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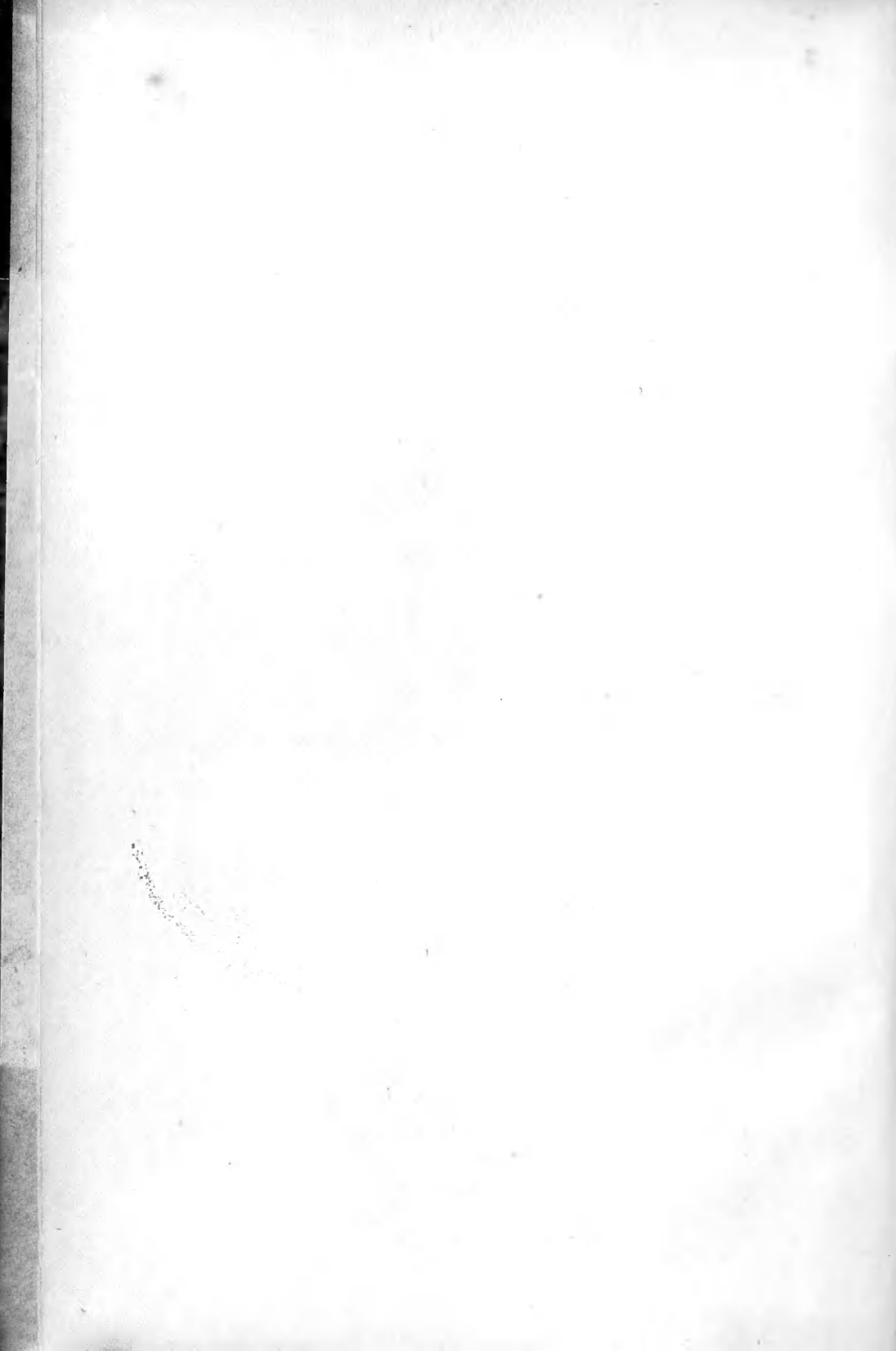
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— 2000. 3. 28

B. C. Stickland -





CONTRIBUTIONS
TO
ORNITHOLOGY

FOR
1850.

BY
SIR WILLIAM JARDINE, BART.
F.R.S.E., F.L.S., ETC., ETC.



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1850.

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1850-51

ORIGINALS

1850

WILLIAM JARVIS

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1851

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NOTICE.

SOME of our Subscribers have expressed a wish to have the Plates numbered, to give facilities for quoting. We have no objections to comply with this wish, though we thought that the quotation of the description was sufficient, and our intention was, that the Plates of the "Illustrations" might be bound separately, as they accumulated sufficiently to form a moderately thick volume. A List of the Plates for 1848, 1849, and 1850 is now given, with the numbers which should accompany each. The Vignettes which have been occasionally introduced in the Letterpress are also included, but are placed in a separate Column. In Part I. for 1851, the Plates will be numbered, following those already published, which Subscribers are requested to number for themselves, in accordance with the following List:—

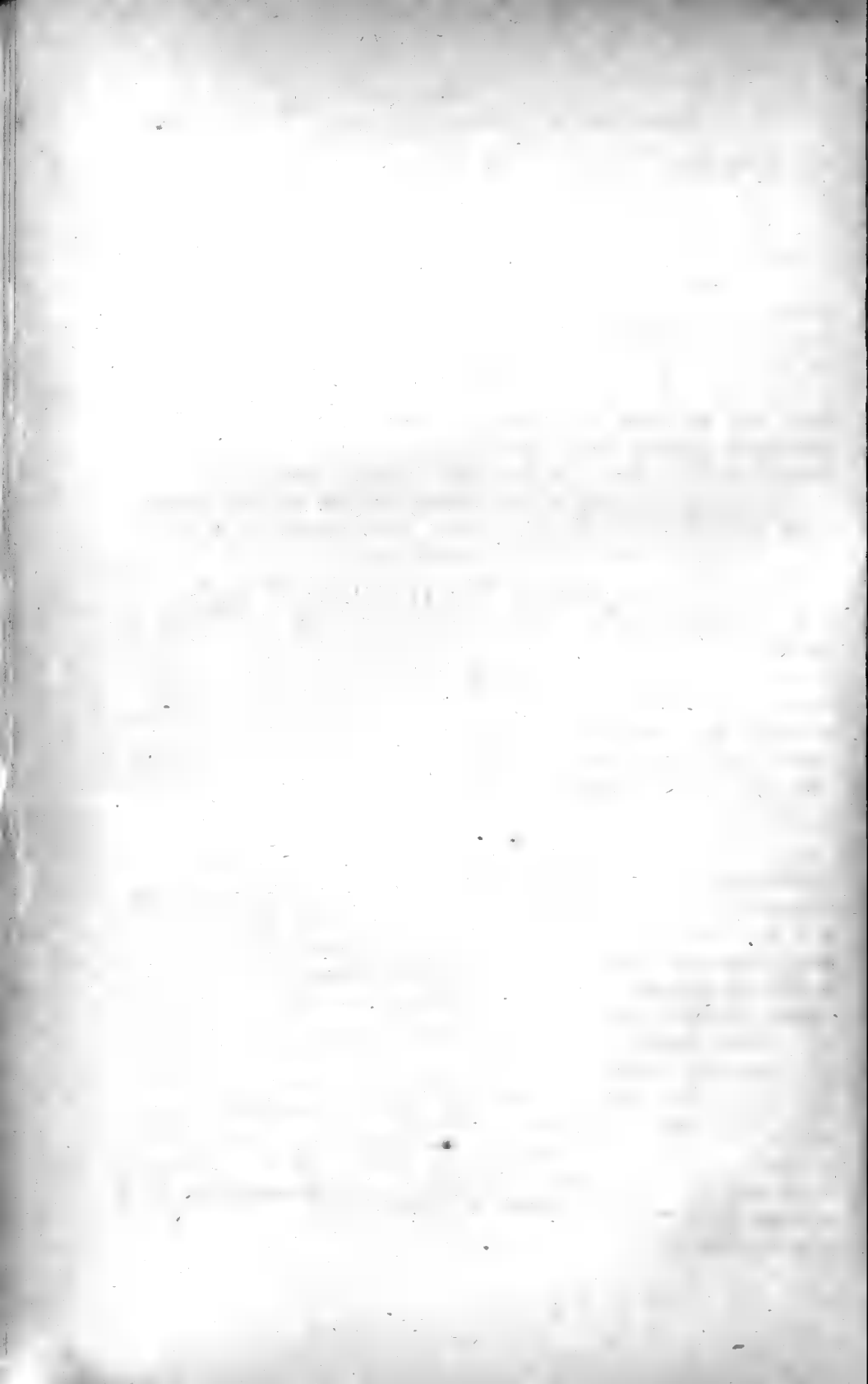
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ORNITHOLOGY OF QUITO.

OUR long expected box from Professor Jameson has at last arrived, containing some very interesting things, which we shall endeavour to notice as early as we succeed in making them out.

The elevated regions in the vicinity of Quito, up to the very limit of the snow line, seem to abound in a few species of peculiar Humming Birds. We have previously mentioned

T. ensiferus, of which there are again specimens procured from the forests on the western side of Pichincha; it is stated as not uncommon, and to extract its food from the large bell shaped blossoms of *Datura sanguinea*. In one of these birds the tongue is entire, an instrument fully equalling the bill in length, deeply forked, and having the extremity of each fork dilated and finely fimbriated, the fimbriæ pointing backwards. We have also the female or young.

Oreotrochilus jamesonii ♀, which we believe is yet undescribed. It is dull coloured and without the gular patch; above, entirely of a brownish-green, the upper tail-covers showing green reflections; beneath, brownish-grey, palest on the throat, and having the feathers there and on the sides of the neck darkest in the centre. The tail is coloured nearly as bright as in the male; the base of the feathers, except the centre ones, white; the second and third from the outside tipped on their inner webs with white. The entire length is 4.5; bill to forehead, 8; wing, 2.7½. In another specimen, apparently a young male, subsequently received by post, the throat and fore part of the neck is nearly pure white, each feather spotted at the tip with dull green. A figure of these birds is given in our "Illustrations" accompanying the present Part.

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We have, besides these, five additional species, not noticed before in the ornithology of Quito.

T. temminckii. — This is a very powerfully winged bird, coming almost near to some of the *Campylopteri* in the strength of the quills. A male varies slightly from Mr. Gould's figure, in having the blue on the upper surface of the wings confined to the secondaries; and on the under surface, to the secondaries and base of the quills. Our specimen, marked female, is deep rufous on the throat, breast and centre of the belly, and the two outer tail-feathers, are white along the centre. It may be a less mature state than Mr. Gould's ♀. This species "occurs in the wooded region of the Andes, between 10,000 and 12,000 feet elevation, extracting its food from the flowers of *Siphocampylus giganteus*."

T. thalassinus, SWAIN. (1827). — *Ornismya* and *Ramphodon anais*, LESS. 1831. — The tip of the maxilla has fine regular recurved teeth or serratures. — "A widely diffused species, and frequents the flowers of *Bernadesia spinosa*."

T. (Eriopus) luciani, BURC. — The specimens seem to be as named above by Bourcier; it seems however to be allied to several species. The above named author states, that it approaches *T. cupreovertris* of Fraser and *T. mosquera* of De Lattre; it also comes near to *T. glaucopoides* de la Fresnaye. — "It inhabits the western side of Pichincha at 10,000 to 12,000 feet elevation, and is very common."

T. allardi, BURC. — The specimens agree with Bourcier's description of the bird we have named, except that he states, "*croupion roux-clair*." (See our figure in next part.) Bourcier's specimens were from Santa Fé de Bogota. Professor Jameson states, that the birds sent are from "the western declivity of Pichincha. It feeds generally on the flowers of a blue lupine, and its habits certainly resemble more those of an insect than one of the feathered tribe."

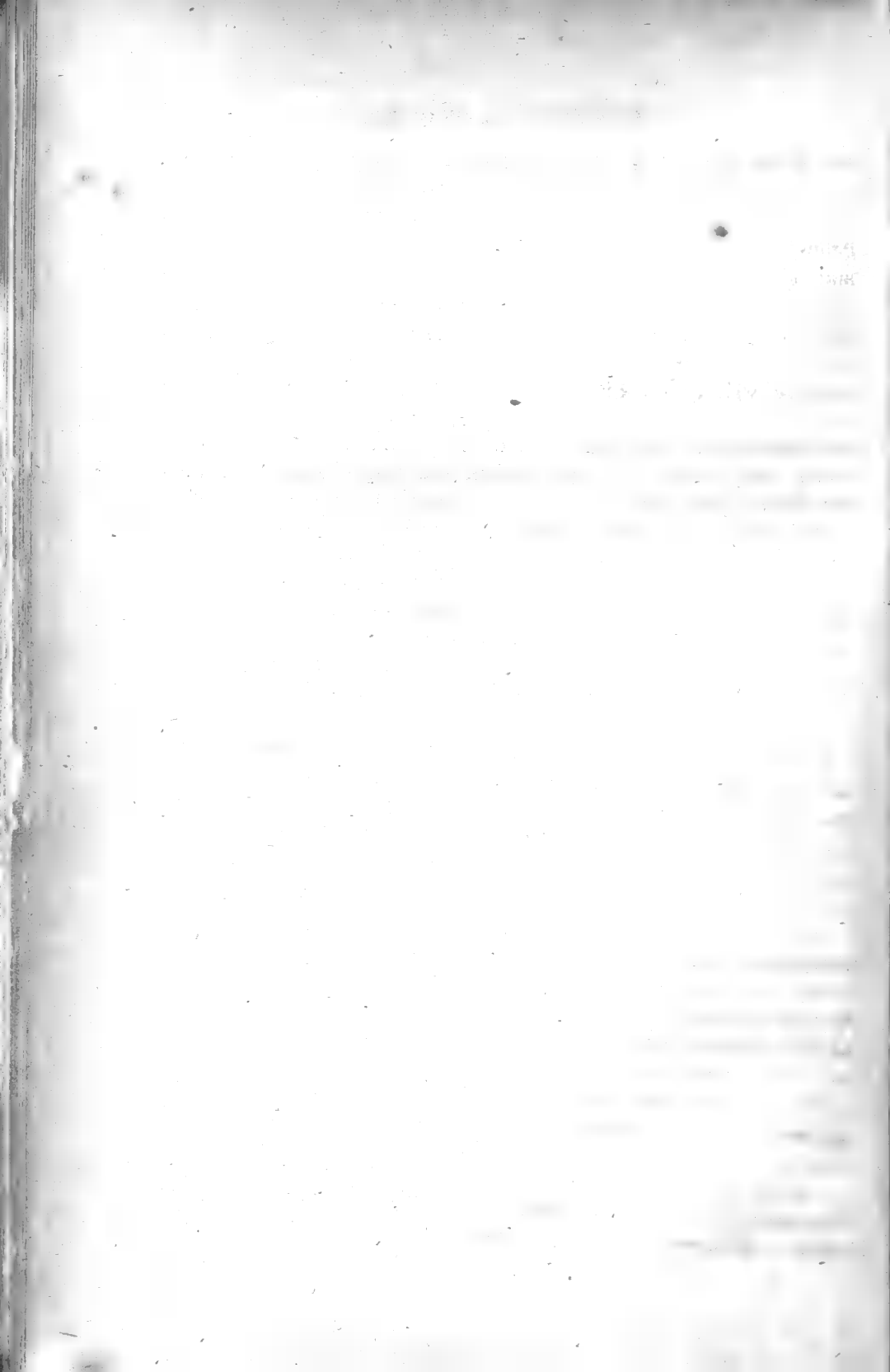
T. cupripennis, BURC. — Agrees generally with Bourcier's description of birds received from Colombia. In those from Quito

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the lower part of the back and rump show the bright changing colours, as well as the upper tail-covers which Bourcier mentions as alone possessing them. Of this form Mr. Gould makes his genus *Aglaeactis*. Professor Jameson observes—“Inhabits the middle regions of Pichincha, extracting its food from the flowers of *Siphocampylus giganteus* and *Loranthus*. The species seems to be peculiar to the province of Patto and to the equator.”

Since writing the above, we have received four specimens by post from the same regions, one a ♀, of a species common about the suburbs of Quito. The *T. nana*, Less.

We may notice this again when other specimens have been received.



ORNITHOLOGY OF THE BERMUDAS.

WHEN printing the Ornithology of the Bermudas in our contributions for last year, we sent a proof sheet to Lieutenant Wedderburn, who was then on the eve of departure. The proof missed him, and only reached him after his arrival at the islands. It has just been again returned to us, accompanied with remarks by Mr. Hurdis who has attended to this branch of the natural history; and as these follow the order of our previous list, we at once print them as a supplement, with our thanks to the writer for his attention. Were similar lists and observations made out by residents in our various possessions, they would be of great use to ornithology.

Sialia wilsonii.—Common at all seasons of the year; breeding in April, May, and June. Is sometimes exceedingly abundant in the months of January and February: this large and temporary increase of numbers is doubtless to be ascribed to migration from the American coast. During the past summer, these beautiful birds were less numerous than during the preceding nine years.

Mimus carolinensis.—Common. Has established itself as a permanent resident.

Guiraca cardinalis.—Very abundant; rearing its young, and remaining throughout the year. It is not improbable that a few of this species occasionally arrive, like their progenitors, from the coast of America.

Vireo noveboracensis.—This little bird is very common, and appears to have thoroughly established its residence in these islands.

Corvus americanus.—A small flock of these crows frequents that portion of the islands between the Iron Light House and the town of Hamilton. They are supposed to have been introduced

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from Nova Scotia, in the year 1838, and are known to breed here.

Chamæpelia passerina.—Abundant throughout the year.

Gallinula galeata.—Supposed to be an autumnal migrant from the shores of America; is more or less common in some years than others, and breeds annually in these islands.

Ortyx virginianus.—Fifteen or twenty years ago this bird was known to breed in the Bermudas. None have been observed of late years, and it is now supposed to be extinct.

SUMMER RESIDENTS.

Phæton flavirostris.—The young of the Bermuda *Phæton* remains in the hole or cavity in which it has been nestled until capable of flight. Its plumage is then white, marked on the back and wings with transverse bracket-shaped bars of black or dark brown, the tail being without the elongated feathers of the adult bird. From this period the young disappear, and it is supposed they proceed with the parent birds to sea.

Sterna dougalii.—A summer visitant, breeding on the rocks near the entrance of Castle Harbour; arrives about the first of May, and departs in the month of September.

S. hirundo.—This is also a summer visitant, frequenting the same localities, and departing at the same season of the year; only two specimens shot by me, 17th June, 1848.

AUTUMNAL AND WINTER VISITANTS.

Pandion haliaëtus.—Occasionally met with from October to June.

Falco peregrinus.—*F. anatum* of Buonaparte. One specimen shot by Dr. Cole, 20th Regiment, in October, 1846. Another was killed in the town of Hamilton on the 1st February last.

Falco columbarius.—Mr. Tristram's observations are correct.

Circus cyaneus.—Occasionally seen during the autumn migration.

Surnia nyctea.—Two specimens were shot at Boss' Cove, in the autumn of 1843, by Lieut. Fayrer, of H.M. hulk "Tenedos."

Otus americanus.—Three examples were shot at Gibb's Hill,

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during the winter of 1846 and 1847, and another in the beginning of November, 1849.

Otus brachyotus.—I have examined but one specimen of this species, which was shot by Dr. Cole, 20th Regiment, in December, 1846.

Scotophilus acadica.—The specimen here mentioned is the only one that has been observed, and was captured alive at Ireland Island, on the 12th January, 1849. (Tengmalm's Owl was not *S. acadica*, but a genuine Tengmalm. It flew on board the schooner "Robert" on the 14th November, 1847. This vessel was then on her voyage from Halifax to these islands: her latitude $41^{\circ} 10'$, longitude $63^{\circ} 40'$; the wind blowing very fresh at the time from the south west. I examined this Owl soon after it arrived here. It was then alive, but having been fed at sea with pieces of salt pork soon died.)

Chordeiles virginianus.—Many of these birds visit us for a few days in the months of April and October, going to and returning from the north. In 1849 they were unusually common during the spring migration.

Hirundo rufa.—Occasionally a transient visitor in the months of April and May, though more commonly met with in September. This species was very numerous in the great flight of Swallows which visited these shores in September, 1849.

H. riparia.—Two or three specimens were shot in September, 1846. Two others were observed near Hamilton, on the 8th August, 1847.

Ceryle alcyon.—Visits the Bermudas regularly during the autumnal migration, arriving in the latter half of September. A few remain with us during the winter months; these take their departure about April, and never leave a straggler behind them. Of course they do not breed here.

Sylvicola coronata.—An autumnal visitant, of which three or four specimens have been obtained. My earliest date is October 30, 1846, and latest, the 24th January, 1850.

S. petechia.—Two specimens only have been obtained, one on the 17th December, 1847, the other about the 3d November, 1848, and both by Lieut. Wedderburn.

S. discolor.—The only specimen I have seen, was shot by Lieut. Wedderburn, at Ireland Island, 3d October, 1848.

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Sæiurus noveboracensis.—A regular autumnal visitor, a few of which remain with us during the winter months. They are seldom seen, though often heard in the thick mangrove swamps.

Linaria minor.—Has been occasionally met with from October to February. Rare.

Dolichonyx orizivorus.—An autumn visitor which appears about the middle of October, and invariably in winter plumage. In some years this bird is uncommon, in others the reverse. Is generally found in small flocks.

Plectrophanes nivalis.—First obtained in February, 1848, subsequent to which several examples have been procured during the winter months. On the 17th November last I examined a specimen in summer plumage, shot by Mr. Darrell.

Lanius ludovicianus.—Occasionally found during the autumn and winter months. Was first observed by Dr. Cole, 20th Regiment, in October, 1846.

Bombicilla americana.—A flock of about thirty, seen by Lieut. Wedderburn in October, 1847, from which three specimens were obtained. In December following he killed four others. In December, 1849, I shot two specimens from a flock of about twelve. In no other instance am I aware of the occurrence of this bird in the Bermudas.

Picus varius.—Accidental and rare. May occasionally remain during the winter months. Has not been observed since March, 1849.

Coccyzus americanus.—First observed by Dr. Cole, 20th Regiment, in 1844. In 1847 a specimen was captured at Ireland Island in October; and on the same date, in 1848, a similar capture was made in the same place; this occurred on the 15th or 16th. On the 9th October, 1849, these islands were visited by a very extraordinary flight of many thousands of these birds, then on their southern migration—the greater number of these departed on the following day, the remainder followed soon afterwards.

Ectopistes carolinensis.—In the ornithological list for 1849, prepared by myself, this bird has been transferred to the doubtful squad, for reasons there given.

Squatarola helvetica.—Rarely met with, though the young are supposed often to mingle with *C. virginianus*, in their southern migration in the month of September. A fine adult specimen was shot by Lieut. Wedderburn, on the 5th September, 1848.

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Charadrius virginiaus.—In the month of September and the early portion of October, this species passes over the Bermudas in flocks, some of which are very large. They fly in a south or south-easterly direction, and seldom alight unless from stress of weather. They are not observed here on their return north in the spring.

Ægialites vociferus.—Occasionally met with during the winter months. Shot a specimen of this bird on the 12th November, 1849, which may be considered early for this species.

Æ. semipalmatus.—Visits these islands in August and September. Not uncommon.

Æ. melodus.—A single example of this species, shot by Lieut. Wedderburn on the 5th September, 1848.

Calidris arenaria.—A winter visitant, frequenting the sandy bays of the coast; has been shot early in September. Uncommon.

Streptilas interpres.—Arrives from the north as early as the commencement of August, though more commonly in September. Is one of the most regular and common of our autumnal and winter visitants. Is generally seen in small flocks.

Tringa pectoralis.—Not uncommon in August, September, and October. On the 9th October last, this species made its appearance in numerous flocks during tempestuous weather.

T. schintzii.—Visits these islands during the autumnal migration. A few specimens only have been met with.

T. pusilla.—Frequently found associating with *T. semipalmata*.

T. maritima.—In the absence of positive proof, this *Tringa* has been transferred to the list of doubtful birds.

T. semipalmata.—Visits Bermuda as early as the beginning of August, and is occasionally seen in small flocks from that period to the month of November.

Phalaropus lobatus.—A pair of these birds were obtained in the spring of 1848. The male was found dead, floating in Riddle's Bay, on the 18th March, and had probably struck the lantern of the Iron Light House (which is immediately above) during its nocturnal flight from the southward. The female, in ruddy plumage, was found swimming at the head of Hamilton Water, where it was killed on the 22d March, by a blow from a stick.

Totanus macularius.—The earliest of our autumnal migrants from the north, appearing in the middle of July, and remaining to

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the end of September and occasionally later. A few were observed in April, 1849. Does not breed in Bermuda.

