decapitated condition on the floor.

The second pair chose a cavity in a bamboo pole similar to the one used by the Shamas. They merely padded the floor of the cavity with grass and a few cocoanut fibres and thereon laid the eggs. This pair began to build their nest on the 17th May. I used to look in occasionally for the eggs; but none were laid during the month. In June I could not inspect the nest in the first week and on the 8th I discovered three eggs. I removed one from this clutch also. The eggs of this clutch differed from those of the other in that the speckles were not sprinkled all over the surface but were concentrated in a zone at the thick end. The eggs were hatched out on the 16th and 17th June. But on the 19th I missed the young ones. I strongly suspect, though I have no actual ocular proof, that in both cases the male parents were responsible for the death and disappearance of the nestlings. On p. 32, I have already stated that cock Dhayals kill their own young. That the cock has carnivorous tastes was apparent from his conduct in my own

aviary. A pair of Bulbuls (*Molpastes leucotis*) nested and raised two nestlings in the aviary in which the first pair of Dhayals was breeding. One day I noticed the cock Dhayal on the floor beating to death a Bulbul's nestling. The Dhayals are, therefore, not fit to be in a mixed aviary containing inoffensive birds; and, as the cock is an unnatural father, he should be segregated as soon as the young ones come out of the shells.

3. HAREWA

On p. 100 I have quoted a passage from the new edition of the Avi-fauna of British India (edited by Mr. Stuart Baker) in which it is stated that Gold-fronted Chloropsis (*C. aurifrons aurifrons*) becomes gregarious in the non-breeding season. But the male Harewa has been known to be a very sturdy little creature with an autocratic temper and never associates with others of his ilk (vide p. 104). According to Legge we find that females of *C. jerdoni* collect in small flocks. Since the habits of closely related species are generally the same, I made bold to suggest the possibility of Mr. Baker having seen

parties of female Harewas only. Since writing the chapter six months ago, I got half a dozen of these birds for my aviary and had ample opportunities to observe their habits on this point. I find that the males assume a stand-offish attitude towards each other not only in the breeding season but in the off seasons for breeding as well. They are impatient of each other's company and can not be lodged together. But my four female Harewas associate together and live in the same aviary in admirable harmony. It is very likely that regarding gregariousness the habits of Jerdon's Chloropsis and the Gold-fronted one are similar viz., that the females only collect in small parties in the non-breeding season.

4. THE DĀMĀ

In describing the coloration of the female Orange-headed Ground Thrush in the Fauna of British India (Birds, Vol. II., p. 140), Oates writes, "the back and scapulars greenish brown with yellowish margins". I possess two pairs of Damas and I notice that the yellow to the margins of the back and scapulars is put

on during the breeding season, and is not retained all through the year. The yellow splash, therefore, indicates breeding plumage.

In distinguishing males and females, the colour of the lower body does not seem to be the criterion, for I have found that the female of one pair has the chestnut colour deeper than the male. So, when buying these birds or choosing pairs reliance should not be placed on this point.

5. TICKELL'S OUZEL

I have two specimens of *Merula unicolor*. Up till last spring they were kept separately in different aviaries. But in June last I heard one of them attempting to sing. The attempt resulted in short and frequently-uttered whistles which were a mixture of guttural and sibilant sounds. Hoping that the season might not pass in vain, I brought the above two birds together. For the first few days, I noticed the male chasing the female about. The hen was evidently dallying with the male. In a short while there was no more pursuit and dodging; the birds lived together quite peacefully in evident harmony.

For a long time I did not see them making any attempt at nesting. Late in July, on the 27th, I saw the female perched on the top of a long bamboo-pole. Entering the aviary, I went up to the pole but the bird did not move. Curious to see what made the erstwhile shy bird so indifferent to my proximity, I brought a ladder and placing it against the pole, climbed up to discover the bird sitting in a beautiful nest. The top of the fat pole had a slight depression in the middle. Around this depression the bird had created a wall of soft grass and the cavity had been upholstered with very fine cotton-fibres. That very day the two birds mated in my presence. The restless male was in evident heat. It was following the female everywhere. They were first on the ground. The hen suddenly flew up to the nest. The male came up to her with a loud note and perched on the edge of the nest. The female moved off and flew on to the top of a hanging cage. The male followed her there with a strange guttural sound and, with mouth agape, attempted to pair. The female however, slipped down to the ground. The cock followed and, alighting at a little distance, made a quick run towards the hen. When close up to her side the cock opened his mouth again and

I heard a distinctly audible sound, such as that mentioned above, issuing from his throat. In a second they mated. Next day I found an egg in their nest. The hen laid three eggs consecutively and sat very close. During this period I noticed a change in the conduct of these extremely shy birds. They became quite bold and fearless. If I climbed up to inspect the nest, the female bird would not stir till I was actually upon it. On its leaving the nest, the cock would fly up and sit in front of my nose and make a noise. Though not actually aggressive towards other birds they jealously guarded their nest at this time from intrusion. For over a fortnight the hen sat on the eggs but unfortunately these proved to be clear.

