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A. R. Wallace. Pigeons of the Malay Archipelago.

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ON THE

PIGEONS OF THE MALAY ARCHIPELAGO.

BY

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(Plate IX.)

The two most remarkable and most isolated groups of fruit-eating birds—the Parrots and the Pigeons—attain their maximum development, as regards beauty, variety, and number of species, in the same limited district, of which the great island of New Guinea forms the centre, and which I have proposed to call the Austro-Malayan subregion. It extends from the island of Celebes on the west to the Solomon Islands on the east, and includes the Moluccan and Timor groups. Its actual land-area is less than one-sixth that of Europe, yet it contains more than one-fourth of all the species of Pigeons that are known to exist. The islands west of Celebes, as far as Malacca and the Nicobar Islands and including the Philippines, are also rather rich in this family of birds. They form the Indo-Malayan subregion; and by combining the two we have in the Malay Archipelago considerably more than one-third of all the Pigeons that inhabit the earth. We can only vaguely speculate on the causes that have led to this peculiar distribution, since it would seem, at first sight, that the forests of Africa, of India, and especially of South America, would be equally well adapted to the development and support of these beautiful birds; and the fact that

fruit-eating birds, as a whole, are more abundant in South America than in these islands, proves that their comparative scarcity cannot be attributed to a deficiency of appropriate food. It is to be noted, however, that the most striking superabundance of Pigeons, as well as of Parrots, is confined to the Austro-Malayan subregion, in which, although the most luxuriant forests everywhere clothe the country, and fruit-bearing trees, especially those of the Fig tribe, are very abundant, yet all the forest-haunting and fruit-eating mammals, such as Monkeys and Squirrels, are totally absent. But Monkeys, besides consuming vast quantities of fruit, are exceedingly destructive to eggs and young birds; and Pigeons, which build rude, open nests, and whose young are a long time helpless, must be more particularly exposed to their attacks. This is no doubt the reason why, in the dense forests of the Amazon, where Monkeys are most abundant, Pigeons are scarce or almost entirely absent; and in South America generally, it is to be observed that by far the larger number of the Pigeons inhabit the districts where Monkeys are almost or quite wanting—the mountains of Chili and of Mexico, the open plains of the Orinoko and La Plata, and the savannas of Central Brazil. The South American Pigeons are mostly ground-feeding species, and build in low bushes and thickets to which Monkeys rarely descend. In India and Africa, where Monkeys, especially the smaller kinds, are less abundant, true fruit-eating Pigeons occur, feeding and building on lofty trees, and protected to some extent by the green tints of their plumage. They form, however, in these countries but a small portion of the group, whereas more than two-thirds of the Pigeons of the Malay Islands are fruit-eaters of the genera *Treron*, *Ptilonopus*, and *Carpophaga*, which never descend to the ground, and are true denizens of the dense virgin forests. We may also remark that in these regions there are no great families of fruit-eating *Passeres* like the Tanagers and Chatterers of tropical America, whose place seems to be in some measure supplied by the Fruit-Pigeons, which, being generally larger birds, consume a vast quantity of fruit. The great development and rapid increase of these, unchecked by the competition of fruit-eating mammals, or by the attacks af arboreal carnivora, would

perhaps, in the struggle for existence which is always most severe between creatures of a similar mode of life, prevent the increase of the smaller fruit-eaters; and we may thus understand how it is that in many of these islands Parrots and Pigeons form such a large proportion of the avifauna, and are by far the most prominent and characteristic of the living creatures that inhabit them.

The classification of the Pigeons is a very difficult subject, and can probably only be satisfactorily effected by an examination of the anatomy of all the genera. They may, however, be very conveniently grouped into three great families:—1st. The *Treronidæ*, or Fruit-Pigeons, which have short legs with broad-soled, grasping feet, feed entirely on fruits, and never descend upon the ground; 2nd. The *Columbidæ*, or true Pigeons and Doves, which have larger feet and slenderer toes, and feed either on trees or on the ground; 3rd. The *Gouridæ*, or Ground-Pigeons, which have generally longer legs, feed always on the ground, run quickly, and only ascend trees to roost.

The *Treronidæ* are entirely confined to the eastern hemisphere. A few species of the genus *Treron* are found in Africa, but the greater portion inhabit India and the western Malay Islands. These are beautiful birds, almost always of a yellowish or ashy-green colour, variegated with patches of bright yellow, purple, or chestnut, which are less vivid or altogether absent in the females. This genus may be considered to be almost confined to the Indian region, fourteen species occurring in India, ten in the islands of Java, Sumatra, and Borneo, and three in the Philippines; but on passing into the Australian region they diminish rapidly, two, which scarcely differ from those in the other islands, being found in Celebes, one in the Moluccas, and two in the islands between Java and Timor. In the next genus, *Ptilonopus*, the distribution is reversed, since New Guinea is their metropolis, whence they diminish in every direction, only one species occurring in Borneo and Sumatra, and the utmost limits of the genus being reached in the southern part of the Malay peninsula. In the Pacific islands and in the Moluccas they abound, many even of the smallest islands having their peculiar species. These are the smallest and most beautiful of

the Fruit-Pigeons; their ground-colour is generally of a rich grass-green, diversified with bands and spots, caps, and shoulder-patches of the most vivid colours—crimson, pink, purple, white, or yellow in endless diversity. The genus *Carpophaga*, on the other hand, comprises the giants of the family. They also have their metropolis in New Guinea, but they extend further westward, two species occurring in India. Some of these birds have a deep booming note, which might almost be taken for the roar of a wild beast. Their gape and throat are so extensile that they can swallow very large fruits. In the Moluccas they devour the nutmegs, as soon as the fruits open, for the sake of the mace, which is digested off in the bird's stomach, and the seed disgorged entire.

Looking at the whole family of Fruit-Pigeons, we find that fifty-four species are confined to the Austro-Malayan subregion, while twenty-eight inhabit the Indo-Malayan district, only three species (one of each genus) being common to the two. Beyond the Archipelago, fourteen species (all of the genus *Treron*) are found in India, and six of the same genus in Africa; thirty (of the genera *Carpophaga* and *Ptilonopus*) inhabit the various islands of the Pacific, and eight have been found in Australia and New Zealand. Even with our present imperfect knowledge of New Guinea we have fourteen species from that island, a larger number than are known to inhabit any other single tract of land, and plainly marking it out as the focus of the group. Of all the other islands Celebes is by far the richest in Fruit-Pigeons, containing ten species, seven of which are peculiar to it.

The family *Columbidæ* is chiefly represented in the Archipelago by the genus *Macropygia*, which extends from the Himalayan Mountains to Australia and the Pacific Islands. Rarely is more than a single species found in any island, except in Java, which has three if not four species, and may therefore be considered the headquarters of the genus. These birds feed on the ground or on low bushes; and all are more or less of a chestnut-brown colour, and have long and graduated tails. They are of a weak structure and seldom take long flights. *Turacœna* and *Reinwardtœna* are two genera so closely allied to *Macropygia* that they have been often combined with it. The former, how-

ever, is characterized by the shorter tail, the bare orbits, and the black colour of the plumage. Three species only are known, which are widely scattered over the Austro-Malayan subregion, though each species is very local—one being confined to Celebes, another to Timor, and the third to the Solomon Islands. In the Moluccas, which occupy the space between the widely scattered localities of *Turacœna*, is found the single species of *Reinwardtœna*, which has a much stronger bill and longer tail, and has the whole under surface white, while the back is rich brown. The presence of these birds, so closely allied to *Macropygia*, in the Austro-Malayan subregion only, would lead us to suppose that this peculiar form of Pigeon is really most characteristic of that district, and that the preponderance of the species of *Macropygia* in Java is only due to some favourable local conditions. The beautiful metallic Pigeons forming the genus *Ianthœnas*, and which seem to form a transition from the Macropygiine form to that of the true Pigeons, are found also in the Moluccas, New Guinea, and Timor, extending to the Pacific islands, and one species to Japan. The old-world genus *Turtur* has a few representative species in the Indo-Malay islands, but does not properly extend to the Australian region, as only stragglers have reached Timor along the chain of islands from Java, and those found in the Moluccas may perhaps have been introduced, as they have not extended to the easternmost islands or to New Guinea.

The *Gouridæ*, or Ground-Pigeons, seem especially to abound in the Australian and American regions. Of the seven genera found in the Archipelago only two extend on to the continent of Asia (one species of each), while five are confined to the Austro-Malayan subregion and three to New Guinea, and several other peculiar genera inhabit Australia and the Pacific islands. Of the seventeen or eighteen species in the Archipelago no less than fourteen inhabit the Austro-Malayan subregion, and seven are found in New Guinea itself, although so little is yet known of that great island. Some of these are among the most remarkable of Pigeons. *Trugon terrestris*, by its stout hooked bill and strong legs, shows some approach to the wonderful *Didunculus*, the existing representative of the Dodo.