T. solitarius.—More or less common every year, from August to November.

T. flavipes.—One of our earliest visitors from the north, appearing with wonderful regularity on or about the 1st August, *i. e.*, in the heat of our summer. Is last seen about the end of September. Common.

T. vociferus.—This species makes its appearance soon after the preceding, and is occasionally met with to the 10th November. Is more or less common in some seasons.

Catantrophorus semipalmatus.—The only specimen I have seen was shot by Lieut. Wedderburn on the 4th July, 1848.

Himantopus nigricollis.—I am not aware that this bird has been observed in these islands. Of *Tringa himantopus* of Audubon, one specimen was obtained by you on the 2d August, 1848, which appears in Sir William Jardine's list to be mistaken for *H. nigricollis*.*

Scolopax wilsonii.—More or less common during the autumnal migration, appearing at the commencement or middle of October. A few stragglers are occasionally found so late as the month of January. In May, 1847, several couple were killed on their return or northern flight. On the 13th October last, unusual numbers of these birds suddenly appeared in Pembroke Marsh, and afforded capital shooting for three or four days, when they took their departure. On the 6th November, 1848, I examined a *Scolopax*, shot by Lieut. Wedderburn, which had every appearance of belonging to this species, though strange to say, it had eighteen feathers in its tail. Another, also shot by him four days previously, had an imperfect tail of seventeen feathers.

Macrorhamphus griseus.—An autumnal visitor, of which two specimens only have been obtained. One of these on the 1st October, 1847, the other on the 21st August, 1848.

Rusticola americana.—Accidental. A single specimen having been shot in a marsh near Hamilton, in October, 1842.

Numenius borealis.—This bird is occasionally shot on the shores of Bermuda during the autumn migration.

* Mr. Hurdis is most probably right.—W. J.

ORNITHOLOGY OF THE BERMUDAS.

Numenius hudsonicus.—This wary bird appears early in the middle of August. Uncommon.

Fulica americana.—A few specimens have been shot in November and December, also one on the 28th May, 1847.

Ortygometra carolinus.—This bird is a regular visitant, and sometimes makes its appearance from the American coast in the beginning of September, though in general somewhat later. In October, 1849, hundreds of this species appeared in the marshes simultaneously, with a considerable flight of *Scolopax wilsonii*. It is occasionally met with during the winter. On the 26th April, 1849, I shot a specimen near Warwick Pond.

Ortygometra noveboracensis.—The two specimens were shot by Lieut. Wedderburn in Pembroke Marsh, in October, 1847, and are the only ones I have seen.

O. jamaicensis.—One specimen only has been obtained, which was shot by Lieut. Wedderburn on the 5th September, 1848.

Nycticorax gardeni.—An autumnal migrant, occasionally found from September to March. All the specimens which have been obtained were in the spotted plumage of the young. In Sir William's mention of this bird, a little confusion appears to have arisen from mistaking Mr. Tristram's account of *Ardea herodias* as applicable to the present species.

Botaurus lentiginosus.—More or less common from October to December, and occasionally met with till March.

Ardeola exilis.—One example only of this species has come under my observation, which was killed by Lieut. Wedderburn, on the 23d October, 1847.

A. virescens.—This may be considered a rare bird in most seasons; it was however abundant in the month of April, 1849, and again during the autumnal migration of that year, from the latter part of September to the end of October.

A. leuce.—A pair of these Egrets were shot at Hungry Bay in 1840. No specimens have been since obtained, though instances are known of its having been seen here. Of course they do not remain during the winter, as stated by our worthy friend Tristram.

A. herodias.—An autumnal visitor, a few of which remain the whole winter, indeed throughout the year. In 1846 the nest of this bird, containing two eggs, was found in the mangrove trees of

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Hungry Bay. It was a Heron of this species which Mr. Tristram kept in his garden, and which was seen upon one occasion to capture a *Columba passerina*, and swallow it entire.

Anser hyperboreus.—Two of these birds, in the plumage of the young or “Blue-winged Goose,” were shot in Riddle’s Bay, on the 19th October, 1848.

A. canadensis.—The occurrence of this species is considered “doubtful.”

Anas obscura.—Occasionally met with during the winter months. Two specimens were shot in December, 1849.

A. discors.—An occasional visitor during the autumn and winter months. About the 10th October, 1849, a few flocks of this species appeared in the marshes near Hamilton, from which several birds were killed.

A. carolinensis.—An autumnal visitant, more or less common in some years.

Dendronessa sponsa.—The only example observed here was a female, with a conspicuous white patch surrounding the eye. It was shot by Dr. Cole, 20th Regiment, on the 16th December, 1846.

Rynchopsis chlypeata.—I have seen but one specimen of this duck, which was killed in December, 1844.

Dafila acuta.—Is occasionally met with from October to December.

Fuligula marila.—This is the larger Scaup of Europe and America, and is an occasional visitant to these islands.

F. mariloides.—The occurrence of this species requires confirmation, I have therefore placed it among the doubtful birds in the list of 1849.

Clangula albeola.—A winter visitant, of which two or three specimens only have been obtained.

Mergus merganser.—Transferred to the doubtful portion of the list of 1849, for reasons there given.

Phalacrocorax dilophus.—An accidental winter visitant. Uncommon.

Plotus anhinga.—This is an error in the list of 1848; our specimen proving to be *Sula fusca* of Audubon. It was captured alive in October, 1847.

Tachypetes aquila.—Two specimens of this bird were shot by Lieut. Wedderburn, at Ireland Island, in September, 1848.

ORNITHOLOGY OF THE BERMUDAS.

Pelicanus fuscus.—In the absence of specimens, this bird is transferred to the doubtfuls in the list of 1849.

Podiceps cornutus.—One specimen, considered to belong to this species, was killed by Dr. Cole, 20th Regiment, in November, 1846. It is now in the possession of the Rev. T. B. Tristram. A careful description of the same is wanted.

P. carolinensis.—Two examples were shot in October, 1849.

Larus occidentalis.—A winter visitant to the shores of these islands, several examples of which were shot in 1847, and one in November last.

L. zonorhynchus.—Rare. One specimen obtained in January, 1849.

L. argentatus.—A few of these Gulls were shot in February and March, 1848.

L. tridactylus.—An occasional winter visitant. In March, 1849, several of this species appeared for some days in Hamilton Harbour.

Xema atricilla.—See list of doubtfuls for 1849.

X. sabinii.—A single specimen killed by Captain Drummond, 42d R.H., date not recorded by me.

Sterna fuliginosa.—A fine specimen of this Tern was shot by Dr. Cole, 20th Regiment, in October, 1846.

Thalassidroma wilsonii.—Often seen by fishermen and others about the outer reefs, but has not been observed to approach the shores of these islands. Does not breed on any part of the coast.

VERNAL VISITANTS.

Myiodoctes mitratus.—A male specimen, shot at Ireland Island, 30th March, 1847.

Milvulus tyrannus.—Two examples have been obtained; one in March, 1847, the other in April, 1849.

Nycticorax cayenensis.—Two specimens have come under my observation; one in April, 1848, the other in September, 1849.

ACCIDENTAL STRAGGLERS FROM EASTERN HEMISPHERE.

Saxicola oenanthe.—This European bird was shot near the Iron Light House, on the 5th October, 1846, by Lieutenant Wood,

ORNITHOLOGY OF THE BERMUDAS.

of the 20th Regiment, by whom it was presented to me. The tail-feathers only were preserved, and these I forwarded through the Rev. T. B. Tristram to Mr. Yarrell, in August, 1847, who has expressed himself satisfied with the identity of the same.

Crex pratensis. — This specimen was in the plumage of the young, and was shot in Pembroke Marsh by Lieut. Wedderburn, on the 25th October, 1847.

Scolopax gallinago. — I have nothing to add to Sir William's note under this head.

OBSERVATIONS

ON THE

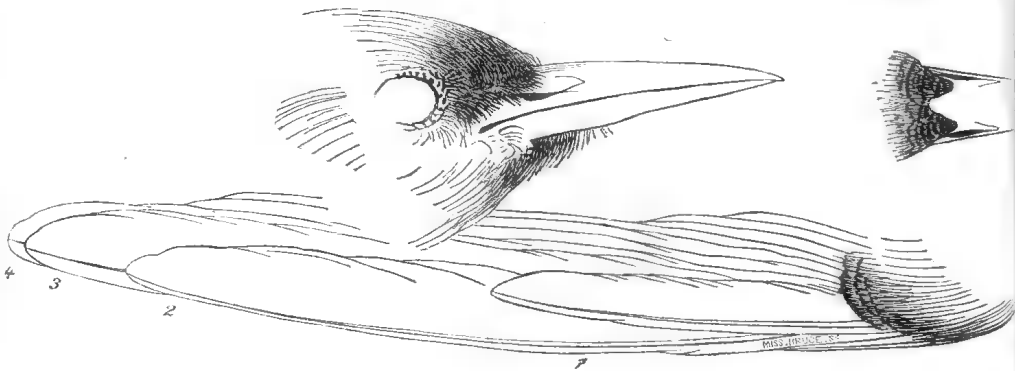
POSITION OF *OCYPTERUS SANGUINOLENTUS*, TEMMINCK.

By the attention of Mr. Wilson, whose collection has already supplied us with many materials, we have been enabled to examine the yet rare bird, *Ocypterus sanguinolentus* of Temminck, the type of Mr. Swainson's genus *Analcipus*, by whom it was placed among the *Laniadæ*, and in the division containing the Drongo Shrikes or *Dicrurineæ*. The first glance assured us, that it had no connection with *Ocypterus* (*Artamus*), none with *Dicrurus* or the Shrikes, and that its proper position was, as arranged by Mr. Gray, with the *Oriolinæ*, and with our genus *Psaropholus*. The structure of the wings is the same as with the Orioles; but that of the bill in this bird and *P. trillii* differs in the nostrils being at once pierced into the bill, wanting the covering membrane, or at least in its being so strong as to appear a part of the bill itself, and resembling the cleft nostril of the greater part of the *Icterine* group. The colouring is also remarkable, black, with an indication of brilliant colour on the centre of the belly, and a very small trace on the wing, the feathers on the bright spot of the former possessing the same silky texture with those of *Psaropholus*. We give the woodcut from the "Illustrations of Ornithology" illustrating that genus; and it will be extremely difficult to draw separate generic characters for these two birds. When we first saw *Psaropholus* we considered it generically distinct from the typical Orioles, the ruling colours of which are yellow, greenish, or olive and black, never crimson. The two birds in question exhibit rich purplish-brown and crimson, contrasted with black; and from the structure of the bill and entire appearance, we consider that they mark very

ON THE POSITION OF OCYPTERUS SANGUIOLENTUS.

distinctly among the Orioles the representation of the *Icterine* form in the Old World. Of the habits of *Psaropholus* we have yet no knowledge, but *Analcipus sanguinolentus* is almost entirely fructivorous. In a very interesting account of an expedition to the interior of the north-west of Sumatra by S. Muller, we have the following note of its habits:—"This bird shows as great a difference in its habits from the true *Ocypteri* as it does in its whole appearance and formation. It is a real inhabitant of the wood, and resembles most in its habits some species of the genus *Oriolus* and *Paradisea*. Its food consists almost exclusively of wild fruits, especially figs; some remains of caterpillars and other insects are very rarely found in its stomach. There are sufficient grounds for making this a new genus, for which perhaps the name of *Philocarpus* would not be unsuitable."*

* Tijdschrift voor Natuurlijke geschiedenis en Physiologie. Van der Høeven, 1835, p. 331.



PSAROPHOLUS.

SCOLOPAX BREHMI, KAUP.

IN our concluding part for 1849, we made some observations on *Scolopax brehmi* of Kaup, and we are glad to say, that these have already been attended with advantage, and have directed attention to the subject. There is much more variation in the plumage and different states of our Snipes than is at first observed from the very cursory examination which they receive when shot, even by ornithologists. The tail, as we before remarked, has been taken as a part affording distinctive characters; but the breadth of the feathers, and their colours, will be found to present much variety, white, black, and sienna, in their turn, prevailing in different proportions.

We do not unfrequently find the outer tail-feathers longer than the others, accompanied by minute variations in the plumage; such as more white at the tips of the secondaries, and in the inner webs of these feathers being more distinctly mottled, affording a very favourite feather for the angler, and which has been long observed and sought after, although with no suspicion of that arrangement belonging to any distinct race or species. In all these, however, we have never counted more than fourteen feathers in the tail.

We sent impressions of our plate of the tails of *S. gallinago* and *brehmi* to several correspondents; and C. A. Gordon, Esq., M. D., now in Ireland with his regiment (57th), a few days since, sent us a Snipe, shot in the vicinity of Enniskillen, bearing all the characters of *S. brehmi*, having sixteen feathers in the tail, with that on the outside slightly lengthened beyond the others. On comparing this bird with that having fourteen feathers, and which we gave as *S. brehmi*, there is very little difference; the bills are equal in length, and the general tone of the plumage is similar. On comparing them again with *S. gallinago*, shot at Jardine Hall, we find the bill shorter, 2.6; tarsus, 1.2; naked part above the joint, $\frac{4}{3}$; the pale parts of the upper plumage more rufous;

SCOLOPAX BREHMI.

the stripe on the centre of the head more narrow; the tail with a much less proportion of black. These may be all only variations occurring among many, and they are only noticed now as the distinctions presented in the birds before us.





Grus antigone,
March, 1880.

ILLUSTRATIONS OF FOREIGN OOLOGY.

GRUS ANTIGONE.

OUR active correspondent, Mr. Blyth, has favoured us with two drawings of the egg of this noble Crane, together with the following observations on the Cranes of India:—

“ The eggs were laid by a tame bird that has the range of a garden, and were unimpregnated. They do not accord with Captain Tickell’s notice of the egg of *Grus antigone*, in *Journ. As. Soc. Beng.* xvii. 303; and we doubt that those described as frequently brought to him in Singbhoom and also in Manbhoom, where they are tolerably common—(‘ colour pure white, not quite so pure as in the domestic fowl, without spot or mark of any kind;’ ‘ length about $3\frac{1}{2}$ by $2\frac{2}{3}$ inches,’ and ‘ generally two in the nest, which is a raised heap of rushes, &c., placed in heavy grass jungle, in retired places, generally at the foot of hills, covered with forests, July, ’)—were the eggs of *Grus antigone*, upon the evidence of the two undoubted specimens here figured, although these were produced by an unimpregnated bird in confinement. At the same time, it is difficult to guess what the eggs described by Captain Tickell could have been. All the Stork tribe build on trees and other elevations, *Mycteria*, as we are informed, upon the highest trees, while the *Anatidæ* lay numerous eggs; besides, that no species that breeds in India could lay so large an egg as that described by Captain Tickell. We can only suggest that they may be those of the migratory or lesser Indian Adjutant, *Leptophilos javanicus* (*Ciconia capillata* of Temminck); but even these would probably be laid in nests, placed high upon the largest trees, in conformity with the nidificatory habits of the group. However, the *Sáras* or *Surhuns* (*Grus antigone*) does breed in India, unlike the *Kurlung* or

'Coolen' (*Grus cinerea*), and the *Kakarra*, *Kurrounch*, or *Kur-concha* (*Gr. virgo*), which are there known as winter visitants only, both being far more abundant than the native *Sáras*. The beautiful White Crane (*Gr. leucogeranos*), though found in Afghanistan, does not appear to reach India in its migrations, and our correspondent doubts the distinctness of *Gr. torquatus*, Vieillot, from *Gr. antigone*. At least he states his belief that there are but three species of Crane in India proper, and of these the *Kakarra* (which erroneously is termed 'Coolen' by most sportsmen) or *Demoiselle*, does not appear to visit Lower Bengal, though common in parts of the Peninsula and in Western India, and as we are also informed, upon the *churro* or alluvial islands, high up the Brahmaputra, occurring there in flocks of hundreds, mingled with *Gr. cinerea*, whereas *Gr. antigone* is observed in pairs, or small flocks of six or eight only, and as we understand, always apart from the other species. All three are numerous in some districts during the cold season, as in Behary, where Buchanan Hamilton states them to be the most destructive birds to the crops.* They do not however feed solely on grain, but will pick up Quails, and probably any other small living animal that comes within their reach, as do the Bustards likewise. Mr. Elliot mentions finding a quail's egg entire in the stomach of the great Indian Bustard. The gizzard of the Cranes is powerfully muscular; and the general anatomy allies them rather to the Snipe and Plover grand series (the *Pressirostres* and *Longirostres* of Cuvier), than to the *Ardeadæ* (or *Cultrirostres* of Cuvier); and the affinity is borne out by the egg, which in all the veritable *Ardeadæ* we know of is spotless,† dull white, buff, or pale blue; and also by the activity of the chick at an early age, when the young of the *Ardeadæ* are helpless. Our friend informs us, that he has known the *Sáras* to be bred in captivity, and that he has seen a captured chick, when very young, which would follow any one for food, and was reared with great ease. Till nearly grown, the head of this young *Sáras* was fully feathered, the same as in young turkeys, guinea fowls, and vultures, and we believe all other bare-headed birds; and the distinction of the subdivision *Anthropoides*, rests only on the permanently feathered head and greater elongation of the tertiary plumes, characters of the most trivial import,

* Montgomery Martin's "History of Eastern India," i. 226.

† The egg of the Spoonbill is spotted.—W. J.

ILLUSTRATIONS OF FOREIGN OOLOGY.

and as might be supposed, exhibiting gradations from species to species, as shown by the intermediate *Gr. carunculata*, figured by Messrs. G. R. Gray and Mitchell. *Balearica* is a much better division, and in this the trachea does not enter a cavity in the sternal ridge, as in the other Cranes in common with the Trumpeter Swans.

“ These elegant birds have, again, a carriage widely different from that of any *Ardeada*; and they are particularly remarkable for their manner of *dancing*, as it may well be termed, with wings extended, several thus playing together with amusing activity. Hence the names *Demoiselle* and *Virgo* applied to the small *Kakarra*, as it is termed in India. They are easily tamed, and their handsome appearance and graceful movements render them favourites wherever kept, ranging at large in parks or pleasure-grounds, with wings cut, however, to prevent their leaving in the breeding season, after which they would very probably return if not elsewhere captured; but such escaped individuals descend at once to the loud trumpet-call of a tame one from below, when they are again caught and deprived of the means of flight. In general, they are very gentle creatures, but not when they have young to protect, or the male is getting into season, on which occasions the large Indian *Sáras* is rather a formidable foe, as fierce as dauntless; but it is not difficult to catch him suddenly by the neck, being at the same time wary of his claws; he cannot then be suffered to range about as usual, as he comes boldly up and attacks every one. The adults keep in pairs at all seasons, even though the pairs should associate into flocks; and our informant tells us, that he now knows of a male *Grus cinerea*, paired with a female *G. antigone*, in a paddock where several of both species are kept, both being perfectly tame and gentle, though, if the lady *Sáras* be molested in any way, her under-sized beau comes up at once to make a show of attack, prancing around the intruder with expanded wings. We look with interest to know if any result will follow this union. The two species have much the same loud trumpet cries, but which are nevertheless very distinguishable; and the sound from on high is familiar to most residents in India, as the flocks pass over at a great altitude, flying like wild geese in a line, or more generally an open wedge.

“ In some parts of that country the *Sáras* is protected by the

inhabitants. Thus a writer, in the Calcutta Sporting Review, in the Narrative of his Journey through Bundelkhand, remarks :— ‘ It need hardly be observed, that sportsmen have great opportunities of picking up information by familiar intercourse with the people. There is always something interesting, not to say absolutely necessary, to learn regarding their superstitious veneration for particular animals and birds. Everybody has heard of the murder of two officers at Muttra, because they happened not to know that the Monkeys they shot were held sacred. I remember when a Mahomedan servant of mine shot a pea-fowl near Gwalior, which circumstance led to about a hundred villagers sallying out with bludgeons to assail all my party; and nothing could have saved some of our heads, but for the thorough knowledge of the language of my companion, who assured the enraged people that the man should be severely punished, and he kept his word. There are, however, birds, which if not actually sacred like the pea-fowl, are nevertheless regarded by Hindoos with such affection, that to shoot them is offensive. Among these is the Sárás, which not coming within the category of game, ought not to be shot.’

“ According to Mr. Jerdon, the Sárás is migratory in South India, appearing in the Peninsula only in the cold weather; but we can scarcely doubt that it breeds in parts of Central India, where Captain Tickell believed that he obtained its eggs in July; for he could hardly be mistaken as to this conspicuous and sonorous great bird then occurring in the vicinity. In the Rajmahl and Monghyr Hill district of Bengal many are bred; and a friend, familiar with the ornithology of India, informs us, that he has been pointed out a *j’heel* (or marshy lake), higher up the Ganges, in which Sárás bred annually. This bird also inhabits the Burmese countries, where it bears the name of *Gyo-gya*. The tame pair before alluded to as having bred repeatedly in confinement, had the range of a large native garden, containing inundated patches of paddy or rice; and to one of these they always resorted to form their nest, which was commenced under water, and raised to some height above it. Two eggs were generally laid; and the birds were as little disturbed as possible when building and incubating—the male being then very fierce and combative; but as soon as the young were hatched, they were caught and more closely confined with their parents, who reared them in a large cage apartment. These

details were obtained from the native gentleman who owned them, and may, we believe, be fully trusted; but with regard to the colour of the eggs, he had never looked at them."

Mr. Jerdon quotes from Mr. Elliot's notes the following excellent observations, chiefly made in Guzret, the *Sáras* being but a rare visitant to the South Mahratta country—the chief scene of Mr. Elliot's printed zoological labours:—"The *Sáras* lives always in pairs, though several pairs are frequently seen together, and occasionally though rarely a stray bird, either a young one, or one that had lost its mate, with another pair. Every morning they are seen at sunrise winging their way to the cultivated fields, to feed upon grain, their sole (chief) aliment; and about eleven or twelve o'clock they make their way to the nearest water to drink, always preferring the sandy beds of rivers, where they are seen in the greatest numbers, but not disdaining to resort to tanks should no stream be near. There they remain all day, and at evening again betake themselves to the fields, returning to pass the night by the water-side. When alarmed, and when on the wing in their morning flights, they utter a fine clear trumpet-like note."

The *Karlang* (whence "Coolen") or European Crane seems also to be a rare bird in the Peninsula of India in comparison with Upper India generally. There it is seen in great flocks, mingled with the *Kakarra* or Demoiselle as before described, but Mr. Jerdon states:—"This well-known Crane is found in South India in the cold season only, living in pairs or small parties of six, eight, or more. Has similar habits and food with the *Sáras* Crane. On one occasion I found the flowers of the *Carthamus tinctorius* to be the only food partaken of. This was late in March, when most of the grains are cut. The *Koolung* is often seen in company with the *Kurkurrah*."

"The last," remarks the same naturalist, "is found all over the peninsula during the cold weather, and in much greater numbers than either of the other two species. Like these it is most abundant in the neighbourhood of the larger rivers, and has similar habits and food. Mr. Elliot, in his Notes, says:—'Flies in vast flocks, from fifty to one hundred, and even five hundred, with great regularity of arrangement, in a long line, a few of the leading ones disposing themselves in another line at an angle, varying from a right to an acute one with it. This is when they are in progress.

At other times, as when disturbed during the heat of the day, they may be seen circling round at a great height, but still a regular order of lines may be distinguished. Their favourite food is the *Cicer arietum*. They never go to tanks to drink, but always to rivers.' "When this bird," adds Mr. Jerdon, "is struck by a *Bhyree* (*Falco peregrinus*), its mate generally comes to its assistance. The *Bhyree* always strikes it on the back and wings, to avoid being wounded by the sharp inner claw, with which, if struck on the head, it generally manages to inflict severe wounds on the breast of the Falcon. The inner claw of all these cranes is much hooked, and exceedingly sharp, and the bird always, in self-defence, strikes with its claw, and never with its bill."

By the sportsmen of the Bengal Presidency, the Demoiselle is always known as the "Coolen," a term which is sometimes extended likewise to *Grus cinerea*. It is in great estimation for the table. We will conclude by citing a couple of sportsmen's notices of it, as an object of quest for dinner, not objecting to a little repetition if from the pen of another original observer:—

"The *Coolen*," says a writer in the Bengal Sporting Magazine (for Feb. 1837), "are almost always to be seen in large flights (similar to geese), frequenting in the day time the large beds of sand of the Jumna, Chumbul, Soane, and other rivers of Western India, and at night (evening and morning) feeding in the corn fields, which they damage very considerably. Occasionally I have seen a stray bird or two feeding along with the Sárás. (*Qu. Gr. cinerea?* though the bright red head of the Sárás renders it familiar to all, B.); but I have never observed any below Dinapore, and cannot say whether they are common about Meerat and Kurnaul. They are very shy, and difficult to approach in flights, and there is always one of them on the lookout *for the enemy*. I have, however, sometimes found one or two down on the skirts of a *jewer* field, and thus an occasional bird may be shot.