As in the case of the Shama, the female Ouzel alone built the nest and took part in incubation. The cock, though not obsequiously attentive, kept watch over the nursery and, whenever the hen was away, he went up close to the nest and sometimes perched on its edge. But I never found him brooding on the eggs.

GLOSSARY

<i>Biri</i>	...	Indigenous cigarettes
<i>Bunds</i>	...	Embankments between two plots of cultivated land marking their boundary
<i>Chenna</i>	...	Gram
<i>Ekka</i>	...	A two-wheeled horse- driven gig
<i>Ghee</i>	...	Clarified butter
<i>Jheels</i>	...	Large water-sheets, natural or artificial
<i>Jhora</i>	...	A hill-stream running through a gorge
<i>Khushkus</i>	...	A kind of sweetly-scent- ed grass
<i>Kunkur</i>	...	Gravel for metalling roads
<i>Lal-pugree</i>	...	Lit., red turban ; police- man, so-called from the head-gear
<i>Lepcha</i>	...	A hill-tribe of Sikkim
<i>Pan</i>	...	Betel

<i>Purdah</i>	...	Screen
<i>Rahar</i>	...	A kind of cereal
<i>Satoo</i>	...	Flour of gram
<i>Svayambara</i>	...	Ancient Indian ceremony of selecting bridegroom by the bride

SCIENTIFIC NOMENCLATURE

According to Oates

Ægithina tiphia

Alauda arvensis

Alauda gulgula

Alaudula raytal

Alcippe nepalensis

Astur badius

Calliope amatschatskensis

Carpodacus erythrinus

Cercomela fusca

Chimarrornis leucoccephalus

Chloropsis aurifrons

Chloropsis hardwickii

Chloropsis jerdoni

Cittocincla macrura

According to Stuart Baker

Ægithina tiphia tiphia

Alauda arvensis cinerascens

Alauda gulgula gulgula

Alaudula raytal raytal

Alcippe nepalensis nepalensis

Astur badius dussumieri

Calliope calliope

Carpodacus erythrinus roseatus

Cercomela fusca

Chaimarrornis leucoccephala

Chloropsis aurifrons aurifrons

Chloropsis hardwickii hardwickii

Chloropsis jerdoni

Kittocincla macroura tricolor

According to Oates

*Copsychus saularis**Coccyzus jacobinus**Corvus macrorhynchus**Corvus splendens**Criniger flaveolus**Cuculus canorus**Cuculus micropterus**Cyanecula suecica**Dissemurus paradiseus**Eudynamis honorata**Galerita cristata**Garrulus lanceolatus**Geocichla citrina**Geocichla cyanonotus*

According to Stuart Baker

*Copsychus saularis saularis**Clamator jacobinus**Corvus coronoides levailanti**Corvus splendens splendens**Criniger tephrogenis flaveolus**Cuculus canorus telephonus**Cuculus micropterus micropterus**Cyanosylvia suecica suecica**Dissemurus paradiseus grandis**Eudynamis scolopaceus scolopaceus**Galerida cristata chendoola**Garrulus lanceolatus**Geocichla citrina citrina**Geocichla citrina cyanotis*

According to Oates

*Hierococcyx varius**Larvivora brunnea**Merula bouboul**Merula bourdilloni**Merula kinnisi**Merula simillima**Merula unicolor**Mirafra affinis**Mirafra assamica**Mirafra cantillans**Mirafra erythroptera**Molpastes bengalensis**Molpastes leucotis**Motacilla alba**Motacilla maderaspatensis*

According to Stuart Baker

*Hierococcyx varius**Larvivora cyane cyane**Planesticus bouboul**Planesticus simillima
bourdilloni**Planesticus simillima
kinnisi**Planesticus simillimus
simillimus**Planesticus unicolor**Mirafra assamica affinis**Mirafra assamica assa-
mica**Mirafra cantillans canti-
llans**Mirafra erythroptera**Molpastes haemorrhous
bengalensis**Molpastes leucotis**Motacilla alba dukhu-
nensis**Motacilla alba maderas-
patensis*

According to Oates*Motacilla melanope**Myiophoneus eugenii**Myiophoneus horsfieldi**Myiophoneus temminckii**Niltava sundara**Pratincola caprata**Pratincola mauva**Pycotrhis nasalis**Pycotrhis sinensis**Rhyacornis fuliginosus**Suya crinigera**Tarsiger crysaus**Thamnobia cambaiensis**Thamnobia fulicata**Trochalopteron lineatum***According to Stuart Baker***Motacilla cinerea melanope**Myiophoneus horsfieldi eugenie**Myiophoneus horsfieldi horsfieldi**Myiophoneus horsfieldi temminckii**Niltava sundara**Saxicola caprata bicolor**Saxicola torquata indica**Pycotrhis sinensis nasalis**Pycotrhis sinensis sinensis**Rhyacornis fuliginosa**Suya crinigera crinigera**Tarsiger crysaus**Thamnobia fulicata cambaiensis**Thamnobia fulicata fulicata**Trochalopteron lineatum griseicentior*

