ing up of a list of all the birds of India, Burma, and the Malayan peninsula, with those of Sindh, Asám, Ceylon, the Nicobars, &c. (so far as I am able), in which I propose to offer such observations on the affinities of many of the species or races as may enable the student to draw his own conclusions respecting their claims to be regarded as species or as mere varieties. A bare list of names, especially if unaccompanied by synonymes, is oftentimes of little or no utility whatever as a guide, or even worse so often as mistakes in the determination of species occur, or those of the rarest and most casual occurrence are set down without a word of remark together with the commonest and most generally diffused. Where a constant variation, however trivial, obtains, it should be duly noted, and the value that the particular writer attaches to it is of small consequence: and it should likewise be distinguished whether the author writes from his personal knowledge or from the observations of others, if any authority is to attach to his production.

Conspectus of the Ornithology of India, Burma, and the Malayan peninsula, inclusive of Sindh, Asám, Ceylon, and the Nicobar islands.\*

—By E. Blyth, Esq.

## Order I. SCANSORES. Fam. PSITTACIDÆ. Subfam. ARINÆ.†

Genus PALÆORNIS, Vigors.

Totá, Sugá, Hind.: Tiyá, Beng.: Girawa, or Rana Girawa, Cingh.: Kyet-ta-rwe, Arakan.

- \* The Andamans, with the Maldives and Laccadives, would also have been added, had more information been available respecting this branch of their fauna.
- † The Parrot family divides naturally into five sub-families, of which the second and last are the most strongly characterized by peculiarities of structure.
- 1. CACATUINÆ (or Cockatoo group). Comprising the genera Dasyptilus (?), Microglossum, Calyptorhynchus, Cacatua, Nestor, and Strigops (with sub-divisions of the third and fourth). The first and second of these are peculiar to the Papuan islands. The third also occurs in N. Guinea, but is chiefly developed in Australia with Tasmania. The fourth inhabits (in different species) Australia, Papua, the Philip-

1. P. ALEXANDRI (Edwards, pl. 292).

SYN. Psittacus Alexandri, L.

Ps. eupatria, L.
Psittaca ginginiana, Brisson. the female.

Psittaca ginginiana, Brisson. J
Psittacus guinneensis, Scopoli (nec guineensis, Gmelin).

Ps. Sonneratii, Gmelin.

Palæornis nipalensis, Hodgson, As. Res. XIX. 177.

pines, Moluccas, and Borneo. The fifth very recently comprised two species, one in N. Zealand, the other—already extinct—in the islet called Philip island near Norfolk island (the fauna and flora of which islands ally them chiefly with N. Zealand). The sixth, consisting of but one known species rapidly verging upon extinction (the crepuscular and Owl-like Strigops habroptilus, G. R. Gray), is also a N. Zealander.

- 2. PLATYCERCINÆ (or ground Parrakeets). Inhabiting N. Holland, with a few outlying species of *Platycercus* only in N. Zealand and Polynesia proper, and one *Aprosmictus* extending its range to N. Guinea. This group is nearly affined to the preceding one, but has a remarkable structural distinction from all other birds in the absence of bony clavicles, which in the rest of the *Psittacidæ* (as in almost throughout the class) are united to form the *furcula* or "merry-thought" bone. The members of both of these sub-families are mainly eaters of grain and other farinaceous seeds, but some of the Cockatoos feed also largely on bulbs, and the *Calyptorhynchi* partly on large insect larvæ.
- 3. Arinæ (or Maccaw group). Chiefly S. American, one small species only occurring in the proximate regions of N. America; but with a subordinate division in S. E. Asia and its archipelago, Africa, and Australia, comprising the genera Palæornis, Tanygnathus, and Agapornis, with Prioniturus (which would seem to be intermediate to the first and second), in the former regions, and Polytelis in the last named. This eastern subgroup is less frugivorous than the western; and all would appear to be birds of vigorous flight, an attribute in which the whole family has been supposed deficient.
- 4. PSITTACINÆ (or ordinary Parrots). Chiefly S. American, with a few species in Africa and Madagascar, and a particular division comprehending *Eclectus* and *Loriculus* in S. E. Asia and its archipelago. N. B. This and the foregoing group are affined, and the species are, in general, much more frugivorous than the members of the two preceding subfamilies, and the *Psittacinæ* more so than the *Arinæ*; but the great majority feed also on hard grain.
- 5. LORINÆ (or Lories). Peculiar to the Austral-asian archipelago, with Papua, Australia, and Polynesia. This subfamily is particularly distinguished by the peculiar structure of the tongue (varying somewhat in different genera), which is adapted for extracting the nectar from flowers; the species also feed upon soft fruits, but never on grain, and the beak is proportionally feeble.