"The similitude of plumage of both sexes is striking; but the male is somewhat larger than the female. The former weighs about 4 lbs., and stands about 25 inches high.

"The *Coolen* possesses a recommendation not common to all birds; namely, it may not only please the taste of the lovers of the fowling-piece, but likewise suit the palate of the epicure. For my part, I award the palm to it, even over the Floriken."

Another sporting writer, who seems equally to appreciate the flavour of "roast Coolen," remarks, that "there are two species, the large and the small" (*i.e.*, *Grus cinerea* and *Grus virgo*); "the former are rather scarce, but appear at the same time, and feed with their smaller brethren. Both make their appearance at the commencement of the cold weather, and depart at the same time as the wild fowl. In a sporting sense, I am well acquainted with them, and will therefore do my best to describe how a good bag is to be made. In the first place, it is necessary to be on the ground by dawn of day; at this time, flight after flight wend their way towards the favourite feeding-grounds, and may be seen and heard (perhaps the latter before the former) at a considerable distance. To know their favourite food is a sign-post as to direction (day after day I have been to the same fields and met with the same success). The great favourite in this part of the world is *mote*, a grain somewhat resembling in appearance unripe grain; and the earlier the sportsman appears in these fields, the better will be his bag. *Bajra* and *jawa* fields also often hold Coolen after the green is gathered; the stalks are not cut till a much later period. The Coolen remain feeding till eight or nine A.M., and then proceed to the sands of a river or *j'heel*, remaining there as long as the sun's beams are uncomfortably hot. About four P.M. they leave for the fields, and return after sundown to the sands for the night. It is usually very difficult to get a shot at mid-day, as they keep to an open space, are very shy, and seem to comprehend a man's intentions very quickly. It is their appetite which betrays them whilst feeding, or very few would be shot. By stratagem, however, I once surprised a large flock of these birds, at a small *j'heel* near Deeig, which was literally covered with them. I managed, by creeping unperceived through long grass surrounding the *j'heel*, to bag seven at a single discharge of my gun, loaded with No. 2 cartridges. Loose shot is of no use whatever. I bagged seven as stated above, but not without considerable difficulty, even after they were on the ground, for about two-thirds were only wounded, and Coolen can both run and fight well, and these did both. The Coolen, when wounded, dies game, and his attitude of defence is very commendable. Instead of tamely submitting to his fate, he throws his long neck into the air, making it oscillate like a snake,

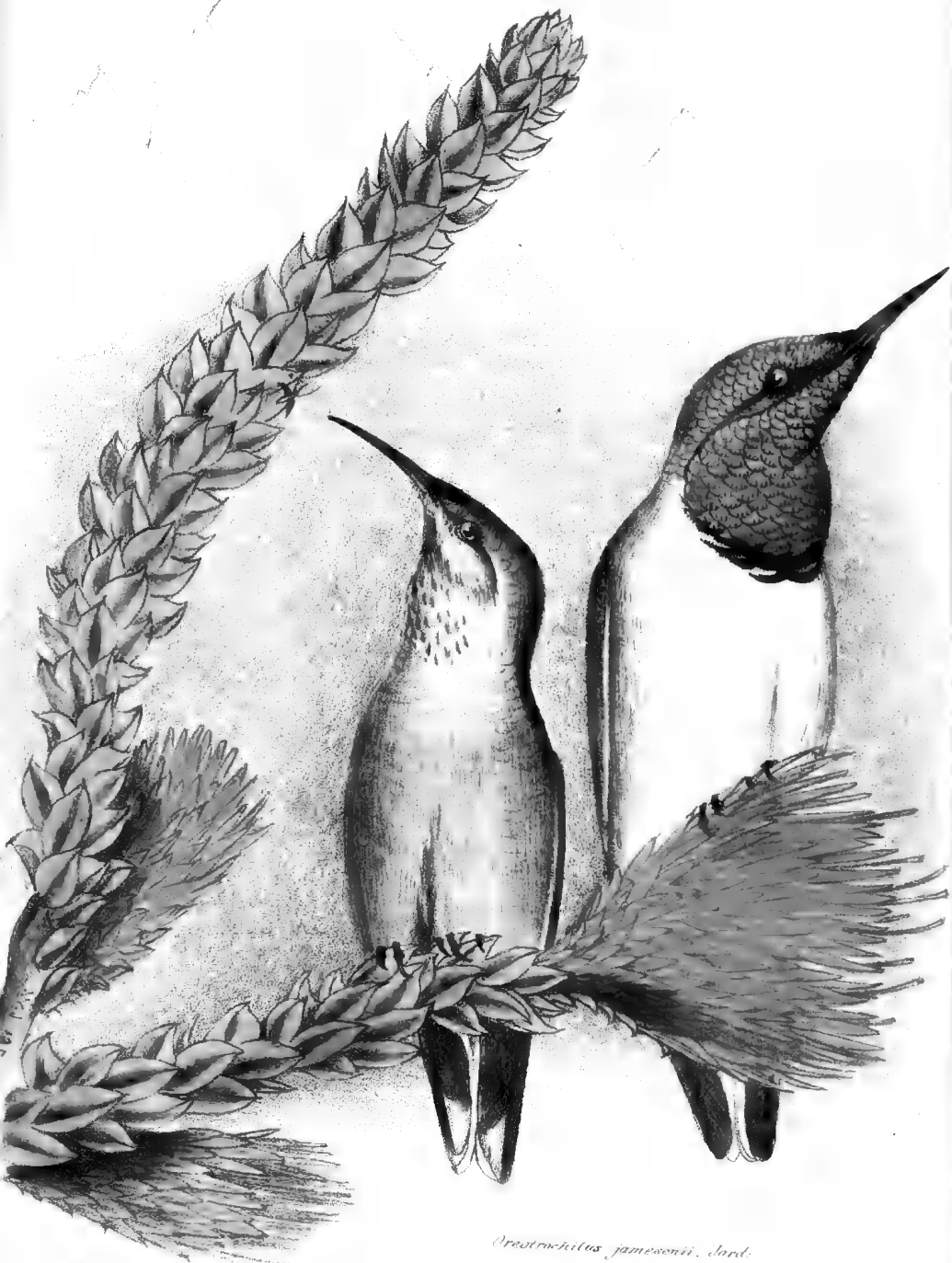
ILLUSTRATIONS OF FOREIGN OOLOGY.

whilst his beautiful red eyes seem to flash fire. As a bird for the table the Coolen is very superior, standing in my opinion next to the Floriken (*Otis bengalensis*). It should be kept a week before being cooked, and this is easily done in the north-west provinces, during December and January. Coolen visit the west of the Jumna in immense numbers. They are found at Delhi, Agra, Muttra, Bhurtpore, Bundelkhund, Neemuch, Nusserebad, and east of the Jumna. They appear to be seldom met with (at least I never heard of or met with any) in Bengal, in Dinapore, Gorackpore, Benares, Cawnpore, Meerut, &c., &c. To my surprise, however, I read in the 'Calcutta Sporting Review,' that they are found at Dakka. If so, and they all arrive in India from the same place, the Coolen must make a long flight to little purpose, and leave a large tract of country unvisited."*

These Dakka "Coolen" are no doubt the *Grus cinerea*, for the *Gr. virgo* certainly does not visit Lower Bengal; nor are the others much seen in the Gangetic delta.

* "Calcutta Sporting Review," 1847, p. 163.

RECEIVED
JAN 10 1887



Oreotrachelus jamesonii, Jendr.

Desc. 1869. Fig. 1184.

ILLUSTRATIONS OF ORNITHOLOGY.

OREOTROCHILUS, JAMESONII, JARDINE.

WE now give a figure of both sexes of the beautiful Humming Bird, the male of which we described at page 67-2 of our last volume. Since then we have received specimens of the female and young from Professor Jameson, a notice of which, with other Humming Birds from the same regions, will be found in the Ornithology of Quito of the present part. We have also attempted to represent with it the beautiful and very remarkable plant from which it is found principally to extract its food. Specimens of this and several other plants connected with the ornithology have been forwarded to us, rendering the collections doubly interesting, and these will be introduced wherever they in any way serve as food or shelter, or otherwise bear upon the subject.

IANTHIA RUFILATA, HODGSON.

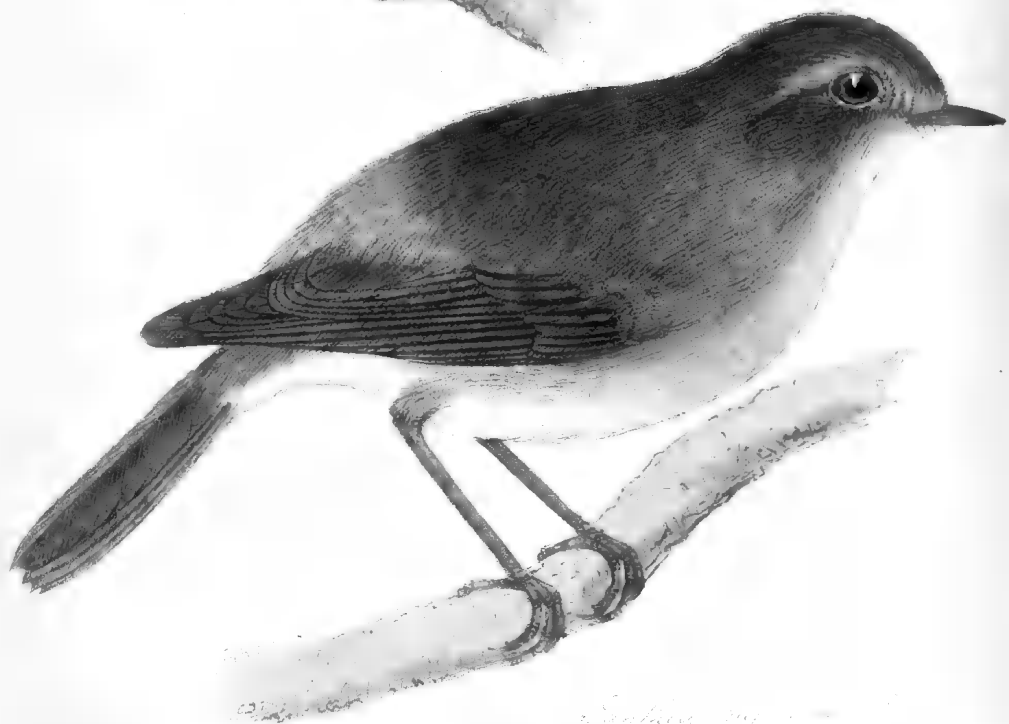
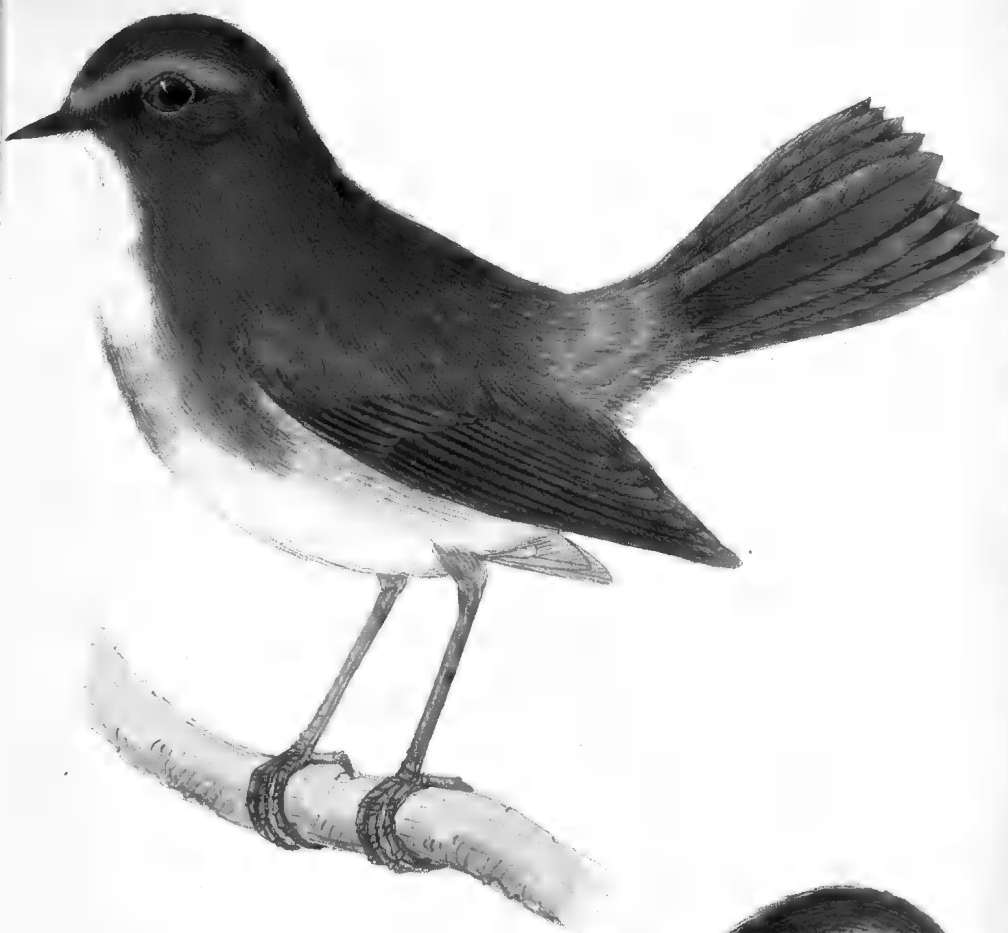
Nemura rufilata, *Hodgs.*, *Proceed. Zool. Soc.*, 1845, p. 27. — *Ianthia rufilata*, *Blyth*, *Journ. As. Soc. Beng.*, xvi. p. 132. — ♀ *Nemura cyanura*, *Hodgs.*, *Proceed. Zool. Soc.*, 1845, p. 27, *Auct. Blyth.*

THE observations made in the description of *Ianthia hyperythra*, will equally apply to the present species, represented from another of Mr. Blyth's drawings.

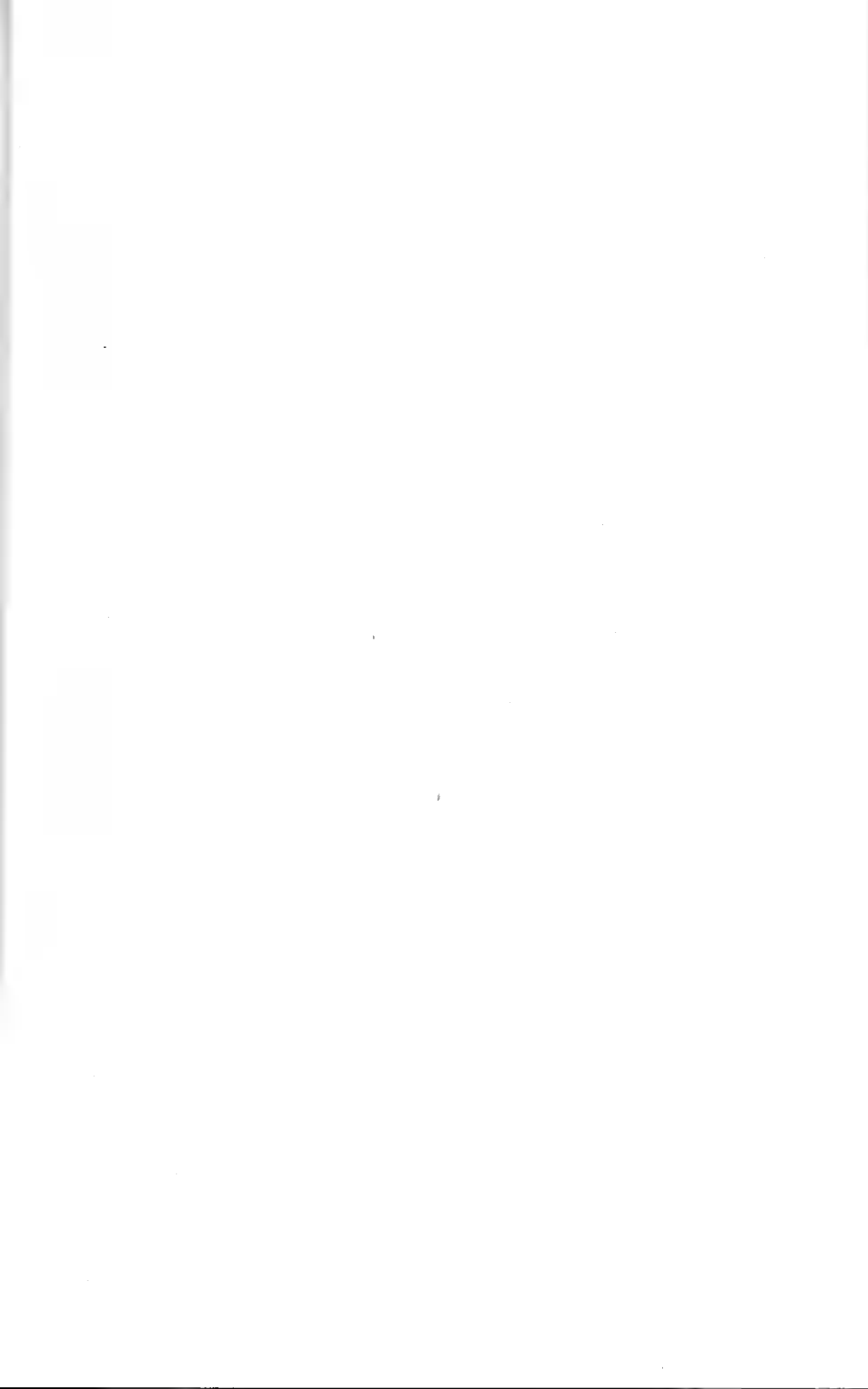
“The male has the upper parts Prussian blue, brightening and inclining to ultramarine upon the sides of the forehead over the eyes, on the shoulder of the wing, and on the rump; lower parts white, confined to a narrow streak on the throat and fore-neck, but the flanks bright ferruginous; bill blackish, and legs dark brown. The female has the upper parts uniform brown, with a trace of blue on the shoulder of the wing, a supercilium greyish-blue posteriorly, and russet margins on the tertiaries; tail blue as in the male, the rump lighter and more greyish-blue; middle of the belly, lower-tail covers, and medial line of throat, white; the flanks ferruginous as in the other sex. Inhabits Himalaya, from Missouri and Simla to Darjeeling.” — *Blyth.*

Total length, 5.2 or 3; bill to gape, 4; wing, 3.2; tarsus, 8¼.

We may remark, that Mr. Blyth's supposition that the female of this bird may be Professor Jameson's *Erythaca tytleri* is incorrect. The bird in the Edinburgh collection so labelled, is *Muscicapa parva*, or a nearly allied species.



Spizella monticola





Megalaima capistratus, Eyton.

Jan. 1850.

ILLUSTRATIONS OF ORNITHOLOGY.

MEGALAIMA CAPISTRATUS, EYTON.

RECEIVED from Mr. Eyton for illustration. The locality marked "unknown."

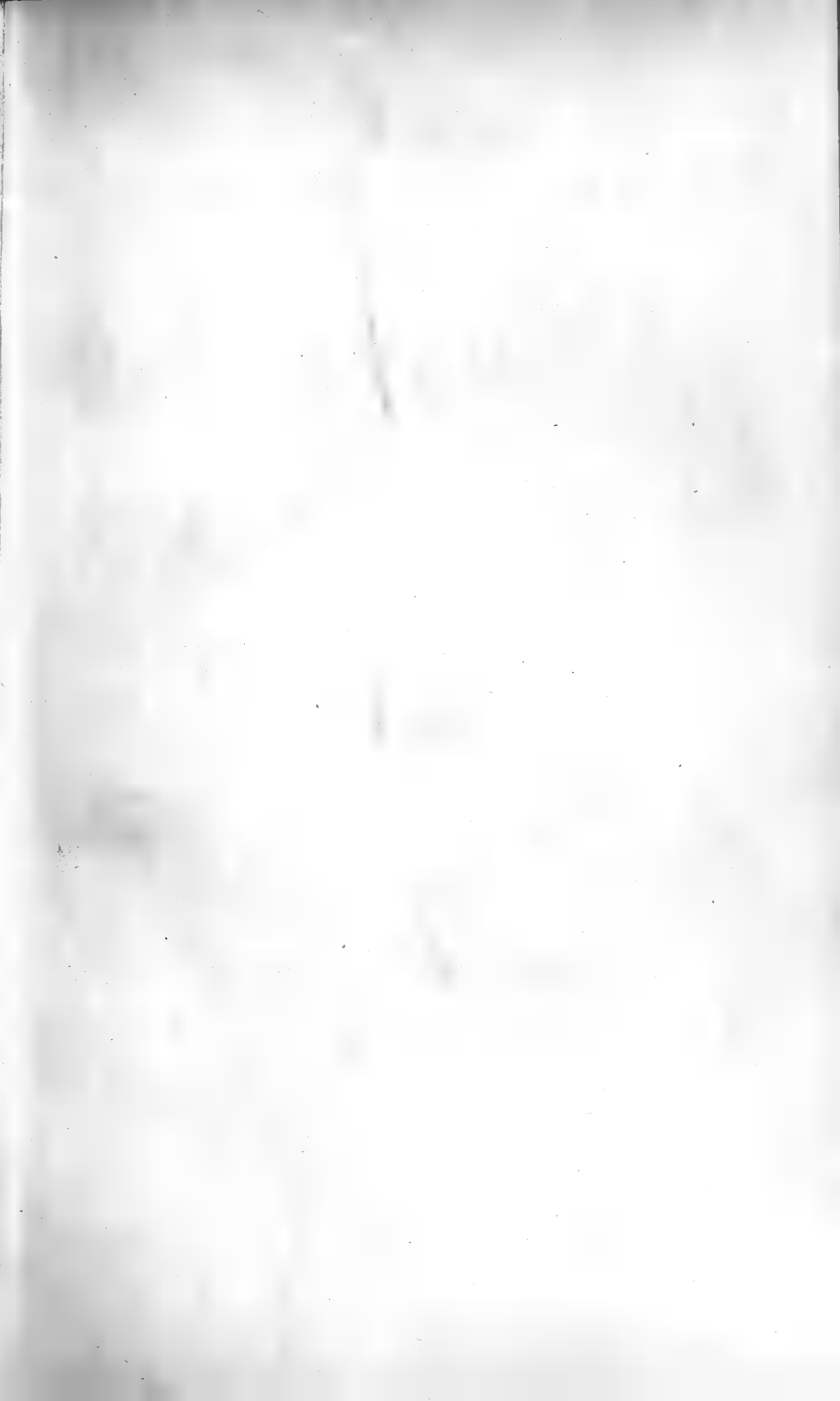
Above, forehead before the eyes and over the nostrils, black; a streak above the eyes, cheeks, and auriculars, pale indigo, which also tips some of the last feathers of the black forehead; the crown and nape forming a narrow collar on the sides of the neck, and almost meeting the gorget, shining orange yellow, slightly interspersed with yellowish-green, into which colour it shades on the back rump, greater part of the wings, and middle tail-feathers: quills and secondaries, blackish-brown; outer webs edged with yellowish-green, inner with very pale yellowish-brown; tail, greenish-brown; *beneath*, the chin black; throat, breast and centre of the belly, clear greenish-yellow, crossed in the centre of the throat with a gorget of orange-yellow, $\frac{1}{4}$ broad in the centre, and narrowing to nothing, where it almost reaches the nuchal collar; the belly, vent, and flanks, are pale greenish-yellow, having the centre of each greyish-green; bill greenish-yellow, bluish-black at the base; tarsi and feet blackish-blue.

Entire length, 7.3; bill to forehead 6; to gape, 9; wing, 2.8; tarsi, $6\frac{1}{2}$.

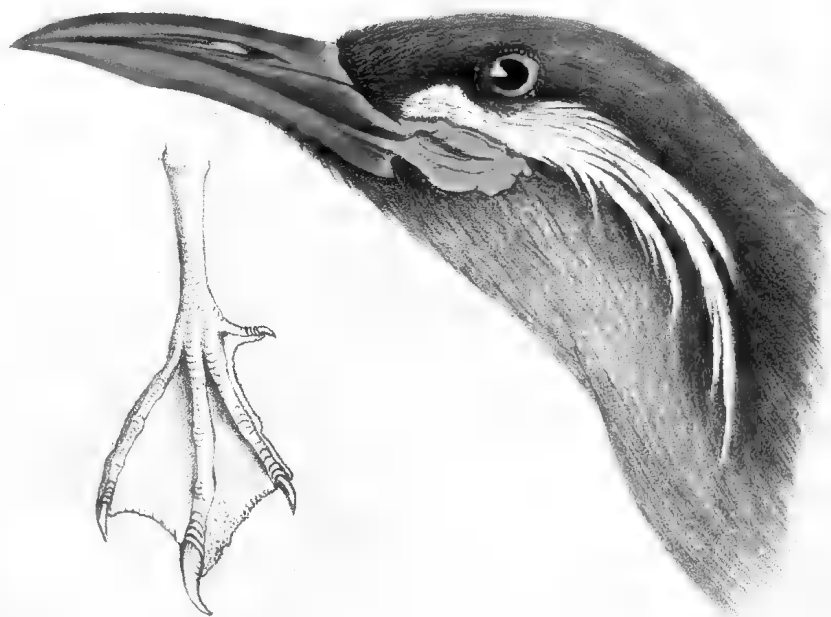
ILLUSTRATIONS OF ORNITHOLOGY.

