

After these Mr. Oates places the Sun-birds or *Nectariniidæ*, which he divides into two subfamilies, the true Sun-birds (*Nectariinæ*) and the Spider-hunters (*Arachnotherinæ*).

In the first group we have birds laying white eggs more or less spotted and marked with grey and brown or reddish-brown. In *Æthopyga* the markings are usually sparse, but in some cases they are fairly dense. In *Arachnecethra* they become far more so; indeed some eggs in this genus look very much as if they were of an uniform grey-brown. Now, it is curious that these very nearly approach some eggs of *Arachnothera magna*, the Great Spider-hunter, a bird of the next subfamily; yet the members of that subfamily lay two distinct types of eggs, which have apparently no connexion one with another. The first type ranges in colour from a deep and absolutely uniform chocolate-brown to a less uniform freckly dark grey. This type therefore connects with the other subfamily through *Arachnecethra*. On the contrary, the little Spider-hunter (*Arachnothera longirostris*) lays white or pinkish eggs, faintly marked with darker reddish. This type connects with the previous subfamily through the most pink-tinted eggs of the genus *Æthopyga*. Thus we have the members of one subfamily with two totally different types of egg, forming the two extremes of a graded series laid by those of the previous subfamily. This fact, so far as I can ascertain, is quite unique in Indian oology.

The *Pittidæ*, or Pittas, lay typical eggs which cannot well be confounded with those of any other birds; there is little variation among them, and no remarks are necessary.

XXXI.—*The Cage-Birds of Calcutta.* By F. FINN, Deputy Superintendent, Indian Museum, Calcutta.

THE taste for keeping pet birds is a very old one in India, exotic forms, such as Cockatoos, having been imported so long ago as the time of Jehangir, to judge from the representation of a yellow-crested species in a picture dating from the reign of that monarch which I had an

opportunity of inspecting some time ago. And even to-day in Calcutta many birds are commonly to be seen in captivity hailing both from various parts of India itself and from other countries, although "the fancy" is no longer what it was, and both the demand and supply have dwindled away sadly. Nevertheless, enough birds are to be seen to arouse keen interest in English amateurs; and this is especially noticeable in the case of "soft-billed" or insectivorous and frugivorous forms, which are very extensively kept in India.

Calcutta rejoices in a very well-known bird-market in Tiretta Bazaar; and as this is within an easy walk of the Museum, I have long been in the habit of paying it frequent visits. One or two dealers in the Provision Bazaar also keep cage-birds; but Tiretta is the leading emporium for pets, always excepting Mr. W. Rutledge's establishment in South Road, Entally. There business has been carried on for nearly half a century, Mr. Rutledge dealing in living animals of all kinds; and many very choice birds pass through his hands, though he naturally does not trouble himself greatly about the commoner species. To him I have long been indebted for much information concerning birds and the methods pursued in keeping them.

Few birds seem to be kept or bred in aviaries here; small cages with a single inmate, or larger receptacles containing several, are chiefly in vogue; and as the objectionable custom of covering up birds kept for song is almost universally followed, it is not easy to determine the exact species of the occupants in many cases, though the note often affords a clue to the captive's identity. Cages for small singing-birds are usually oblong with a vaulted roof, and provided with two perches, or are square with a pyramidal top, containing only one perch; they are fitted with large comfortable handles, as it is the custom to take cage-birds out continually in order to give them fresh air.

Larger birds are kept in big wicker cages with a domed or hemispherical top, and Parrots in similar round domiciles of iron, or chained to iron swings. All native cages have a

barred floor, instead of the drawer arrangement so familiar to home amateurs, but a mat is often provided to cover the bottom. Food and water-vessels are always placed inside, in my opinion very wisely. Sand is not given, except to Larks and Partridges.

“Soft-billed” birds are fed on the flour of gram, a kind of pulse, made up into a paste with ghee (clarified butter). This “*satoo*” seems to suit them very well; it is supplemented, in the case of purely insectivorous species, by a daily ration of live maggots and grasshoppers. The breeding of the former and the collection of the latter form the trade of a number of professional bird-feeders, who, on the receipt of a small monthly sum, will call daily at the houses of their patrons and supply insectivorous birds with everything needful. With the exception of Parrots, few seed-eating birds are kept simply as pets, and their treatment calls for no special remark.

Many birds are imported from China, and come over in excellent condition, being housed in strong but light oblong or square cages of split bamboo, well put together and fitted with trays. The insectivorous birds are fed on shelled millet and small insects, mixed together and given quite dry and plain; they thrive excellently on this diet, which is far better than the mess of “*satoo*” and repulsive maggots given here.

From the farther East come chiefly Lories and Cockatoos, fastened to perches by a wide ring of cocoa-nut shell, through a hole in the circumference of which the foot of the bird is slipped—I think by pressing the third toe back against the shank. Although so closely attached to the perch—which is merely passed through the ring that plays upon it—these birds appear to fare well and to keep in good condition. The Lories are fed upon rice-and-milk sop, which food is not given to any other birds, so far as I am aware.