According to Oates

Trochalopterus simile

**According to Stuart
Baker**

Trochalopterus variegatum simile

INDEX

- Egithina tiphia*, 110,
 125, 312
Aggia, 128, 130; colora-
 tion 162-64; flight
 142; ground-feeder
 145; habitat of Ben-
 gal Bush-Lark 130;
 habitat of Madras
 Bush-Lark 131; nidi-
 fication 150-53; perch
 142; resorts 143;
 song 142
Aggin, 128, see *Aggia*;
 habitat 130-31; song
 143-44; mimic 143
Alauda arvensis, 127,
 129, 137
Alauda gulgula, 127,
 137, see *Bharat*
Alaudula raytal, 132
Alcippe nepalensis, 312
Amsler, Dr., 167
Argya, 312
Astley, 179, 201
Astur badius, 303
Avicultural Magazine
 167, 201
Babbler, 81, 82, 296,
 303, 310, 312
Babbler, Golden-eyed,
 see *Gulab-chasm*
Babbler, Yellow-eyed,
 77-91; 89
Baker, E. C. Stuart,
 100, 125, 224, 243,
 288, 297, 298, 305,
 308, 313, 336
Ball, 130
Barnes, 133
Basil-Edwardes, Mr. S.,
 198
Bee-eater, 97
Bharadwaj, 128

Bharat, 126-165 ; altitude of flight-ascent 139-40 ; coloration 162 ; compared with European Sky-Lark 137 ; dust-bath 142 ; flight 138-39 ; habitat 129 ; nidification 151-52 ; resorts 140-41 ; roosting 141 ; Sanskrit name 128 ; sings under fear and excitement 140 ; soaring compared with birds of prey 140 ; sociability varies with season 141 ; song 137-39

Bhimraj, 222-39, 271 ; albinism 237-38 ; attacking a dog 227-28 ; attractive character and plumage 223 ; captivity 232-35 ; careless about territorial rights 228 ; coloration 235-39 ; differ-

ence between birds from Northern and Southern India 235-36 ; dislike for Wood-pecker 226 ; division into species of the genus *dissimurus* 224-25 ; food 230 ; food in captivity 234, 235 ; flight 229 ; habitat 225-26 ; idea of fun 227 ; Indians adept in bird-keeping 222-23 ; manner of preying 228-29 ; mimicry 231, 233 ; nidification 231-32 ; not unsociable 228 ; predatory nature 226-27 ; resorts 226 ; song 230-31 ; tail 229-30 ; tameness 233 ; unfit for mixed aviary 232

Bingham, Major, 227

Blackbird, Ceylon, 212

- Blackbird, Grey-winged,
see Kasturi
- Blackbird, South-Indian,
211
- Blanford, 288
- Blue-throat, Indian, 67,
73, see .. Hussaini
Piddah
- Blyth 35, 130, 149, 276,
295
- Bombay Natural His-
tory Society 290
- „ Journal of, 183, 237,
243, 261, 290
- Bou-kathā-kao, 286 ;
beneficial bird 309-
10 ; birds generally
victimised by it 312 ;
call-notes 308 ; cap-
tivity 315 ; coloration
320 ; cover for cages
a necessity during
rains 315 ; eggs 313 ;
food in captivity 316 ;
habitat 288 ; held
in great esteem 316 ;
resorts 304 ; sweeter
voice 316 ; too secre-
tive for aviaries 317 ;
winter migrant in
Ceylon 288
- Brain-fever bird, 303,
307, 308
- Brooks, 138
- Bulbul, 92, 94, 98, 122,
306, 312
- Bulbul, Bush, 122
- Bulbul, Gold-fronted
green, 92
- Bulbul, Green, 99, 102
- Butea frondosa*, 60
- Butler, Dr. A. G., 104,
217, 258, 276, 280.
- Butler, Dr. Fanny, 276.
- Calliope camatschatken-
sis*, 73
- Carpodacus erythrinus*,
265
- Carpodacus erythrinus-
roseatus*, 265
- Cercomela fusca*, 184
- Chat 48, 76, 325
- Chat, Common Pied
Bush, 35-47, 53, 54