PYCNOSPHTS GRAMMICEPS, STRICKLAND.

IN our description of this species in the volume for 1849, p. 124-5, we were not aware of its locality. We have now ascertained, that it is a native of Java. The generic name should also be changed as above, the word being derived from *σσφους* not *σσφρους*.



REMARKS
ON
THE *STERNA INCA*, LESSON.



INCA MYSTICALIS, JARDINE.

APRIL, 1850.

GEN. CHARACTERS. — Bill strong, curving to the tip; culmen rounded; mandible with a marked angle; nostrils pervious, nearly central; edges of the mouth with a broad dilatable skin; wings of middle length; tail broad, forked, the outer feathers longest; feet small, hallux connected to the foot by a rudimentary web. Type, *Sterna inca*, Less.

Note.—South America, maritime; breeds on rocky islands; feeds on fish.

The colouring of the Terns and Gulls is mostly plain, chaste and unobtrusive, gray or pure white, deepened in shade by a mixture of black or brown, or warmed by a tint of rose or pink, which fades almost with the life of the bird. The livery put on at the great season of breeding is confined to the head being capped with black or dark brown, generally affording a marked contrast to the usually pure plumage, or it is sometimes reversed in the dull spotting or streaking of the neck and head in winter, which gives place to an unsullied white during the full dress of summer. All ornament, by the elongation or addition of plumes or wattles is departed from, except in the species now before us; and from our want of knowledge of its habits, we are unable to say whether the white plumes arising from the sides of the head are always present or only a seasonal adornment, or if the rudimentary wattles on the lips become then enlarged and more brilliant.

The genera of the Terns recognised in the most modern works are, *Sterna*, Linn., showing perhaps the largest development of wing and tail, with the feet small, and which is illustrated by the ordinary form and habits of the birds of Great Britain and Europe; they feed chiefly upon fish. *Hydrochelidon*, Boie, is the least maritime of all; is of a slender form, but with less development of tail than *Sterna*; the food is in a great part insects or aquatic larva. *Phætusa*, Wagl., we do not possess; but it seems to be only a strong modification of *Sterna*, and less distinct in its form or habits than either of the two first, or of those forms we are about to notice. *Gygis*, Wagl.; the pacific form, remarkable for the attenuation of the bill; organs of flight are well developed; the toes and claws are lengthened, but the connecting webs are only basal. *Anous*, Leach, is the more strictly pelagic type, petrel-like in its feet, and showing thus a form more adapted for a sojourn upon the ocean; in this respect materially contrasting with the other forms where the feet are small and often only partially webbed, giving place to the great development of wing and tail; in this the tail is forked, but is at the same time graduated exteriorly, the outer feathers being shorter than the second or third; they feed chiefly on fish.

In the beautiful bird before us, a bird which in its recent state and full dress must be truly lovely, its rich gray plumage contrasted yet blending with its bill of coral red, and relieved by the pure white stripe on the cheeks of curious elongated feathers, and the

REMARKS ON THE STERNA INCA.

bar of the same colour across the wings, the external structure is scarcely in accordance with any of the generic forms we have mentioned; the bill is of more than the usual strength, and the lips are furnished with an extension of the edges or a rudimentary wattle, of which we have no other example among the Gulls or Terns; the narrow white elongated feathers, springing from the sides of the head, are equally without example. The feet are small and tern-like in size, but very remarkable in the proportion of the toes, and in the hallux being connected to them by a rudimentary membrane. The structure of the tail and feet, nearest to those of the true Terns, *Sterna*, remove it from *Anous* where it has been generally placed. We do not advocate the multiplication of genera, particularly in a group numbering only from eighty to ninety species; but we do think that this bird has claims stronger and more peculiar than some others; and if by any ornithologists it is thought worthy of a subgeneric separation, we have drawn its characters under the title of *Inca*.

We consider it a most interesting form, drawing closer the alliance between the *Laridæ* and *Pelicanidæ*; for wherever we place *Phæton*, whether with the first or last, this bird is the intermediate step; and we may also think that we see the white lengthened feathers, occurring during the breeding season in many of the Cormorants, repeated in the beautiful white plumes of *Inca mysticalis*. Lesson records having met with this species abundantly in February, 1823, on the barren islet of San Lorenzo, at the opening of the immense Bay of Callao.

We are indebted for the specimens, in spirits, of the head and feet which have served for our illustration, to J. M'Lean, Esq., long resident in Peru.

ORNITHOLOGY OF THE BERMUDAS.

THE last mail from Bermuda brought us a note from Lieutenant Wedderburn, enclosing, from Mr. Hurdis, a list of additions to the ornithology of these islands during 1849 and the commencement of the present year. It will be perceived, that the great migration is from the northern continent, and the character essentially North American; and we have no doubt, that such observers as our correspondent, Captain Drummond and Mr. Hurdis, will soon add to the list; even before the note is sent off, *Turdus migratorius* has been shot.

Chaetura pelasgia.—A single specimen was shot on the 13th September, 1849. On the 22d of the same month, an immense flight of *Hirundinidæ* suddenly appeared on the southern shore of these islands, extending from Ireland Island to St. George's; they remained for one day only, leaving however many stragglers, among which, on the 24th, I observed several of the present species.

H. purpurea.—This species was numerous in the flight above mentioned, and had not been observed previous to that visitation.

H. bicolor.—Very abundant in the great flight of *Hirundinidæ*, 1849, though previously unobserved.

Sylvicola pinus.—Many of these birds were observed for the first time on the 27th September, 1849; were last seen early in October.

S. americana.—A single specimen was shot at Ireland Island on the 21st April, 1849, by the Rev. T. B. Tristram, in whose possession it remains.

Mniotilta varia.—An example of this species was shot by Captain Drummond, 42d. R.H., on or about the 9th October last.

Turdus mustelinus.—Several specimens of this thrush were obtained in the neighbourhood of St. George's, about the 9th October,

ORNITHOLOGY OF THE BERMUDAS.

1849; and one in the vicinity of this town (Hamilton) on the 13th of the same month.

Turdus olivaceus (of Giraud; Birds of Long Island; *Merula olivacea* of the New York Fauna).—Two examples only have been obtained, both of which were shot about the same period as the preceding. The term "*solitarius*," in the List of 1849, is an error.

Anthus ludovicianus.—A flock of four was observed near Hamilton, in November, 1848, from which one specimen was killed. This would appear to be an omission in Sir William's list for that year.

Alauda alpestris.—Two examples shot by Captain Drummond, 42d R.H., on the 25th October, 1849.

Emberiza graminea.—An accidental visitor, of which one specimen was obtained on the 25th October, 1849.

Ammodramus palustris.—A single example, shot in Pembroke Marsh, by Lieutenant M'Leod, 42d R.H., on the 3d December, 1849.

Coccyzus ludovicianus.—A female specimen, killed by Captain Drummond, 42d R.H., on the 9th October, 1849.

Gallinula martinica.—A few of these elegant *Gallinules* were observed about the breakwater, at Ireland Island, in April, 1849, one of which was captured alive. This specimen is now in the collection of the Rev. H. B. Tristram, of Castle Eden, near Durham.

Ardea cœrulea.—Two of this species only have been obtained, one in April, 1849, in the plumage of the young, the other an adult specimen, in October following.

Ardea candidissima.—Several of these beautiful Egrets visited Bermuda in September, 1849, previous to which they had not been observed. Some fine specimens were obtained.

Fuligula perspicillata.—A solitary example of this sea-duck was killed in January, 1849.

Mergus cucullatus.—A female specimen of this species was captured off Ireland Island, by the crew of a boat belonging to H.M.S.S. "Scourge," on the 10th January, 1849.

Larus bonaparti.—One of this species of gull was shot by Mr. Wedderburn, on the 27th January, 1849.

ORNITHOLOGY OF THE BERMUDAS.

Puffinus obscurus.—A summer visitant, known to breed on the rocks near the entrance of Castle Harbour. Two specimens, with the egg and young, were obtained by Messrs. Orde and M'Leod, of the 42d R.H., in May last. Supposed to be identical with the "Cohow," so fabulously described in Smith's account of these islands, 1629.

This brings me to the termination of the List for 1849. One new bird has subsequently been added, viz. —

Loxia curvirostra.—A living specimen of which was captured at Ireland Island in January last, and is now in your collection. (Mr. Wedderburn's.)

The occurrence of several of the birds mentioned in the doubtful List of 1849 being considered unquestionable, I will close my ornithological remarks with a few words concerning them.

Falco sparverius.—A very small hawk, supposed to belong to this species, boldly attacked some domestic pigeons under my window for two or three mornings in succession. (More probably *F. columbarius*—W.J.)

Surnia funerea.—Captain Drummond recently observed this bird on the wing within a few yards of him.

Trochilus colubris.—Said to have visited the eastern portion of these islands in considerable numbers, twenty or five-and-twenty years ago. I have not succeeded in obtaining any authentic account of this occurrence.

Ectopistes migratoria.—Supposed to have been observed by Dr. Cole, 20th Regiment, 1846.

E. carolinensis.—A pair of doves, which from the description I received of them, were probably of this species, were observed at Somerset, in October, 1847.

Tringa maritima.—A "Black Sandpiper," supposed to be this species, was seen by Mr. Wedderburn in July, 1848.

Ibis falcinellus.—This unmistakable bird was observed by myself in the marshes near Warwick Church, on the 28th April, 1849.

Phœnicopterus ruber.—This species, in the greyish-white plumage of the first year, was seen by me at Hungry Bay, on the 24th September, 1849.

ORNITHOLOGY OF THE BERMUDAS.

Anser canadensis.—A single goose of this species is reputed to have been shot, a few years ago, in these islands. The occurrence requires confirmation.

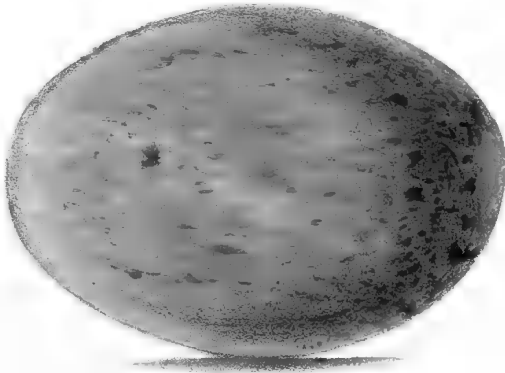
Mergus merganser.—Said to have been killed off Ireland Island in the winter of 1845.

Pelicanus fuscus.—Has been shot at Hungry Bay within the memory of persons now resident upon the spot.

Larus atricilla.—Observed by Mr. Wedderburn, in the Great Sound, in 1847.



ILLUSTRATIONS OF FOREIGN OOLOGY.*



SYPHEOTIDES BENGALENSIS.

APRIL, 1850.

THE Bustards compose a well marked family of birds, intermediate in affinity to the Ostrich and *Rhea* on the one hand, and the *Charadriadæ* on the other. They have exactly the gait and carriage of the Ostriches; and their *Pressirostral*† affinity is indicated by the structure of the skeleton, and even by the mode of flight, by the flavour of the flesh, by the paucity and colouring of the eggs, and by the seasonal changes of plumage which some of the species undergo. We know of no particular *Rasorial* tendencies beyond what are indicated by the mere bulkiness of body, by the compressed and semivertically carried tail (as in the common fowl, as also in the Ostrich), and the habit of *strutting* with expanded wings and tail, as the males of some of the species do in the

* Communicated by E. Blyth, Esq., Calcutta.—W. J.

† If the *Pressirostres* of Cuvier be combined with his *Longirostres*, and thus made to comprise the *Charadriadæ* and *Scolopacidæ* of English systematists, we have then a natural and well defined series, distinct alike from the true *Culivirostres* or *Ardeadæ*, and the restricted *Macrodactyli* or *Rallidæ*. The *Gruidæ*, pertain in our opinion to the first of these series, and so also do the *Palamedeadæ* (comprehending the *Jacanas*). In each series the *egg* and *chick* have a very distinct character.

breeding season.* The Ostrich, however, also enacts something of the kind, as we have personally witnessed; seated on the whole length of his tarsi, he spreads out his plumage and displays his wings finely, at the same time oscillating his long neck from side to side, bringing the head nearly to the ground in a manner somewhat ludicrous to behold. The little Ruffs, too, present an analogous case among the undoubted *Pressirostral gallatores*. As regards the affinity of the Bustards to the Ostriches, the development of the rectum is one of the manifold tokens by which it may be traced.† But we must not overlook the difference in the character of the eggs and of the number laid; though as several female Ostriches are known to lay in the same nest, we are not aware that it has been quite satisfactorily ascertained how many are produced by each individual.

The geographical focus of the Bustard is Africa, and we believe that the only wholly extra African species are the four of India and the single Australian species, which to judge from Mr. Gould's representation of it, would appear to differ very little indeed from the Large Indian Bustard.‡ There is none in either America nor in all South-eastern Asia and its islands; not even in China (so far as hitherto observed);§ and the *O. luzoniensis*, founded on Sonnerat's *Paon sawage de luçon*, is identified by Mr. G. R. Gray, with *O. edwardii* (vel *nigriceps*) of India, and is extremely doubtful as an inhabitant of the Philippines. But should it really prove to exist there, and at the same time to be identical with the Great

* Mr. Elliot thus writes of the large Indian species:—"October 12th, killed a large *Cock Bustard*. When first seen, he was making a curious noise, like a person in pain moaning, which was heard at a considerable distance. I at first thought it proceeded from some one in distress, and rode towards the spot under that impression until I saw the Bustard. He was strutting about on some high ground, ruffling his wings and distending his neck and throat, making the feathers stand out like a ruff. I frequently afterwards heard the moaning, always at the same season;" *Madr. Journ.* xii. 8. Vide also Mr. Hodgson's Account of the Bengal Floriken, in *J. A. S. B.* xvi. 885.

† Vide Todd's *Cyclopædia of Anatomy and Physiology*, Art. *Aves*, by Prof. Owen.

‡ Referring to M. Alfred Malherbe's "Catalogue Raisonné d'Oiseaux de l'Algerie," we find that he only includes the *Tetrax campestris*, whereas we should have looked at least for the *Houbara* in that province.

§ If found in China, so striking a bird as any species of Bustard would surely be depicted in the collections of drawings of Chinese birds by native artists, and of which the species may generally be recognized with facility. We have several times thus seen a magnificent undescribed species of *Bonasa* or Ruffed Grouse represented in these drawings.

Bustard of India, we should then feel scarcely surprised at the Australian species being also the very same.

The great probability, however, is, that the Indian and Australian Bustards are distinct, however closely affined, and that this family has no representative in the Island of Luzon. It is even unknown on the eastern side of the Bay of Bengal (southward at least at Tippera, where *Sypheotidis bengalensis* occurs), though a solitary straggler of the *Sikh* (*Sypheotides aurita*) has been shot at Sandowa in Arakan, as noticed in the "Bengal Sporting Magazine" for September, 1835, p. 151. "The Mughls had never seen a bird of the kind before;" and subsequent good observers in that province have never met with a second instance.

As a general rule, we believe the larger species of Bustard have the male about a third larger than the female; *e. g.* *Otis tarda* of Europe, and *Eupodotis edwardii* or the "Great Bustard" of India; and these two birds (and probably the restricted congeners of the latter species), have a remarkable gular bag in the male sex, which in *Eu. edwardii* (according to Mr. Jerdon), "can contain three quarts of water and more." In the smaller species, known as *Floriken*; the males of which, like both sexes of the Golden Plovers, &c., are distinguished by partially black plumage in the breeding season, we believe there is never a gular bag; and the sexes are either alike in size, as in *Tetrax campestris*, or the females are even rather larger, as in the Bengal *Floriken* and *Sikh*, which latter is known as the "Floriken" in Southern India. We have seen specimens of *Tetrax campestris* or the European "Little Bustard," in which the characteristic breeding dress of the male was being replaced by the plainer garb of the other sex; and have witnessed the same change in males of the Bengal *Floriken*, which a friend long kept loose in his garden, but in these the abdomen alone remained black, when in non-breeding costume. Such birds have been erroneously described as *young males*; a mistake the more likely to arise, as all do not undergo their changes at the same season. The sexual difference of plumage of the *Houbaras* we are less acquainted with; but a good observer, to be quoted presently, states, that the sexes of the Indian *Houbara* "are very nearly alike."

The Great and Little Bustards of Europe and Western Asia are distinguished from all others by their much stouter bill and heavier

and more gallinaceous-looking general aspect. They are respectively the types of the two divisions, *Otis* (as restricted) and *Tetrax*, each consisting of but a single known species. The *Houbaras* approximate the same character in the shortness of their tarsi,* but have the weaker and more ostrich-like bill of the rest of the group. Two nearly affined but well distinguished species, respectively inhabit Spain and Northern Africa and North-western India, Afghanistan, and probably Persia; and a third would seem to exist in *O. ruficrista* of Southern Africa: of these the first two are remarkable for the adornment of both sexes, with a showy crest and greatly developed nuchal ruff. The remainder fall under the divisions *Eupodotis*, comprehending the great Bustards of India, Australia, and many in Africa; and *Sypheotides*, comprising the "Floriken" of Africa and India—two seemingly well marked and very recognisable divisions.

India, as we have seen, possesses four species in all; and we will try to rescue from the oblivion of a sporting journal the following notices of them by a late accomplished sportsman, who, unlike so many of his brethren, could write sometimes about animals without ingeniously avoiding to impart the slightest information concerning their habits and history—something better and more interesting to the generality (we hope) of readers than mere records of slaughter.

Of the Great Bustard of India (*Eupodotis edwardii*), this gentleman writes:—"It measures four feet four inches from point of bill to toes, and seven feet ten inches in extent of wings. It has a receptacle or bag to the neck. It is very strong on the wing, and seldom allows any one to approach nearer than 100 yards, when at one bound he raises himself in the air with apparent ease.

"In Hurriana it is called by sportsmen the *Tokdar* or *Tokdhar*, and *Gooraen* by the natives of the country. In other parts it is called *Gugunbher* and *Sohun*, also *Burra Chirath* (i. e. *Charj*). They resort together in the cold weather in flocks of from three to twenty-five; but in the hot winds and rains they separate, pair" (?), "and breed. The female lays two eggs in a nest on a prominent hillock, whence its native name of *Gooraen*."† For

* So also does the *Eupodotis denhami*.

† "Gunga," in *Bengal Sporting Magazine*, September, 1837, p. 144.

further particulars, *vide* Jerdon, in "Madras Journal of Literature and Science," xii. 8. This naturalist states:—"The Bustard breeds most generally about the end of the monsoon, and subsequent cold weather, the female laying one or two eggs; it however varies much in the time of breeding. The egg is of a dark olive colour, with obscure darker blotches. When feeding, it is generally wary and difficult to approach; but during the heat of the day, it lies down either in the long grass or in the shade of some bush, and is then often approached quite close. It usually takes a long flight when once raised, often several miles, and flies with a continual flapping of its wings, never sailing."

Of the Bengal Floriken (*Sypheotides bengalensis*), Mr. Hodgson has given so full and excellent an account in the "Journal of the Asiatic Society of Bengal" (*i. e.* "The Asiatic Society," by precedence of all others of that name), vol. xvi. pp. 884, *et seq.*, that it is hardly necessary to cite what our sporting authority has penned concerning it. He remarks, however, that "these birds are generally met with in patches of long grass cover, and jhoowad jungle in the Gorruckpore *Teraï*, and along the banks of the Gunduck and other rivers in that direction. I have also," he adds, "seen an occasional bird in the Meywar district, about Neemuch, in the direction of Burrasadree. They are very difficult of approach; and when wounded, will run a considerable distance. The surest method of getting within shot of them, is to accompany a native driving a bullock towards the spot, or the syce" (groom) "leading your horse. The former plan, however, is the surest."* It is remarkable, that the males of this species, in their full breeding livery, so adpress the long feathers of the neck constituting the ruff, in their ordinary movements, that its presence would never be suspected, and the neck looks thin and slender like that of an Ostrich. This we have often observed with some surprise, in those which our friend kept in his garden, and which lost much of their timidity, but never became tame or familiar. They were remarkably fond of the large crimson double flowers of a species of *Hibiscus* commonly grown in Indian gardens, and would strip all the bushes off them as high as they could reach. When gallanting before the females, however, the long neck feathers are displayed, and also in their contests; for

* "Bengal Sporting Magazine," June, 1837.

though Mr. Hodgson asserts, that "Even in the season of love, the intercourse of the sexes among adults is quite transitory, and is conducted without any of that jealousy and pugnacity which so eminently distinguish most birds at that period." Our friend above referred to (and who has shot many of these birds) assures us, that he once saw two males fighting desperately, and so eagerly, that upon being disturbed they renewed their conflict at a short distance, which ended by his bagging them both. Mr. Hodgson is also certainly mistaken in his assertion, that the nuptial dress is worn permanently, as we have witnessed the change before described, and the subsequent partial renewal of the breeding livery, which latter was not well developed in captivity, and have likewise observed the fact in the skins of wild specimens.* "The eggs," writes Mr. Hodgson, "are of the size and shape of an ordinary domestic fowl's, but one sensibly larger and more richly coloured than the other. This larger and more highly tinted egg is that of the male young, the smaller and less and richly hued egg that of the female progeny." In general we should say, however, that the adult female is somewhat larger than the male, as the female *Sikh* is constantly. The egg figured we took from the oviduct, and believe it to be what Mr. Hodgson considers as that which would have produced a female. That figured by Mr. Hodgson, however, is smaller and more speckled, and the eggs are described by him to be "about the size of those of a bantam, 2 inches long by $1\frac{1}{2}$ inches broad, and of a sordid stramineous, being very minutely dotted, and more largely blotched and clouded with black, somewhat as in *Lobivanellus goënsis*."

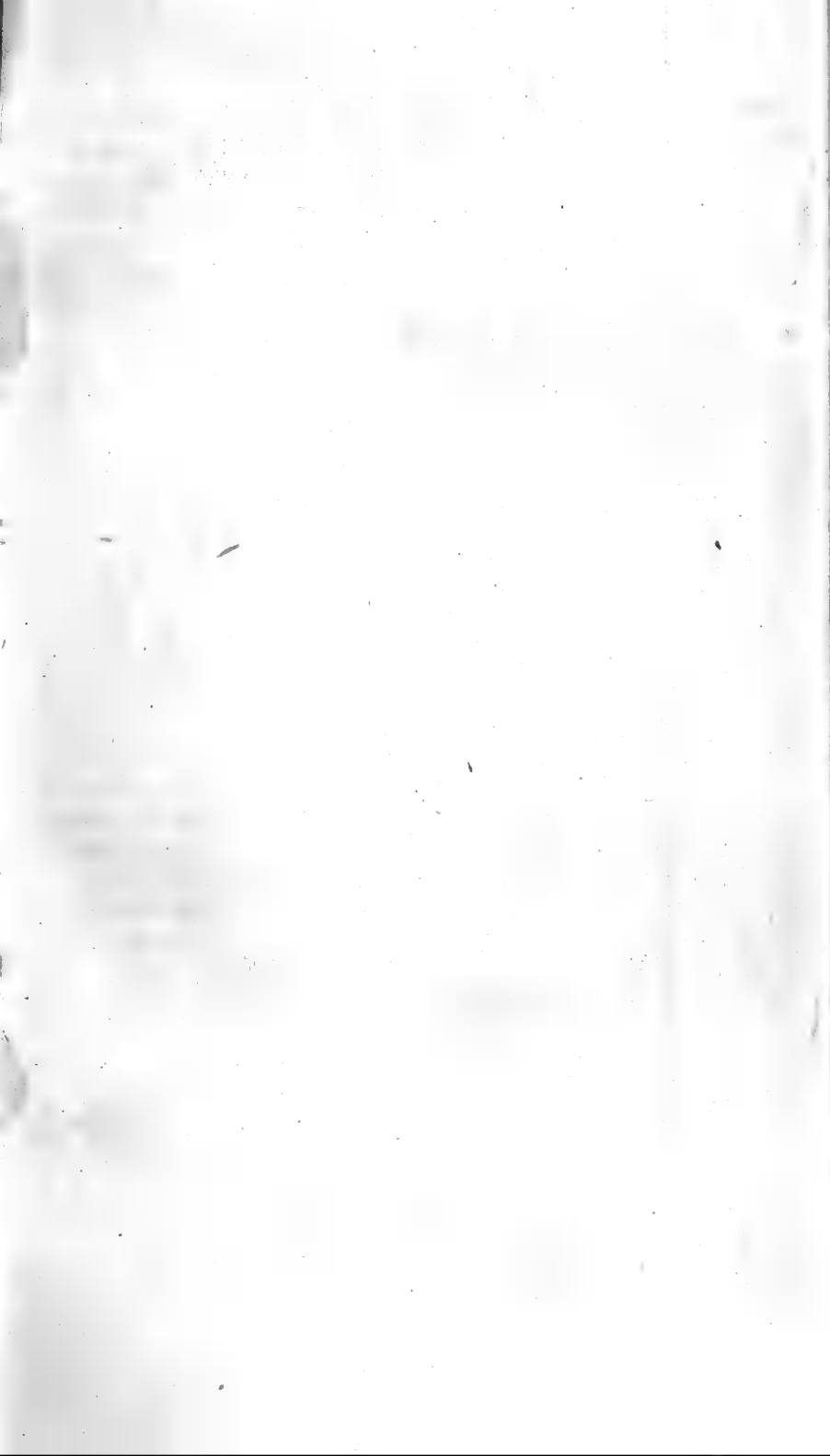
The *Sikh* (*Sypheotides aurita*) or *Floriken* of the sportsmen, of Southern India, is much more extensively distributed over India generally than *S. bengalensis*, being found, we believe, wherever the latter occurs, also over Southern India; and "they are so plentiful sometimes at Guzrat, that they may be bought from the Wagrees alive for a few pice" † (*i. e.* twopence or threepence

* So also, Mr. Jerdon states, of the *Sikh* or Lesser Indian *Floriken*. "I have watched," he writes, "the progressive change in birds at Jalnah, where a few couple always remain and breed, from the garb of the female to the perfect *Black Floriken*" (of Southern Indian sportsmen), "and back again from this, the nuptial plumage, to the more sober livery of the rest of the year."—"*Illustrations of Indian Ornithology*," Art. *Otio aurita*.