It is a curious fact that, to all appearance, the species brought down from the hills often stand the Calcutta climate nearly or quite as well as those which naturally inhabit warm countries. The same remark applies to the few European

kinds imported; some, indeed, of these temperate-climate species seem to feel the heat *less* than denizens of the tropics.

I am very glad to say that, on the whole, the captives are well treated here. The custom above alluded to, of wrapping up the cages in cloths, is certainly regrettable, but the general condition of the birds shows that they are well looked after. Nor are they confined in such a miserably small space as is sometimes the case in Europe, notably with Linnets in England.

The importation of foreign birds is not likely, in my opinion, to have any great influence on the Indian fauna. Of course many escape, but these, if they evade the numerous Crows, ever watchful for a stranger or a weakling, are not numerous enough to establish themselves, even if the climate prove suitable for their propagation. I have some reason, however, for thinking that the Java Sparrow (*Munia oryzivora*) is becoming established here, as in so many other places. But this need be no matter for regret, as the species is one of exceptional beauty, and, though it is undoubtedly destructive in some places, it has never become a pest in India, where it has existed in a wild state ever since Jerdon's time. I therefore feel no shame in confessing to having liberated at different times some scores of individuals, in the hope of giving it a footing as a wild species in this part of the country; especially since, being so numerously imported, so often escaping, and being so well able to look after itself, it was likely to take up such a position without deliberate assistance on the part of anyone.

I will now proceed to treat of the various species of cage-birds to be met with here under their families as given in the Bird-volumes of the 'Fauna of British India,' the scientific nomenclature of which I shall employ, interpolating the exotic forms under the names employed in the British Museum Catalogue of Birds.

Family C O R V I D Æ.

Considering the popularity of the members of the Crow-tribe in England, I was rather surprised to find that in

Calcutta they did not commonly figure as pet birds. The Magpie (*Pica rustica*) may, however, occasionally be met with, usually as a Chinese importation, and the common Indian Tree-Pie (*Dendrocitta rufa*) is often to be observed in the Bazaar. A few Himalayan forms are also pretty regularly brought down—the two species of *Urocissa* (most often *U. occipitalis*), the beautiful *Cissa sinensis*, *Garrulus lanceolatus*, and sometimes *G. bispecularis*; while Mr. Rutledge occasionally gets a few Red-billed Choughs (*Fregilus graculus*), which actually do not seem to suffer from the heat. I noticed that these birds looked distinctly larger than the European specimens I used to see at the London Zoological Gardens, and had deeper red bills and feet.

Of exotic Corvidæ I have seen at Mr. Rutledge's establishment *Corvus australis* and the Chinese *Corvus torquatus*, while quite lately he had a fine specimen of the Brazilian *Cyanocorax cyanopogon*.

Among the Tits the only species I have met with in confinement is *Machlolophus xanthogenys*, a few individuals which had been brought to Calcutta having done very well.

Family PARADISEIDÆ.

Birds of Paradise are of course always scarce and very expensive, but a few males of the two ordinary yellow-plumed species (*Paradisea apoda* and *P. minor*) have appeared for sale during the six years I have spent in Calcutta. They thrive well in confinement, and are much thought of by the natives, who identify them with the legendary *Huma*, which never alights, and confers royalty on whomsoever it chances to overshadow in its flight! Mr. Rutledge tells me that the Ameer sent a man from Cabul on purpose to inspect the first specimen he obtained, and to report on its identity with the bird of tradition.

Family CRATEROPODIDÆ.

The Babblers and Bulbuls are particularly suitable for cage-birds, as they bear captivity remarkably well, and have

many recommendations as pets, especially in the case of the former.

Most esteemed, perhaps, is the Chinese Jay-Thrush (*Dryonastes sinensis*), which is only known here as an imported bird and under its Chinese name of *Peko*. It is a very fine songster and an excellent mimic. A few arrive from time to time and find a ready sale. I know of a very good specimen which is at least 14 years old and certainly shows no signs of age. Another Chinese bird of this type, and similarly imported in small numbers, is the Huamei (*Trochalopteron canorum*), also much prized as a songster.

Some common Indian Jay-Thrushes, *Garrulax leucolophus*, *G. albigularis*, *G. pectoralis*, *G. moniliger*, *Grammatoptila striata*, *Ianthocincla rufigularis*, and one or two others, are pretty regularly brought down in the winter, especially the first-named, which is in some demand for export.

Other Babblers which also arrive in consignments from the hills are *Pomatorhinus schisticeps*, *P. erythrogenys*, and *Lioptila capistrata*, and, among the smaller species, *Mesia argentauris*, *Siva cyanuroptera*, and *Yuhina nigrimentum*. None of these, however, come into the market in any quantity.