- Chat, Indian Blue, 312
 Chat, Indian Bush, 49,
 see Kher-piddah
 Chat, The Brown Rock,
 184
 Chat, Stone, 55
 Chatak 115, 123
 Chendool, 128; colora-
 tion 164-65; flight
 145-46; food 148;
 habitat 131-32; mi-
 gratory 153; mimi-
 cry 146; nidifica-
 tion 153-54; not
 gregarious 148; resor-
 ts 145; song 145-48
*Chimarrhornis leucoce-
 phalus*, 197
 Chloropsis, 122
Chloropsis aurifrons,
 92, 92-109, 107, 336
 Chloropsis, gold-fronted,
 100, see Harewa
Chloropsis hardwickii,
 107
Chloropsis jerdoni, 97,
 100, 101, 336,
Cittocincla macrura, 1
Coccytes jacobinus, 115,
 286, 289, 290, 296,
 305, 310, 313, 322
Copsychus saularis, 19
Corvus macrorhynchos,
 312
Corvus splendens, 312
Crateropus, 312
Criniger flavicollis, 184
 Crow, 292; attacking
 Shah-bulbul 306;
 hatred against the
 Koel 293; how out-
 witted by the koel
 294-95 resemblance
 of its eggs with
 those of koel 312;
 two species victimi-
 sed by koel 312
 Cuckoo, 284-321; rela-
 tion of the coloration
 of their eggs with
 those of their hosts
 313; four species
 commonly caged in
 India 286

Cuckoo, Hawk, see
Pāpiyā

Cuckoo, Indian, see
Bou-kathā-kao

Cuckoo, Pied Crested,
see Shah Bulbul

Cuculidae, 286

Cuculus canorus, 298,
299

Cuculus micropterus, 231,
286, 288, 304, 308,
310, 312, 313, 322

Cunningham, 302, 306

Cyanecula suecica, 67

Dama, 166-86, 187, 195,
208, 219, 325, 337-338;
abnormal form 183-
84; beneficial bird
174; breeding in
captivity 179; cap-
tivity 177-82; colo-
ration 183-84, 338;
coloration of White-
throated Ground
Thrush 175; court-
ing habits 179-81;

feeding habits 173-
74; food in captivity
178; habitat 168-
69; Indian style of
caging 177-78; Is it
a mimic? 182;
mating season 176;
movements 170, 172;
nidification 176-77;
not strictly a ground
bird 169; partial
migrant 170; protec-
tive coloration 171-
72; quarrels between
males 181-82; resorts
169-70; shy and cau-
tious 170-71; so-called
Dama 184-86; soli-
tary and silent 174-
75; song 167, 175,
178-79; song of
White-throated Grou-
nd Thrush 175;
White-throated Grou-
nd Thrush a mimic
182; why called a
Ground Thrush 172

- Davison, 274
- Dewar, 59, 114, 132, 185, 296, 299, 301, 318
- Dhayal, 19-34, 35, 36, 37, 42, 45, 50, 53, 56, 59, 61, 64, 66, 77, 83, 92, 174, 241, 242, 263 325, 331-36; always nests in the same locality 29; argument against caging 31; bath 30; beneficial 28; breeding in captivity 31-32, 331-36; captivity 30-32; cock killing nestlings 32, 336; coloration 32-34; favourite haunts 19, 20, 22, 26; feeding habits 23, 25; fighting bird in Nepal 21; fights with the Shama 332; flight 27; gregariousness 24; habitat 21; idea of territory 27; incubation period 325; love-displays by a hen 332; by cock 334; mating period 28; mimic 20; monogamous 29; nesting in captivity 334-35; nidification 29-30, 334-36; pugnacity 20, 23, 24, 25-26, 332-33; pugnacity leading to capture 24-25; song 19-20, 22-23, 26, 28; tail-play 26; tournament 24; why called Magpie-Robin 19
- Dissemurus alcocki*, 238
- Dissemurus paradiseus*, 222, 224
- Dissemurus paradiseus grandis*, 225
- Drongo, 99
- Drongb. Racket-tailed, 222, see Bhimraj
- Eha, 114, 119, 133.

Eudynamis 288

Eudynamis honorata, 231,
284, 286, 288, 291

Fatik-jal, 110-26; an-
cient classification
with *Ghlropsis* 112;
beneficial 117; cap-
tivity 120-23; colora-
tion 123-26; conduct
when disturbed 118;
controversy about
breeding plumage
124-26; family party
116-17; flight 117,
118; food 117; habi-
tat 111-12; habits
115-18; haunts 112-
13, identity with
Chātak 115; lan-
guishes in captivity
110, 120-21; mating
period 119; meaning
of the name 110;
nidification 119-20;
roosting 117; soft
feathers 121; song

111, 113-14; strange
way of drinking 123;
two moults a year
122; whether a
songster 114