† Journ. As. Soc. Beng. vi. 759.

each). For a full account of this species, *vide* Mr. Jerdon's excellent article in his "Illustrations of Indian Ornithology," from which we will only quote, that it "lays three or four eggs of a thick stunted ovoid form, very obtuse at the larger end, and of a dark olive colour." Our sporting authority remarks, that "in walking, the *Sikh* carries its head very gracefully, moving it backwards and forwards with each step, the broad head and long thin neck appearing over the grass, gives it much the resemblance of a cobra snake; and no doubt this graceful motion gave rise to the native provincial name of Chulla Churj." Other names cited by him, are, "*Nehla, Newalia, Oorail, and Abluk Chereei.*"

The same writer supplies the only notice we have seen, beyond records of its abundant slaughter in Sindh, &c., of the Indian *Houbara*. "*Hurriana,*" he remarks, "has also its *Floriken*; which, however, is a very different bird from the *Floriken* of the plains of the Ganges, and is, in fact, the" (Indian) "*Houbara* or Ruffled Bustard, so called from the ruff of feathers on each side of the neck, and supposed to be a bird of the very highest flavour. * * * It frequents the same country as" *E. edwardii*, "dry sandy plains, where there is a little grass, and is also found in wheat and grain fields. The native name for it is *Tilaor*. The flesh is exceedingly tender, and so covered with fat, that the skins are with difficulty dried and preserved. For an elaborate account of this species, *vide* Blyth, in *Journ. As. Soc. Beng.* xvi. 786. Captain Thos. Hutton there states of it—"These handsome birds are common on the bare stony plains of Afghanistan, and sometimes occur in small packs of five or six together. They fly heavily and for short distances, soon alighting and running. They remain all the year. The Affghan or *Pushtu* name is *Dugd Moor*."





Monasa flavirostris

Mr. STRICKLAND sends us the descriptions of the four following birds:—

“I am indebted to E. Wilson, Esq., for the loan of several birds which he lately purchased at Paris, with the locality ‘Pérou’ inscribed on the labels. They are all closely allied representatives of Brazilian forms, and I therefore have no doubt that they come from Bolivia, or some other region on the *eastern* slope of the Peruvian Andes. The *west* side of the Andes is inhabited by many peculiar generic forms, indicating a distinct zoological region, and rarely produces species so closely allied to Atlantic American ones as those now before us. Four of these interesting birds I now proceed to describe:”—

MONASA FLAVIROSTRIS, STRICKLAND.

CLOSELY allied to the well known *Monasa tranquilla* of Brazil, but differs in its smaller size, the greener tint of the plumage, and in the beak being yellow instead of red.

Plumage black, with a greenish gloss, becoming obscurely cinereous on the belly; covers of the ulnar portion of the wing white, forming a longitudinal streak when the wing is closed; beak wax-yellow; feet and claws black.

Total length, 9.5; beak to front, 1.2; to gape, 1.4; wing, 4.2; medial rectrices, 4.2; external, 3.7; tarsus, 7; middle toe and claw, 11½.

Inhabits Peru.

TODIROSTRUM CHRYSOCROTAPHUM, STRICKLAND.

(Upper Figure.)

A TYPICAL *Todirostrum* with a large broad beak.

Crown and hind head glossy black; lores pure white, over the eye a streak of bright yellow expanding on the temples; a black streak from the gape extending over the ears; back yellow-olive; lesser wing-covers glossy black; middle and greater covers, and all the remiges and rectrices, black, margined externally with yellow; chin whitish; lower parts and under wing-covers, pure yellow; beak and legs fuscous.

Total length, 3.6; beak to front, 5; to gape, 6; height, 1½; breadth, 2½; wing, 1.7; medial rectrices, 1.1; external, 9; tarsus, 6; middle toe and claw, 5; hind toe, 4.

Inhabits Peru.

EUPHONIA BICOLOR, STRICKLAND.

THE species of *Euphonia*, which is most nearly allied to this, is the *E. pectoralis* (Lath.), (*E. rufiventris*, Licht.) of Brazil; which however differs in the black of the throat extending over the upper breast also, and in the lower parts being deep and uniform chestnut, abruptly contrasting with the patch of vivid yellow on the sides of the breast.

Whole head, throat, back, wings and tail, deep blue-black, with a gloss of violet, except the primaries and some of the external secondaries, which are fuscous, margined externally with yellowish-olive; inner webs of remiges margined with white; lower wing-covers pale yellow; sides of breast bright yellow, passing gradually into orange-yellow on the middle of the breast and whole lower parts; tibiæ blackish, tipped with yellowish; beak and legs black.

Total length, 4.3; beak to front, 4; to gape, 5; wing, 2.3; medial and external rectrices, 1.6; tarsus, 6; middle toe, 6; hind toe, 5.

Inhabits Peru.



Toderrostrum chrysocrotaphum

Euphonia bicolor



TARSIGER CHRYSÆUS, HODGSON.

Tarsiger chrysæus, *Hodgs.* in Proc. Zool. Soc. pt. 13, p. 28; Ann. Nat. Hist. vol. xvi. p. 199. — *Sericornis chrysæa*, *Blyth*, in Journ. As. Soc. Beng. vol. xiv. p. 549. — *Nemura chrysæa*, *Gray*, Gen. Birds, sp. 2.

THIS bird is thus described by Mr. Blyth, to whom we are indebted for the drawings from which the plate is taken.

“♂. Whole under parts, shoulder of wing, more or less of the scapulars, rump, and basal three-fourths of all but the middle pair of rectrices, brilliant yellow, the last being also yellow at base, and there is a narrow supercilium of the same; rest of tail, lores, and ear-covers, black; alars and their larger covers, blackish, narrowly edged with dull yellowish; head and back, dusky olive, with dull yellowish-green margins to the feathers; beak, dark above, pale below; legs, pale.

“♀. Upper parts uniform dark greenish-olive, with merely a more yellowish shade over the rump; upper parts sullied yellow; tail, dusky olive, marked as in the ♂, but with considerably duller yellow.

“Young of the year spotted above like a young robin.

“Length, 5.2; wing, 2.7; tail, 2.2; external rectrices, 2; beak to gape, 7; tarsus, i. i.

“Mr. Hodgson informs us, that this bird inhabits the central hills of the Himalaya; is shy, solitary, and bush-loving, constantly descending to the ground from its perch; it feeds and breeds on the ground, making a compact saucer-like nest of moss. Eggs, verditer. In form it comes very close upon *Calliope*, and approaches still nearer to *Cyanecula*, from which its principal structural distinction consists in the more rounded form of its wings and tail, and the somewhat reduced degree of firmness of its plumage; besides which, the yellow colouring is a character of the present group. The wings have the fourth, fifth, and sixth primaries sub-equal and longest, and the first about half their length.”—*E. Blyth*.

XANTHORNUS PROSTHEMELAS, STRICKLAND.

DESCRIPTION.—Head, neck, upper back, throat, breast, wings, upper tail-covers, and tail, deep black; abdomen, vent, lower tail-covers, under wing-covers, lesser wing-covers above, lower back and rump, bright yellow; beak black; base of lower mandible bluish; legs black.

Total length, 7.5; beak to front, 7; to gape, 9; wing, 3.5; medial rectrices, 3.6; external, 2.9; tarsus, 1.

The specimen here figured was procured by Mr. E. Wilson from Central America. A bird from Guatemala, in my own collection, differs in having the lower tail-covers black instead of yellow, and in the yellow colour of the body being of a deeper and more saffron tint; the wing is 5, and the tail 1 longer than in Mr. Wilson's bird. It is probably a more fully developed individual of the same species.

The beak of this bird, as in most of the species of *Xanthornus* (if indeed it be possible to separate that genus from *Icterus*), is slightly curved, and nearly agrees in form with that of *X. chrysocephalus* (Gmel.). I have been unable to identify the species with any of the descriptions to which I have access, but there are two or three Mexican ones described by Wagler in Oken's *Isis* for 1829, with one of which it may possibly be synonymous.—*H. E. Strickland.*

TACHYPHONUS SERRIROSTRIS, STRICKLAND.

THIS species is remarkable for possessing six or seven distinct though rather irregular denticulations, directed forwards as in the *Toucans*, on the medial portion of the margins of both mandibles. This peculiarity of structure might almost justify the formation of a new genus, were it not that the close resemblance of the coloration of this bird to that of *Tachyphonus desmaresti*, and of *T. cristatus*, proves an intimate affinity to exist between these three birds. In *Tachyphonus cristatus* there is a single prominent undulation, almost amounting to a tooth, on the margin of the upper mandible, which leads us to the closely allied genus *Lanio*, where this tooth is still more developed. In the genus *Pyrrhuloxia* also, we find marginal serrations, more or less conspicuous in the different species, so that this structure is by no means anomalous in *Tanagrine* forms.

The genus *Phytotoma*, well known for its serrated mandibles, belongs, there can be no doubt, to the family of *Tanagers*; but it is distinguished from all the other genera, by possessing a double margin to the lower mandible, of which the inner one is serrated, the outer plain.

Front and sides of head, hind neck, upper back, wings, upper tail-covers, and tail, black; proximal portion of lesser wing-covers white; crown yellow; lower back and rump ochre yellow; throat ochre yellow, separated from the breast by a narrow black band; lower parts deep ochre yellow, passing into ferruginous on the breast and middle of the belly; tibiæ black; lower wing-covers and basal part of inner webs of remiges white; beak black; base of lower mandible plumbeous; legs black.

Total length, 6.3; beak to front, 5; to gape, 7; wing, 3; medial retrices, 3; external, 2.8; tarsus, 6.

Inhabits Peru.

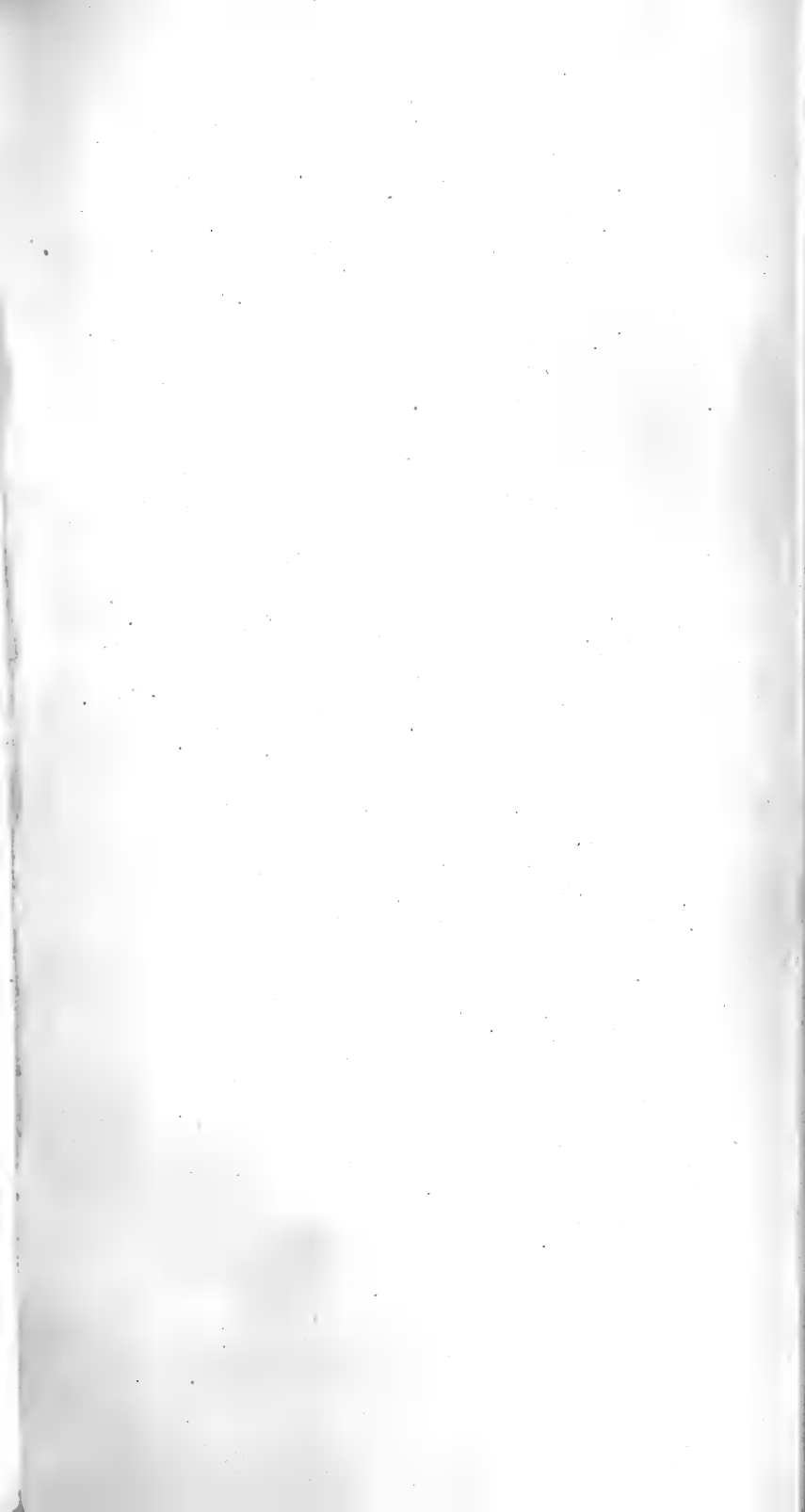
ILLUSTRATIONS OF ORNITHOLOGY.

WE are indebted to a description of this apparently new species of *Calliste*, to P. L. Sclater, Esq., at present residing in Oxford. The figure will be given in a future number.

CALLISTE LUTEOLA, SCLATER.

“ THIS species is nearly allied to *C. cyana*, Linn., from which it may be easily distinguished by the yellow colouring of the back, which in *C. cyana* is green. The colouring of the lower surface nearly resembles *C. cyana*, except the bluish tinge on the breast, which is hardly apparent in the latter species; it is also a quarter of an inch shorter in the wing and altogether smaller. My specimens were purchased without any locality being marked.”

C. supra nitidè lutea, capite supra fulvescente, alis caudâque nigris viridi limbatis, regione paroticâ lorisque atris; infra cœrulescens, ventre rufescente, rostrum superius nigrum, inferius albescens; pedes cinerei.—Long. toto, 4.7½; alæ, 2.7½—Hab.—





Tachyphonus rufiventer, Spix.

TACHYPHONUS RUFIVENTER, SPIX.

Tanagra rufiventer, Spix, Av. Braz. v. 2, pl. 50, f. 1.

THIS species is remarkable for possessing six or seven distinct though rather irregular denticulations, directed forwards as in the *Toucans*, on the medial portion of the margins of both mandibles. This peculiarity of structure might almost justify the formation of a new genus, were it not that the close resemblance of its coloration to that of *Tachyphonus desmaresti*, and of *T. cristatus*, proves an intimate affinity to exist between these three birds. In *Tachyphonus cristatus* there is a single prominent undulation, almost amounting to a tooth, on the margin of the upper mandible, which leads us to the closely allied genus *Lanio*, where this tooth is still more developed. In the genus *Pyrranga* also, we find marginal serrations, more or less conspicuous in the different species, so that this structure is by no means anomalous in *Tanagerine* forms.

The genus *Phytotoma*, well known for its serrated mandibles, belongs, there can be no doubt, to the family of *Tanagers*; but it is distinguished from all the other genera, by possessing a double margin to the lower mandible, of which the inner one is serrated, the outer plain.

The figure of this bird was drawn before I noticed that the species had been already figured by Spix. He, however, omits all notice of the denticulations of the beak.

Front and sides of head, hind neck, upper back, wings, upper tail-covers, and tail, black; proximal portion of lesser wing-covers white; crown yellow; lower back and rump ochre yellow; throat ochre yellow, separated from the breast by a narrow black band; lower parts deep ochre yellow, passing into ferruginous on the breast and middle of the belly; tibiæ black; lower wing-covers and basal part of inner webs of remiges white; beak black; base of lower mandible plumbeous; legs black.

Total length, 6.3; beak to front, 5; to gape, 7; wing, 3; medial rectrices, 3; external, 2.8; tarsus, 6.

The specimen here figured was said to be from Peru. Spix's bird was procured in Brazil.

WE are indebted for a description of this apparently new species of *Calliste*, to P. L. Sclater, Esq., of Corpus Christi College, Oxford.

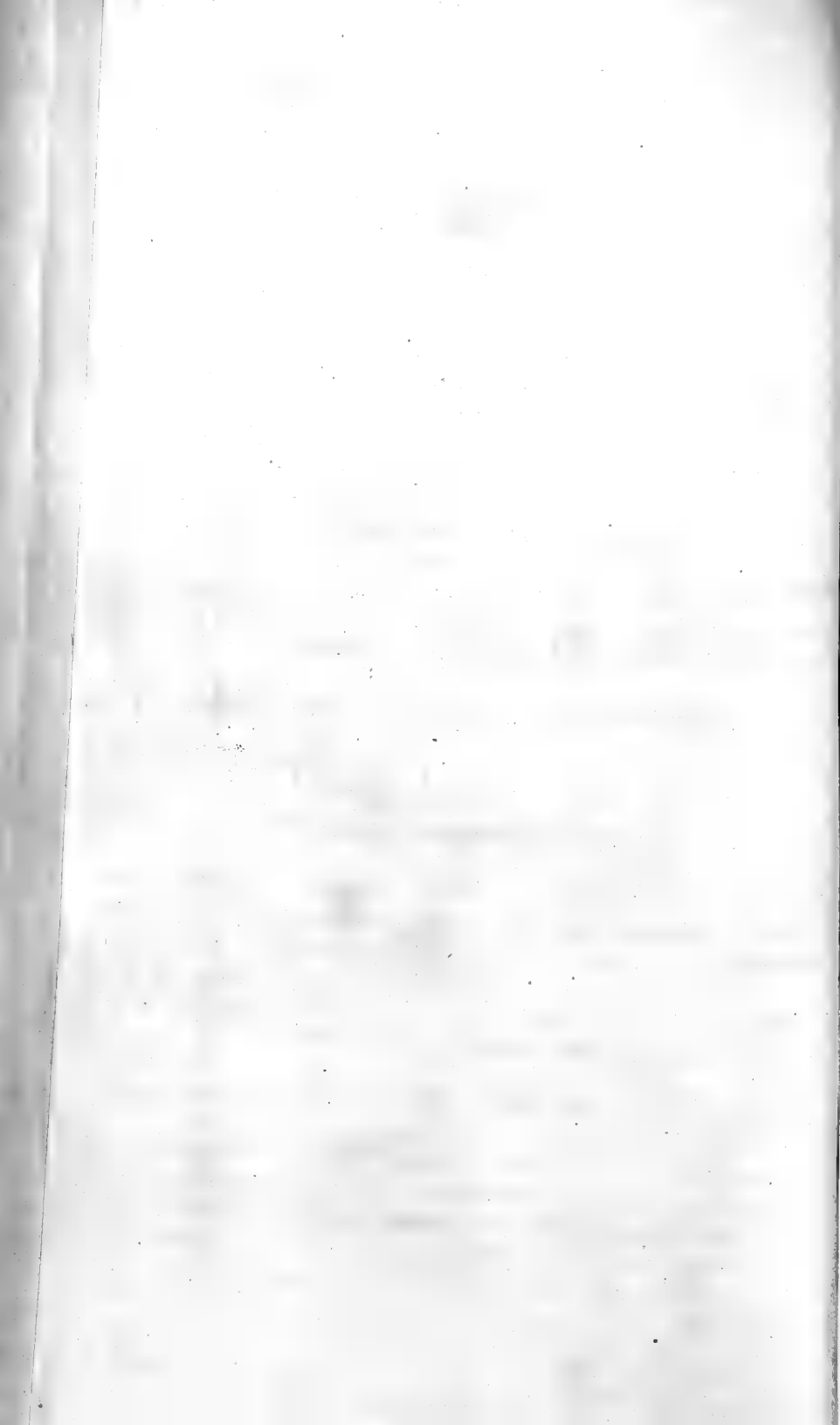
CALLISTE CHRYSNOTA, SCLATER.

C. supra nitidè lutea, capite fulvescente, alis caudâque nigris, viridi limbatis, regione paroticâ lorisque atris; infra cœrulescens, ventre rufescente; rostrum superius nigrum, inferius albescens; pedes cinerei.—*Long. tota, 4.7; alæ, 2.7½.*

“ THIS species is nearly allied to *C. cayana* (Linn.), from which it may be easily distinguished by the yellow colouring of the back, which in *C. cayana* is green. The colouring of the lower surface nearly resembles *C. cayana*, except the bluish tinge on the breast, which is hardly apparent in the latter species; it is also a quarter of an inch shorter in the wing and altogether smaller. My specimens were purchased without any locality being marked; but from the mode in which the skins are prepared, I believe them to be from Cayenne. Mr. Strickland has also a skin of this bird, and there is one in the British Museum.



Calliste chrysomota, Schater.



MONOGRAPH OF THE FALCONIDÆ,

SYSTEMATICALLY ARRANGED BY

DR. T. T. KAUP.*

IV. ORDO ICHTHYORNITHES.

A. Suborder ACCIPITRES, *Linn.*

THE nostrils are situate in a cere, the upper mandible curved and hanging down over the under; the toes not webbed, with long curved claws. There exist five families—

I. Falconidæ. II. Strigidæ. III. Gypogeranidæ. IV. Gypaëtidæ. V. Vulturidæ.

I. Family FALCONIDÆ. *FALCO. Linn.*

The eyes sideways; the toes never feathered; middle toe never thrice as short as the tarsus; cere naked or visible through the plumage; head and neck feathered.

A. Subfamily FALCONINÆ.

1. *Hiërax.* 2. *Tinnunculus.* 3. *Harpagus.* 4. *Falco.* 5. *Ieracidea.*

In this subfamily the typical genus is *Hiërax*, with the largest and roundest head, with the largest brain; the socket of the eye nearly closed, and the nostrils bored in the nasal bones.

* Continued from p. 121-34 of 1849.

I. GENUS HIËRAX, VIGORS.

Two teeth on each side of the bill; tarsus short, covered with irregular scales; size of *Coccothraustes*. The *Psittacine* or true *Falconine* type. East India.

1. *H. coerulescens*, Vig.; *F. coerulescens*, Linn.; Temm. pl. col. 97; Edw. t. 108. *F. bengalensis*, Briss.; *F. fringillarius*, Drap.; *F. malayensis*, Strick.—Band over the ear white; wings and tail with white spots. Java, Borneo.

1. *a. H. entolmus*, Hodgson.—Band over the ear and occiput white. Nepaul.

2. *H. erythrogenys*, Vig. (♂); *F. sericeus*, Kittl. (♀) Vogel.—Wings and tail without bands and spots.—Island of Luçon, Manilla.