Henicophaps has a long, straight, and powerful bill, like that of some of the larger Plovers. *Calœnas nicobarica* I believe to have spread westwards from New Guinea as far as the island where it was first found and from which it has derived its name. It has a massive body, with immense pectoral muscles, and very stiff and ample wings, and is thus capable of passing from island to island; and it is a remarkable fact that it is found almost entirely on small uninhabited islands, scattered at intervals over the four thousand miles of ocean between New Ireland and the Nicobar Islands. Over this wide range it presents no perceptible differences of form or colouring, which may be considered to indicate that migration still takes place at intervals, and by crossing the breeds in distinct islands, checks the formation of local races. *Phlegœnas* is another beautiful genus, scattered sparingly over a wide area; but here each island has a distinct species, showing that the causes that once favoured the distribution of the form have now ceased to act. Accordingly we find these birds to have a much weaker structure than *Calœnas*, and limited powers of flight. The magnificent Crown-Pigeons, the largest and most majestic of the whole order, are confined to the Papuan islands, where they take the place of the Curassows of South America. I have often seen these fine birds walking along the forest-paths in New Guinea, where the absence of carnivorous mammals, and the scarcity of large reptiles and of birds of prey, permit them to multiply unmolested. When disturbed, they fly up into the lowest branches of the nearest tree, in which situations they roost; but they spend the greater part of the day upon the ground, feeding on fallen fruits. The *Geopeliæ* are small, long-tailed Ground-Doves closely resembling Turtledoves in appearance, but having their nearest allies in several Australian species. They appear to have passed from Australia into Timor, and thence along the chain of islands into Java, as they are not found in any of the other parts of the archipelago. The green Ground-Doves of the genus *Chalcophaps* are the only ones which have a more extended distribution. All the species, however, are very closely allied; and the one which is found in India is so very similar to that of the western Malay islands, that

its extension on to the continent may probably not have been of very ancient date. Indeed we have so many instances of the larger animals multiplying rapidly and becoming thoroughly acclimatized in countries very remote from their original home and often differing very widely from it in physical conditions, that I should be inclined to think that in this case, as in many others, the distribution of species has been modified by the agency of man. From a very remote date there must have been communication between Java and India, since the Hindoo religion had been established in the island for an unknown period when it was subverted by Mahommedanism in the fifteenth century; and it is highly probable that a bird so beautiful, and so easily caught and preserved, as the *Chalcophaps javanica*, should have been often carried to the continent, where a few escaping would soon stock a wide extent of country. The fact of this being the only Ground-Dove in all India, and that it so closely resembles the Javan bird that great doubts are entertained of its specific distinctness, renders the supposition of its recent introduction highly probable, since, in most other cases, the species of Java and those of India offer well-marked differences.

If we now turn from the consideration of the separate families, genera, and species to the distribution of the Pigeons as a whole, we shall discover facts not less interesting. The total number of Pigeons now known to exist is about three hundred, or perhaps a few more; and of these the Malay Archipelago possesses no less than one hundred and eighteen. This number will seem especially large if we compare it with that representing the species of Pigeons in other countries. According to Jerdon's work on the Birds of India, only twenty-eight Pigeons are found in that country, exclusive of Ceylon and the countries east of the bay of Bengal. Australia possesses twenty-three species, Africa less than forty, while the vast continent of America has not more than eighty of these beautiful birds. These numbers show that the Malay Archipelago is preeminently the metropolis of the Pigeon tribe. It is now well known, however, that this part of the world belongs to two distinct zoological regions—the Indian and the

Australian: and in these the Pigeons are very unequally distributed; for the western and larger portion (the Indo-Malayan subregion) contains nine genera and forty-three species, while the eastern and smaller portion (the Austro-Malayan subregion) has fifteen genera and eighty-four species. Here, therefore, the species of Pigeons become more condensed and more varied than in any other part of the globe: here is the focus of the order; and it was probably from this part of the world that the original dispersal and modification of the group chiefly took place. This condensation is carried to its greatest height in New Guinea, in which, although only a few points on its coast have been visited, no less than twenty-five species of Pigeons have been obtained.

I believe, therefore, that the distribution of Pigeons in the Malay Archipelago fully confirms the results I have already arrived at from the study of other groups of birds, mammalia, and insects. These are, briefly, that this district is not one of the primary divisions of the globe, but that while one-half of it belongs to the Indian region, the other forms part of that of Australia; that the whole district may be further divided into groups of islands, the productions of which have a very close affinity—the Moluccan group being a satellite of New Guinea, while the Timor group is more closely connected with Australia; that Celebes is a very isolated and remarkable island, which, from the variety and peculiarity of its productions, appears to be the remnant of some more extensive land, which existed anterior to the present distribution of land and water in the surrounding regions; and that New Guinea must be looked upon as the remnant of a vast continent, now sunk beneath the waves of the Pacific. We find, also, that among the Indo-Malay islands (Sumatra, Java, and Borneo) Java is far the most isolated, possessing a considerable number of species peculiar to itself, while almost all those of Sumatra and Borneo are common to those two islands. We learn from this that what at first sight seems a very probable tradition of the Javans, the very recent separation of their island from Sumatra, is the reverse of truth since the evidence of the distribution of the *Pittidæ*, of the Parrots, and of the Pigeons among birds, of the Squirrels

among mammals, and the *Papilionidæ* among insects, distinctly proves that, while all these islands have at no very remote geological epoch been united to the continent, yet the separation of Java was the earliest event, long subsequent to which a land communication existed between Sumatra and Borneo, although a far wider sea now separates them than the narrow strait which divides Sumatra from Java.

In the following list of the Malayan species of Pigeons, which I have endeavoured to make as complete as possible, I have thought it necessary to refer, in most cases, only to Bonaparte's 'Conspectus,' where a full synonymy is given, and to a good figure. Wherever practicable, I have given the colour of the eyes, bill, and feet from my own notes, as well as the dimensions, taken in the flesh and thus indicating the true size of the bird. For the localities I have chiefly depended on my own observations, indicated by "(*Wall.*)" after the names of places where I myself observed the species; but I have also given such other localities as appeared to me trustworthy, with an indication of the authority. I have added a list of such Indian and Chinese species as belong to genera occurring in the Malay islands. Descriptions of four species, which seem to me to require separation, have been given, and a few notes on habits and synonymy are occasionally inserted. The table of the distribution of the species has been found useful in the preceding generalizations, and will enable the ornithologist to see at a glance what species have as yet been ascertained to inhabit each island. I have adopted the limits of the Archipelago which are pointed out in my paper "On the Physical Geography of the Malay Archipelago," printed in the Journal of the Royal Geographical Society for 1863.

Order COLUMBÆ.

Family TRERONIDÆ. Fruit-Pigeons.

Treron, *Vieill.*

(*Sphenocercus*, Gr.)

1. Treron oxyura, Reinwt.; Pl. Col. 240; Bp. Consp. ii. p. 8.

Hab. Malacca, Java, Borneo (*Bp.*).

This appears to be a rare species, as I never obtained a specimen.

2. Treron korthalsi, Bp. (*Sphenura*, Temm.), Consp. Gen. Av. ii. p. 9.

Hab. Malacca, Sumatra (*Bp.*), Java (*Wall.*).

I found this species on the mountains of Western Java, at an elevation of 8000 feet. Iris dark; bill lead-colour; feet red. Three Indian species are allied to these, but are sufficiently distinct, viz.,

(1) *T. apicauda*, Hodg.; allied to *T. oxyura*.

(2) *T. sphenura*, Vig.; allied to *T. korthalsi*.

(3) *T. phasianellus*, Blyth.

Two other species occur in islands beyond the Archipelago, viz.,

(4) *T. formosæ*, Swinhoe, in the Island of Formosa.

(5) *T. sieboldi*, Temm., in Japan.

(*Osmotreron*, Bp.)

3. Treron viridis, Scop. (Briss. i. p. 143, *C. viridis philippensis*.) *T. vernans*, Gm.; Bp. Consp. ii. p. 12.

Hab. Philippine Islands (*B. M.*); Penang (*Wall.*), head darker; Sumatra (*Wall.*); Borneo (*Wall.*), head paler; Macassar (*Wall.*), front and throat greenish.

Iris pale pink, with inner ring of blue; bill bluish, base yellow; feet pinky red; bare part of orbits dusky lead-colour. Length 10½ in.

4. Treron axillaris, Bp. (*ex* Gray), Consp. Gen. Av. ii. p. 13. *Columba aromatica*, Gm.; Bp. Icon. Pig. pl. 6.

Hab. Philippine Islands.

5. Treron aromatica (Gm.). "*Columba viridis Amboinensis*," Briss.

Hab. Bouru, Amboyna (*Wall.*). See Proc. Zool. Soc. 1863, p. 33.

Bill, cere, and eyelids pale dull blue; tip of bill, in dry specimens, yellowish; iris white; feet dusky purple. Total length 11½ in.; wing 6 in.

6. TRERON FULVICOLLIS (Wagl.), (*cinnamomea*, Temm.) Knip, Pig. 1, t. 6; Bp. Consp. ii. p. 14 (*tenuirostre*, Eyton).

Hab. Borneo, Malacca (*B. M.*), Philippine Islands (*Bp.*), Borneo (*Motley*), Sumatra (*Wall.*).

Bill red at base, tip greenish horn-colour; iris lilac-pink; eyelids ochre-yellow; feet pink red. Length 10½ inches.

Female. Dusky green above, yellowish green beneath; top of head purplish ash.