Fauna of British India,
224, 336, 337

Fergusson, 290

Finch, Hobson's Rose,
265, see Tuti

Finch, Rose, 268

Finch, Scarlet Rose,
see Tuti

Fitzgerald, Miss., 192,
201

Flacourtia ramontchi, 99

Fly-catcher, 37

Fringillidae, 275, 278

Galerita cristata, 131

Garrulus lanceolatus, 211

Geocichla citrina, 166,
175, 183, 184, 187,
195

„ *cyanonotus*, 175

Gould, 20

Gulab-chasm, 77-91; bold

in captivity 79, 88 ;
 captivity 88-90 ; co-
 loration 90-91 ; *esprit*
de corps 83-85 ; food
 in captivity 90 ;
 gregariousness 78,
 83 ; habitat 79 ;
 habits 78 ; how cap-
 tured 89 ; mating
 season 86 ; meaning
 of the name 78 ;
 nidification 86-88 ;
 quarrelsome temper
 90 ; resorts 79-81 ;
 shyness 78 ; song
 and call-notes 81,
 83, 85, 89 ; way of
 feeding 82-83

Harewa, 92-109 ; 336-37
 bath 105 ; beneficial
 in tea-plantations 96 ;
 cage vs aviary 104-
 05 ; captivity 102-
 07 ; *chloropsis hard-*
wickii 107 ; colora-
 tion 107-09 ; disease

in captivity 107 ;
 effect of light on
 plumage 105-06 ;
 food 95-97 ; food in
 captivity 106 ; greg-
 arious or not 100,
 336-38 ; habitat 93-94 ;
 haunts and habits
 94-95, 97-98 ; Indian
 way of caging 103 ;
 markets for sale
 104 ; merits as cage-
 pet 102-03 ; mimi-
 cry 92, 99, 102, 103 ;
 nidification 100-01 ;
 protective livery 93,
 95 ; quarrelsome
 104 ; scuffles with
 parrots 99 ; song 92,
 98-99 ; term 'green
 Bulbul' a mistake
 93 ; unsociability 99
 Harvey, Lindsay, 296,
 297

Hawk-cuckoo, see Pāpi-
 yā

Henderson, 270

- Hierococcyx varius*, 286,
287, 302, 312
Honey-sucker, 106
Hornbill, Malabar Grey,
231
Hume, 52, 136, 257, 270
Hundred-tongued, 15
Hussaini Piddah, 67-72 :
• captivity 70-71 ; co-
• loration 71-72 ; habi-
tat 68 ; migration
68 ; mimic 69, 70 ;
movements 68 ; re-
sorts 68 ; song 69 ;
song-flight 70 ; stea-
dying new captives
71 ; tail-play 68-69
Inglis, 183
Iora, 110, 110-26, 112,
312, see Fatik-jal
Jay, Black-throated ,
211
„ Blue, 64
Jerdon, 130, 133, 219
Kālā-piddah, 36, 48
Kālī-Shama, 56-66 ;
appearance 57, 63 ;
bath 63 ; boldness 61,
64, 65 ; captivity 63-
65 ; coloration 65-66 ;
comparison with the
Piddah 57-58 ; dis-
tribution of Northern
and Southern species
58-59 ; habitat 58-
59 ; interpretation
of the name 57 ;
manner of insect-
catching 60 ; nest-
ing period 62 ; ni-
dification 62-63 ; pro-
tective coloration 65 ;
resorts 59-61, 63,
64 ; song 61 ; sun-
bath 63, 64 ; tail-
play 59, 61, 64 ; un-
sociability 61-62, 64
Kasturā, 187, 188-205,
207, 209, 271 ; bath
200 ; captivity 200-
04 ; carnivorous tas-
te 193 : coloration

204-05 ; contrast with Dama 195-96 ; feeding habits 194, 195 ; fisher 194 ; food in captivity 200, 204 ; habitat 190-91 ; idea of territory 196 ; mimic 201 ; murderous inclination in aviary 200 ; nidification 197-200 ; resorts 193-95 ; secretive 195 ; song 188, 192 ; tail-action 195 ; tameness 201 ; thrush and not babbler 189-90 ; whistling note 191-92

Kasturi, 188, 205-18 ; attacks Himalayan Whistling Thrush 211 ; attractive qualities as a pet 206 ; bath 215 ; captivity 214-18 ; coloration 218 ; food in captivity 215 ; habitat

206-07 ; how caged in India 214 ; hybrid with English Blackbird 217-18 ; manner of bathing 209 ; mimicry in nature 207 ; nidification 212-14 ; pugnacity 210-11, 216 ; resorts 207 ; secretive 208-09 ; solitary habits 209 ; song 207, 209, 215-16 ; song connected with sound of falling water 215-16 ; tail-play 209 ; vulgar way of feeding 215