II. GENUS TINNUNCULUS, VIEILL.

One tooth on the bill; tarsus short, covered with irregular scales; toes short with transverse scales; the exterior toe as long as the interior; the first or the first and second quills, near the tip on the inner web, emarginated. The swallow or *Milvine* type.

a. Subgenus *Polihierax*, Kaup.—The wings very short, not reaching to half of the tail; the first and second quills obtuse, emarginated. The *Falconine* type.

1. *T. semitorquatus*, Kp.; *F. semitorquatus*, A. Smith, Ill. of S. Af. Zool. ♂ and ♀.—The wings with white spots on the exterior web. S. Africa.

b. Subgenus *Erythropus*, Brehm.—The secondaries very short, shorter than the quills; only the first quill emarginated. The *Milvine* type.

2. *T. vespertinus*, Kp.; *F. vespertinus*, Linn.; *rufipes*, Naum. tab. 28, pl. enl. 43, i.—The claws whitish-yellow; cere and feet red, rarely yellow. Asia, Africa, Europe.

c. Subgenus *Pœcilornis*, Kp.—Wings only reaching half the length of the tail; the secondaries longer than the quills; the first and second quills emarginated; occiput with a variegated colouring. The *Accipitrine* type.

3. *T. sparverius*, *F. sparverius*, Linn.; Wils. Am. Orn. t. 32, f. 1, ♂; t. 16, fig. 1, ♀; *F. gracilis*, *isabellinus*, and *cinnamominus*, Swains. — The lesser wing-covers spotted with black. N. America.

3. a. *T. sparveroides*, Kp.; *F. sparveroides*, Vig. — The lesser wing-covers without black spots. Cuba.

d. Subgenus *Tichornis*, Kp. — The wings very long; the secondaries longer than the half of the wings; only the first quill emarginated. The *Aquiline* type.

4. *T. cenchris*, Frisch., Naum. t. 29; *F. cenchris*, Fr., Naum.; *tinnunculoides*, Schinz. and Temm.; *xanthonyx*, Natterer. — The claws yellowish, the colouring like *T. alaudarius*. S. Europe, Africa, Asia.

e. Subgenus *Tinnunculus*, Kp. — The secondaries about as long as the half of the wings; the first and second quills emarginated; occiput without a variegated colouring. The *Buteonine* type.

5. *T. alaudarius*; *F. tinnunculus*, Linn.; Naum. 30, pl. enl. 401, 47 i.; *interstinctus*, M'Clell. Proc. 1839, 154. — Beneath, light rufous, with round black spots. Europe, Africa, Asia.

6. *T. cenchroides*, Kp.; *F. cenchroides*, Vig. and Horsf.; Gould Birds of Austr. — The inner wing-covers pure white. Australia.

7. *T. punctatus*, Kp.; *F. punctatus*, Cuv.; Temm. pl. col. 45. — The wings only reaching to the half of the tail. Madagascar.

8. *T. rupicolus*, Kp.; *F. rupicolus*, Daud., Vaill. 35; *F. capensis*, Shaw; *F. rufescens*, Swains. — Entirely dark rufous, with black spots. S. Africa.

9. *T. rupicoloides*, Kp.; *F. rupicoloides*, A. Smith, Ill. of S. Af. Zool. — Wings, 11"; tarsus, 2"; middle toe, 1" 10". — S. Africa.

III. GENUS HARPAGUS, VIG.

Two large and distinct teeth on the upper mandible; tarsus and toes with broad transverse scales; wings very short, very like a *Nisus* or *Accipiter*. The *Accipitrine* type. S. America.

1. *H. diodon*; *Falco diodon*, Temm. pl. col. 198; *Bidens femoralis*, Spix; *Diodon brasiliensis*, Less. — The inner wing-covers and the tibial feathers rufous.

MONOGRAPH OF THE FALCONIDÆ,

2. *H. bidentatus*; *F. bidentatus*, Lath.; Temm. pl. col. 28, adult, 228, young; *Bidens rufiventer et albiventer*, Spix, t. vi. vii. — Adult, beneath rufous.

IV. GENUS FALCO.

One distinct and large tooth on the upper mandible; the toes long, and the exterior longer than the interior; the tarsus with irregular scales; the first or the first and second quills emarginated. The *Aquiline* type. Cosmopolite.

a. Subgenus *Æsalon*, Kp.—Little falcons with short wings; the first and second quills emarginated. The *Falconine* type.

1. *F. æsalon*, Gmel.; pl. enl. 44 f., Naum. 2; *F. regulus*, Pall.—Beneath, pale rufous, with dark-brown longitudinal spots; tail with 6–7 bars. Europe, Asia, Africa.

2. *F. columbarius*, Linn., Wils. 15.3.—Beneath, more rufous, with dark brown longitudinal spots; tail with four bars. N. America.

3. *F. chiquera*, Daud., Vaill. 30; Gould, Birds of Himal.; *F. ruficollis*, Sw. West Afr. Birds, pl. 2.—The upper plumage dark cinereous throughout, with distinct blackish bands. Africa, Asia.

4. *F. femoralis*, Temm. pl. col. 12, i. 343; *F. aurantius*, Lath. Ind. var. *γ*.—The breast black, with fine white bands. S. America.

5. *F. tibialis*, Shaw; Daud., Vaill. 29 (Normal habit); *F. concolor*, Temm. pl. col. 330, Swains. W. Afr. Birds, pl. 3; *F. ardoisiaceus*, Vieill. (cinereous var.)—*a.* Normal habit; beneath, rufous, with oblong spots; the tibial feathers black-brown.—*b.* Cinereous var., entirely cinereous, with black shaft-stripes. W. Africa.

b. Subgenus *Hypotriorchis* (part Boie), Kp.—Little falcons with very long wings and very short secondaries; only the first quill emarginated. The *Milvine* type.

6. *F. severus*, Horsf., Linn. Tr. xiii. 135; *F. aldrovandi*, Reinw. Temm. pl. col. 128.—Beneath, rufous, young with round black spots. Asia.

7. *F. subbuteo*, Linn.; pl. enl. 432, Naum. 26.—Two white spots on the occiput; breast and belly white, black spotted; wings and tail banded. Europe, Asia, South and N. Africa.

8. *F. aurantius*, Lath.; *F. rufigularis*, Daud.; *F. deiroleucus*, Temm. ♀, 348.—Breast and belly black with white fine bars. S. America.

9. *F. frontatus*, Gould, Birds of Austr.—Breast and belly rufous, with dark shaft-spots and black shafts. Australia.

10. *F. eleonoreæ*, Gené., Mem. acc. Tor. 1840, t. 2, p. 41, Ch. Bonap. Ic. d. Faun.; *F. arcadicus*, Linderm. Isis, 1843; *F. concolor*, Temm. (Text.)—Wings without bands. The normal habit like *F. subbuteo*; the cinereous var. like *F. concolor*; var. of *F. tibialis*. Africa, S. Europe.

c. Subgenus, *Gennaia*, Kp. — Large falcons with short wings; the first and second quills emarginated; middle toe as long as the tarsus or shorter. The *Accipitrine* type.

11. *F. jagger*, J. Gray, Ill. Ind. Zool.; *F. lugger*, Jerd.; *F. behree*, Lath.—The flanks and the tibial feathers mostly plain brown with clear spots. Asia.

12. *F. hypoleucus*, Gould, Birds of Austr.—Clear cinereous with black shafts. Australia.

13. *F.* ———, *F. lanarius et feldeggii*, Schleg. Abth. 10, 11; *F. tanypterus*, Licht., Mainz. Collection.—Head rufous, without a black frontlet; breast and belly with round spots on the top of each feather. Africa, Dalmatia.

14. *F. cervicalis*, Licht.; *F. biarmicus*, Temm. pl. col.; *F. chiqueroides*, A. Smith.—The rufous head with a black frontlet; occiput with two brown spots. Africa.

15. *F. lanarius*, Pall., Naum. t. 23; *F. cherrug*, T. Gray, Ill. Ind. Zool.—All the tail-feathers with clear rufous spots not extending to the shaft. Asia and Eastern Europe.

d. Subgenus *Falco*. — Large falcons with long wings, short tail and long toes; middle toe longer than the tarsus; only the first quill emarginated. The *Aquiline* type.

16. *F. peregrinator*, Sundev.; *F. sultaneus*, Hodgs.; *F. shaheen*, Jerd. Ill. Orn. pl. 12. — Beneath, dark rufous; the crop-feathers on the tips with rain-drop spots. Asia.

17. *F. peregrinoides*, Temm. pl. col. 479; *F. frontalis*, Daud.; *F. galericulatus*, Shaw, Vaill. 28. — Beneath, white, with a light rufous tint; tarsus 41; middle toe 44 mm. long. Africa.

18. *F. peregrinus*, Gmel.; pl. enl. 430, Naum. t. adult.—Breast

MONOGRAPH OF THE FALCONIDÆ,

and belly, the tibial and the under tail-covers black-banded. Europe, Africa, Asia.

19. *F. anatum*, Bonap.; *peregrinus*, Wils. t. 76.—The upper parts dark brown; beneath, rufous, with oblong spots like a young *F. peregrinus*. N. America.

20. *F. melanogenys*, Gould, Birds of Austr. Australia.

e. Subgenus, *Hierofalco*, Cuv.—The largest falcons with the longest bill, the tip of the wings not reaching to the end of the long tail; toes long; the first and second quill emarginated. The *Buteonine* type.

21. *F. gyrfalco*, Linn.; pl. enl. 210, Naum. t. 21, 22.—The total colour white. N. Europe, N. America.

22. *F. subniger*, G. R. Gray, Ann. Nat. Hist. 1842.—The total colour soot-black. Australia.

V. GENUS IERACIDEA, GOULD.

One tooth on the upper mandible; the tarsus long, with large irregular scales, and $1\frac{1}{2}$ –2 as long as the middle toe; the toes with broad regular transverse scales; 1–3 quills emarginated. The *Buteonine* type. Australia.

1. *T. berigora*, Gould; *F. berigora et occidentalis*, Gould; *F. berigora*, Vig. and Horsf.—The brown tail with sixteen narrow rufous bars.

2. *T. novæ zeelandiæ*, Kp.; *F. novæ zeelandiæ*, Lath., Gmel. Forst. Ic. ined. t. 38. *F. australis*, Homb. and Jacq.—The tail with eleven small whitish bars not reaching to the shaft.

B. Subfamily MILVINÆ.

- I. Genus *Ictinia*. II. *NAUCLERUS*. III. *Circus*. IV. *Elanus*.
V. *Milvus*.

Nauclerus is the typical genus in this subfamily, and represents the swallow type with very short secondaries, very long quills, swallow tail, and very short feet and toes.

I. GENUS ICTINIA, VIEILL.

The bill like *Falco*, with a tooth on the upper mandible, and a fine emargination on the under mandible; the tail a little forked; the secondaries a little shorter than the half of the wings; the first and second quill emarginated; hind toe with a broad sole. The *Falconine* type. America.

1. *Ictinia mississippiensis*; *F. mississippiensis*, Wils. iii. 25, 1; *I. ophiophaga*, Vieill., Gal. t. 1 f.; *Milvus cenchrus*, Vieill.—The tail without bars.

2. *Ictinia plumbea*, Vieill; *F. plumbea*, Gmel., Spix 86, adult. Temm. pl. col. 180, young.—The tail with white bars.

II. GENUS NAUCLERUS, VIG.

The secondaries much shorter than the half of the wings; feet and toes very short; the tail much forked, and the first feather more than double the length of the middle feather. The swallow or true *Milvine* type.

a. Subgenus *Chelidopteryx*, Kp. — A tooth on the upper mandible and a fine emargination on the under mandible. The *Falconine* type.

1. *N. riocourii*, Vig.; *Elanoides riocourii*, Vieill., Gal. t. 17, Temm. pl. col. 85.—Light ash coloured. Senegal.

d. Subgenus *Nauclerus*, Kp. — Without a tooth and an emargination on the bill. The *Aquiline* type.

2. *N. furcatus*, Vig.; *F. furcatus*, Linn., Wils. 51, 2.—White, with black wings and tail. America.

The Subgenera, *b. c. e.* are not discovered.

III. GENUS CIRCUS, ANTIQ. LACEP.

The middle toe one half shorter than the tarsus; tarsus and toes with regular transverse scales. The *Accipitrine* or *Grallatorial* type.

MONOGRAPH OF THE FALCONIDÆ,

a. Subgenus *Strigiceps* (part) Bonap. — The secondaries longer than the quills; the quills do not extend to the tip of the tail; 1-4 quills emarginated; bill slender as *Spilocircus* and *Circus*. The *Falconine* type.

1. *Circus cyaneus*, G. Gray; *F. cyaneus*, Linn.; *pygargus*, Linn., Naum. t. 39, 1, (♂) 2, (♀) 38, 2, (♂ young). — ♂ ash coloured, with white upper tail-covers, breast, belly, tibial, and under tail-covers. Europe, Africa, Asia.

1. a. *C. uliginosus*; *F. uliginosus*, Gmel., Wils. 51-2, young, Bonap. Am. Orn. t. 8, adult. — Very like *C. cyaneus*, but the young bird is beneath rufous, without distinct spots. It is a subspecies, climatic variety, or a race of *C. cyaneus*.

2. *C. melanoleucus*, Vieill.; *F. melanoleucus*, Gmel., Vail. 32. — ♂ Head, body above, parts of the wings and crop, black. Asia.

3. *C. acoli*, Vieill.; *F. acoli*, Daud., Vail. 33. — ♂ The wings very short, extending to half the length of the tail; breast and beneath with rufous bars. S. Africa.

4. *C. maurus*, G. Gray; *F. maurus*, Temm. pl. col. 461; A. Smith, Ill. of S. Afr. Zool. t. 58; *C. ater*, Vieill. — The total colour black or black brown. S. Africa.

b. Subgenus *Glaucopteryx*, Kp. — The secondaries shorter than half of the whole wings; 1-3 quills emarginated. The *Milvine* or *Nauclerus* type.

5. *C. cinerascens*, G. Gray; *F. cinerascens*, Mont., Naum. t. 40, fig. 1 and fig. 2; ♂ middle age, fig. 3; ♀ young; *C. montagui*, Vieill., Gal. pl. 13. — With a black band over the quills. Europe, Africa.

6. *C. pallidus*, Syk. Proc. 11, 80, 1830; *C. swainsonii*, A. Smith, Ill. of S. Af. Zool. t. 43-44; ♂ ad.; ♂ middle age; ♀ young; *C. dalmatinus*, Rüpp., Mus. Senk., vol. ii. 1837. — Without a band over the quills. Asia, Africa, Dalmatia.

c. Subgenus *Spilocircus*, Kp. — The tibia and tarsus very long; the secondaries longer than the quills which do not extend to the tip of the tail; 1-4 quills emarginated; the feathers of the body with white round spots; the bill stronger than the bill of the *Strigiceps* and *Glaucopteryx*. The true *Accipitrine* type.

7. *C. jardini*, Gould, Birds of Austr. x. 3. — Beneath, rufous, with white spots. Australia.

d. Subgenus *Spiziacircus*, Kp. — The secondaries longer than the

half of the quills, which are longer than the tip of the tail; 1-5 quills emarginated. The *Aquiline* type. S. America.

8. *C. macropterus*, Vieill., Enc. p. 1215; *C. albicollis*, Vieill., Enc. 1214, young; *F. palustris*, Pr. Max.; Temm. pl. col. 22, ad.; *C. superciliosus*, Less.—The tarsus 78-115; mm. long.

9. *C. histrionicus*, Kp.; *F. histrionicus*, Quoy. and Gaim., Voy. de la Uran. Ois. 15, 16; *C. cinereus*, Vieill., Azara 32.—The tarsus 62-69 mm. long; the tail with four bands.

e. Subgenus *Circus*, Bonap.—The bill longer, larger, more horizontal, and the toes longer; 1-4 quills emarginated. The *Buteonine* type.

10. *C. spilonotus*, Kp., Coll. of the Zool. Gard.—Head black; wings and tail without bars; beneath, white, with black oblong spots on the crop. Asia.

11. *C. ranivorus*, Vieill.; *F. ranivorus*, Daud., Vaill. 23.—The wings and tail with bands. S. Africa.

12. *C. æruginosus*, G. Gray; *F. æruginosus*, Linn.; pl. enl. 460, 424; *F. rufus*, Gmel. Naum. t. 37, 1 ♂, 2 ♀; 38, 1 ♂ young.—The wings and tail without bands. Europe, Asia, Africa.

13. *C. assimilis*, Jard. and Selby, Ill. Orn.—The tarsus 94-100; middle toe, 39-44 mm. long. Australia.

IV. GENUS ELANUS, SAV.

The claws round; the tarsus with small scales. Cosmopolite. The *Aquiline* type.

a. Subgenus *Gampsonyx*, Vig.—The tip of the wings extends to the half of the tail; only the first quill emarginated. The *Falconine* type.

1. *Elanus swainsonii*, Kp.; *Gampsonyx swainsonii*, Vig.; *El. torquatus*, Cuv., Less. Hist. Nat. des Ois. vii. 207.—Size of a thrush; it has analogies with *F. sparverius*. S. America.

♂. Subgenus *Elanus*, Sav.—The wings longer than the short tail; the first and second quill emarginated. The *Milvine* type.

The subgenera *c*, *d*, *e*, are not discovered.

2. *E. melanopterus*, Leach.; *E. cæsius*, Sav.; *F. melanopterus*, Daud., Vaill. 36; *F. vociferus et sonniniensis*, Lath.—The inner

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covers of the wings white; tail 126 mm. long. Africa, Asia, Europe (accidental).

3. *E. axillaris*, G. Gray; *F. axillaris*, Lath.; *Circus axillaris*, Vieill.; *E. melanopterus*, Vig. and Horsf.—The inner covers of the wings white, with 6–7 black feathers; the tail 143–162 mm. long. Australia, Asia.

4. *E. leucurus*, G. Gray; *Milvus leucurus*, Vieill., N. Dict. d'Hist. Nat. n. xx. 563; Azara, 36; *F. dispar*, Temm. pl. col. 319, young; Bonap. Am. Orn. t. 11, 1 ad.—The inner covers of the wings white, with a long black stripe on the quills. America.

5. *E. scriptus*, Gould, Birds of Austr.—The inner covers of the wings white, with a black stripe over the quills and secondaries in figure of a V. Australia.

V. GENUS MILVUS, CUV.

The bill longer, horizontal, and large; the wings very long, at the tip curved like a sabre; 1–5 quills emarginated; tarsus short, covered on the sole with fine scales; the colour is rufous or soot black.

c. Subgenus *Lophoictinia*, Kp.—The bill lengthened and more slender; the nostrils longer than broad; the wings longer than the tip of the tail, which is forked; the emarginations of the quills more obtuse; the tarsus shorter, with small and irregular scales; the toes with 3–4 transverse scales only before the claws. The *Milvine* type.

1. *M. isiurus*, Gould, Birds of Austr. ii. 2.—The interior webs of the quills with black bars. Australia.

d. Subgenus, *Milvus*, Cuv.—The bill larger; the nostrils oval; the wings do not extend to the tip of the more forked tail; the emarginations are more angular and distinct; the slender tarsus and toes with horizontal scales; the sole of the toes with pointed warts. The *Aquiline* type.

2. *M. parasiticus*; *F. parasiticus*, Daud., Vaill. 22; *F. ægyptius*, et *forskahlii*, Gmel.; *F. migrans*, Bodd.—The bill yellow; total plumage soot black. Africa.

3. *M. affinis*, Gould, Birds of Austr. viii. 3; *M. melanogenys*,

Temm. et Schleg. Faun. Jap.—The bill black; head with the bill 60 mm. long; the superior ear-feathers black. Australia, Asia.

4. *Milvus govinda*, Syk., Proc. Zool. Soc. 1839, 155.—The bill black; before the emarginations of the quills pure white; total colour soot black.

5. *M. regalis*, Briss.; *F. milvus*, Linn., Naum. t. xxxi. pl. enl. 422.—The largest species, in adult age with yellow bill and whitish head; before the emargination of the quills and the middle of the little feathers of the wings, pure white; total colour rufous; tail more forked. Europe, Africa.

e. Subgenus *Gypoictinia*, Kp.—The bill twice as long as high; tarsus on the upper half with transverse scales, and on the lower half with fine little scales; the tail as long as the body and not forked; the first portion of the tail hid by the covers. The *Buteonine* or *Vulturine* type.

M. melanosternon, Kp.; *Buteo melanosternon*, Gould, Birds of Austr. ix. 1.—Face, gorge and breast, black; large like a little eagle. It shows analogies with *Helotarsus*, second genus of *Aquilinæ*. Australia.

III. Subfamily ACCIPITRINÆ.

In this subfamily the typical genus is *Geranopus*, which, with the whole subfamily, represents the *Grallatorial* type, because it has the longest legs and the shortest toes. This subfamily exhibits the shortest wings in the greatest number of the species, and shows a banded plumage.

I. *Spiziaëtus*. II. *Nisus*. III. GERANOPUS. IV. *Astur*. V. *Asturina*.

I. GENUS SPIZIAËTUS, VIEILL. (part) KAUP.

The tarsus covered with feathers. The *Falconine* type.

a. Subgenus *Limnaëtus*, Vig.—The secondaries cover up to $\frac{3}{4}$ of the quills; 1-6 quills emarginated. The *Falconine* type.

1. *Sp. cirrhatus*, Kp., G. Gray; *F. cirrhatus*, Will., Gmel.: *F. ceylonensis*, Lath.; *F. calligatus*, Raffl.; *F. limnaëtus*, Horsf.,

Temm. pl. col. 134, ♀ juv.; *F. niveus*, Temm., ♀ juv.; *F. cristatellus*, Temm. pl. col. 282, ♂ ad.; *Nisaëtus pulcher*, *nepalensis* et *pallidus*. Hodgs.; *Morphnus hastatus*, Less.; *Spizaëtus orientalis*, Temm. and Schleg. Fauna Jap., ♂ young. — The adult bird with a black moustache and a central stripe on the chin; the adult male on the breast, belly, legs and under tail-covers, black or brown banded; the young male beneath, white, with black brown longitudinal spots on the tip of each feather.

The adult female coloured very like the young male, but the spots larger and the crest longer. The very young female without a crest, sometimes uniform soot brown (*limnaëtus*), another time more whitish (*niveus*). Asia and its Archipelago.

b. Subgenus *Lophaëtus*, Kp. — The secondaries cover $\frac{2}{3}$ of the quills; bill slender and divided to middle of the eye; 1-5 quill emarginated but not very distinct. The *Milvine* type.

2. *Sp. occipitalis*, G. Gray; *F. occipitalis* et *senegalensis*, Daud., Vaill. t. ii. — The wings and tail pure white. The soft and woolly plumage shows analogies with *Circus*. Africa.

c. Subgenus *Spiziäetus*, Kp. — The secondaries cover $2\frac{1}{2}$ of the quills; bill strong; 1-6 quill very distinctly emarginated. The *Accipitrine* type.

3. *Sp. ornatus*, Vieill.; *F. ornatus* et *maudujiti*, Daud., Vaill. xxvi.; *F. superbus* et *coronatus*, Shaw; *Harpyia braccata*, Spix, f. 3, Azara 23. — Beneath white with black bars; the little feathers of the wings black banded. S. America.

4. *Sp. bellicosus*, Kp.; *F. bellicosus*, Daud., Vaill. Ois. d'Afr. i.; *Aquila bellicosa*, Vieill.; *F. armiger*, Shaw, Smith, Ill. i. 42. — Head with the bill 123 mm. long; beneath white, every feather with a round black spot on the tip. S. Africa.

5. *Sp. coronatus*, Kp.; *F. coronatus*, Linn., A. Smith, Ill. xli. — Head with the bill 106 mm. long; head, neck, and beneath, white. S. Africa.

d. Subgenus *Spiziaster*, Less. — The occiput without a crest; 1-5 quill with a distinct emargination; the secondaries cover half of the quills; middle and hind toes very long; the tail a little forked. The *Aquiline* type.

6. *Sp. atriceps*, Kp.; *F. atricapillus*, Cuv.; Temm. pl. col. 79; *Buteo melanoleucus*, Vieill., Gal. 14. — White, with black lorum and eye region; the occiput black; back and wings black. S. America.

e. Subgenus *Pternura*, Kp.—The tail longer than the body; 1-6 quill slender emarginated. The *Buteonine* type.

7. *Sp. tyrannus*, Kp.; *F. tyrannus*, Pr. Max. pl. col. 73.—Black or black brown, with white tail-covers; the tail 346 mm. long. S. America.