7. TRERON OLAX, Temm. Pl. Col. 241, ♂; Bp. Consp. ii. p. 15.

Hab. Java (*Bp.*); Sumatra, Malacca (*Wall.*).

Iris white; bill pale greenish horn-colour, base pale olive; feet coral-red. Length 9¾ in.

The species of this group inhabiting other districts are—

(6) *Treron bicincta*, Jerd. (ii. p. 449). India, Ceylon, and Tenasserim.

(7) *Treron malabarica*, Jerd. (ii. p. 450). Peninsula of India.

(8) *Treron phayrei*, Blyth (Jerd. ii. p. 451). Assam, Burmah.

(9) *Treron flavogularis*, Blyth (Jerd. ii. p. 452). Ceylon and Southern India.

(10) *Treron chloroptera*, Blyth. Nicobar Islands.

(11) *Treron pompadora*, Gm. Ceylon.

The next group (*Crocopus*, Bp.), with yellow feet and pointed primaries, has no representative in the Malay islands. The species yet described are—

(12) *Treron phœnicoptera*, Lath. (Jerd. ii. p. 447). North India and China.

(13) *Treron viridifrons*, Blyth. Burmah and Tenasserim.

(14) *Treron chlorogaster*, Blyth (Jerd. ii. p. 448). Ceylon and Indian Peninsula.

(*Treron*, Vieill.)

8. TRERON PSITTACEA, Temm. Pig. t. 4; Bp. Consp. ii. p. 10.

Hab. Timor (*Wall.*).

Iris orange-buff; bill pale greenish, bluish at the base; orbits bare, blue and greenish; feet purple. Length 12½ inches. Sexes alike.

In Bonaparte's character of the restricted genus *Treron*, he says, "remigum tertia margine integro." This is an error, as the third quill is quite as much sinuated or scooped out as in the other members of the genus. He begins his description of this species with the word "*Minor*," which might lead one to suppose that it is a small species, whereas it is really one of the largest of the genus, and only inferior to *Butreron capellii*, which precedes it in the 'Conspectus.'

9. Treron floris, Wall. Proc. Zool. Soc. 1863, p. 496.

Hab. Flores and Solor Islands (*Wall.*).

Bill greenish lead-colour, with the tip yellowish; orbits bare; feet red. Length 11½ in. Sexes nearly alike.

10. Treron griseicauda (Wall. *ex* G. R. Gray), Proc. Zool. Soc. 1862, p. 344. *C. curvirostra*, Vieill.; Bp. Icon. Pig. pl. 6.

Hab. Sulla Island and Celebes (*Wall.*).

Bill pale yellow green, the base dark olive-green; iris red; orbits bare green; feet red. Length 10¼ in. Sexes differ.

11. Treron pulverulenta, Wall. 'Ibis,' 1863, p. 319.

Hab. Java (*Wall.*).

Iris orange-red; orbits bare, yellow; bill, base dark greenish, tip yellowish white; feet purple-red. Length 11 in.

(*Toria*, Hodgs.)

12. Treron nepalensis, Hodgs.; Bp. Consp. ii. p. 11.

Hab. Sumatra (*Wall.*), Nepal, Assam, Tenasserim, Malay Peninsula.

Bill pale yellow, base deep red; iris golden orange; face and orbits bare, yellowish pea-green; feet rich carmine red. Length 10¼ in.

The North-Indian specimens have the bill rather stouter, and the basal portion of a duller red, and more swollen.

13. Treron nasica, Schleg. Ned. Tijdschrift, 1863, p. 67.

Hab. Sumatra (*Wall.*).

Iris golden orange; bill greenish white, base dark olive; feet dull pinkish purple. Length 11 in.

N.B. This is most probably the *Columba curvirostra* of Gmelin; but as it now seems impossible to determine what that species

really was, it will be necessary to expunge the name altogether from our lists. The locality given for it, Tanna, one of the Pacific Islands, is certainly wrong, as the whole group (genus or subfamily) to which it belongs is essentially Asiatic, extending to Africa, but not beyond the Moluccas eastward.

(*Butreron*, Bp.)

14. Treron capellii, Temm. Pl. Col. 143; Bp. Consp. ii. p. 9.

Hab. Malay Peninsula, Sumatra (*Wall.*); Java (*Bp.*).

Bill greenish white, base olive-green; iris dark ash; orbits slightly bare, yellow-tinged; feet chrome-yellow. Length 15 in.

Ptilonopus, Sw.

A. First primary abruptly attenuated at the end.

a. Tail-feathers fourteen (not twelve, as stated by Bonaparte); size large; tail long, even. (*Leucotreron*, Bp.)

15. Ptilonopus cinctus, Temm.; Knip, Pig. i. t. 23; Bp. Consp. ii. p. 15.

Hab. Timor (*Wall.*).

Bill ochre-yellow, greenish at base; feet red; iris red. Sexes alike.

16. Ptilonopus albocinctus, Wall. Proc. Zool. Soc. 1863, p. 496, pl. 39.

Hab. Flores (*Wall.*).

Bill greenish at base, yellow at tip; feet bright red. Length 12½ inches.

17. Ptilonopus gularis, Quoy & Gaim. Voy. Astr. t. 29; Bp. Consp. ii. p. 15.

Hab. Menado (North Celebes) (*Wall*).

Bill yellow; feet red; iris orange-brown; eyelids and orbits bare, blue.

18. Ptilonopus lechlancheri, Bp. (*Trerolæma lechlancheri*, Bp. Icon. Pig. pl. 16. (*Carpophaga*, pt., Gr.)

Hab. New Guinea.

b. Size moderate; tail shorter; tail-feathers 14.

* Tail rounded. (*Rhamphiculus*, Bp.)

19. PTILONOPUS OCCIPITALIS, Gray, Genera of Birds, ii. p. 467, t. 118.

Hab. Philippine Islands.

20. PTILONOPUS HUGONIANUS, Schlegel, Ned. Tijdsch. v. d. Dierkunde, 1863, p. 60.

Hab. Philippine Islands.

21. PTILONOPUS JAMBU, Gm.; Knip, Pig. i. t. 27; Bp. Consp. ii. p. 17.

Hab. Malacca (*Wall.*), Borneo (*Motley*), Sumatra (*Bp.*).

Bill bright yellow; feet dark red.

** Tail square.

22. PTILONOPUS IOZONUS, G. R. Gray, Proc. Zool. Soc. 1858, p. 186.

Hab. Aru Islands (*Wall.*).

Bill yellow, base above and feet purple red; iris white. Sexes alike.

23. PTILONOPUS HUMERALIS, Wall. Proc. Zool. Soc. 1862, p. 166, pl. 31.

Hab. Salwatty and New Guinea (*Wall.*).

*** Size small; bill small; tail somewhat rounded. (*Cyanotreron*, Bp.)

24. PTILONOPUS CORONULATUS, G. R. Gray, Proc. Zool. Soc. 1858, p. 185, pl. 138.

Hab. Aru Islands, New Guinea (*Wall.*).

Bill greenish yellow; feet red; iris orange.

N.B. New Guinea specimens have the crown a paler violet.

25. PTILONOPUS PULCHELLUS, Temm. Pl. Col. 564; Bp. Consp. ii. p. 22.

Hab. Waigiou, Mysol, New Guinea (*Wall.*).

Bill yellow, tip greenish yellow; feet dull carmine; iris orange, paler within; eyelids yellow. Length 7¾ in. Sexes alike.

26. PTILONOPUS MONACHUS, Reinwt.; Pl. Col. 253; Bp. Consp. ii. p. 24.

Hab. Batchian, Kaioa Island, Ternate, Gilolo, Morty Island (*Wall.*).

Iris dark; feet red; bill greenish. Sexes different.

c. Breast-plumes bifid or decomposed.
(*Lamprotreron, Ptilopus*, Bp.)

27. PTILONOPUS SUPERBUS, Temm.; Knip, Pig. i. t. 33; Bp. Consp. ii. p. 18.

Hab. Amboyna, Ceram, Batchian, Gilolo, Waigiou, Mysol, Aru Islands, New Guinea (*Wall.*).

Bill olive-green, tip yellowish; feet pink; claws pale; iris yellow. Length 9½ in. Sexes different.

Columba cyanovirens, Less., is probably the female of this species.

28. PTILONOPUS FORMOSUS, G. R. Gray.

Similis *P. superbo* (Temm.), sed fascia pectorali purpureo-nigro latiore et antice dilute purpurea, spatio postoculari viridi minus dilatato, rostro paullo minore.

Rich green; forehead and crown purple pink; nape and sides of the neck, to the shoulders, rufous orange; a narrow space behind the eyes and the ear-coverts green; chin and throat ashy white; the forked feathers of the neck and breast purplish at the base, which becomes pure pale purple on the upper part of the breast, and shades into the deep purple-black band which crosses the middle of the breast; middle of belly and vent yellowish white; flanks green, crossed by a white band above the thighs; under tail-coverts white, yellow-tinged, and with green stripes and spots; a large patch on the shoulders and a spot on each of the scapulars, tertiaries, and adjacent wing-coverts deep purple; tail blackish, the feathers edged with green and purple, and a whitish band at the tip; primaries black, white-edged; secondaries and greater coverts green-margined and yellow-edged. Iris yellow; bill olive-horny; feet pinky-red.