The charming little "Pekin Robin" (*Liothrix lutea*) is numerously imported in winter—generally from China—and hence is almost always to be procured. *Zosterops simplex* is also a very common captive, and attempts are sometimes made by Bazaar dealers to pass it off as a "Humming-bird"!

Chloropsis aurifrons, well known as the *Harewa*, is often on view, and is one of the most delightful of cage-birds, being easily kept, and possessing the recommendation of being a very clever mimic as well as very ornamental. If hand-reared, it is very tame; but individuals vary much in temper, and some are quite impossible companions for any small bird, while others are perfectly peaccable. As the sexes are so much alike in this species, I have not been able to discover the reason of this difference of disposition, whether it be personal or sexual. The fine *Chloropsis hardwickii* is comparatively scarce, and *C. jerdoni* is seldom to be had.

The species of *Chloropsis* are often called Green Bulbuls, but they cannot be placed far from *Ægithina tiphia*, obviously a small Babbler, which is sometimes kept here (but rarely, being a delicate species). It is locally known as "Tofik." Another small Timeliine form occasionally on sale is the Gulab-Chasm (red-eye) (*Pyctorhis sinensis*)—a most amusing little bird, very impudent, and mischievous when in company with others.

Of the true Bulbuls, the common *Molpastes bengalensis* is by far the most popular captive. It is not so often caged, however, as tethered to an iron T-shaped perch padded with cloth, the cord being fastened to a soft string round its body. This is to further its employment as a fighting-bird, that being the purpose for which it is commonly kept. Two individuals are made hungry, and then their jealousy is excited by offering food to one only, which of course provokes a fight. The sport is carried on during the winter, after which the birds are released, with the exception of such as have proved worthy of maintenance for the future.

This is the only species employed in such a way, but several other Bulbuls may be seen caged, especially the almost equally abundant *Otocompsa emeria*. *O. flaviventris* comes to hand occasionally in small numbers, and sometimes considerable supplies of *Molpastes leucotis*, *M. leucogenys*, and the Chinese *Pycnonotus sinensis* arrive, but these cannot be reckoned on. A few examples of *Hypsipetes psaroides*, *Hemixus flavala*, and *H. maclellandi* have been brought down in the winter of late years.

Before leaving the Crateropodidæ, I should mention that a few specimens of the splendid *Myiophonus temmincki* have passed through Mr. Rutledge's hands, and that lately my friend Mr. E. W. Harper secured from him a fine imported specimen of the Chinese *M. cæruleus*, which he has sent to the London Zoological Gardens. But undoubtedly the members of this fine genus are wrongly placed in this family, being certainly true Thrushes. The distinction between them and the Babblers is perfectly obvious to any bird-keeper or field-naturalist, however hard it may be to make out from skins.

Family DICRURIDÆ.

Only one bird of this family is commonly kept here—the Bhimraj (*Dissemurus paradiseus*); but few specimens are brought in, and these are hand-reared birds in poor condition, which seldom live long, as they require—but do not usually get—a very large cage. This species is, as Jerdon correctly remarks, an excellent mimic. I have even heard that it will occasionally talk, and I have myself known one individual that could imitate the song of a canary to perfection, and also mew like a cat; while another with which I am at present acquainted not only possesses the latter accomplishment, but whistles two or three lines of a song with absolute accuracy of execution.

The Kesraj (*Chibia hottentotta*) is sometimes on sale, but is not popular, so far as I know; the Dhouli (*Dicrurus carulescens*) is occasionally to be procured, and is said to whistle very well.

Family LANIIDÆ.

The Indian members of this family are hardly ever caged here, though some consignments of Minivets (*Pericrocotus speciosus* and *P. brevirostris*) have arrived but have not thriven.

The Australian Crow-Shrikes or Magpies (*Gymnorhina leuconota* and *G. tibicen*) are, however, not unfrequently imported; they thrive well and fetch good prices on account of their well-known whistling and talking abilities. I lately saw a specimen in the possession of Mr. Rutledge which had pale grey on one side of the back and black on the other—this was, I presume, a hybrid between the two species.

Family ORIOOLIDÆ.

Orioles are not generally kept, and the few that are to be seen do not thrive well, especially the common *Oriolus melanocephalus*. *O. trailli* bears confinement far better than the yellow species, being less restless. It also looks very different from them in life, as it keeps the head-feathers

erect, and has a more upright carriage, in addition to its striking light-yellow irides. The eyes of young birds are, however, dark brown.

Family EULABETIDÆ.

The common Hill- or Talking-Mynah (*Eulabes intermedia*) is one of the best-known cage-birds in Calcutta, being brought into the Bazaar by scores at a time, which include both adult and newly-fledged specimens. As everyone knows, some of these birds are very fine talkers, but I have only heard one that was really good, whose imitation of the human voice was perfect. They often prove but short-lived pets, and I am inclined to think that the "satoo"-diet is too rich for these fruit-eating birds, as they usually seem to die in fits, and those I have handled have been very plump and heavy and were probably unduly fat. Recently I saw one with a nearly white iris, the only such specimen I have ever observed among a great number of individuals from India and the Andamans. The smaller Talking-Mynah (*E. religiosa*) is not often caged here, and I have seen no other bird of this family in captivity.