Chandaná ('Sandal-wood coloured,' alluding to the yellowish tinge of the under parts and upper portion of the back), Beng.: Karan sugá and Kararia of Nepal (Hodgson): Ráé Totá ('Royal Parrakeet'), Hind. (Jerdon): Kyai Phoungka, Arakan (Phayre).

HAB. Hilly regions of all India proper, from the sub-Himalayas to Ceylon inclusive; Asám; Sylhet; Arakan; Tenasserim provinces.

2. P. TORQUATUS (Daubenton's Pl. Enl. 551).

Syn. Psittaca torquata, Brisson.

Psittacus Alexandri, var. B, Latham.\*

Ps. cubicularis, Hasselquist.

Ps. docilis, Vieillot.

Ps. steptophorus, Desmarest.

Var. Sulphur Parrakeet, Shaw.

Tiyá (or Teeyá, imitative of voice), Hind.: Tent'hia
Suga, Nepal (Hodgson): Gallar of some, H.: Lybar,
Masuri (Hutton): Lybar Totá, S. India (Jerdon):
Kyai-gyot, Arakan (Phayre).

HAB. Plains of India; Ceylon; Asám; Sylhet; Arakan; Tenasserim provinces; Malayan peninsula (to latitude of Penang): W. Africa (apud Swainson), smaller variety.+

In general, the Psittacidæ are exclusively vegetable-feeders, as much so as the Columbidæ: but the Calyptorhynchi are described to cut up decaying trees, by means of their extremely powerful beaks, to get at the larvæ in the interior of the wood; and the Loriinæ (at least in confinement) will eat soft maggots. This general diet of the group helps to bear out the analogy which the Psittacidæ among birds bear to the Quadrumana among mammalia (though it is true that many of the Quadrumana are, in the wild state, far more omnivorous than is generally supposed). In their whole structure, the Psittacidæ manifest no particular affinity (that we can discern) for any of the zygodactyle Insessores; but they decidedly constitute a very distinct ordinal type, shewing most relations with the diurnal Raptores: and regarding them as the most highly organized of birds, we do not hesitate to follow the arrangement of those zoologists who place them at the head of the class, parallel to the Apes and Monkeys among the mammalia.

\* Except that there is no patch of crimson on the wing-coverts of Ps. torquatus.

+ "The Rose-ringed Parrakeet," writes Mr. Swainson, "is one of the few birds of Senegal whose geographic distribution extends from east to west. Of four specimens in very perfect plumage now before us, three are from Western Africa and

Remark. This is the only Indian Parrot (so far as we are aware) that affects the vicinity of human habitations, flocks of them often settling upon buildings, especially if situate in gardens with trees about them, and one or more pairs occasionally breeding in suitable cavities about buildings. It is the only species observed wild in the densely populous neighbourhood of Calcutta, but in jungle districts becomes replaced by No. 4.

3. P. SCHISTICEPS, Hodgson, As. Res. XIX. 178.

Syn.? Conurus himalayanus, Lesson, in Belanger's Voyage. = hand Mádana Sugá, Nepal (Hodgson): Puhari Tuiya, Masuri (Hutton): Gági of Calcutta bird-dealers.

HAB. Sub-Himalayan region (exclusively).