II. GENUS NISUS, CUV. ACCIPITER, BRISS. ET ANGLICOR.

The tarsus is long and slender, with twelve or thirteen indistinct transverse scales before and behind; the external toe longer than the internal. This genus has the smallest forms in the whole subfamily. The *Milvine* type.

a. Subgenus *Hieraspiza*, Kp.—The secondaries cover $\frac{3}{4}$ of the quills; the eye region naked; 1-4 quill emarginated; the inner wings banded, and the tail with three or four bars. The *Falconine* type with the smallest forms.

1. *N. vel. Acc. tinus*, G. Gray; *F. tinus*, Lath.; *Acc. tinus*, Gen. of Birds, with an excellent fig.; *F. superciliosus*, Linn.—Breast and beneath with fine bands. S. America.

2. *N. vel. Acc. minullus*, Cuv.; *F. minullus*, Shaw, Daud., Vaill. xxxiv.—Tail with three white bars, which shine through on the surface; the least upper tail-covers white, black banded, with broad white margin. S. Africa.

3. *N. vel. Acc. virgatus*, Cuv.; *F. virgatus*, Reinw.; Temm. pl. col. 109.—Chin white, with a central black stripe and moustaches. Asia.

b. Subgenus *Tachyspiza*, Kp.—The secondaries cover $2\frac{1}{2}$ of the quills; 1-4 quill not distinctly emarginated; middle toe as long as the scaled part of the tarsus; bill with a circular formed tooth. The *Milvine* type.

4. *N. soloensis*, Kp.; *F. soloensis*, Horsf.; *F. cuculoides*, Temm. pl. col. 110, 119.—The adult bird with black wings; on the upper parts pure white; beneath whitish and wine red. Asia.

c. Subgenus *Scelospiza*, Kp.—Tarsus very long; middle toe short; 1-4 quill emarginated; the inferior part of the wings banded; the tail with four or five bars. The *Accipitrine* type.

5. *N. vel. Acc. francessi*, A. Smith, Ill. of S. Afr.—Tarsus 46-49; middle toe 23-26 mm. long. Madagascar.

d. Subgenus *Nisus*, Kp.—The bill without a circular formed

tooth; 1-5 quill distinctly emarginated; the nostrils covered with bristle-feathers; the interior web of the quill banded, and the tail with 4-6 bars; chin and under tail-covers white; the middle toe very long. The *Aquiline* type. This subgenus shows more than five species, because some species are subspecies, climatic varieties, or races of another species.

6^(a). *Nisus exilis*; *F. exilis*, Temm. pl. col. 496; *N. perspicillaris*, Rüpp. neue Wirbelth, 18, 1, ♀; *Acc. rufiventris*, A. Smith, Ill. S. Af.—Beneath and under wing-covers rufous. Africa.

6^(b). *Nisus fringillarius*; *N. communis*, Cuv.; *F. nisus*, Linn., Naum. t. 19, 20; *Acc. fringillarius*, Briss.—Beneath rufous or blackish banded; the adult female beneath with blackish bars; the male with a tail slightly forked. Europe, N. Africa.

6^(c). *Nisus madagascariensis*, Verreaux, Quart. Journ. S. Afr. Inst., p. 80.—Tail with five, and on the external feathers with seven or eight black bars.

6^(d). *Nisus fuscus*; *F. fuscus*, Gmel.; *F. velox et pennsylvanicus*, Wils. xlv. 1, pl. col. 67, young.—The male very like *fringillarius*, tail slightly forked; the larger female with oblong spots on the lower parts, like a young *Astur palumbarius*. North America.

6^(e). *Nisus vel. Acc. erythronemius*, G. Gray.—Large like *fringillarius*, with rufous tibial feathers; beneath, white; every feather with 3-5 bars, and blackish shafts. Bolivia, British Museum.

7. *Nisus tachiro*, Cuv., Vaill. t. 24, young; *Acc. polyzonus*, A. Smith, Ill. S. Africa ♀; *Astur unduliventer*, Rüpp., neue Wirbelth, t. xvii. 1, ♀, col. 377, young.—Beneath with a great number of bars; tarsus 60-63 mm. long. Africa.

8. *Nisus pileatus*, Cuv.; *F. pileatus*, Pr. Max.; Temm. pl. col. 205, ♂ ad. *F. beskii*, Licht. ♀ young; *F. cooperi*, Bonap. Am. Orn., pl. x. 1, ♀ young.—Tarsus 58-67; middle toe 36-45 mm. long; the adult bird beneath clear ash coloured. S. America, very rare in N. America.

e. Subgenus *Urospizia*, Kp.—The secondaries cover more than $\frac{2}{3}$ of the quills; 1-5 quill emarginated; the tail as long as the body, and with 14-19 small bars; the middle toe shorter than the scaled part of the tarsus. Australia.

9. *Nisus torquatus*, Cuv. xliii. 93.—Size of *N. fringillarius*, tail small, forked, with fourteen or fifteen bars.

10. *N. cruentus*, Kp.; *Astur cruentus*, Gould, Birds of Austr.—Size of *N. pileatus*; tarsus 70–72 mm. long; tail with fifteen bars.

11. *N. approximans*, Kp.; *Astur approximans*, Vig. and Horsf.; *Ast. radiatus et fasciatus*, Vig. and Horsf.; *F. radiatus*, pl. col. 123, young, Gould, Birds of Austr.—Size of a male of *Ast. palumbarius*; tarsus 72–83 mm.; middle toe 36–45 mm. long; tail with 14–19 bars.

III. GENUS GERANOPUS, KAUP.

ISCHNOSCELIS, Strickl. (employed).

The exterior toe shorter than the interior; 1–5 quill emarginated. The *Accipitrine* or *Grallatorial* type.

1. *G. gracilis*, Kp.; *F. gracilis et hemidactylus*, Temm. pl. col. 3, 91.—Slender like *Circus cyaneus*. S. America.

IV. GENUS ASTUR, BECHST.

The tarsus larger, more robust, and the transverse scales more distinct than *Nisus*; the external toe longer than the internal; the bill shorter and more curved than *Austurina*.

a. Subgenus *Lophospizia*, Kp.—Occiput like *Spiziaëtus* with a little crest; the secondaries cover the quills $\frac{3}{4}$; tarsus feathered to the middle; toes before the claws with three or four transverse scales.

1. *A. trivirgatus*, G. Gray; *F. trivirgatus*, pl. col. 303; *Ast. indicus*, Hodgs.—Lower part of the breast, belly, and the tibial feathers with broad bars. This species has analogies with *Sp. cirrhatus*. India and its Archipelago.

b. Subgenus *Micronisus*, G. Gray.—Occiput without a crest; the secondaries cover $\frac{2}{3}$ of the quills; 1–4 quill emarginated; tarsus and toes short; middle toe as long as the scaled part of the tarsus. The *Milvine* type. This subgenus shows analogies with *Nisus*.

2. *A. monogrammicus*, Sw. W. Afr. Birds, t. iv.; *F. monogrammicus*, Temm. pl. col. 314.—Chin with a central longitudinal black

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stripe; tail with the base and band before the tip white; with little scales on the tarsus and toes. W. Africa.

3. *A. rüppellii*, Kp.; *Nisus sphenurus*, Rüpp., Syt. ueb. t. ii. ♂ ad.; *Accipiter brachydactylus*, Swains. W. Afr. Birds, p. 118; *Acc. polyzonoides*, A. Smith, Ill. of S. Af. Africa.

4. *A. gabar*, Kp., Vaill. xxxiii.; *Sparvius niger*, Vieill., Gal. pl. 22, var *nigra*; *F. banksii*, Temm.; *Acc. erythrorhyncha*, Sw. W. Afr. Birds, p. 121.—Cinereous; paler on the chin, throat, and breast; body, thighs, and inner wing-covers, white, with numerous blackish bands; upper tail-covers white. It has in the plumage analogies with *F. musicus (meliërax)*. Africa.

5. *A. badius*, Kp.; *F. badius*, Gmel.; *F. dussumieri*, Temm. pl. col. 308, 336; *F. manilensis*, Mey.—Tarsus 48–57 mm. long; beneath with numerous rufous bands. Asia.

c. Subgenus *Meliërax*, G. Gray.—The middle toe without claws, the third the length of the tarsus. The *Accipitrine* type. It shows analogies with *Geranopus*.

6. *A. musicus*, Kp.; *F. musicus*, Vaill. 2 f. *Nisus polyzonus*, Rüpp. Fauna Abyss. t. xv. 1, ♂.—Tarsus 76–108 mm. long; middle toe 37–48 mm. long. Africa.

d. Subgenus *Astur*, Bechst.—The secondaries cover near $\frac{1}{2}$ of the quills; middle toe a little longer than the scaled part of tarsus. All the species large and robust. The *Aquiline* type.

7. *A. testaceus*, Kp.; *F. testaceus*, var. e. Lath.; *radiatus*, Lath., Gould, Birds of Austr. xiii. 2; *Haliaëtus colei*, Vig. and Horsf., Linn. Tr. xv. 186.—Middle toe 55–69 mm. long; black brown, with rufous margined feathers. Asia, Australia.

8. *A. smithii*, Kp.; *Acc. melanoleucus*, A. Smith, Ill. of S. Af. Zool. 18; *Astur melanoleucus*, Herz. Paul. v. Wurtemb.—Black and white. Africa.

9. *A. palumbarius*, Bechst.; *F. palumbarius*, Linn.; pl. enl. 1408, Naum. 17, 18. The adult bird, beneath, with numerous black bands. Europe, Asia, Africa.

^{9(a)} *A. atricapillus*; *F. atricapillus*, Wils. vi. 52, 3; *regalis*, Temm. pl. col. 495.—A little larger than the European *A. palumbarius*, and beneath with a greater number of bands.

10. *A. uncinatus*, Kp.; *F. uncinatus*, Temm. pl. col. 313; *Buteo harrisii*, Aud.—The little feathers of the wings, the inferior wing-covers, and the tibial feathers, rufous. America.

10^(a). *A. (unicinctus) galapagöensis*; *Craxirex galapagöensis*, Gould.—The small quill-feathers black, a little larger. Falkland Islands and the Strait of Magellan.

e. Subgenus *Leucospiza*, Kp.—With arched cere and very high bill. Middle toe shorter than the scaled part of the tarsus. The *Buteonine* type.

11. *A. novæ hollandiæ*, Vig. and Horsf.; *Falco n. holl.*, Gmel., Gould, Birds of Austr. xii. 1, 2. — White.

11^(a). *A. (n. holl.) raii*, Vig. and Horsf.—Clear gray; beneath white, with banded breast and belly. Australia.

V. GENUS ASTURINA, KAUP.

The bill more straight and elongated; the tarsus with distinct transverse scales; toes short; outer toe a little longer than the inner. All the species peculiar to S. America. The *Buteonine* type in its subfamily.

a. Subgenus *Asturina*, Vieill.—The tarsus short, half feathered; neck without a crest; large like *Buteo*; eye-region more naked. The *Falconine* type.

1. *A. poliogaster*, Kp.; *F. poliogaster*, Natt.; pl. col. 264, ad., 265, young.—Long $16\frac{1}{2}$ – $17\frac{1}{2}$ "; tail with 3-5 white bars.

2. *A. leucorrhœa*, Kp.; *F. leucorrhœus*, Quoy. and Gaim., Uran. pl. 13.—Black, with white tail-covers; tail with 2 bands in the middle.

3. *A. nitida*, Kp.; *F. nitidus*, Lath.; *F. striolatus*, Temm. pl. col. 87 (ad.) 294, young; *Asturina cinerea*, Vieill. Gal. 20; *Astur nitidus*, D'Orbig.—Long 16–17"; tail black with ■ white band; young with 3 above and 5 on the underside.

4. *A. albifrons*, Kp., Mus. Frankfort.—Above black; the front and beneath, pure white.

b. Subgenus *Morphnus* (part), Cuv.—The nostrils high, placed on the cere, and form a slit like *Pernis*; tarsus very high and slender; occiput with a crest, large like an eagle. The *Milvine* type.

5. *A. guianensis*, Kp.; *F. guianensis*, Daud.—Tarsus 91–101 mm. long; it has analogies in the plumage with the *Milvinae* and *Strigidæ*.

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c. Subgenus *Rupornis*, Kp. — Occiput without a crest; tarsus very high; middle toe shorter than the tarsus; tarsus and toes with transverse scales; 1-5 quills emarginated. The *Accipitrine* type.

6. *A. magnirostris*, Kp.; *F. magnirostris*, Gmel.; pl. enl. 464; pl. col. 86, young; *Astur magnirostris*, G. Gray; *F. insectivorus*, Spix, t. viii. L'Indayé Azara, N. 30. — Large like a female *N. fringillarius*.

7. *A. meridionalis*, Kp.; *F. meridionalis*, Lath., Gmel.; *Circus rufulus*, Vieill. Enc. 1216; *F. rutilans*, Licht.; pl. col. 25; *Aquila buson*, Spix, Aves, Br. N. 3; Azara, N. 11. — Large like *Circus æruginosus*; rufous beneath with black bars.

8. *A. urubitinga*, Kp.; *F. urubitinga*, Gmel.; *Aq. urubitinga*, Spix, t. i. ad.; *picta*, Spix, young; pl. col. 55, young; Azara, N. 17, 18, 20. — Tarsus 120-125 mm. long; the adult bird black.

9. *A. æquinoctialis*, Kp.; *F. æquinoctialis*, Lath., young; *F. buson*, Daud., Vaill. 21; *Circaëtus solitarius*, Tchud. i. (ad.) — Tarsus 34-94 mm. long; the adult bird black.

d. Subgenus *Thrasaëtus*, G. Gray. — The bill very large and strong; the nostrils placed under the middle of the cere; tarsus very robust with small scales; claws very strong, and the interior and hind claw greater than the toes; wings short, and the secondaries cover the greatest part of the quills. The *Aquiline* type.

10. *A. harpyia*, Kp.; *Vultur harpyia*, Linn.; *F. destructor*, Daud.; pl. col. 14; *F. imperialis*, *calquin et regalis*, Shaw. — Ash-gray with a black breast-shield.

11. *A. azaræ*, Kp.; *F. coronatus*, Azara, Temm. pl. col. 234; *Haliaëtus unifasciatus*, G. Gray, Brit. Mus. — Beneath ash-gray; tail with a 2" broad terminal band.

e. Subgenus *Leucopternis*, Kp. — Large like *Buteo*; the bill more slender; the wings short, 1-5 quill emarginated; tarsus moderately high; middle toe twice shorter than the tarsus; occiput without a crest; head, neck, and beneath, pure white. The *Buteonine* type.

12. *A. melanops*, Kp.; *F. melanops*, Lath.; pl. col. 105. — Lorum and eye region black; head and neck with black longitudinal stripe; wings very short, not reaching to the upper tail-covers.

13. *A. albicollis*, Kp.; *F. albicollis*, Lath.; *F. picatus*, Shaw. — Tail white, with a 3" broad terminal band; body white.

14. *A. scotoptera*, Kp.; *F. scotopterus*, Pr. Max. Beitr. iii. 204; *F. lacernulatus*, Temm. pl. col. 437. — Wings uniform ash-gray, without a black eye-region; tarsus 78 mm. long.

15. *A. polionotus*, G. Gray; *Buteo melanotus*, Vieill. ? — Tail with a 3" broad terminal band; wings and body dark ash-gray.

IV. Subfamily AQUILINÆ.

Pandion is the typical genus in this subfamily, which with the whole subfamily represents the *Pelicanidæ*, because this genus feeds only on fish, and shows the most curved claws.

I. *Aquila*. II. *Helotarsus*. III. *Circaëtus*. IV. PANDION.
V. *Haliaëtus*.

I. GENUS AQUILA, NOV. AUCT.

The tarsus wholly feathered. The *Falconine* type.

a. Subgenus *Hieraëtus*, Kp. — The bill more curved; 1-6 quill emarginated, large like a *Buteo*. The *Falconine* type.

1. *Aq. morphnoides*, Gould, Birds of Austr. vii. 2. — The feathers of the occiput form a small crest. Australia.

2. *Aq. pennata*, Cuv.; *F. pennatus*, Gmel.; pl. col. 33; *F. minuta*, Brehm. — Without a crest. Eastern Europe, Africa, Asia.

b. Subgenus *Pteroaëtus*, Kp. — Lorum and eye-region naked; 1-5 quill emarginated; claws very strong and curved; the first feather of the tail a little shorter than the middle feather. The *Milvine* type.

3. *Aq. vulturina*, G. Gray; *F. vulturinus*, Daud.; Vaill. 6; *A. verreauxii*, Less. Cent. Zool. f. 38. — Size of *Aq. fulva*; entire colour black. Africa.

c. Subgenus *Onychaëtus*, Kp. — Exterior toe very short, with a short claw; the claws long like a spur. The *Accipitrine* type.

4. *A. malayensis*, G. Gray; *Falco malayensis*, Reinw.; pl. col. 117. — Black-brown, size of *Aq. naevia*. India and Indian Archipelago.

d. Subgenus *Aquila*, Kp. — Bill more strait and moderately high;

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1-6 quill emarginated; exterior toe longer than the interior; tail a little cuneiform. The *Aquiline* type.

5. *Aq. nævioides*, Cuv.; *Aq. næv. et senegalla*, Cuv.; *F. rapax*, Temm. pl. col. 455; *Aq. albicans*, Rüpp. 13, 1, 2; *A. fulvescens*, *fusca*, *punctata*, J. E. Gray; *Aq. vindhiana*, Frankl.—Bill with an obtuse tooth; on the cere 26 mm. high; middle toe 58 mm. long; tail 270 mm. or $13\frac{1}{2}$ " long. Asia, Africa.

6. *Aq. heliaca*, Sav. Descr. d'Eg. t. 12; *F. imperialis*, Bechst., Naum. t. 6, ad., t. 7, young; *F. bifasciata*, J. Gray, Ind. Zool.—The bill divided to the hind corner of the eyes; wings longer than the short tail; middle toe with 5 scales before the claws. Eastern Europe, Asia, Africa.

7. *Aq. bonelli*, Bon.; *F. bonelli*, Temm. pl. col. 288; *Aq. intermedia*, Bonelli; *A. fasciata*, Vieill; *Spizaëtus grandis*, Hodgs.—Middle toe 62 mm. long; beneath with black longitudinal spots. S. Europe, Asia.

8. *Aq. fulva*, Cuv.; *F. fulvus*, *chrysaëtus*, *melanaëtus*, et *canadensis*, L.; *F. niger*, Gmel., Naum. 8, 9.—Tail $13-13\frac{1}{2}$ " long. Europe, America, Asia, Africa.

e. Subgenus *Uroaëtus*, Kp. — The bill very high, tail very long; the first tail-feather one-third shorter than the middle one. The *Buteonine* or *Vulturine* type.

9. *A. audax*, G. Gray; *F. audax*, Lath.; *Aq. fucosa*, Cuv.; pl. col. 32; *Aq. albirostris*, Vieill.—Tail $14\frac{1}{2}-15\frac{1}{2}$ " long. We see analogies with the *H. pelagicus*, which is in its genus the same representative of the same type. Australia.

II. GENUS HELOTARSUS, A. SMITH.

The very long wings extend beyond the very short tail. The *Milvine* or *Swallow* type.

1. *H. ecaudatus*, G. Gray; *F. ecaudatus*, Daud., Vieill. 7, 8.—Black with rufous body, tail-covers and tail. Africa.

III. GENUS CIRCAËTUS, KAUP.

The middle toe shorter than the tarsus, covered with small scales. The *Accipitrine* or *Grallatorial* type.

a. Subgenus *Herpetotheres*, Vieill.—The compressed bill curved like *Falco*; ear with a distinct facial disk like *Circus*. S. America. The *Falconine* type.

1. *Circaëtus cachinnans*, Kp.; *F. cachinnans*, Linn., Spix, t. 3, ad., Azara, 15; *Herpetoth. cachinnans*, Vieill.—The head-feathers elongated; tarsus 55–57 mm. long.

2. *C. brachypterus*, Kp.; *F. brachypterus*, Temm. pl. col. 141, 116; *Sparv. semitorquatus et leucomelas*, Vieill., Azara, N. 28, 29.—White necked Falcon, Lath. Longer than *cachinnans*; tarsus 81–85 mm. long.

3. *C. xanthothorax*, Kp.; *F. xanthothorax* (ad.) et *leucauchen* (young), Temm. pl. col. 92, 306.—Tail with 4 white bands; tarsus 55–60 mm. long.

4. *C. concentricus*, Kp.; *F. concentricus*, Ill.—Large like a female *N. fringillarius*; beneath with a great number of bars, and 2–3 white tail-bands.

b. Subgenus *Gymnogenys*, Less.—Head very small; wings very long; tarsus slender like a *Circus*; the face naked. The *Milvine* type.

5. *C. radiatus*, Kp.; *Vultur radiatus*, Scop.; *F. madagascariensis*, Lath., Gmel.; *F. gymnogenys*, Temm. pl. col. 307.—Tarsus 89; middle toe 40; external toe 25; internal 29 mm. long. Dr. Smith thinks that the *Polyboroides typus* of the Cape is very different from the *radiatus* of Madagascar. I have no opportunity to compare them.

c. Subgenus *Spilornis*, G. Gray.—The wings extend to the middle of the long tail; middle toe twice shorter than the tarsus, the claws edged. The *Accipitrine* type.

6. *Circaëtus cheela*, Kp.; *F. cheela*, Lath.; *F. bacha*, Daud., Vaill. 15; *albidus*, Cuv.; pl. col. 19; *bido*, Horsf.—Breast and crop ash-brown without spots and bands; lower breast, belly, tibial feathers and under tail-covers, with 3–4 pairs of white round spots. Africa and Asia.

7. *C. holospilus*, Kp.; *Buteo holospilus*, Vig.—Beneath with a great number of white spots; black bordered, without black bars. Asia.

8. *C. undulatus*, Kp.; *Hæmatornis undulatus*, Vig.; *Circ. nepalensis*, Hodgs.—Beneath with numerous black bars and small white spots.

MONOGRAPH OF THE FALCONIDÆ,

9 *C. fasciolatus*, Kp. (Brit. Mus.)— Neck-feathers pointed; lower breast, belly, and tibial feathers white, with ash-gray rufous broad bars. Port Natal.

d. Subgenus *Circaëtus*, Vieill.— The wings extend beyond the tip of the tail; eye-region with fine down; 1-3 quill very distinctly emarginated. The *Aquiline* type.

10. *C. gallicus*, G. Gray; *F. gallicus*, Gmel.; pl. enl. 413; *Aq. brachydactyla*, Mey.; *F. leucopsis*, Bechst.; *ferox*, Gmel.—Above and breast clear brown; beneath white, with clear brown bands. S. Europe, Africa, Asia.

11. *C. thoracicus*, Cuv.; *pectoralis*, A. Smith.— Breast with a black shield. Dr. Smith describes the young bird soot-black like *C. funereus*. Africa.

12. *C. funereus*, Rüpp.; *cinereus*, Vieill. Gal. 12.— Uniform soot-black, with a higher bill than the *C. thoracicus*. Africa.

e. Subgenus *Poliornis*, Kp., G. Gray.—Tarsus with large scales; the toes with 3-4 transverse scales; large like small *Buteones*. The *Buteonine* type. Asia.

13. *C. teesa*, Kp.; *Buteo teesa*, J. Gray, Ind. Zool.; *Astur hyder*, Syk.; *Juggar falcon*, Lath.— Chin white, with a central oblong stripe; breadth between the eyes 30 mm.

14. *C. liventer*, Kp.; *F. liventer*, col. 438; *Buteo pallidus*, Less.—Tail rufous, with seven black bars; inner webs of the quill rufous brown, with 3-6 black bands.

15. *C. indicus*, Kp.; *F. indicus*, Lath.; *poliogenys*, Temm. pl. col. 325.—Breast and beneath with bars; between the eyes 39 mm. broad.

16. *C. pyrrhogenys*, Kp.; *Buteo pyrrhogenys*, Temm. et Schleg., Fauna Jap. p. 21.—Between the eyes 30 mm. broad; tail like an *Astur*, with three black broad bars before the black white-bordered terminal band.

IV. GENUS PANDION, SAV.

The claws curved in a circle.

a. Subgenus *polioaëtus*, Kp.—Tarsus and toes with large transverse scales; wings short. The *Falconine* or *Buteonine* type. Asia.

SYSTEMATICALLY ARRANGED BY DR. T. T. KAUP.

1. *P. ichthyaëtus*, *F. ichthyaëtus*, Horsf.; *Haliaëtus plumbeus*, Hodgs.; *Ichthyaëtus bicolor*, G. Gray. — Head and bill 95; tarsus 80; tail 243 mm. long.

2. *P. humilis*, Mull. Zool. t. 6. — Head and bill 82; tarsus 68; tail 192 mm. long.

b. Subgenus *Pandion*, Sav.—Tarsus and toes with pointed scales; wings very long.