Family STURNIDÆ.

As might be expected where the family is so well represented, the various Starlings and Mynahs are often seen caged. Much the commonest of them is the ordinary *Acridotheres tristis*, which is even more commonly kept than *Eulabes intermedia*, and sometimes talks nearly or quite as well. It also becomes so tame that it may be allowed full liberty. I have seen several more or less perfect albinos of this species in confinement; two very curious specimens are at present in the Calcutta Zoological Garden, for which I procured them from Mr. Rutledge. Both were white when he first obtained them, but one has now completely assumed the normal coloration of the species, and the other has partly done so. A similar phenomenon occurred with a common Babbler (*Crateropus canorus*) recently in his possession, which unfortunately escaped.

Another common Starling (*Sturnopastor contra*) is frequently seen caged, and from its very sweet liquid notes is certainly better suited than any other of its family for a pet. It does not appear to have been noticed that the coloration of the soft parts of the young of this species is quite different from that of the adult, the bill and legs being black, with the inside of the former orange, while in old birds the legs are white and the bill orange and white, with the inside of the mouth black.

All the other common Indian Starlings may be seen at times caged in Calcutta, namely :—*Acridotheres ginginianus*, *Æthiopsar fuscus*, *Sturnus menzbieri*, *Pastor roseus*, *Temenuchus pagodarum*, and *Sturnia malabarica*. The last two are known as *Pawi*, and this title is shared by *Sturnia andamanensis*, which is occasionally imported and is called "*Sada Pawi*," *Sada* meaning "white." *Graculipica nigricollis* is also brought in small numbers from China. The male is a most amusing bird, with his habit of erecting his crest and bowing and muttering to visitors.

Family MUSCICAPIDÆ.

The only Flycatchers I have seen in captivity here are *Stoparola melanops* and *Niltava sundara*, of which a few have been brought down from the North and have thriven very well on the *satoo*-and-maggot regime.

Family TURDIDÆ.

As in other countries, the birds of this family are popular captives here. In fact, if a census of the cage-birds of Calcutta were taken, I should expect the Shama (*Cittocincla macrura*) to come very near the head of the list, as it is extensively kept, and thoroughly deserves its popularity on account of its splendid song. Indeed, after the common Green Parrot, it might, I think, be called the characteristic cage-bird here. Many individuals are also sent to Europe, where the species is yearly becoming better appreciated. Both wild-caught birds and hand-reared fledglings, still in the mottled plumage of immaturity, appear in the shops

of the dealers, while the great majority of the birds exposed for sale are males. A few females may, however, be seen, being presumably hand-reared birds, whose sex could not be determined at first. These have given me the opportunity of observing that this favourite songster is a most pugnacious bird; the cocks will at once fight if put together, and so will the hens. At the same time, old wild-caught cocks and young spotted birds arrive, in many cases at least, in cages containing half a dozen or more, though Shammas are more usually brought in long wicker-cages divided by bars into separate partitions for the several inmates.

Other small Turdidæ not uncommonly kept are the "Dhyal" (*Copsychus saularis*) and the "Pidha" (*Pratincola caprata*). *Chimarrhornis leucocephala* is also occasionally brought down from the hills in winter. The "Bulbul bostha," or true Eastern Nightingale (*Daulias golzi*), is sparingly imported at this season, the birds fetching high prices—from fifty to two hundred rupees. I am told that a man will come all the way from Cabul with a few of these much-esteemed birds as his main venture.

Of the large Indian Turdidæ the only species at all frequent in captivity here are the "Kastura" (*Turdus bouboul*) and the "Dama" (*Geocichla citrina*), and I have not seen many even of these. A few English Song-Thrushes (*Turdus musicus*) have been imported, and do fairly well, but I have noticed that they are very liable to an overgrowth of the scaly covering of the feet. A silly attempt is now being made to introduce the Song-Thrush and Blackbird into Darjeeling, which is already well stocked with more attractive species of birds, especially *Lioptila capistrata* and *Liothrix lutea*.

Family PLOCEIDÆ.

The typical Weavers of the genus *Ploceus* all occur commonly in the Bazaar, except the true *P. megarhynchus* (see Ibis, 1901, p. 29), which is unknown to the dealers. *P. atrigula* (*P. megarhynchus* of the 'Fauna of British India') is often brought in as a young bird, and evidently breeds near

here. *P. baya* is only known as a bird brought down from Lucknow, most of the specimens being males. Many of that sex of *P. atrigula* show a few yellow feathers on the breast when in full plumage.

Foudia madagascariensis used to be occasionally imported in very small numbers, but I have not seen any lately.