Khanjan, 240-64 ; captivity 258-63 ; coloration 263-64 ; cross between Pied and Grey Wagtails 261 ; flight 251 ; flirtation 249 ; food 253-54 ; gait 251-52 ; gregariousness 249-50 ;

habitat 244-46; idea of territory 254; ideal aviary bird 258; Indian cages 259; Indian prejudice against caging it 241; Is *Motacilla maderaspatensis* a sub-species? 243-44; love-song and song contests 246, 250; nidification 255-58; queer nesting sites 256-57; quest for food 254; resemblance with the Dhayal 241; resorts 246-48; restricted application of the term to a particular species 240; restricted range in Bengal 242; song 241, 242; super-abundance of energy 253; uncompanionable with other Khanjans 260; un-

like its European congener does not use the nests of other birds 257

Kher-piddah, 49-55; appearance 50; captivity 53-54; coloration in summer 54, in winter 55; habitat 52; migration 51; nesting time 52; nidification 52-53; resorts 50; song 49, 53, 55; tail-play 50

Koel, 284-322; and its allies 284-322; beneficial bird 309-10; call 306-07; captivity 314-16; coloration 318-19; coloration connected with parasitism 302; cunning 293; does young koel eject foster-brothers? 298-300; disliked by English residents 285; female

destroying eggs of
 hosts 295-96; female
 takes charge of you-
 ng, according to
 Oates 300-01; flight
 294, 295; food in
 captivity 314, 315;
 frugivorous 292, 310;
 habitat 288-89; In-
 dian cages 315; me-
 thod of outwitting
 crows 294-95; popu-
 lar with Indians 284-
 85, 314; resemblan-
 ce between koel's and
 crow's eggs 312;
 resident in some
 places of Bengal
 290-91; resorts 291-
 292; song in captivi-
 ty 316; superfluous
 in aviaries of Indian
 Zoo Gardens 317;
 victimises two speci-
 es of crows 312;
 whether female carries
 eggs in bills to place

in nest 297-98; young
 hand-fed for longer
 period 315; young
 very clamorous 301

Kokil, 306

Lark, 126-65, 258, 259;
 adaptability to cli-
 matic conditions 136-
 37; breeding in capti-
 vity 158-61; capti-
 vity 155-61; eco-
 nomically beneficial
 150; Eha. on the
 field-observation of
 Larks 133-34; first-
 hand field observa-
 tion meagre 133-34;
 food 149; food in
 captivity 157; Indi-
 an cages 155-57;
 intimate with keeper
 157; Is caging Larks
 a cruelty? 128-
 29; Larks as food
 137; mock-combats
 136

- Lark, Bengal Bush, see Migrants, 287
 Aggia „ *partial*, 287
 „ Crested, see Chendool „ *true*, 287
 „ Ganges Sand, see *Mirafr* *affinis*, 131
 Retal „ *assamica*, 130
 „ Madras Bush, see „ *cantillans*, 130
 Aggia „ *erythroptera*, 131
 „ Red-winged Bush, 131 *Molpastes bengalensis*,
 „ Singing Bush, see 312
 Aggin *Molpastes leucotis* 336
Larvivora brunnea, 312 *Motacilla alba*, 260
 Layard, 20, 114 „ *alba maderaspatensis*,
 Leaf-bird, 95 243
 Legge, 6, 20, 100, 114, „ *lugubris*, 257
 122, 124, 137, 151, „ *maderaspatensis*, 240,
 169, 246, 257, 336 242, 244, 250, 263
 Leothrix, 122 „ *melanope*, 257
 Magpie, 19
 Magrath, Major, 216
 Mandal, G. C., 11
 Mason, 310
Merula bouboul, 187, 205
 „ *bourdilloni*, 207
Merula kinnisi, 212
 „ *simillima*, 206
 „ *unicolor*, 218, 338
 Munia, 281
 Munn, P. W., 74, 118, 124
Myiophoneus eugenii, 191
 „ *horsfieldi* 191
 „ *temminckii*, 187, 191,
 207
 Naidu, Mrs. Sarojini, 308
 Nightingale, 1
 Nilkanthi, 67

destroying eggs of hosts 295-96; female takes charge of young, according to Oates 300-01; flight 294, 295; food in captivity 314, 315; frugivorous 292, 310; habitat 288-89; Indian cages 315; method of outwitting crows 294-95; popular with Indians 284-85, 314; resemblance between koel's and crow's eggs 312; resident in some places of Bengal 290-91; resorts 291-292; song in captivity 316; superfluous in aviaries of Indian Zoo Gardens 317; victimises two species of crows 312; whether female carries eggs in bills to place

in nest 297-98; young hand-fed for longer period 315; young very clamorous 301

Kokil, 306

Lark, 126-65, 258, 259; adaptability to climatic conditions 136-37; breeding in captivity 158-61; captivity 155-61; economically beneficial 150; Eha on the field-observation of Larks 133-34; first-hand field observation meagre 133-34; food 149; food in captivity 157; Indian cages 155-57; intimate with keeper 157; Is caging Larks a cruelty? 128-29; Larks as food 137; mock-combats 136