Remark. The Masuri name of this species (or 'mountain Tuia') well expresses its near affinity for the next. The adult sexes differ in the male having a small maronne spot on the wing, which is wanting or barely indicated in the female, and the black demi-collar is also rather more developed. The young have generally but a trace of the slaty-blue cap, but this is fully developed in some few specimens, though without the black demi-collar which borders this cap in the adult. The beak, which in P. cyanocephalus is bright yellow, is in the present species yellow tinged with coral-red, and in adults of all the other species is bright coral-red.

4. P. CYANOCEPHALUS (Edwards, pl. 233; Daubenton's Pl. Enl., 264).

Syn. Psittacus cyanocephalus, L.

Ps. flavitorquis, Shaw.

Ps. annulatus, Kuhl.

Palæornis flavicollaris, Franklin.

Psittaca bengalensis, Brisson.

one from Madras: between the first three of these, there is no difference whatever in size; but that from the East Indies is considerably larger; the length of its wing, in fact, measuring 7 in., while that of the Senegal race is not quite 6 in." Birds of W. Africa, II, 175. Of numerous Indian specimens examined, from all the above named localities, we have found the length of the wing to be very regularly  $6\frac{1}{2}$  in., rarely  $\frac{1}{4}$  in. more or less.

Psittacus erythrocephalus, Gmelin.

Ps. ginginianus, Latham.

Ps. rhodocephalus, Shaw.

Var. Ps. narcissus, Latham (with coloured figure).

Faridi, and Fariádi ('plaintive'), Bengal; Tui Sugá (the first or specific name imitative of cry), Nepal (Hodgson); Tuia Totá, S. India (Jerdon); Bengali totá, Panjab; Kyai-ta-ma, Arakan (Phayre).

HAB. Upland and jungle regions of all India proper; Ceylon; Asám; Sylhet; Arakan; Tenasserim provinces. N. B. It occurs in open jungle, in the Bengal Sundarbans. To the westward, leaving the alluvial soil of the Ganges, it seems entirely to take the place of P. torquatus in the Midnapur jungles.

5. P. MALACCENSIS (Daubenton's Pl. Enl. 887; Levaillant, pl. 72). Syn. Psittacus malaccensis, Gmelin (nec Latham).

Ps. erubescens, Shaw.

Ps. ginginianus, var. C, Latham.

Ps. barbatulatus, Bechstein.

Bayan, Sumatra (Raffles); Madná Bhola of the Calcutta dealers.

HAB. Malayan peninsula; Sumatra.

6. P. ERYTHROGENIS, Blyth, J. A. S. XV, 23, 51, 368.

HAB. This beautiful species is common in the Nicobar Islands, and does not appear to have been hitherto observed elsewhere.

7. P. CANICEPS, Blyth, J. A. S. XV, 23, 51.

HAB. Nicobar Islands; Malayan peninsula (latitude of Penang).

Remark. Of this fine and strongly marked species, we have seen two specimens only; one with a coral-red beak, procured alive (with its wings and tail much mutilated) from a Nicobarian savage, and which is now in the Society's Museum; the other with a black beak, from Province Wellesley.

8. P. BARBATUS (Daubenton's Pl. Enl. 517; Swainson's Zool. Ill., 2nd series, pl. 16).

Syn. Psittacus barbatus, Ps. pondicerianus, and Ps. borneus, Gmelin.

Ps. bimaculatus, Sparrman.

Ps. javanicus, Osbeck.

Ps. Osbeckii, Latham.

Ps. mystaceus, Shaw.

Palæornis nigrirostris, Hodgson (the young female).

P. modestus, Fraser (the very young female).

Madnú ('charming,' 'pleasing'), the red-billed bird; Kájlá (as having the black pigment, Kájal, applied to the eye-brows; alluding to the black loral line), the black-billed bird, Hind.; Imrit Bhila, Nepal, (Hodgson); Bettet, Java, (Horsfield).

HAB. Hilly parts of Bengal, Nepal, Asám, Sylhet, Arakan, Tenasserim, Malayan peninsula (to latitude of Penang), Sumatra, Java, and Borneo.