Of the small Munias and Waxbills, *Sporæginthus amandava*, *Munia atricapilla*, *Uroloncha punctulata*, and *U. malabarica* are all very common, as might be expected. *Stictospiza formosa*, *Munia malacca*, and *Uroloncha striata* are much less often seen, but may be obtained now and then. Intermediate forms between *M. malacca* and *M. atricapilla* often occur, and are doubtless hybrids. Wild specimens of *Uroloncha acuticauda* are rarely seen, but the domesticated Japanese race (known to home amateurs as the "Bengalee") is constantly present in the Bazaar, in one or other of its three forms—the brown-and-white (grading completely into the wild type), the fawn-and-white, and the pure white, the last being the rarest. It is somewhat curious that no form exists, apparently, intermediate between the fawn-and-white and brown-and-white types, but a similar broad distinction exists between the cinnamon and green forms of the domestic Canary.

Of the small exotic Ploceidæ, *Munia maja*, *M. castaneithorax*, *Teniopygia castanotis*, and *Estrellda astrild* are the most common; but *Poëphila mirabilis*, *P. gouldiæ*, *P. acuticauda*, and *P. cincta* have been imported, the two former most frequently and the latter only quite recently, together with *Ædemosyne modesta*.

Erythrura prasina, though occurring in our empire, is of course only known here as an imported bird, and does not usually do well.

I have in my prefatory remarks already alluded to the Java Sparrow as a commonly introduced bird, and now need only mention that the more or less pure white domestic form from Japan is even more constantly an occupant of the dealers' cages, presumably because it sells at a much higher price, and is therefore not so readily disposed of.

Family FRINGILLIDÆ.

The ubiquitous Canary is, of course, a very common cage-bird in Calcutta, and will probably tend to displace many native species in the affections of the people. Most of those sold here come from China; they are small birds, generally of the pale whitish-yellow tint known to fanciers in England as "buff," green or pied birds being relatively few, and full bright yellow and cinnamon being rarely if ever seen.

I once saw a green bird (not a hybrid of any sort) marked with yellow on the quills and tail, like a Greenfinch. The note of these Chinese Canaries is very soft and pleasant, and they generally resemble the German type of bird. Maltese and a few English Canaries are also imported, the latter fetching three or four times the price of Chinese forms.

The only Indian Finch commonly kept as a songster is the "Tuti" (*Carpodacus erythrinus*); this of course loses the red colour after moulting in confinement, like other carmine-tinted Finches. Several other species, however, appear in the Bazaar, generally to form part of mixed collections, viz.:—*Emberiza luteola*, *Hypocanthus spinoides*, and, less commonly, *Emberiza melanocephala*, *E. aureola*, *Melophus melanicterus*, *Gymnorhis flavicollis*, and *Carduelis caniceps*. A large consignment of the last-named came down during the past winter, but the birds did not thrive as a rule. A few individuals of the Eastern form of Linnet (*Acanthis fringillirostris*) have also been brought in, and I noted that the males, when kept over the moult, lost the red, as the home Linnet does. I have also seen a few specimens of *Metoponia pusilla*.

Of exotic Fringillidæ, *Chloris sinica* is the most common, except of course the Canary; a good many examples of *Eophona melanura* used to be imported, but they were greatly subject to disease of the feet and have not been very popular. The European Goldfinch (*Carduelis elegans*) is generally to be found, but comes in very small numbers; it does not feel the heat at all, nor does it gasp, as many native species do. Bullfinches (*Pyrrhula europæa* and *P. major*) may sometimes be had, as may also the Brambling (*Fringilla*

montifringilla), the specimens of this bird being imported. A species of *Serinus*—I think *S. icterus*—is not uncommon. American Cardinals (*Cardinalis virginianus* and *Paroaria cucullata*) have been brought here and have done well, but have not sold very readily.

Family ALAUDIDÆ.

Larks are popular here as cage-birds, especially the "Chendool" (*Galerita cristata*) and the "Agheens" (*Mirafra*). *Melanocorypha bimaculata* is also brought down to Calcutta in numbers at the close of the cold season, while a few specimens of *M. mongolica* may generally be seen, as it is pretty regularly imported. Another Chinese Lark is often to be noticed, *Alauda gulgula*, I think—at any rate it differs, like that bird, from *A. arvensis* in its smaller size, shorter wings and tail, and larger feet. These birds are expensive, costing between ten and twenty rupees, although not apparently different from Indian specimens of *A. gulgula*, which I have never seen caged. But the custom of wrapping up the cages has limited my knowledge of Larks to a very great extent.

Family NECTARINIIDÆ.

Both *Arachnechthra asiatica* and *A. zeylonica* may be occasionally seen at the dealers' establishments, but can hardly be expected to thrive. Nevertheless, I have known the latter kept by Europeans for many months, and I deposited one of the former safely in the London Zoological Gardens in 1897, although it was in poor condition and did not live long. Mr. Rutledge informs me, however, that this species is kept in some places as a song-bird, so that certain natives must understand how to treat it.