- Lark, Bengal Bush, see Migrants, 287
 Aggia " *partial*, 287
 ,, Crested, see Chendool ,, *true*, 287
 ,, Ganges Sand, see *Mirafra affinis*, 131
 Retal " *assamica*, 130
 ,, Madras Bush, see " *cantillans*, 130
 Aggia " *erythroptera*, 131
 ,, Red-winged Bush, 131 *Molpastes bengalensis*,
 ,, Singing Bush, see 312
 Aggin *Molpastes leucotis* 336
Larvivora brunnea, 312 *Motacilla alba*, 260
 Layard, 20, 114 " *alba maderaspatensis*,
 Leaf-bird, 95 243
 Legge, 6, 20, 100, 114, " *lugubris*, 257
 122, 124, 137, 151, " *maderaspatensis*, 240,
 169, 246, 257, 336 242, 244, 250, 263
 Leothrix, 122 " *melanope*, 257
 Magpie, 19
 Magrath, Major, 216
 Mandal, G. C., 11
 Mason, 310
Merula boulboul, 187, 205
 " *bourdilloni*, 207
Merula kinnisi, 212
 " *simillima*, 206
 " *unicolor*, 218, 338
 Munias, 281
 Munn, P. W., 74, 118, 124
Myiophoneus eugenei, 191
 " *horsfieldi* 191
 " *temminckii*, 187, 191,
 207
 Naidu, Mrs. Sarojini, 308
 Nightingale, 1
 Nilkanthi, 67

Niltava sundara, 312

Oates, 42, 74, 100, 122,
124, 130, 132, 133,
138, 148, 149, 152,
168, 187, 189, 224,
243, 288, 289, 295,
300, 301, 319, 337

Ornament of the forest,
102

Ortolan, 137

Ouzel, Grey-winged, see
Kasturi

„ Tickell's, 218-221,
339-41; breeding in
captivity 338-40;
captivity 220-21;
coloration 221; habi-
tat 219, 220; manner
of feeding 219-20;
nidification 220, 339-
40; song 219, 220, 339

Palās, 60

Pāpiyā, 286; ailments
316; beneficial 309-
10; birds victimised
by it 312; call 306,

307-08; captivity
315; coloration 319-
20; covering for
cages a necessity du-
ring rains 315; eggs
313; food in capti-
vity 316; habitat 287-
88; may frighten
smaller birds in avia-
ries 317; mobbed by
Babblers 303; per-
ching habit 303; re-
semblance with *As-
tur badius* 303; resi-
dent bird 287; risk
of being mobbed in
aviaries 317; vic-
timises Babblers 303

Parrots, 20, 99, 100

Phillips, Reginald, 12,
172, 175, 181, 182,
235, 331

Piddah, 35-48, 50, 56, 57,
58, 64, 66; appear-
ance 36; boldness
39; captivity 44-46;
coloration 46-47; food

- 39; habitat 36-37; movements 39-40; nidification 42-43; pugnacity 41, 45; resorts 37-39; song 35, 41-42; sounds of anger 40; tail-play 40
 „ Hussaini, 67-72
 „ Kālā, 36, 48
 „ Kher, 49-55
Pratincola caprata, 35, 48, 57
 „ *maura*, 49
 Protective coloration, 65, 93, 95, 171-72, 272
 Puttoo, 167
Pyctorhis nasalis, 79
 „ *sinensis*, 77
 Red-start, 45, 186
 Red-start, Plumbeous, 197
 „ White-capped, 197
 Retal, 128; adaptability to climatic conditions 136; coloration 165; flight 149; habitat 132-33; nidification 154; resorts 148; song 149
Rhyacornis fuliginosus, 197
 Robin, 14, 19, 35, 45, 48, 61, 67
 „ Golden Bush, 312
 „ Indian, 56-66
 „ Indian Black-backed, 58
 „ Brown-backed, 58
 „ Magpie, 19, 232, see Dhayal
 Ruby-throat, the Common, 73-76; captivity 76; coloration 74-76; habitat 74; shyness 74; song 74; winter visitor 74
 Russ, Dr., 279
 Rutilillas, 45
 Sand-Lark, see Retal
 Sanyal, 107
 Satoo, 13, 14, 54, 63, 106
 Seebohm, 276

Selous, 135, 278

Seven Sisters, 83

Shah-bulbul, 286; arrival in Bengal 305; attacked by crows 306; beneficial 309-10; birds victimised by it 312; coloration 321; disliked by bulbuls 306; eggs 313; feeds on ground 305; flight 309; food in captivity 317; habitat 289-90; habit of destroying eggs of hosts 296-97; insectivorous 317; notes 309; partial migrant 290; rare as a captive 316; resident in Ceylon 290; resorts 305; silent when perching 309; young fed on caterpillars by foster-parents 310