Female. Rather deeper coloured than the same sex in *P. superbus*. Total length 10½ in.; wing 5 in.

Hab. Macassar and Menado (Celebes) (*Wall.*).

Remarks.—Mr. George Robert Gray indicated this bird as distinct from *P. superbus*, in his list of Moluccan Birds (Proc.

Zool. Soc. 1860, p. 360), and proposed for it the name of *P. formosus*.

29. Ptilonopus porphyreus, Reinwt. Pl. Col. 106; Bp. Consp. ii. p. 18. (*P. roseicollis*, Wagl.)

Hab. Java (*Wall.*), "6000 to 8000 feet elevation."

Bill yellowish olive; feet coral-red; iris crimson. Length 12 in.

30. Ptilonopus flavicollis, G. R. Gray; Bp. Consp. ii. p. 20; Icon. Pig. pl. 20.

Hab. Timor (*Wall.*).

Bill olive-green; orbits bare, greenish olive; iris reddish orange; feet pale olive; claws dusky.

31. Ptilonopus diadematus, Temm. Pl. Col. 254; Bp. Consp. ii. p. 17.

Hab. Banda (*Wall.*).

Bill and feet as in the last species.

B. First primary but slightly and gradually narrowed at the end. (*Sylphitreron*, Verreaux.)

32. Ptilonopus perlatus, Temm. Pl. Col. 559; Bp. Consp. ii. p. 40.

Hab. Aru Islands (*Wall.*), New Guinea (*Temm.*).

Bill yellow; feet red; iris orange-yellow.

This fine species has been put by Bonaparte with *Carpophaga*; it seems, however to me, to go well in this group, with which it agrees in most of its characters.

33. Ptilonopus wallacii, G. R. Gray, Proc. Zool. Soc. 1858, p. 185, pl. 136.

Hab. Aru Islands (*Wall.*).

Bill yellow; feet red; iris orange-red. Length 10½ in.

34. Ptilonopus aurantiifrons, G. R. Gray, Proc. Zool. Soc. 1858, p. 185, pl. 137.

Hab. Aru Islands, Mysol, Salwatty, New Guinea (*Wall.*).

Bill yellow, base swollen, red; feet red; iris orange. Length 9½ in. Sexes different.

(*Iotreron*, Bp.)

35. PTILONOPUS HYOGASTER, Reinwt.; Pl. Col. 252; Bp. Consp. ii. p. 25.

Hab. Batchian, Gilolo (*Wall.*).

Bill bluish white, tip yellow; feet lilac-purple.

36. PTILONOPUS MELANOCEPHALUS, Gm.; Knip, Pig. i. t. 30; Bp. Consp. ii. p. 24.

Hab. Java, Lombock, Celebes, Sulla Island (*Wall.*).

Bill yellow, greenish horny at the tip; feet pink red; orbits bare, green. Length 9 in. Sexes different.

37. PTILINOPUS PRASINORRHOUS, G. R. Gray, Proc. Zool. Soc. 1858, p. 185.

Hab. Bouru, Goram, Matabello, Ké Island, Mysol, Waigiou (*Wall.*).

Bill and skin to the eye gamboge-yellow; feet dull purple; iris orange-brown. Sexes different.

38. PTILONOPUS RIVOLI, Prevost; Knip, Pig. ii. t. 57; Bp. Consp. p. 25.

Hab. Louisiade Archipelago.

39. PTILONOPUS VIRIDIS, L.; Knip, Pig. ii. t. 17; Bp. Consp. ii. p. 24.

Hab. Bouru, Amboyna, Ceram, Goram (*Wall.*).

Feet pink red; bill yellow, base red; orbits yellow; iris with inner ring yellow, outer red. Sexes alike.

40. PTILONOPUS EUGENIÆ, Gould, Proc. Zool. Soc. 1856, p. 137.

Hab. Solomon Islands.

41. PTILONOPUS ROSEIPECTUS, G. R. Gray, Proc. Zool. Soc. 1861, p. 432.

Hab. Waigiou, Gagy Island, Mysol (*Wall.*).

Feet red; bill orange; iris yellow. Sexes different.

42. PTILONOPUS NANUS, Temm. Pl. Col. 565; Bp. Consp. ii. p. 25.

Hab. New Guinea.

(*Omeotreron*, Bp.)

43. Ptilonopus batilda, Bp. Consp. Gen. Av. ii. p. 27.
Hab. Philippine Islands.

44. Ptilonopus virens, Less. Voy. Coq. t. 42. f. 2; Bp. Consp. ii. p. 27.
Hab. New Guinea.

(*Phapitreron*, Bp.)

45. Ptilonopus leucotis, Temm. Pl. Col. 189; Bp. Consp. ii. p. 28.
Hab. Philippine Islands.

46. Ptilonopus amethystina, Bp. Consp. Gen. Av. ii. p. 28.
Hab. Philippine Islands.

Carpophaga, Selby.

(*Globicera*, Bp.)

47. Carpophaga tumida, Wall. (*C. sundevalli*, Bp., B. M. Cat. Columbæ, p. 18). *C. pacifica*, Gm.; Bp. Icon. Pig. pl. 35.; Consp. ii. p. 30.

Æneo-viridis, aureo micans, alis caudaque purpureis; capite, collo, dorso superiore pectoreque pallide cinereis; nucha et corpore subtus vinaceo-canis; mento et fronte albis; tectricibus caudæ inferioribus castaneis, alis subtus cum tectricibus inferioribus fuscis; rostro parvo nigro-plumbeo, cera magna elevata tumida, pedibus et iridibus rubris.

Brilliant metallic green, with golden and blue reflexions; wings and tail metallic purple; head, neck, breast, and upper part of back very pale ash-colour, except the back of the head and nape, which are tinged with red; breast and belly pale red or purplish buff; under tail-coverts rich chestnut-brown; under wing-coverts blackish ash; forehead and chin white; quills and tail beneath blackish. Bill and cere blackish lead-colour, the cere elevated and enormously swollen in a hump, like that of *Anser cygnoides*, in both sexes; eyelids pale; feet coral-red; iris crimson.

Total length 17 in.; wing $9\frac{3}{4}$ in.; tail $6\frac{1}{4}$ in.; bill, from feathers at gape, 1 in.

Hab. Waigiou, Mysol, New Guinea (*Wall.*).

Remarks.—This species has a hoarse croaking note, like that of *C. chalybura*. It was abundant in Waigiou, and both sexes had the cere nearly equally swollen during the three months that I stayed there. It does not agree with Bonaparte's description of *C. sundevalli*, with which it has been hitherto confounded; and whether it is the bird named *C. pacifica* by Gmelin it is impossible now to determine. I have therefore thought it better to give it a new name, although it is undoubtedly the same as that figured by Bonaparte in his 'Iconographie' under the name of *C. pacifica*.

48. Carpophaga sundevalli, Bp. Consp. ii. p. 32; Icon. Pig. pl. 40.

Hab. Caroline Island (*Paris Mus.*); Louisiade Archipelago (*B. M.*).

49. Carpophaga rubricera, Gr.; Bp. Consp. ii. p. 31.

Hab. New Ireland (*Paris Mus.*).

(*Carpophaga*, Selby.)

50. Carpophaga ænea (L.); Knip, Pig. i. t. 3; Bp. Consp. ii. t. 32.

Hab. Java, Sumatra, Borneo, Lombock, Flores (*Wall.*), Malay Peninsula.

The Borneo specimens are rather darker and more richly coloured. Bill lead-colour; iris, eyelids, feet, and base of bill purple red. Total length 17 in. This species feeds on various fruits, sometimes eating small figs, the size of currants, at others swallowing hard globular palm-fruits an inch in diameter. Allied to this are

C. sylvatica, Tickell. India generally.

C. insularis, Blyth. Nicobar Islands.

51. Carpophaga chalybura, Bp. Consp. ii. p. 32; Icon. Pig. pl. 43.

Hab. Philippine Islands.

52. Carpophaga concinna, n. s. (*C. chalybura*, G. R. Gray, Proc. Zool. Soc. 1858, p. 186.)

Cinereo-alba, capite cinerascente (fronte albo marginata), nucha cinereo-vinacea, dorso tectricibusque alarum viride pur-

pureo et aureo micantibus, remigibus rectricibusque obscurioribus purpureis, tectricibus alarum inferioribus æneis et plumbeis, remigibus rectricibusque subtus nigrescentibus, tectricibus caudæ inferioribus castaneis.

Pale ashy white; head pale ashy; forehead narrowly white, rufous-tinged; back, with upper wing- and tail-coverts, rich metallic green with gold and purple reflections; quills and tail-feathers dark purple; under tail-coverts chestnut, vent ashy; belly and thighs faintly tinged with yellowish or rufescent (in Aru specimens more ashy); quills and tail-feathers beneath all blackish; under wing-coverts brassy-green and lead-colour. Bill horny black; feet coral-red; iris light orange-yellow; eyelids pale, their edges white. Total length 20 in.; wing $10\frac{3}{4}$ in.; tail 7 in.

Hab. Matabello Island, Sanguir Island, Aru (one small island west of) (*Wall.*); Banda Island, Ké Island (seen, but no specimens obtained); Philippine Islands? (*B. M.*).