Remark. We have never seen this bird in Malacca collections, nor does it appear to occur wild in any part of the Indian peninsula or in Ceylon; hence the name pondicerianus cannot be adopted. Specimens from Java are perfectly similar to those of India. In a presumed female observed in captivity, the upper mandible changed from black to coral-red when the bird was about 18 months old.

9. P. COLUMBOIDES, Vigors (Jerdon's Ill. Ind. Orn., pl. 8).

Syn. P. melanorhynchos, Sykes,—the young.

Madan-gowr Totá, H. (Jerdon).

HAB. Nilgiris; Malabar.

10. P. CALTHRAPÆ, Layard, Blyth, J. A. S. XVIII, 800.

HAB. Mountainous interior of Ceylon.

Remark. In the adult specimen described, loc. cit., the middle tail-feathers had not attained their full length: in three other adults since received, they are full grown but very short, measuring but from  $4\frac{1}{2}$  in. to  $5\frac{1}{2}$ .\*

\* In this enumeration of the species of *Palwornis*, I have provisionally omitted to include a race (or slight variety of *P. torquatus?*) which inhabits Ceylon, and which I formerly supposed to be *P. bitorquatus*, Kuhl, judging from a female only which I had then reason to believe was procured in the Mauritius. Mr. Layard considers it distinct from the ordinary *P. torquatus* of Ceylon, &c., and has obligingly procured for me a living male not yet received.—Since the foregoing was in type, I have received a further communication from Mr. Layard, in which he mentions having obtained a number of skins. *P. bitorquatus*, a species which is

## Genus Tanygnathus, Wagler.

11. T. MALACCENSIS (Swainson's Zool. Ill., 1st series, pl. 154, the male? or adult of either sex?).

Syn. Psittacus malaccensis, Latham (nec Gmelin).

Ps. incertus, Shaw.

Tana, Malacca.

HAB. Malayan peninsula; Sumatra.

Remark. This species is essentially a small Palæornis with a short and sub-even tail, and is somewhat allied in its colouring to P. columboides and P. Calthrapæ, which last (as we have seen) has a shorter tail than the rest of its genus. T. macrorhynchos, upon which the present genus was founded, is also closely related to Palæornis, but upon a larger scale; and the two bear the same mutual relationship as subsists between P. Alexandri and P. cyanocephalus. Intermediate, we have T. sumatranus, (Raffles), and we believe Ps. melanopterus, Gm., and others, with the Prioniturus setarius, (Tem.), remarkable for the shape of its tail, which however may still be considered intermediate to those of Tanygnathus and Palæornis. In T. sumatranus (both sexes of which we have possessed together and studied alive), the male has a coral-red bill and the female a white bill; and the same would appear to obtain with T. malaccensis (if the difference of plumage in different specimens be characteristic of sex and not merely of age): and in the great T. macrorhynchos, the nearly affined but smaller and less powerfully billed T. sumatranus, and the small T. malaccensis, are alike perceived a peculiar yellow margining of the wing-coverts, which occurs in no species of Palæornis. Nearly affined again, we have the minute African and Madagascar species forming the genus Agapornis, to which T. malaccensis has by some been referred.

It remains to ascertain whether both T. macrorhynchos and T. sumatranus do not also inhabit the more elevated districts of the interior of the Malayan peninsula. In a collection which Capt. Charleton made at Malacca, there was a fine specimen of the former, but we are not aware that it was obtained wild in that vicinity, and rather doubt that either of these species occurs wild except in Borneo and to the eastward.

very little known, and is said to inhabit the island of Bourbon, is the only other *Palæornis* not included in the above list; the two Australian species being properly separated to form the genus *Polytelis*.

Subfamily. PSITTACINÆ. Genus. Loriculus, Blyth.

12. L. GALGULUS (Edwards, pl. 293, f. 2).

Syn. Psittacus galgulus, L.

Ps. pumilus, Scopoli.

Serindak, Sindada, Malacca; Serindit, Sumatra (Raffles).

HAB. Malayan peninsula; Sumatra.