Family DICEIDÆ.

A few examples of *Dicaeum cruentatum* are occasionally on sale, but these birds, though they will eat bananas greedily, are not easy to keep. This is a great pity, as they are not only very pretty, but quite the tamest and most fearless of any small birds I know.

Family PITTIDÆ.

A few specimens of *Pitta brachyura*—hand-reared birds—occasionally come into Mr. Rutledge's hands, but this species is certainly not common in cages. Although not a songster, it makes a very nice pet, owing to its tameness and amusing gestures.

Family PICIDÆ.

The only Woodpecker caged here, and that but rarely, is the common *Brachypternus aurantius*, hand-reared specimens of which get very tame and thrive well in confinement. From the readiness with which they partake of plantains, I fancy that the species must be naturally more or less of a fruit-eater. The outer hind toe (third toe) is certainly reversible in this species—and, indeed, in some other Woodpeckers that I have noticed—for it often points laterally forwards when the bird is moving about in a cage. Nestlings of this species have a warty pad on the hough, and shuffle about on it without the aid of the toes.

Family CAPITONIDÆ.

I have more than once seen a statement in print that Barbets do not thrive well in captivity; but this is quite a mistake, at all events as regards most Indian forms. The first Barbet I ever saw alive was an example of *Cyanops asiatica*, which lived for at least six years in the London Zoological Society's Parrot-house. This species is the easiest of all to keep, both hand-reared and wild-caught birds being exposed for sale in the Turret Bazaar, where some may practically always be found. Several individuals may safely be placed together in one cage, which is not the case with other Barbets, and a great many must reach Europe; indeed, the bird is only kept for export, and is certainly not unfrequently on sale in England. A few specimens of *Megalama marshallorum* and of *Thereiceryx zeylonicus* are occasionally seen here, and *M. virens* sometimes arrives from China. The Coppersmith (*Xantholæma hæmatocephala*) is often brought in to the dealers, but never lives long, as they will

feed it on "sattoo," a diet which kills it in a very few days. Yet on bread-and-milk and fruit, or the latter only, it lives well.

Family CUCULIDÆ.

The male Koël (*Eudynamis honorata*) is a very popular pet with natives, and is always on sale here. Many examples are reared from the nestling stage by hand. The young birds that I have observed do not seem to bear out the theory that both sexes are at first entirely black, and that the female assumes her proper livery later. Some young males are quite black, and others are black sparsely spotted with buff. The young females are much like the adults of that sex, but have the upper half of the head and the nape black. In all young birds the bill is black, not green, as in the old.

The only other Cuckoo I have met with commonly in cages is the "Popiya," or Brain-fever-bird (*Hierococcyx varius*), the note of which is as much esteemed by natives as it is disliked by Europeans. It does not keep its plumage in such good condition as the Koël, which seems to do very well as a cage-bird. The Crow-Pheasant (*Centropus sinensis*) is often brought in, not as a pet, but on account of some fancied medicinal virtue. I have noticed two types of young Crow-Pheasants, which never seem to occur in one brood, at least they are not sent in together. One is a large barred bird, usually taken as the typical young of the species, which is very easy to tame. The other is smaller, especially as regards the bill and feet, and shows no trace of bars, but is a dull edition of the adult. When full-fledged it is wilder than the first, has a longer tail, and is inclined to hop as well as walk. It also moults much later. This is as much as I have yet been able to make out from studying the live birds, and I am not sure whether these uniformly-coloured young are merely the males, as Jerdon says, or a distinct race, or even species. Against the latter view, and tending to prove the existence of much variation, may be instanced the fact that we have in the Indian Museum the skin of a nestling which is in *perfectly bright adult plumage*,

whereas the young birds of the second type mentioned above resemble those of *C. chlororhynchus* as figured in Captain V. Legge's 'Birds of Ceylon,' or may be even duller and darker. All the young birds I have seen have grey eyes and black bills, flesh-coloured at the base in the case of the barred specimens.

PSITTACI.

The Parrots are of course very important in the present connexion, though many of them are not cage-birds in the literal sense, for they are quite as often chained, as mentioned above; this is the case even with Parrakeets and Lories. Many foreign species are imported, and some very rare forms occasionally occur; but, not being specially interested in the group, I have not kept any record of these, and must confine myself to the more usual importations. But I would strongly advise any member of the B. O. U. who likes rare Parrots, or wants specimens of them, not to neglect examining the Calcutta dealers' stocks, if he ever has the opportunity of so doing.

Family LORIIDÆ.