This species has a remarkably loud, hoarse, booming note, like the roar of a wild beast. It is one of the largest and handsomest of the genus. It is very closely allied to *C. chalybura*, Bp., but, if his description and figure are to be relied upon, is quite distinct. The British Museum specimen is of this species, and probably came from the island of Mindanao.

53. Carpophaga perspicillata (Temm.), Pl. Col. 246; Bp. Consp. ii. p. 33.

Hab. Ceram, Amboyna.

Bill lead-colour, red at base above; iris dark; feet purple.

54. Carpophaga temmincki, n. s. (*C. perspicillata*, Bp. Icon. Pig. pl. 45.)

Similis *C. perspicillatæ*, sed dorso alisque magis cæruleis, capite colloque ardesiacis, pectore ardesiaco-cinereo, remigibus vix pulverulentis.

Like *C. perspicillata*, Temm., but the back and wings more purplish green; the head and neck dark purplish ashy, shading into pure ashy on the breast, the metallic-green colouring extending up to the nape; the white circle round the eye, and the patch on the forehead, more distinct.

Bill bluish horn, red at base above; feet dull purple; iris deep olive-brown. Total length 18 in.

Hab. Bouru, Batchian, Gilolo, Waigiou (*Wall.*).

In my list of the birds of Bouru, I have regarded this as a variety of *C. perspicillata*; but as its differences are exactly analogous to those of many of the *Psittaci* that have been universally treated as species, I thought it better to give this also a distinctive name.

(*Ptilocolpa*, Bp.)

55. Carpophaga carola, Bp. Consp. ii. p. 34.

Hab. Philippine Islands.

56. Carpophaga griseipectus, Gray; Bp. Consp. ii. p. 34.

Hab. Philippine Islands.

(*Ducula*, Hodgs.)

57. Carpophaga badia, Raffles; Temm. Pl. Col. 165; Bp. Consp. ii. p. 35.

Hab. Java, Sumatra.

58. Carpophaga lacernulata, Temm. Pl. Col. 194; Bp. Consp. ii. p. 35.

Hab. Java (*Wall.*).

Bill horny black; iris deep crimson; feet pink-red. Length 16 in.

59. Carpophaga basilica, Bp. Consp. ii. p. 35.

Hab. Batchian, Gilolo, Morty Island (*Wall.*).

Bill dusky lead-colour; iris dark red; feet coral-red; eyelids red. Length, ♂ 16½ in., ♀ 15½ in.

60. Carpophaga paulina, Temm.; Knip, Pig. i. t. 4; Bp. Consp. ii. p. 35.

Hab. Macassar, Menado (Celebes); Sulla Island (*Wall.*).

Bill lead-blue, above nostrils to base red; iris deep red; eyelids red.

61. Carpophaga cineracea, Temm. Pl. Col. 563; Bp. Consp. ii. p. 36.

Hab. Timor (*Wall.*).

Iris dark; bill black; feet purplish black.

Allied to *C. lacernulata* of Java.

62. Carpophaga rosacea, Temm. Pl. Col. 578; Bp. Consp. ii. p. 36.

Hab. Flores, Timor, Macassar (*Wall.*).

Bill lead-colour, red at base above; iris and eyelids red; orbits bare, pale lead-colour; feet pink red. Length 16½ in.

63. Carpophaga pistrinaria, Bp. Consp. ii. p. 36.

Hab. Solomon Islands.

There is one Indian species of this group: *Ducula insignis*, Hodgs., which inhabits Northern India.

(*Myristicivora*, Reich.)

64. Carpophaga grisea, Bp. Consp. ii. p. 36.

Hab. Malasia, Borneo.

65. Carpophaga luctuosa, Reinwt.; Pl. Col. 247.

Hab. Menado, Macassar (Celebes); Sulla Island (*Wall.*).

Bill and feet lead-blue, bill horny yellow at the tip; iris black.

This species is distinguished from the following by the rich cream-colour of its plumage, the powdery-white outer webs of all the quills, and the outer tail-feathers nearly all white.

66. Carpophaga melanura, G. R. Gray, Proc. Zool. Soc. 1860, p. 361.

Hab. Bouru, Ceram, Amboyna, Batchian, Gilolo, Goram (*Wall.*).

Bill greenish horn-colour, tip greenish yellow; feet lead-colour; iris nearly black.

67. Carpophaga spilorrhoa, G. R. Gray, Proc. Zool. Soc. 1858, p. 186.

Hab. Aru Islands (*Wall.*).

Bill yellowish; iris very dark olive; feet lead-blue.

68. Carpophaga bicolor, Scop; Bp. Consp. ii. p. 36.

Hab. Mysol, New Guinea (*Wall.*).

Bill black; feet lead-colour.

This species has the thighs and under tail-coverts entirely white; the bill is also entirely black, and shorter than in the allied species.

(*Zonœnas*, Reich.)

69. Carpophaga muelleri, Temm. Pl. Col. 566; Bp. Consp. ii. p. 37.

Hab. Aru Islands (*Wall.*), (New Guinea, *Temm.*).

Feet purplish red; bill black; orbits pale; iris olive-brown.

70. Carpophaga pinon, Quoy & Gaim. Voy. Uranie, t. 28; Bp. Consp. ii. p. 37.

Hab. Aru Islands, New Guinea, Waigiou, Mysol (*Wall.*).

Bill dark lead-colour, tip bluish horny; feet carmine-red; iris and orbits coral-red. Length 18 in.

71. Carpophaga radiata, Quoy & Gaim. Voy. Ast. t. 26; Bp. Consp. ii. p. 38.

Hab. Macassar, Menado (Celebes) (*Wall.*).

Bill olive-green, black at tip; orbits greenish; iris orange; feet coral-red.

72. Carpophaga zoea, Less. Voy. Coq. t. 39; Bp. Consp. ii. p. 38.

Hab. Aru Islands, New Guinea (*Wall*).

Bill black; orbits pale reddish; iris white; feet purple-red.

73. Carpophaga rufigaster, Quoy & Gaim. Voy. Ast. t. 27; Bp. Consp. ii. p. 38.

Hab. New Guinea, Mysol, Waigiou (*Wall.*).

Bill black; iris, eyelids, orbits, and feet red. Length 13½ in.

(*Hemiphaga*, Bp.)

74. Carpophaga poliocephala, Gray, Gen. of Birds, t. 119; Bp. Consp. ii. p. 39.

Hab. Philippines.

75. Carpophaga forsteni, Temm.; Knip, Pig. ii. p. 29; Bp. Consp. ii. p. 39.

Hab. Celebes (Menado) (*Wall.*).

Bill black; orbits and feet deep red; iris orange-yellow. Length 19 inches.

This fine species appears to be confined to the mountainous district of Minahassa, in the northern peninsula of Celebes.

(*Megaloprepia*, Reich.)

76. CARPOPHAGA PUELLA, Less.; Knip, Pig. ii. t. 1; Bp. Consp. ii. p. 40.

Hab. New Guinea, Waigiou, Mysol (*Wall.*).

Bill yellow, red at base; iris orange-red; feet yellow green; claws dusky. Length 12 inches. Sexes alike.

77. CARPOPHAGA BERNSTEINI, Schleg. *Ptilopus bernsteini*, Schleg. Nederl. Tijdsch. 1863, p. 59. *Carpophaga formosa*, G. R. Gray, Proc. Zool. Soc. 1860, p. 360. *P. ochrogaster*, Bernst. Ned. Tijdsch. 1865, p. 324.

Hab. Gilolo (*Wall.*), Batchian (*Bernstein*).

Bill and feet lead-colour; apex of bill yellow. Sexes differ.

This species must certainly go in the same genus with *C. puella* and *C. magnifica*; and I believe they are nearer *Carpophaga* than *Ptilonopus*, though they should perhaps form a genus distinct from either. After much consideration as to the proper course to adopt, I have accepted Prof. Schlegel's name to the exclusion of that given at a much earlier date by Mr. G. R. Gray, because, immediately preceding his description of the species in question, Mr. Gray had indicated and sufficiently described a *Ptilonopus formosus*, which bird exists in many collections, and has no doubt already received the name there given. The difference of opinion as to the *genus* of the present species obliges me to change one of the bird's names; and it seems therefore most proper to retain that which had the precedence, though only by a few lines.

Family COLUMBIDÆ. Wood-Pigeons and Doves.

IANTHŒNAS, Reich.

78. IANTHŒNAS METALLICA, Temm. Pl. Col. 565; Bp. Consp. ii. p. 44.

Hab. Timor (*Wall.*).

Base of bill red, tip pale yellow horny; iris orange; orbits red; feet dull red; claws pale. Length 17 in.

79. IANTHŒNAS HALMAHEIRA, Bp. Consp. ii. p. 44.

Hab. Gilolo, Waigiou, Mysol (*Wall.*).

Bill red, tip white; iris ochre-orange; orbits red; feet dull coral-red; claws pale. Length 15½ in.

I cannot find that this bird was described by any one previous to the publication of Bonaparte's 'Conspectus'; his name must therefore be adopted in preference to the catalogue name "*albogularis*."

