

The number of teeth is, as I have also observed in immature specimens of other species, complete, which shows that also in this respect the Prosimii have much affinity with the Insectivora. The formula of teeth is $\frac{3 \cdot 3}{3 \cdot 3} \frac{1}{1} \frac{2-2}{4} \frac{1}{1} \frac{3 \cdot 3}{3 \cdot 3}$. The upper incisors are not lobated, and the true molars have no third internal series of tubercles, developed from the lingulum, as is observed in *Lemur* and *Microcebus*. The tongue has its point rounded, not entirely flattened, and sharp-edged as in *Lemur* and *Microcebus*. The viscera do not differ in any way from those of other species, as described at large in my work on the Mammalia of Mozambique, where I have also noted the remarkable difference that exists between the Lemurine animals from Madagascar and the other Prosimii, in the peculiar position of the *vesica follis*, which in the former has its basis turned towards the back.

4. ON THE IDENTIFICATION OF THE *HIRUNDO ESCULENTA* OF LINNÆUS, WITH A SYNOPSIS OF THE DESCRIBED SPECIES OF COLLOCALIA. BY ALFRED R. WALLACE, F.Z.S.

The small eastern Swifts which construct the edible nests have been separated by Mr. G. R. Gray as the genus *Collocalia*. For more than two hundred years they have attracted the attention of naturalists and travellers; yet up to the present time the species first described by Rumphius in 1750, and to which Linnæus gave the name of *Hirundo esculenta*, has remained quite unknown. Four or five other species of the genus have since been described, and specimens of all of these are more or less common; but though some of them have at various times been misnamed *esculenta*, it is I believe the general opinion of ornithologists that no specimen of the true Linnæan species is known to exist in European collections.

It is, therefore, with great pleasure that I bring before the Zoological Society specimens of this long-lost bird; for the description of Rumphius and the character of Linnæus are so clear and precise, that there can be no doubt whatever about the identification of the species. The whole bibliography of the subject has been so well worked out in Messrs. Horsfield and Moore's 'Catalogue of the East India Company's Museum' (Birds, i. pp. 99, 100) that I need do no more now than quote what is essential to prove my point. The oldest description of the bird, quoted by Linnæus, is that of Rumphius (Herb. Amb. vi. p. 183), who says, "*Ipsarum color plerumque niger est cum cæruleo fulgore, sique caudæ plumæ separantur, in quavis penna alba conspicitur macula.*" Linnæus says only, "*rectricibus omnibus macula alba notatis,*" which short character is, however, sufficient to distinguish the bird even now from the other species of the genus, all of which have the tail immaculate. My specimens all have these white spots on the tail; and they were obtained in various localities in and around the Moluccas, north, south,

east, and west of Amboyna, where Rumphius obtained his specimens. It is to be observed that these white spots are quite concealed, both on the upper and under view, by the overlapping of the feathers and the tail-coverts; so that, as Rumphius accurately describes it, "only when the feathers are separated, the white spots become visible." This circumstance, and the close general resemblance of the bird to the allied *Collocalia linchi*, Moore, which has no tail-spots, has led to this striking character being overlooked. It would appear that these two species are restricted to the Australian and Indian regions of the archipelago respectively, *C. linchi* extending from Java westward to the Nicobar Islands, while *C. esculenta* is found in Celebes and through the Moluccas to Timor and the shores of New Guinea.

It seems extraordinary that a bird which ranges over nearly half of the Malay Archipelago, and is by no means uncommon there, should not have been hitherto identified with the Linnæan species, as it is almost certain that specimens of it must exist in the museums of Leyden and other Continental cities. The fact may, however, probably be accounted for by the circumstance of one of the authorities most relied upon having been himself deceived in what he supposed to be the constructor of the edible nest of Java. M. Poivre furnished Buffon with a figure and description of a bird obtained at the place where nests were found on an island in the Straits of Sunda. This figure and description have been copied by Brisson, and have been mixed up with the description of the true *esculenta* by Gmelin and other naturalists. The locality, however, from which M. Poivre obtained his nests would show that they must have belonged to *C. linchi* or *C. fuciphaga*, and not to *C. esculenta*; while his figure proves that the bird he obtained was not a *Collocalia* at all—not even a Swift or a Swallow, but a short-winged, long-legged, straight-billed bird, agreeing in dusky colouring with *Collocalia fuciphaga*, but having the tail-feathers *white-tipped*. These extraordinary discrepancies, however, seem to have been generally overlooked; and the character given by Brisson, "*rectricibus nigricantibus, apice albis*," has been taken as agreeing with that of Linnæus, "*rectricibus omnibus macula alba notatis*;" whereas Rumphius (who is quoted by Linnæus) says that the feathers must be separated in order to see the white spots, clearly proving that they were situated towards the base, and not at the tip of the tail*.

In the British Museum collection there is a very beautiful species from the New Hebrides, having the white tail-spots as in *C. esculenta*, but with a narrow band of pure white across the rump.

I add a synopsis of what appear to me to be the well-authenticated species of this genus hitherto described.

* Since reading this paper, I have found that the late Prince Bonaparte had made the discovery of *Hirundo esculenta*, L. (*Comptes Rendus*, xli. p. 977), in 1855, from a Timor specimen in the Paris Museum, collected by Maugé in 1820. He notices the white spots towards the base of the tail. With this independent confirmation of my opinion, there can remain no doubt that the species is now satisfactorily determined.