The justice of what I have remarked above is evidenced by the fact that *Trichoglossus forsteni*, which was not even in the British Museum ten years ago, and was only received by the London Zoological Society in 1896, has been, at any rate since I came here in 1894, quite the most commonly imported Lory; indeed, I am not sure that it has not been brought in more numerously than any other exotic Parrot. It thrives very well in captivity, and has bred in the Calcutta Zoological Garden. *Trichoglossus swainsoni* and *T. ornatus* are also not uncommon. Of the other Lories, *Eos riciniata* is, perhaps, the most abundant; but *Lorius garrulus* is also plentiful, *L. domicella* far from rare, and *L. lory* often to be seen.

Family CACATUIDÆ.

The commonest Cockatoos imported are *Cacatua sulphurea*

and *C. roseicapilla*, which come in large numbers and are sold for a few rupees only. *C. galerita* is also common, *C. alba* much less so, and *C. leadbeateri* rather rare. The great *C. moluccensis* is always on sale, though not imported in any very great quantity at one time, each bird being anchored in the manner above described to an L-shaped perch of wood, and so kept unless transferred to a swing. I have particularly noticed the great tameness and intelligence of these birds. All of them are eager for notice, and they will frequently invite me to scratch their heads by beginning to ruffle their feathers with one foot—in fact, will make a sign of their wishes. The only other species I have ever seen do this was a Red Macaw lately in Mr. Rutledge's possession; but the action is so universal with these Cockatoos that it may fairly be put down as a characteristic piece of intelligence, though their tameness is, no doubt, due to their being hand-reared.

The Cockateel (*Calopsittacus novæ-hollandiæ*) is often imported and generally to be bought; it has bred in the Zoological Garden here. I have noticed that this bird's plumage is remarkably impervious to wet; water poured on it glides off as from a Duck's back.

Family PSITTACIDÆ.

The cage-bird of India *par excellence*, and one of the longest- and best-known anywhere, is of course the familiar Ring-Parrakeet (*Palæornis torquatus*), which is popular both with natives and Europeans, and may be met with, chained or caged, in almost every street. Hundreds of fledged and unfledged young, and of wild-caught adults of both sexes, come into the hands of the dealers. Many of the latter are more or less heavily splashed with yellow; while perfect *lutinos* are far from rare and are extremely beautiful birds. The males in these cases retain the pink neck-ring, and the bill is always red. Such birds fetch very high prices—about eighty rupees—and consequently seldom reach Europe, though some have been exhibited in the London Parrot-house. No attempt has, however, been made to breed the variety in captivity,

and the dealers depend for their supply on chance "sports." Yet the form probably has the elements of permanence in it, for Mr. Rutledge assures me that he knows of a case of a pair of normally-coloured birds which always nest in the same tree and always produce a yellow brood, the young being eagerly watched until fit to be taken. Lately I have seen a particularly curious *semi-lutino*, not splashed, but of a shade midway between green and yellow throughout.

Nearly as numerous as the common Parrakeet is the larger "Rock-Parrot" (*P. nepalensis*), but most, if not all, of the examples are, I think, brought in as young birds. In the Tiretta Bazaar there are at the time of writing (February) a good many examples of this species still so young as to show the dark irides which when immature this and the common Ring-neck exhibit. I have never seen a *lutino* of this large Parrakeet.

The "Blossom-head" (*P. cyanocephalus*) is common in the Bazaar, but is not so popular a cage-bird as the Ring-neck. The Eastern form (*P. rosa*) is also often to be seen. Another common *Palaeornis* is *P. fasciatus*, but only quite lately have *P. magnirostris*, *P. schisticeps*, and *P. columboides* appeared here, so far as I am aware, and then there were only a few individuals, except of the last species, of which a good many pairs arrived, and some are still on sale. *P. finschi* I have seen only once; the specimen was secured for the London Zoological Gardens by Mr. Harper.

The common little Lorikeet is often to be met with, and the Malayan *Loriculus galgulus* is frequently imported, both being in favour as inmates of minor aviaries. I have only once seen *L. indicus*. The only small foreign Parrot numerously imported besides *L. galgulus* is the well-known Budgerigar (*Melopsittacus undulatus*), which thrives and breeds as well here as elsewhere. Mr. Rutledge has seen escaped birds nesting in the open, but I am not aware that the species has established itself. I have never seen or heard of *lutinos* of this species in India, though in Europe such are not uncommon and are advertised for sale.

Several of the larger Australian Parrakeets are imported,

Platycercus eximius being much the commonest. *P. elegans*, *Polytelis barrabandi*, and *P. melanura* are brought in small numbers, as are also *Ptistes erythropterus*, *Aprosmictus cyanopygius*, and some form of *Barnardius*.

More constantly present than any Australian Parrots, except the Cockatoos, are the common *Eclecti*, especially *E. voratus*. *E. pectoralis*, and very probably other species, occur, but I cannot be certain about this under the circumstances. A species of *Tanygnathus* is also often imported.

The African Grey Parrot (*Psittacus erithacus*) not uncommonly appears, generally in good health and condition, unlike the majority of its unhappy fellows in England. *Coracopsis vasa* may also sometimes be procured.