80. Ianthœnas albogularis, Bp. Comptes Rendus, xliii. p. 835.

Hab. Ceram (*Leyden Mus.*).

Bonaparte says this has a smaller bill than the last species. I heard of its existence in Ceram, but did not obtain a specimen.

Macropygia, Sw.

81. Macropygia phasianella, Temm. Linn. Trans. xiii. p. 129; Gould, Birds of Australia, v. t. 75; Bp. Consp. ii. p. 56.

Hab. Aru Islands, Ké Island (*Wall.*), Australia.

82. Macropygia magna, Wallace, Proc. Zool. Soc. 1863, p. 497.

Hab. Timor (*Wall.*).

Bill blackish; feet pale pink red. Length 17 in.

83. Macropygia rufipennis, Blyth, J. A. S. Bengal, 1846, p. 371; Bp. Consp. ii. p. 56.

Hab. Nicobar Islands.

84. Macropygia amboinensis, L.; Bp. Consp. ii. p. 56.

Hab. Bouru, Amboyna, Ceram (*Wall.*).

Var. *batchianensis* (*M. albicapilla*, G. R. Gray, P. Z. S. 1860, p. 361), breast immaculate, violet brown; feathers of nape green-margined. Like *M. ruficeps*, but larger.

Hab. Batchian (*Wall.*).

Bill dusky horn-colour; feet red; iris pearly pink.

Var. *macassariensis*, earthy brown markings, less distinct; resembles *M. magna*, but tail-markings agree with this species.

Hab. Macassar (*Wall.*).

85. Macropygia albicapilla, Bp. Consp. ii. p. 57.

Hab. Macassar, Tondano (Celebes), Sulla Island (*Wall.*).

Bill and feet dusky purple; iris pinky pearl-colour. Length 14 in.; wing 6 in.; bill, from front, ½ in.

86. Macropygia tenuirostris, Gray, B. M. Cat. Columb. p. 39; Pl. Col. 100 (*phasianella*).
Hab. Philippines (B. M.).

87. Macropygia doreya, Bp. Consp. ii. p. 57.
Hab. New Guinea, Mysol, Waigiou (*Wall.*).
Bill reddish, tip dusky; feet dusky red.

88. Macropygia carteretia, Bp. Consp. ii. p. 57.
Hab. New Ireland.

89. Macropygia emiliana, Bp. Consp. ii. p. 58.
Hab. Java, Lombock (*Wall.*).
Iris reddish pearly, or red with yellow inner ring; bill horny or flesh-colour; feet red or purplish. Length 14½ in.

90. Macropygia ruficeps, Temm. Pl. Col. 561; Bp. Consp. ii. p. 58.
Hab. West Java (*Wall.*).
Iris ashy white; bill reddish horn-colour; feet coral-red. Length 12½ in.; wing 5½ in.

91. Macropygia leptogrammica, Temm. Pl. Col. 560; Bp. Consp. ii. p. 58. (*M. unchall*, Wagl.)
Hab. West Java (*Wall.*).
Bill black; iris very narrow, yellow; eyelids red; feet red. Length 15 in.
The female is banded throughout beneath; the male only slightly on the breast. Found up to an elevation of 7500 feet.

92. Macropygia walicmehra, Reich. Columbariæ, p. 86.
Hab. Java.
The only other species of the genus are
Macropygia tusalia, Hodgs., from N. India, allied to the last; and
Macropygia macrura, Gm., from Ceylon.

Turacœna, Bp.

93. Turacœna manadensis, Quoy & Gaim. Voy. Astr. t. 30; Bp. Consp. ii. p. 58.
Hab. Macassar, Menado (Celebes), Sulla Island (*Wall.*).

Bill and feet black; orbits bare, red.

94. Turacœna modesta, Temm. Pl. Col. 552; Bp. Consp. ii. p. 59.

Hab. Timor (*Wall.*).

Bill and feet black; iris brick-red, inner ring yellow; orbits yellow. Length 16 in.

95. Turacœna crassirostris, Gould, Proc. Zool. Soc. 1856, p. 136.

Hab. Guadalcanar (Solomon Islands).

Reinwardtœna, Bp.

96. Reinwardtœna reinwardti, Temm. Pl. Col. 248; Bp. Consp. ii. p. 59.

Hab. Batchian, Gilolo, Amboyna, Ceram, Waigiou, New Guinea (*Wall.*).

Base of bill and orbits dull blood-red; tip of bill horny; feet coral-red; iris blood-red, with an inner ring yellow. Length 21 in.

Turtur, Selby.

97. Turtur tigrina, Temm. Pig. t. 43. (Bp. Consp. ii. p. 65, *T. chinensis*.)

Hab. Malay Peninsula, Java, Lombock, Celebes, Flores, Timor, Ternate (*Wall.*).

Iris reddish pearl; bill black; feet pinkish.

This species is sufficiently distinct from *T. chinensis* and *T. suratensis*, with which it has been confounded. From the former it differs in its much lighter underparts, the dark spots on the back and wing-coverts, and the white shoulder and margin of greater wing-coverts; and from the latter by the entire absence of the violet rufescent spots on the back and wings.

(*Streptopelia*, Bp.)

98. Turtur bitorquata, Temm.; Knip, Pig. i. t. 40; Bp. Consp. ii. p. 65.

Hab. Java, Lombock, Flores, Timor (*Wall.*).

Bill black, base at gape red; orbits red; iris yellow; feet pinky red. Length 13 in.

99. Turtur dussumieri, Temm. Pl. Col. 188; Bp. Consp. ii. p. 65.

Hab. Philippine Islands (*B. M.*), Java, Sumatra, Borneo (*Bp.*), ? err. loc.

100. Turtur humilis, Temm. Pl. Col. 259; Bp. Consp. ii. p. 66.

Hab. Philippine Islands, var. (*Bp.*), Malacca (*Wall.*).

101. Turtur cinerea, Scop.; Bp. Consp. ii. p. 61.

Hab. Philippine Islands.

Family GOURIDÆ. Ground-Pigeons.

Trugon, Homb. & Jacq.

102. Trugon terrestris, Homb. & Jacq. Voy. au Pôle Sud, Ois. t. 28. f. 1; Bp. Consp. p. 86.

Hab. New Guinea (N.W. extremity) (*Wall.*).

Iris dark red; bill yellow, base dark; feet yellow?

Henicophaps, G. R. Gray.

103. Henicophaps albifrons, G. R. Gray, Proc. Zool. Soc. 1861, p. 432, pl. 44.

Hab. New Guinea, Waigiou (*Wall.*).

Iris dark; bill horn-colour; feet pale dull red. Length 14 in.

This curious species was first shot by myself in Waigiou; it was afterwards obtained by my collector in New Guinea. It feeds on low trees and shrubs, but does not appear to be altogether terestrial.

Phlegœnas, Reich.

104. Phlegœnas luzonica, Scop. (*cruenta*, Gm.); Knip, Pig. i. t. 8; Bp. Consp. ii. p. 88.

Hab. Philippine Islands.

105. Phlegœnas criniger, Homb. & Jacq. Voy. au Pôle Sud, t. 27. f. 2, ♀; Bp. Consp. ii. t. 88.

P. bartletti, Sclat. Proc. Zool. Soc. 1863, p. 377, pl. 34.

Hab. Sooloo Islands.

Remark.—Dr. Sclater informs us he is now satisfied of the identity of these birds, P. Z. S. 1865, p. 238.

106. PHLEGŒNAS TRISTIGMATA, Bp. Consp. ii. p. 88.
(Plate X.)

Hab. Macassar, Menado (Celebes) (*Wall.*).

Bill dusky purplish, apex dark horny; orbits pale slaty; eyelids dull purple; legs carmine-red; toes slaty purple; claws pale horny.

This species feeds on the ground, and inhabits the drier forests of Celebes, where it is very scarce.

107. PHLEGŒNAS RUFIGULA, Puch. Voy. au Pôle Sud, t. 27. f. 1; Bp. Consp. ii. p. 88.

Hab. New Guinea (*Homb. & Jacq.*).

CHALCOPHAPS, Gould.

108. CHALCOPHAPS JAVANICA, Gm.; Bp. Consp. ii. t. 91.

Hab. Borneo, Java, Lombock, Flores (*Wall.*), Sumatra (*Mus. Leyden*).

Iris dark brown; bill coral-red, purple at base; feet purple. Length 10½ in.

109. CHALCOPHAPS MOLUCCENSIS, G. R. Gray, Proc. Zool. Soc. 1860, p. 361, ♀; Wallace, Proc. Zool. Soc. 1862, p. 345.

Hab. Bouru, Batchian, Ternate, Gilolo, Ceram, Amboyna, Sulla Island (*Wall.*).

Iris dark olive; bill red; feet pink. Length 10 in.

This species has a very close affinity to *C. javanica*; but the female differs in having the head and upper part of back earthy brown, the vinous purple and slaty tints being entirely absent.

110. CHALCOPHAPS BORNEENSIS, Bp. Comptes Rendus, xliii. p. 948.

Hab. Borneo.

111. CHALCOPHAPS TIMORIENSIS, Bp. Comptes Rendus, xliii. p. 948.

Hab. Timor (*Wall.*).

Bill orange, base red; feet dull red; iris dark brown; eyelids red. Length 10½ in.