1. COLLOCALIA ESCULENTA (L.), Rumph. Herb. Amb. vi. p. 183.

C. hypoleuca, G. R. Gray, Proc. Zool. Soc. 1858, p. 170.*Nigro-cærulea, subtus grisea et alba; reatricibus, mediis exceptis, macula alba basali notatis.*Long. al. $3\frac{3}{4}$ poll.*Hab.* Celebes; Timor; Moluccas; Aru Islands.

2. COLLOCALIA LEUCOPYGIA.

"C. linchi, Horsf., et *C. troglodytes*, G. R. Gray," MM. Verreaux et Des Murs, Rev. et Mag. de Zool. 1862, p. 129.*"Supra nigra, subtus albo-argentea, capite nigerrimo æneo micante, uropygio niveo."**"Long. al. 9.5 cent. = 3 $\frac{2}{3}$ poll."**Hab.* New Caledonia.*Remark.*—As this bird cannot possibly be either *C. linchi* or *C. troglodytes*, I am obliged to give it a new name. It may be the same as the species already mentioned, from the New Hebrides, in the British Museum.

3. COLLOCALIA LINCHI, Horsf. & Moore, Cat. Mus. E. I. Comp. i. p. 100.

Similis *C. esculentæ*, L., sed paullo obscurior et cauda immaculata.*Hab.* Java; Malacca; Nicobar Islands.

4. COLLOCALIA SPODIOPYGIA, Peale, U. S. Expl. Exped. i. p. 176.

*"Tota fuliginosa, supra saturatior; uropygio tænia transversa lata cinerascenti-alba."*Long. al. $4\frac{1}{2}$ poll.; caudæ $2\frac{1}{4}$ poll.*Hab.* Samoan and Fiji Islands.

5. COLLOCALIA TROGLODYTES, G. R. Gray, Gen. of Birds, t. 19 (sine descr.).

*Fusco-nigra, subtus fuliginosa, crisso albescente; tectricibus caudæ inferioribus et superioribus fusco-nigris; fascia uropygiali albida, reatricibus basi pallidis.*Long. al. $3\frac{3}{4}$ poll.; caudæ $1\frac{1}{3}$ poll.*Hab.* Malacca?; Philippine Islands?

B.M.

6. COLLOCALIA FUCIPHAGA, Thunb. Act. Holm. xxxiii. p. 151. t. 4.

C. fuciphaga et *C. nidifica*, G. R. Gray, Gen. of Birds, i. p. 55.*C. esculenta*, Horsf.*C. brevirostris*, M'Clell.*C. unicolor*, Jerd.*C. concolor*, Blyth.*C. cinerea*, Gm.; Cassin, U. S. Expl. Exped. p. 178.*C. francica*, Gm. S. N. p. 1017.*"Supra atra, subtus cinerea, tota immaculata."*—Thunb.*Hab.* Bourbon and Mauritius (var. *francica*, Gm.); India and

Ceylon; the whole of the Malay Islands; Louisiade Archipelago; New Caledonia; Tahiti (var. *leucophæa*, Peale; *cinerea*, Gm.); Marianne Islands.

Remarks.—This species has a very wide range, and varies much in size and a little in coloration. The females have a whitish band on the rump, which in old and worn specimens becomes more conspicuous. If that character exists in both sexes of *C. francica*, it may be considered a distinct species; but a specimen collected by Mr. E. Newton in Mauritius does not perceptibly differ from one of my females from the archipelago. The sexes differ in size, the females being the largest. I have both sexes from Macassar: wing of ♂ $4\frac{1}{10}$ inches, of ♀ $4\frac{1}{2}$ inches. The Indian specimens seem a little larger than this; those from Java smaller; while the Pacific Islands specimens, collected by the United States Exploring Expedition, are the largest of all, the wing being given as $5\frac{1}{3}$ inches. But as some Indian specimens which I have seen measure 5 inches, there is such a regular gradation that this character will not serve to divide the specimens. In accordance with the views of Bonaparte, I retain the original name of *fuciphaga* for this species, since, like that of *Paradisea apoda*, it is rather useful than otherwise, as indicating the erroneous opinions which were so long held as to the origin of the celebrated edible nests.

5. NOTES ON THE KAGU. BY DR. GEORGE BENNETT, F.Z.S.

On the 13th of June 1863, I received from New Caledonia, by H. I. M. Schooner 'La Calédonienne,' a pair of Kagus (*Rhinochetus jubatus*), male and female—one presented to me by Dr. Segol, the surgeon of the vessel, and the other obtained and sent to me by the kind exertions of M. Ferdinand Joubert, now residing in New Caledonia. Both these gentlemen have been indefatigable in endeavouring to procure living specimens, the value of which is much raised by the increased scarcity of Kagus on the island. The day following their arrival I placed them in the aviary in the Botanical Gardens. The female is a fine bird, and the largest specimen of the Kagu I have yet seen. It is graceful and elegant in appearance, active and lively in its habits, and its plumage in excellent condition. It is distinguishable from the male bird by its much larger size, and by the light colour of its plumage, also of its bill, feet, and legs. She has besides a peculiar habit of crouching on the ground and covering herself with her wings, by throwing them over together in a concave form, completely concealing the head and body. The male bird, on the contrary, throws up his wings alternately, as if using them as shields, and displays much pugnacity. The latter differs in colour from the female, his plumage being dark brown, with bars of a lighter shade; the primaries and secondaries of the wings are very dark brown, barred with black; the crest is also of a much darker shade of grey than in the female; the bill and legs are of a bright orange-red colour. When seen together, the male appears small compared