American Parrots, as might be expected, are not often to be seen, but the common Blue-fronted Amazon (*Chrysotis amazonica*) is not very rare, and a few Macaws (*Ara macao*, *A. chloroptera*, and *A. ararauna*) are on sale from time to time, being highly valued by the natives. Mr. Rutledge knew of an individual of the red-and-blue species being kept for no less than three generations in a native family. I once saw two most beautiful dark-blue, red-vented Parrots, somewhat similar in size and style to the common African Grey Parrot, which I took to be examples of *Pionus chalcopterus*, a species I never remember to have seen elsewhere.

COLUMBÆ.

Almost the only other cage-birds remaining to be dealt with are the various Doves and Pigeons, some of which are, however, more properly aviary or menagerie birds. Such is *Goura coronata*, which is imported quite numerously at times, and has been bred by a native amateur, according to information given me by Mr. Rutledge.

The only species of this group really common and popular as a cage-pet is the well-known domestic Turtle-Dove, which is found both in the ordinary cream-coloured form with black half-collar, and in more or less completely albino varieties. It is certainly not identical with the wild *Turtur risorius*, so far as the note goes, this being a very marked point of

specific difference in all the ring-necked species of *Turtur* I have seen alive.

The common wild Turtle-Doves are frequently to be seen for sale—*Turtur suratensis*, *T. cambayensis*, *T. risorius*, *T. orientalis*, and *T. tranquebaricus*. Mr. Rutledge once gave me a very peculiar albinoid cream-coloured male of the last species. *Chalcophaps indica* and *Geopelia striata* are also often to be had, and *Calænas nicobarica* is pretty commonly imported.

Of the Fruit-Pigeons, the "Hurrial" (*Crocopus phænicopterus*) is generally for sale in the Bazaar, and, more rarely, one may meet with the "Kokla" (*Sphenocercus sphenurus*), which, although much esteemed in some parts, is apparently not often kept in Calcutta. *Osmotreron bicincta* is commoner. *Carpophaga ænea* and *Myristicivora luctuosa* are sometimes imported in considerable numbers, but cannot be called abundant. On a few occasions recently Mr. Rutledge has procured the lovely *Ptilopus jambu*, and I once saw a splendid *Butreron capellii* in his possession. Fruit-Pigeons are quite easy to keep, as they live well on any soft vegetable food, such as *satoo*-paste or boiled rice, and I wonder that the home dealers do not take more trouble to introduce these most exquisitely coloured birds.

Of foreign Pigeons, the most frequently imported are *Ocyphaps lophotes* and *Phlogænas luzonica*, not to mention the great Ground-Pigeon alluded to above. Other species occasionally occur, such as *Leucosarcia picata*, *Phaps chalcoptera*, and *Geopelia cuneata*, while a short time ago a good many *Turtur chinensis* and *T. bitorquatus* were imported, especially the latter, which proved quite a drug in the market. Before leaving the Pigeons, I ought to record the curious fact that the Alpine *Columba leuconota*, which Mr. Rutledge sometimes obtains, bears the heat perfectly well, and even shows a desire to breed. As its note has apparently not been recorded, I may mention that it is not a coo, but a repeated croak, not unlike a hiccough, and, much as the bird resembles the domestic Pigeon, I have never seen it sweep the ground with its tail when courting, but rather raise it.

GALLINÆ.

The *Phasianidæ* are usually regarded in the light of aviary birds, but as one of them is among the commonest species kept in confinement here, the family demands some notice.

Family PHASIANIDÆ.

The Grey Partridge (*Francolinus pondicerianus*) is very widely kept for fighting, and in consequence is one of the birds most commonly seen in cages. Those used are small, with the interstices of the pyramidal top filled in many cases with string netting, to avoid injury to the bird's head. These Partridges, however, become so tame that they can be let out for a run, and I have seen one following its owner over the grass like a little dog.

The Common and Rain-Quails (*Coturnix communis* and *C. coromandelica*) are also occasionally kept in cages for fighting. The Pheasants, which are brought down from the hills for exportation, hardly come within the scope of the present paper, but it may perhaps be allowable to mention a few birds of this family which have long been imported for ornamental purposes, although they cannot be called cage-birds. These are the Java Peacock (*Pavo muticus*) and the white and pied forms of the common *P. cristatus*, together with the "Japan Peacock" (*P. nigripennis*). Mr. Rutledge tells me that this form really does occur in Japan to his positive knowledge (no doubt introduced), and there is certainly a Japanese specimen of Temminck's in the Paris Museum. The Ring-necked Pheasant (*Phasianus torquatus*) and Silver Pheasant (*Gennæus nycthemerus*) are frequently brought over from China, as is the Golden Pheasant (*Chrysolophus pictus*), the male of which often has a hen of *P. torquatus* assigned to him as a companion. The male Golden Pheasant occurs in the old picture to which I alluded at the commencement of the present paper, so that it may fairly claim to have been one of the earliest fancy birds exported from its own country.