112. Chalcophaps stephani, Homb. & Jacq. Voy. au Pôle Sud, t. 38. f. 2.

Hab. North Celebes (*Wall.*).

Iris narrow, dark olive-brown; eyelids dull red; bill bright yellow; feet blood-red. Length 11 in.; wing $5\frac{3}{4}$ in.

113. Chalcophaps hombroni, n. sp. (*C. stephani*, pt., Bp. Consp.)

Similis *C. stephani*, sed minor; fronte cæruleo-grisea, collo et dorso rufis nec violaceis.

Smaller than *C. stephani*; rufous, above dusky rufous; forehead slate-colour; the middle and larger wing-coverts and ends of the tertiaries golden green; back black, with two yellowish bands; bill red; feet purple-red; iris dark olive. Length $9\frac{1}{2}$ in.; wing $5\frac{1}{4}$ in.

Hab. New Guinea, Waigiou, Mysol (*Wall.*).

Geopelia, Sw.

114. Geopelia maugeii, Temm.; Knip, Pig. i. t. 52; Bp. Consp. ii. p. 94.

Hab. Timor, Flores (*Wall.*).

Iris pinky white, orbits buff; bill lead-colour; feet dull purple. Length 10 in.

115. Geopelia striata, L.; Knip, Pig. i. t. 47: Bp. Consp. ii. t. 94.

Hab. Lombock (*Wall.*), Java (*B. M.*), China (*B. M.*).

Calœnas, Gray.

116. Calœnas nicobarica, L.; Knip, Pig. i. t. 2; Bp. Consp. ii. p. 95.

Hab. Batchian, New Guinea (*Wall.*); widely distributed over the archipelago.

Iris dark brown; feet reddish purple; bill and cere lead-black.

This remarkable species feeds on the ground, and has a heavy but powerful flight. I have positive information of its having been taken at sea, making for a small island one hundred miles north of New Guinea. This fact will help to explain its curious distribution over the whole archipelago; but it is everywhere scarce, and generally confined to the small outlying islets, where

it is probably free from the attacks of carnivorous mammals. On New Guinea, where there are none such, it is found on the mainland.

GOURA, Flem.

117. GOURA CORONATA, L.; Knip, Pig. i. t. 1; Bp. Consp. ii. p. 96.

Hab. Waigiou, Mysol, New Guinea (*Wall.*).

Iris orange-crimson; legs whitish, powdery; feet red; bill dusky horn-colour. A ground feeder; gizzard very muscular, containing large pebbles. Dampier, in the year 1699, was probably the first Englishman who saw this bird. His description is full and accurate:—"One of my men killed a stately land-fowl, as big as the largest dunghill-cock. It was of a sky-colour; only in the middle of the wings was a white spot, about which were some reddish spots. On the crown it had a large bunch of long feathers, which appeared very pretty. His bill was like a pidgeon's. His crop was full of small berries. It lays an egg as big as a large hen's egg; for our men climbed the tree where it nested, and brought off one egg."

118. GOURA VICTORIÆ, Fraser, Proc. Zool. Soc. 1844, p. 27; Gray & Mitchell, Gen. of Birds, ii. t. 120; Bp. Consp. ii. p. 96.

Hab. Jobie Island (North of New Guinea).

Remark.—I obtained information of the true habitat of this species from the traders, who frequently bring it alive to the Moluccas.

The island of Jobie would probably furnish many novelties to an explorer, since, besides this fine and very distinct species, the only other birds which have as yet been received from it are two Parrots, *Lorius cyanauchen* and *Eos cyanogenia*, which are equally distinct from the allied species inhabiting the mainland of New Guinea. It is to be regretted that the natives of Jobie have a disagreeable habit of putting to death such strangers as visit them; for naturalists may perhaps be thereby deterred from undertaking the exploration of the island.

TABLE *showing the distribution of Malayan Pigeons.*

	INDIAN REGION.							AUSTRALIAN REGION.																				
	Asia.		Indo-Malay Islands.					Celebes.		Timor group.			Moluccan group.									Papuan Islands.						
TRERONIDÆ.	Indian Asia.	Chinese Asia.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sulla Island.	Lombock.	Flores.	Timor.	Batchian.	Kaios Island.	Gilolo and Ternate.	Morty Island.	Bouru.	Ceram and Amboyna.	Goram and Matabello.	Ké Island.	Aru Islands.	Mysol.	Waigiou.	New Guinea and Salwatty	Islands east of New Guinea.			
TRERON (*Sphenocercus*)																												
oxyura	...	...	1	...	1	1																						
apicauda	1																											
korthalsi	...	...	1	1	1																							
sphenura	1																											
phasianellus	1																											
formosæ	...	1																										
sieboldi	...	1																										
(*Osmotreron*)																												
viridis	...	...	1	1	...	1	1	1																				
axillaris	...	...	...	...	...	...	1																					
aromatica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...
fulvicollis	...	...	1	1	...	1	1																					
olax	...	...	1	1	1																							
bicincta	1																											
malabarica	1																											
phayrei	...	1																										
flavogularis	1																											
chloroptera (Nicobar)	...	1																										
pompadora	1																											
(*Crocopus*)																												
phœnicoptera	1	1																										
viridifrons	...	1																										
chlorogaster	1																											
(*Treron*)																												
psittacea	...	...	...	...	...	...	...	...	...	...	1																	
floris	...	...	...	...	...	...	...	...	...	1																		
griseicauda	...	...	...	...	...	...	...	1	1																			
pulverulenta	...	...	...	...	1																							
(*Toria*)																												
nepalensis	1	...	1	1																								
nasica	...	...	...	1																								
(*Butreron*)																												
capellii	...	...	1	1	1																							
PTILONOPUS (*Leucotreron*)																												
cinctus	...	...	...	...	...	...	...	...	...	...	1																	
albocinctus	...	...	...	...	...	...	...	...	...	1																		
gularis	...	...	...	...	...	...	...	1																				
lechlancheri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1					
(*Rhamphiculus*)																												
occipitalis	...	...	...	...	...	1																						

TABLE (*continued*).

	INDIAN REGION.								AUSTRALIAN REGION.																							
	Asia.		Indo-Malay Islands.						Celebes.		Timor group.			Moluccan group.									Papuan Islands.									
TRERONIDÆ.	Indian Asia.	Chinese Asia.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sula Island.	Lombock.	Flores.	Timor.	Batchian.	Kaioa Island.	Gilolo and Ternate.	Morty Island.	Bouru.	Ceram and Amboyna.	Goram and Matabello.	Ké Island.	Aru Islands.	Mysol.	Waigiou.	New Guinea and Salwatty.	Islands east of New Guinea.							
PTILONOPUS (*Rhamphiculus*)																																
hugonianus	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
jambu	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
iozonus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...							
humeralis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...							
(*Cyanotreron*)																																
coronulatus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...							
pulchellus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...							
monachus	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	...	...	...	...	...	...	...							
(*Lamprotreron*)																																
superbus	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	1	1	...	...	...							
formosus	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
porphyreus	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
flavicollis	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...							
diadematus (Banda)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	B.	...	...	...	...	...	...							
(*Sylphitreron*)																																
perlatus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...							
wallacii	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...							
aurantiifrons	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...							
(*Iotreron*)																																
hyogaster	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...							
melanocephalus	...	...	...	...	...	1	...	...	1	1	1	...	...	...	...	...	...	1	...	1	1	...	1	1	...							
prasinorrhous	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	1							
rivoli	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
viridis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	1							
eugeniæ	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
roseipectus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...							
nanus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...							
(*Omeotreron*)																																
batilda	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...							
virens	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
(*Phapitreron*)																																
leucotis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
amethystina	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
CARPOPHAGA (*Globicera*)																																
sundevalli	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1							
tumida	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...							
rubricera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1							
(*Carpophaga*)																																
ænea	...	...	1	1	1	1	1	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...							
sylvatica	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							

TABLE (*continued*).

	INDIAN REGION.							AUSTRALIAN REGION.																		
	Asia.		Indo-Malay Islands.					Celebes.		Timor group.			Moluccan Group.								Papuan Islands.					
	Indian Asia.	Chinese Asia.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sula Island.	Lombock.	Flores.	Timor.	Batchian.	Kaios Island.	Gilolo and Ternate.	Morty Island.	Bouru.	Ceram and Amboyna.	Goram and Matabello.	Ké Island.	Aru Islands.	Mysol.	Waigiou.	New Guinea and Salwatty.	Islands east of New Guinea.	
TRERONIDÆ.																										
CARPOPHAGA (*Carpophaga*)																										
insularis (Nicobar)	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
chalybura	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
concinna	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
perspicillata	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
temmincki	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...	1	...	...	...
(*Ptilocolpa*)																										
carola	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
griseipectus	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(*Ducula*)																										
badia	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
lacernulata	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
basilica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
paulina	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...
cineracea	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
rosacea	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
pistrinaria	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
insignis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
(*Myristicivora*)																										
grisea	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
luctuosa	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
melanura	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	1	...	...	...	...	...	...	...
spilorrhoa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
bicolor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
(*Zonœnas*)																										
muelleri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...
pinon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
radiata	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...
zoeæ	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
rufigaster	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
(*Hemiphaga*)																										
poliocephala	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...
forsteni	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(*Megaloprepia*)																										
puella	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
bernsteini	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	1	1	1	...	...	...
COLUMBIDÆ.																										
IANTHŒNAS																										
metallica	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
halmaheira	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	...	...	...	...