13. L. VERNALIS (Swainson's Zool. Ill., 2d series, pl. 1).

Syn. Psittacus vernalis, Sparrman.

Ps. galgulus apud Horsfield, Lin. Tr. XIII, 182.

Latkan ('pendent'), Hind., Bengal; Bhorá or Bhoárá, S. India, (Jerdon); Kyai-tha-da, Arakan (Phayre); Silindit, and Silinditum, Java (Horsfield).

HAB. Hilly parts of India, from the sub-Himalayan region to S. India; also Asám, Sylhet, Arakan, Tenasserim, and Java.

Remark. We have never seen this species from the Malayan peninsula, nor the preceding one from any country where the present is found; though both are extremely numerous in their respective habitats. N. B. Javanese specimens differ in no respect from Indian, though Dr. Horsfield states that the Javanese bird differs from Ps. vernalis—(Mus. Carls.) in size, and in the proportions of the wings to the tail." The latter may depend on the mounting in museum specimens.

14. L. ASIATICUS (Edwards, pl. 6).

Syn. Psittacus asiaticus, Latham. Ps. indicus, Gmelin.

Pol-Girawa, Cingh.

HAB. Ceylon.

Remark. Peculiar as this species (or race) is to Ceylon, the names which have been applied to it are infelicitous. Its distinctive colouring from L. vernalis would appear to be constant (vide description in J. A. S. XVIII, 801). Nevertheless, it is so very closely affined to the Indian bird that many would prefer to regard it as a permanent local variety of the same species. Its distinctions from the Philippine L. rubrifrons, (Vigors), remain to be pointed out: and we have seen drawings of another, similar, but with the entire head as deep red

(from the S. of China?) N. B. Neither the *Eclecti* nor the *Loriculæ* have the tongue filamented as in the *Loriinæ*, with which they have been generally but quite erroneously classed. These two genera form a particular and peculiarly Asiatic division of the *Psittaeinæ*, immediately preceding the *Loriinæ*. Such at least is the result of our long continued study of living specimens.

Here it should be remarked that the Eos ornata (Psittacus ornatus, Gmelin,) is stated by Raffles to inhabit the Malayan peninsula, but doubtless by mistake. With other Lories, &c., it is commonly brought by the Malays from the more eastern islands of the Archipelago, and may be frequently purchased in Calcutta and other ports.

Summary view of the distribution of the PSITTACIDE in India and the neighbouring countries. From the foregoing catalogue it follows that only two generic forms of Psittacidæ inhabit India, viz. Palæornis and Loriculus, nor are we aware that another occurs in all continental Asia, with the exception of Tanygnathus as exemplified by T. malaccensis in the Malayan peninsula, this species being however barely separable from Palæornis, and the peninsula itself belonging physically to the region of the archipelago, or Indonesia, as this region has been recently designated by Mr. Logan. Tanygnathus should accordingly be regarded as strictly an Indonesian form. In the Asiatic countries westward of Sindh, it does not appear that any species of Parrot has been observed; \* and we know but little of those of Indo-China eastward of the British possessions on that side of the Bay of Bengal, or those of the southernmost provinces of China. In the great Indonesian or Austral-asian archipelago, the number of genera and of super-generic forms gradually increases to the eastward, where the Lories and species of white Cockatoo, also the two species of Eclectus among the Psittacinæ, and the large Tanygnathi, are met with in Borneo, Celebes, the Moluccas, and some of them even in the Philippines; forms of black Cockatoo appearing likewise in the Papuan group; while in Australia the Psittacidæ attain their maximum of developement as regards the number of genera and of species, though the two generic forms of India and certain others of Indonesia are foreign to the Australian fauna.

<sup>\*</sup> Lieut. Irwin remarks.—"The Parrot and Maina are scarcely natives of Turkestan, or at least of the country beyond the Oxus." J. A. S. VIII., 1007. Surely neither of them is found there at all, i. e. any Parrot, Acridotheres (verus) or Gracula!