Shama, 1-18, 19, 20, 22, 23, 30, 33, 34, 35, 37,

45, 53, 57, 64, 77, 83, 92, 103, 122, 133, 140, 174, 186, 222, 233, 325-331, 340; bath 15; breeding in captivity 11-12; captivity 9-16; coloration, male 16 17, female 17-18, young 18; coquetish displays 327; courtship 327; diseases 14; fights with Dhayal 332-33; flight 6, 7; food 7; food in captivity 12, 14; food of young 12-13, 330; habitat 4-5; incubation period 12, 331; idea of sanitation 13; Indian way of caging 2-3; manner of feeding 7; manner of feeding young 331; mating period 8; meaning of the name 2; mimicry 15; nests in captivity

- 328; nidification 8-9,
 328-331; resorts 5-6;
 song 1-2, 6-7, 14-
 15, 327; tail-play
 7, 10; winter visi-
 tant to Cachar 5;
 unmotherly hen-bird
 328-29; unsociability
 7-8, 10-11, 15-16
 Shikra, 303
 Shrike, 122
 Sky-Lark, 127, 129, see
 Bharat
 Sonapur fair, 104
 Stone-chat, 55
 Sunbird, 97
Suya crinigera, 312
Sylvidae, 122

Tarsiger crysocus, 312
Thamnobia, 45, 48, 58,
 59, 66, 171
Thamnobia cambaiensis,
 56, 56-66, 68
 „ *fulicata*, 58
 Thrush, Ground, Dusky,
 219
 Thrush Orange-headed
 Ground, see Dāmā
 „ White-throated, Grou-
 nd 175, 179, 182
 „ Himalayan Streaked
 Laughing, 312
 „ Himalayan Striated
 Laughing, 312
 „ Himalayan Whist-
 ling, 187, 208, 211, see
 Kastura
 „ Malabar Whistling,
 189
 „ Western Variegated
 Laughing, 312
 Ticehurst, Mr. Claude
 B., 243
 Tickell, 308
 Tit, 97, 115
*Trochalopteron linea-
 tum*, 312
 „ *simile*, 312
 Tuti, 265-83; breeding
 in captivity 279; cap-
 tivity 280-82; colo-
 ration 282-83; food
 274-75; food in cap-

tivity 281-82 ; gregariousness 270-71 ; habitat 268-70 ; loss of colour in captivity 280-81 ; mass-favourite 266 ; migratory movements 268-70 ; nidification 278-80 ; no protective coloration 272 ; pugnacity 274 ; resorts 274 ; song 275-76, 277 ; song and beauty united in it 277-78 ; timidity and alertness as protective characters 272-73

Wagtail, 68, 70, 71, 145, 169

„ Grey, 257

„ Large Pied, see Khanjan

Warbler, 123

„ Brown Hill 312

White-eye, 115

Wood-pecker, 226

„ Malabar Black, 231

Zoological Gardens, Calcutta, 11, 107, 234

Calcutta Oriental Series

1. **Yuktikalpataru by King Bhoja** ... Rs. 2-8
2. **Chanakya Rajaniti Sastram** (Second edition, pp. xxvi + 72) with a learned Foreword by Mr. John Van Manen, Librarian, Imperial Library, Calcutta 0-14-0
3. **Harilila** by Vopadeva with the Commentary of Madhusudana Sarasvati Re 1-4
(Second edition to be published shortly)
4. **Inter-state Relations in Ancient India, Part 1.** by Dr. Narendra Nath Law M. A., B. L., P. R. S., Ph. D. Rs. 2.
5. **Muktaphalam** by Vopadeva with the Commentary of Hemādri, 2 parts. Rs. 6
6. **Chanakya-Katha** by Ravinartaka with a Bengali translation by Satish Churn Law Re. 1
7. **Historical Gleanings** by Bimala Charan Law M. A., B. L., F. R. Hist. S. (Thacker, Spink & Co.) Paper Rs. 5. Cloth Rs. 6
8. **Vakrokti Jivita** by Rajanaka Kuntala with his own commentary..... (A Treatise on

Sanskrit Poetics). Edited from original manuscript with critical notes and introduction by Dr. S. K. De M. A., D. Litt. Rs. 2

9. The Life and Work of Buddhaghosha by Bimala Charan Law M. A., B. L., F. R. Hist. S. With a Foreword by Mrs. C. A. F. Rhys Davids, M. A., D. Litt. (Thacker, Spink & Co.)

Paper Rs. 8. Cloth Rs. 9.

11 The Buddhist Conception of Spirits by Bimala Charan Law M. A., B. L., F. R. Hist. S. With a Foreword by Rai Saheb Dr. Krishnaswami Aiyangar, M. A., Ph. D. (Thacker, Spink & Co.) Rs. 4

To be had of—The Sanskrit Press Depository,
30, Cornwallis Street, Calcutta
and
N. C. Paul Esqr. B.A., Calcutta Oriental Press,
107, Mechuabazar Street, Calcutta.