TABLE (*continued*).

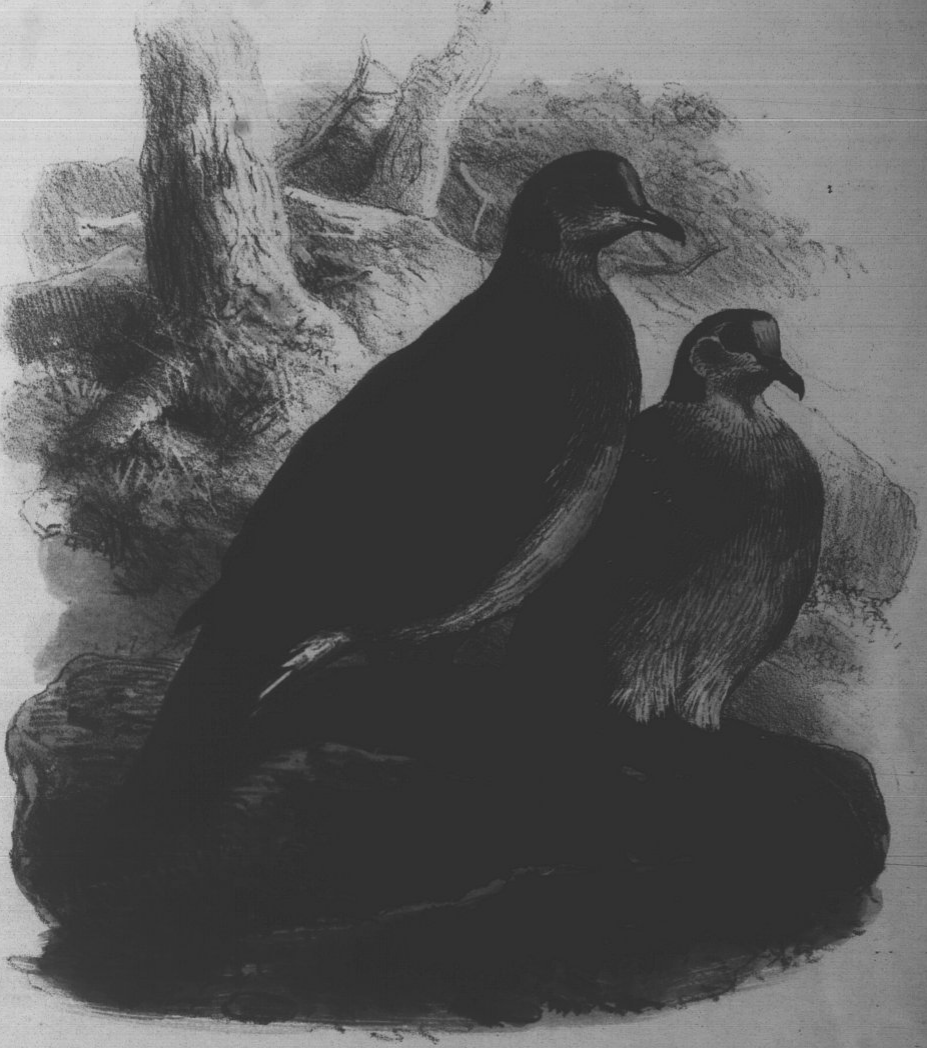
	Indian Region.								Australian Region.																								
	Asia.		Indo-Malay Islands.						Celebes.		Timor group.			Moluccan Group.									Papuan Islands.										
	Indian Asia.	Chinese Asia.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sula Island.	Lombock.	Flores.	Timor.	Batchian.	Kaioa Island.	Gilolo and Ternate.	Morty Island.	Bouru.	Ceram and Amboyna.	Goram and Matabello.	Kê Island.	Aru Islands.	Mysol.	Waigiou.	New Guinea and Salwatty.	Islands east of New Guinea.								
COLUMBIDÆ.																																	
IANTHŒNAS																																	
albogularis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...								
TURACŒNA																																	
manadensis	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...								
modesta	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...								
crassirostris	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1								
REINWARDTŒNA																																	
reinwardti	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	...	1	1									
MACROPYGIA																																	
phasianella	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1												
magna	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...										
rufipennis (Nicobar)	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...										
amboinensis	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...										
albicapilla	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...										
tenuirostris	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1									
doreya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1								
carteretia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
emiliana	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
ruficeps	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
leptogrammica	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
walicmehra	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
tusalia	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
macrura	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
TURTUR																																	
tigrina	...	...	1	...	1	...	...	1	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...									
suratensis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
chinensis	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
meena	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
cinerea	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
risoria	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
bitorquata	...	...	...	1	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...									
dussumieri	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
humilis	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
GOURIDÆ.																																	
TRUGON																																	
terrestris	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1								
HENICOPHAPS																																	
albifrons	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1									
PHLEGŒNAS																																	
luzonica	...	...	...	...	...	...	...	1																									

TABLE (*continued*).

GOURIDÆ.	INDIAN REGION.								AUSTRALIAN REGION.																			
	Asia.		Indo-Malay Islands.						Celebes.		Timor group.				Moluccan Group.								Papuan Islands.					
	Indian Asia.	Chinese Asia.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.		Celebes.	Sula Island.	Lombock.	Flores.	Timor.		Batchian.	Kaios Island.	Gilolo and Ternate.	Morty Island.	Bouru.	Ceram and Amboyna.	Goram and Matabello.	Ké Island.	Aru Islands.	Mysol.	Waigiou.	New Guinea and Salwatty.		Islands east of New Guinea.
PHLEGŒNAS																												
criniger	...	...	...	...	...	...	...	1																				
tristigmata	...	...	...	...	...	...	...	...	1																			
rufigula	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
CHALCOPHAPS																												
indica	1	1																										
javanica	...	...	1	1	1	1	1	...	...	1	1																	
moluccensis	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	1	1									
borneensis ?	...	...	...	...	...	1																						
timoriensis	...	...	...	...	...	...	...	...	...	...	...	...	1															
stephani	...	...	...	...	...	...	...	1																				
hombroni	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1			
GEOPELIA																												
maugeii	...	...	...	...	...	...	...	...	...	...	...	1	1															
striata	...	1	...	...	1	...	...	...	...	...	1																	
CALŒNAS																												
nicobarica	...	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1		
GOURA																												
coronata	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
victoriæ (Jobie I.)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		

	Indian Region.							Australian Region.													
	Asia.		Indo-Malay Islands.					Celebes.		Timor group.			Moluccan group.							Papuan Islands.				
	Indian Asia.	Chinese Asia.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sulla Island.	Lombock.	Flores.	Timor.	Batchian.	Kaioa Island.	Gilolo and Ternate.	Morty Island.	Bouru.	Ceram and Amboyna.	Goram and Matabello.	Ké Island.	Aru Islands.	Mysol.	Waigiou.	New Guinea and Salwatty.	Islands east of New Guinea.
TRERONIDÆ.																									
Treron	10	5	7	7	5	3	3	2	1	...	1	1	...	...	...	...	1	1	...	...	...	...	...	...	...
	14		10				3	2		2			1								0				
Ptilonopus	...	...	1	1	2	1	5	3	1	1	2	2	3	1	3	1	2	2	2	1	5	5	5	8	2
			3				5	3		4			9								13				2
Carpophaga	2	...	2	2	3	2	4	5	2	1	2	2	4	...	4	1	2	2	2	1	4	5	5	8	3
	2		5				4	5		3			6								10				3
COLUMBIDÆ.																									
Ianthœnas	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	1	1	...	...
										1			2								1				
Turacœna	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
								1		1															1
Reinwardtœna	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	...	1	1	...
Macropygia	2	...	...	...	3	...	1	1	1	1	...	1	1	...	...	...	1	1	...	1	1	1	1	1	1
	2		3				1	1		2			2								2				1
Turtur	3	3	2	1	2	...	3	1	...	2	2	2	...	...	1	...	...	...	...	...	...	...	...	...	...
	6		3				3	1		2			1								0				
GOURIDÆ.																									
Trugon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Henicophaps	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...
Phlegœnas	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Chalcophaps	1	1	1	1	1	2	1	1	1	1	1	1	1	...	1	...	1	1	...	...	...	1	1	1	...
	1		2				1	2		1			1								1				
Geopelia	...	1	...	...	1	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
	1		1							2															
Calœnas	...	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Goura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...
																					2				
Number of species	...	...	14	12	17	8	19	17	7	7	9	12	11	1	11	2	7	9	4	3	10	14	16	25	7
Number of species			28				19	17		18			24								34				7
Number of genera			8				7	9		9			9								11				4
	Indo-Malayan Subregion. 9 Genera. 43 Species.							Austro-Malayan Subregion. 15 Genera. 85 Species.																	

118 species are found in the Archipelago. Of the 15 genera, 9 are peculiar to the Archipelago.



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J. Wolf del. et lith.

M&N Hanhart imp

PHLEGŒNAS TRISTIGMATA.