Sumatra and Java contain the large *Tanygnathi* perhaps as rarities, but no Cockatoo, nor *Eclectus*; and the only Lory, if any, is *Eos ornata*, which Sir St. Raffles reported by mistake (?) to inhabit the Malayan Peninsula.\*

With regard to the distribution of species in India and the neighbouring countries, we first remark three of Palæornis (Alexandri, torquatus, and cyanocephalus,) as common-with unimportant local exceptions-to all India from the sub-Himalayan regions to Ceylon inclusive, and also to the eastward in Asám, Arakan, the Tenasserim provinces, and P. torquatus as far southward as Penang. Others are much more local, as P. Calthrapæ which is confined to the mountains of Ceylon, P. columboides to those of S. India, P. schisticeps to the sub-Himalayan regions, and P. erythrogenis (so far as known) to the Nicobar islands. Of P. caniceps we know of but two examples, one procured in the Nicobars, the other at or near Penang; and this may prove to be properly a species of Indo-China. In the hilly parts of Bengal, and along the S. E. sub-Himalayan regions, in Asám, Sylhet, Arakan, the Tenasserim provinces, and the Malayan peninsula to the latitude of Penang, P. barbatus abounds, and is common also in Sumatra, Java, and Borneo; but it is unknown in the Indian peninsula (though having for a synonyme the name pondicerianus), and it would seem equally so in the southern parts of the Malayan peninsula. these latter countries its place would seem to be taken by P. malaccensis; and the range of Tanygnathus malaccensis and of Loriculus galgulus corresponds. In Malacca collections I have seen only the three last named species, added to which in Penang collections I have seen P. torquatus, P. barbatus, and one specimen of P. caniceps: while another of this last is the only Parrakeet which I have seen from the Nicobars in addition to P. erythrogenis. It is probable that both of these also inhabit the Andamans and the northern part of Sumatra. Of Loriculus, while L. galgulus would appear to be confined to the Malayan peninsula and Sumatra, and L. asiaticus (so

<sup>\*</sup> We suspect that Raffles's statement of Tanygnathus sumatranus (of which he describes the female only, apparently from a captive individual,) inhabiting Sumatra, needs confirmation as much as that of Eos ornata inhabiting the Malayan peninsula. Dr. Horsfield does not mention any Tanygnathus or Lory as occurring in Java,

called) to Ceylon, L. vernalis ranges over the hilly regions of all India, with Asám, Arakan, the Tenasserim provinces, and also Java; like Palæornis barbatus, and similarly without invading (as it would seem) the regions tenanted by L. galgulus together with P. malaccensis and Tanygnathus malaccensis. It may further be remarked that the whole of these species are such as no zoologist would hesitate in regarding as indisputably distinct, with the exception of Loriculus asiaticus, which some would consider to be a local variety of L. vernalis; in which case the race of the Philippines (L. rubrifrons) and another we have seen figured with the entire head crimson, should likewise rank as varieties merely of L. vernalis.

Notice of Lieut. Strachey's Scientific Enquiries in Kumaon.

From J. Thornton, Esq. Secretary to Government, N. W. P.

To Secretary, Asiatic Society, Calcutta.

SIR,—I am desired by the Honorable the Lieutenant-Governor, N. W. P. to request that you will lay before the Asiatic Society, the annexed copy of a letter from Lieutenant R. Strachey, Bengal Engineers, who has lately been engaged on scientific enquiries in Kumaon, under the orders of this Government.

- 2. Lieutenant Strachey has embarked for England in the March Steamer from Calcutta, carrying with him all his papers and collections; which will be placed at the disposal of the Honorable the Court of Directors.
- 3. Lieutenant Strachey had not sufficient time after his return from Kumaon, to prepare any of his papers for publication. This will be more advantageously and easily done in England. My present communication is designed to inform the Society, and through them the public generally, of the nature and extent of Lieutenant Strachey's researches, and of the quarter, whence further information respecting them may be expected.

I have the honor to be, Sir,

Your obedient humble servant,

J. THORNTON,

Agra, the 25th March, 1850.

Secy. to Govt. N. W. P.