3. *P. gouldii*, Kp.; *P. leucocephalus*, Gould, Birds of Austr. xiii. 1. — Two to three transverse scales before the claws; only the inner webs of the superior part of the tail-feathers, with six toothed white bands, do not extend to the shaft. Australia.

4. *P. haliaëtus*, Cuv.; *F. haliaëtus*, Sav., Naum. t. 16; *P. fluviatilis*, Sav. — Four transverse scales before the claws; tail with six black bars, extending over both the webs. Europe, Africa, Asia.

V. GENUS HALIAËTUS, SAV.

The non-feathered part of the tarsus, and the long toes, with transverse regular scales. The *Buteonine* or *Vulturine* type.

a. Subgenus *Haliaëtus*, Kp. — Larger than *Aq. fulva*; tarsus feathered to the middle; bill of medium height; tail not remarkably long. The *Falconine* type.

1. *H. leucocephalus*, Sav.; *F. leucocephalus*, Linn., Wils. iv. 36, vii. 55, 2. — Adult with a pure white head, neck, and tail. N. America.

2. *H. albicilla*, Pall; *H. nisus*, Sav.; *F. albicilla et ossifraga*, L., Naum. t. 12–14. — Adult with clear brownish head and a white tail. Europe, Asia, Africa.

b. Subgenus *Ictinoëtus*, Kp. — Large like a *Milvus*; tarsus a third part feathered. The *Milvine* type.

3. *H. ponticerianus*, Cuv.; *F. ponticerianus*, Gmel.; pl. enl. 416; *H. girrenera*, Vieill.; *H. garuda*, Less.; *F. indus*, Bodd. — Tail shorter than the body; adult with black shafts on the white plumage. India.

3^(a). *H. leucosternus*, Gould, Birds of Austr.—The white plumage with white shafts. Australia.

4. *H. canorus*, Vig. and Horsf. Linn. Tr. xiii. 136; *Milvus*

MONOGRAPH OF THE FALCONIDÆ.

sphenurus, Vieill. Gal. 15. — Tail longer than the body. Australia.

c. Subgenus *Heteroætus*, Kp. — Tarsus high; toes very short; wings shorter than the tail; the sole of the toes with obtuse warts; the plumage banded. The *Accipitrine* type.

5. *H. aguia*, Kp.; *F. aguia*, Temm. pl. col: 302; *Spiz. melano-leucus*, Vieill.; Azara, N. 8; *Spiz. fuscescens*, Vieill.; Azara, N. 9, young. — Above and the crop dark gray; wings and beneath with a great number blackish gray bands. This species has a great many analogies with *Buteo erythronotus*, which represents in its genus and subgenus the same type. S. America.

d. Subgenus *Pontoætus*, Kp., G. Gray. — Tarsus high, with the third part feathered, and long middle toe; 1-5 quill with a slender emargination. The *Aquiline* or *Pandion* type.

6. *H. leucogaster*, *F. leucogaster*, Gmel.; pl. col. 49; *Blagre*, Vaill. 5; *H. sphenurus*, Gould, Birds of Austr. ii. 1. — The middle feathers of the tail considerably longer than the first. Africa, Asia, Australia.

7. *H. macei*, Cuv.; pl. col. 8, 223; *Aq. leucorypha*, Pall.; *H. fulviventis*, Vieill.; *H. (cucuma) albipes*, Hodgs. — The occiput with long, small, and pointed feathers; the adult bird with white tail, having broad black terminal band. Asia.

8. *H. vocifer*, Cuv., Vaill. 4; *F. vocifer*, Daud., Lath. — White, with rufous belly, tibial feathers, inferior tail-covers and inferior wing-covers. Africa.

e. Subgenus *Thalassaetus*, Kp. — With a very high bill, short wings and remarkably long tail; tarsus half feathered. The *Buteonine* or true *Vulturine* type.

9. *H. pelagicus*, Temm. et Schleg. Fauna Jap., young, Kittlitz, Icones ad.; *F. leucopterus*, Temm. pl. col. 489. — Front, superior part of the wings, beneath and tail, white, ad.; the tarsus covered with small scales. Asia.

V. And last Subfamily, BUTEONINÆ.

In this last subfamily, *Ibicter* is the typical genus, which with the whole subfamily, represents the *Gallinaceous* or *Vulturine* type, on

account of the face and chin being naked, and because in this subfamily fruit-eaters appear. In this subfamily, particularly in the last genus, *Ibicter*, we see the impurest character of the whole family.

I. *Buteo*. II. *Pernis*. III. *Polyborus*. IV. *Rostrhamus*. V. *IBICTER*.

I. GENUS BUTEO, BECHST.

The nostrils half-moon shaped, on the end of a soft membrane.

a. Subgenus *Archibuteo*, Brehm.—Tarsus feathered but not the sole; toes with scales before the claws; 3-4 transverse scales. The *Falconine* type.

1. *B. lagopus*, Bechst.; *F. lagopus*, Brann.; Naum. t. 34; Vaill. 18.—Tarsus 64-66 mm. long; the inner-covers of the wings white and rufous-yellow, with large black spots. N. Europe, S. and N. Africa.

2. *Buteo sancti johannis*, Bonap.; *F. sancti johannis*, Gmel.; *F. niger et lagopus*, Wils. 55-1, ad., 33-1, young; *Buteo ater*, Vieill.; *Archibuteo regalis*, G. Gray? female.—Tarsus 86 mm. long; tail 230 mm. long, female. America.

3. *Buteo strophiatatus*, Kp.; *Aq. strophiatata*, Hodgs.; *Buteo leucocephalus*, Hodgs.; *Buteo hemilasius*, Temm. et Schl. Fauna Jap., t. vii.—Large like an *Aquila nœvia*; tarsus 93; tail 256 mm. long. Asia.

b. Subgenus *Tachytriorchis*, Kp.—The long wings extend beyond the tip of the tail; 1-2 quill distinct, 3 and 4 slender emarginated. The *Milvine* type.

4. *Buteo albonotatus*, G. Gray.—Black with concealed white spots, which on the general plumage shine through. S. America.

5. *Buteo pterocles*, Cuv.; pl. col. 56, 139; *Buteo albicaudatus*, Vieill.; *Spiz. leucurus*, Vieill.; *Aq. cola blanca*, Azara.—Black, with rufous spots on the wings; tail on the upper half white with fine gray bands; tarsus 91-92 mm. long. S. America.

c. Subgenus *Pœcilopternis*, Kp.—The short wings extend to the middle of the tail; 1-3 quill distinct, 4 slender emarginated. The *Accipitrine* type. America.

6. *B. wilsonii*, Bonap.; *F. pensylvanicus*, Wils. 54-1; *F. latissi-*

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mus, Ord; *Sparv. platypterus*, Vieill.—Head and bill 65, and the scaled part of the tarsus 36 mm. long. N. America.

7. *Buteo lineatus*, Jard.; *F. lineatus*, Gmel.; Wils, 53-2; *himalis*, Wils. 35-1, young.—The wings 332 mm. long. N. America.

8. *Buteo erythronotus*, G. Gray; *Haliaëtus erythronotus*, King; *Buteo unicolor et tricolor*, D'Orb.; *varius*, young, Gould.—The wings 398-429; tail 190-196 mm. long. Chili, Falkland Islands, Strait of Magellan.

9. *Buteo infulatus*, Kp., Brit. Mus.—The wings 364; tail 200; tarsus 80, middle toe 35 mm. long; front white. A young bird, and nearly connected to the *B. lineatus*. Galapagos Islands.

10. *Buteo borealis*, Swains.; *F. borealis et jamaicensis*, Gmel.; Wils. 52-2, ad.; *F. leverianus*, Wils. 52-1, young; *F. ferrugineo-cauda*, Vieill. Ois. d'Am. t. 6; *B. americanus*, Vieill.; *Accipiter ruficaudus*, Vieill. Ois. d'Am. t. 44, bis.—The wings 375; tail 235; tarsus 80 mm. long. N. America.

d. Subgenus *Ichthyoborus*, Kp.—The bill a little elevated; 1-5 quills slenderly emarginated; toes with distinct transverse scales; sole of the toes with pointed warts (a fisher). The *Aquiline* or *Pandion* and *Pelicanoid* type.

11. *Buteo nigricollis*, Kp.; *F. nigricollis*, Lath.; *F. busarellus*, Daud.; Vaill, 20; *Circus leucocephalus*, Vieill; Azara, N. 13; *Aq. milvodes*, Spix, 1 ad.—The total plumage rufous. S. America.

e. Subgenus *Buteo*, Kp.—Tarsus before and behind with transverse scales; the wings extend to the tip of the tail; 1-4 quill distinctly emarginated; the sole of the toes with obtuse warts. The *Buteo-nine* type.

12. *Buteo augur*, Rüpp.; *B. augur et hydrophilus*, Rüpp., Neue Wirbelth, t. 16, 17.—Adult, tail rufous, with a black terminal band; the secondaries ash-gray, with black bars; tarsus (female) 90, middle toe 40 mm. long. Very nearly connected with the *B. jackal* of the Cape. N. Africa.

13. *Buteo jackal*, Cuv.; Vaill. 16.—Plumage black, white, and rufous; tail rufous, with black terminal band; secondaries ash-coloured, with dark spots and black terminal band; tarsus 80-89; middle toe 42-43; tail 190-196 mm. long. Cape.

14. *Buteo rufinus*, Rüpp. Fauna Ab.; *B. longipes*, Jard.—Middle toe shorter than the scaled part of the tarsus. Asia, accidental in Africa.

15. *Buteo vulgaris*, Bechst.; *F. buteo*, Linn., Naum. 32, 33; *F. communis, versicolor, albidus*, Gmel.; *Buteo mutans et faciatus*, Vieill.; *F. tachardus*, Daud., Vaill. 19.—The quills brownish, with indistinct blackish bars; tail with 12 bands; tarsus 71–77, middle toe 35–37; wings 360–400; tail 210–220 mm. long. Europe, Africa, Asia.

16. *Buteo plumipes*, G. Gray; *Circus plumipes*, Hodgs.—Soot-black; tarsus 44 mm. long, feathered. Asia.

II. GENUS PERNIS, KAUP.

The nostrils form a small fissure, tarsus short, with small scales. The *Milvine* type.

a. Subgenus *Baza sive Hyptiopus*, Hodgs.; *Aviceda*, Swains.; *Lophotes*, Less.—Two fine teeth on the upper mandible, and two or three emarginations on the under mandible; occiput crested. The *Falconine* type.

1. *Pernis lophotes*, Kp.; *F. lophotes*, Cuv.; pl. col. 10.—Wings and tail without bars; the smallest species. Asia.

2. *Pernis subcristatus*, Kp.; *Lepidogenys subcristatus*, Gould, Proc. 1837, Birds of Austr.; *F. reinwardtii*, Temm. Verh. tab. 1-5, fig. 2 mas., fig. 1 fem.—Above ash-gray; crest on the superior middle white; lower breast, belly and flanks, banded; inner wing-covers rufous yellowish. Australia and Indian Archipelago.

3. *Pernis crassirostris*, Kp.; *Baza magnirostris*, G. Gray.—Above black-brown; crest black on the tip, bordered with white; beneath barred. Philippine Islands.

4. *Pernis cuculoides*, Kp.; *Aviceda cuculoides*, Swains. W. Afr. Birds, t. 1.—Above ash-gray; crest on the superior part white; chin, upper-breast, ash-gray; belly and flanks banded; the upper mandible 13 mm. high, allied to *P. subcristatus*. Senegal and Port Natal. Brit. Mus.

b. Subgenus the *Milvine* type is not discovered.

c. Subgenus *Regerhinus*, Kp.—The large bill very compressed, much higher than broad; the nostrils very short; lorum and eye-region naked. The *Accipitrine* type.

5. *Pernis uncinatus*, Kp.; *F. uncinatus*, Ill.; pl. col. 104–115; *Cymindis uncinatus*, Cuv.—Beneath barred. Cayenne.

d. Subgenus *Odontriorchis*, Kp.—The large bill with a tooth. The *Aquiline* type.

6. *Pernis cayennensis*, Kp.; *F. cayennensis*, Gmel.; pl. col. 204-270; *Ast. cyanopus*, Vieill.; *palliatu*s, Pr. Max.; *monachus*, Temm.; *Sparv. monachus*, Vieill.—Tail black, with three white or ash-gray bands.

e. Subgenus *Pernis*, Cuv.—Lorum and eye-region with scaly like feathers. The *Buteonine* type.

7. *P. cristata*, Cuv.; *F. ptilorhynchus*, Temm. pl. col. 44.—Hind head with a crest. Asia.

8. *P. apivorus*, Cuv.; *F. apivorus*, Linn., Naum. 35-36.—Without a crest. Europe, Africa.

III. GENUS POLYBORUS, VIEILL. (part) G. GRAY.

The nostrils are placed high on the cere, equally broad, oval, and on the under margin bending inwards in the middle; bored in the nasal-bones; neck and feet very long. The *Accipitrine* type.

1. *P. brasiliensis*, G. Gray; *F. brasiliensis*, Gm.; *Polyb. vulgaris*, Vieill. Gal. 7; *F. plancus*, Mill. Cym.; *plancus*, t. 17; *F. tharus*, Gm. Chereway Jacq. The entire plumage numerously banded. S. America.

IV. GENUS ROSTRHAMUS, LESS.

The round nostrils placed in a soft membrane; the middle claw denticulated like the middle claw of *Pelicanus* or *Ardea*. The *Aquiline*, *Pandion*, or *Pelicanoid* type.

1. *R. sociabilis*, D'Orb., Azara, N. 16; *Herpetotheres sociabilis*, Vieill.; *Buteo hamatus*, Vieill.; *F. hamatus*, Ill.; pl. col. 61 ad. 231, young; *Cymindis leucopygos*, Spix, t. ii.; *R. niger*, Less., Lafresn. Mag. de Zool. 1834, pl. 20.—The old bird black, a fisher. S. America.

V. And last GENUS IBICTER, KAUP.

The nostrils round, bored in the nasal bones; bill long, with a trace of a tooth and an emargination on the under mandible. The true *Buteonine* or *Vulturine* type.

a. Subgenus *Daptrius*, Vieill.—The face and chin naked; the wings extend to two-thirds of the body; tail long; 1-5 quills with a slender emargination; middle toe with regular transverse scales, and as long as the scaled part of the tarsus; outer toe a little longer than the inner. The *Falconine* type.

1. *Ibicter aterrimus*, Kp.; *F. aterrimus*, Temm. pl. col. 37, 342, young; *Daptrius ater*, Vieill., Gal. 5.—Black, the superior middle of the tail white. Cayenne.

b. Subgenus *Phalcobaenus*, D'Orb.—The face naked; the wings extend beyond the tip of the tail; 1-4 quill distinctly emarginated. The *Milvine* type.

2. *Ibicter montanus*, Kp.; *Ph. montanus*, D'Orb., Voy. dans l'Am. with a figure; *Aq. megaloptera*, Mey. Nov. Acta, 1834, t. 8; *Milvago albogularis*, Gould, Voy. of Beagle Birds. pl. 1.—White and black; the head-feathers crisp like a *Crax*. Chili.

c. Subgenus *Milvago*, Spix.—Lorum and eye-region naked; the wings extend to two-thirds of the tail; 1-5 quills slenderly emarginated; toes with regular transverse scales, and shorter than the thin tarsus; outer and inner toes of equal length. The *Accipitrine* type.

3. *I. chimachima*, Kp.; *P. chimachima*, Vieill., Azara, 4; *F. degener*, Ill.; *Milv. ohrocephala*, Spix. t. 5, ad.; *Gymnops strigilatus*, Spix, t. 4, young.—Tarsus bluish, and 50 mm. long. S. America.

4. *I. chimango*, Kp.; *P. chimango*, Vieill., Azara, 3; *Aq. pezo-pora*, Mey. Nov. Act. 16, t. 6.—Tarsus yellowish, and 63 mm. long. S. America.

d. Subgenus *Ätotriorchis*, Kp.—Lorum and eye-region naked; the wings do not extend to the tip of the tail; 1-5 quill emarginated; middle toe longer than the scaled part of the tarsus, which has before the toes 3-4 transverse scales. The *Aquiline* type.

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5. *I. australis*, Kp.; *F. australis*, Lath., Gmel.; *F. leucurus*, Forst. pl. col. 224, young, 129 adult; *Polyborus novæ zeelandiæ*, Less.; *F. novæ zeelandiæ*, Lath (part); *Circaëtus antarcticus*, Less.—Size, an eagle. S. America and Australia.

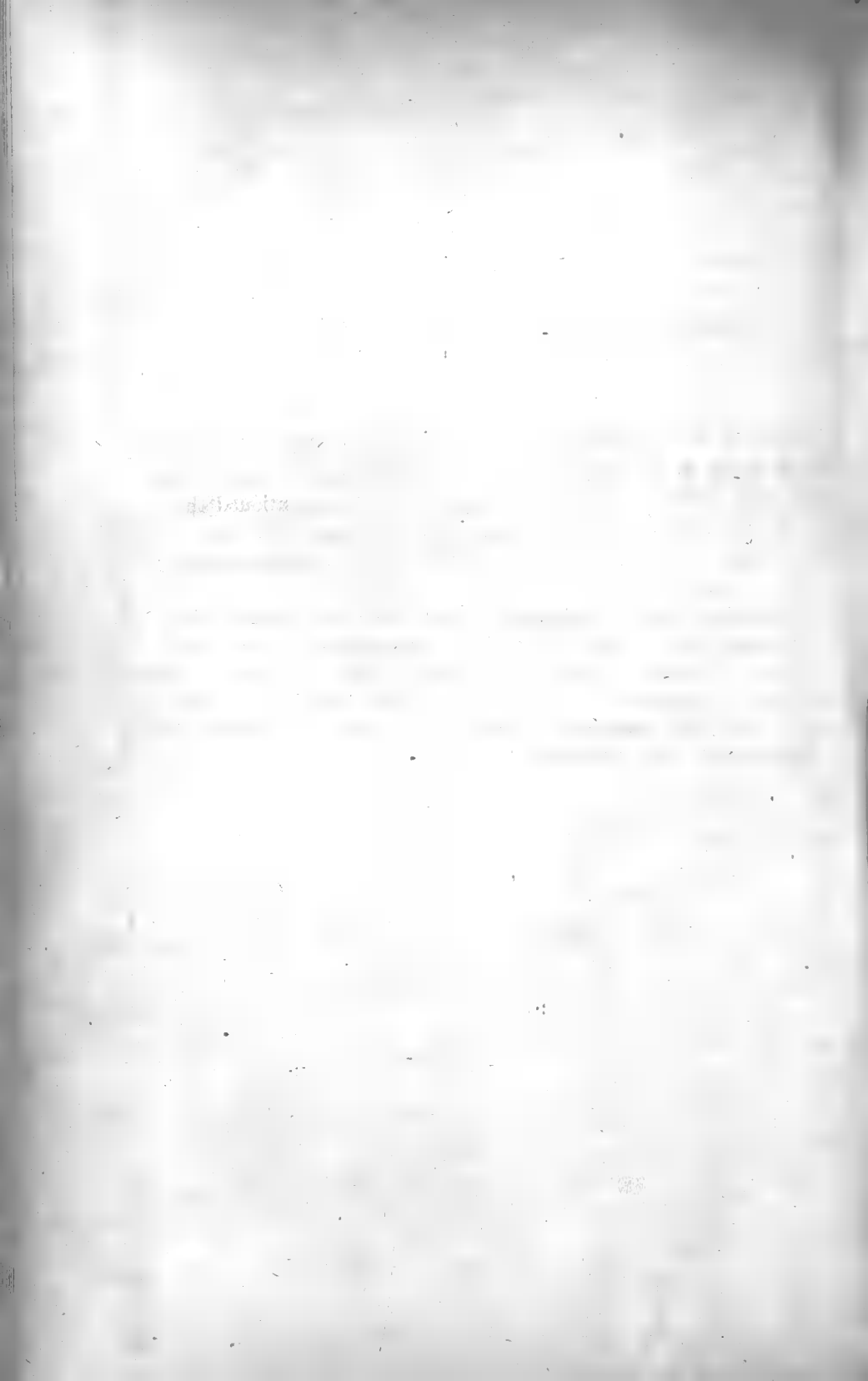
e. Subgenus *Ibicter*, Vieill.—The face and chin naked; wings long but not reaching the tip of the tail; 1-5 quill slenderly emarginated; middle toe irregularly scaled, longer than the scaled part of the tarsus; outer toe long, longer than the inner one. The true *Buteonine*, *Vulturine*, and *Gallinaceous* type.

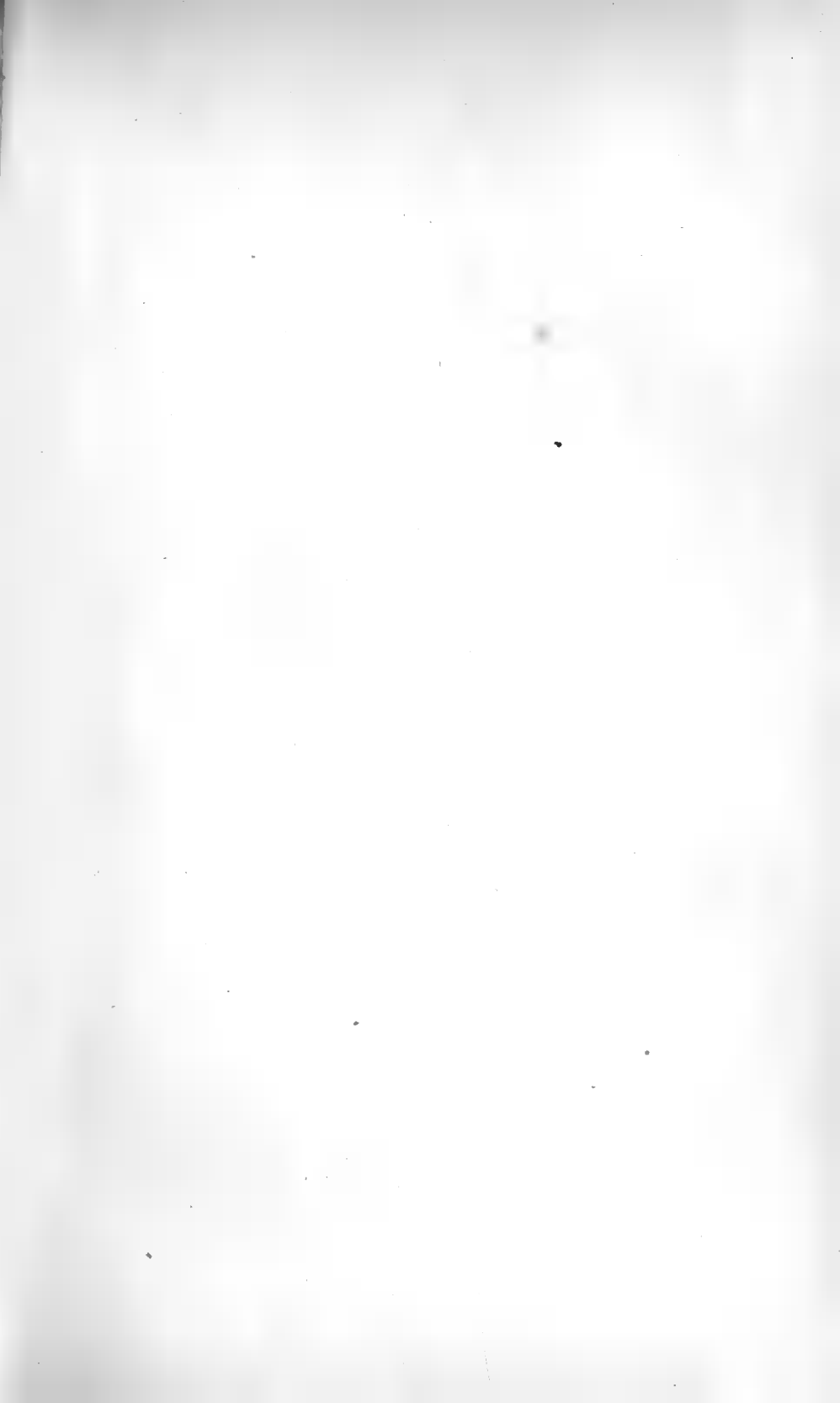
6. *I. aquilinus*, G. Gray; *F. aquilinus*, Gmel.; pl. enl. 417; *F. nudicollis*, Daud.; *formosus*, Lath.; *I. leucogaster*, Vieill.—Black, with white tibial and under tail-covers. S. America.

ORNITHOLOGY OF THE BERMUDAS.

LETTERS from Lieutenant Wedderburn, announce the addition of several birds to the Ornithology of the Bermudas, and we have no doubt, that were such zealous observers to continue stationed there, the list might be still further increased. We hope, for the sake of Ornithology, they will soon have a wider field of observation.

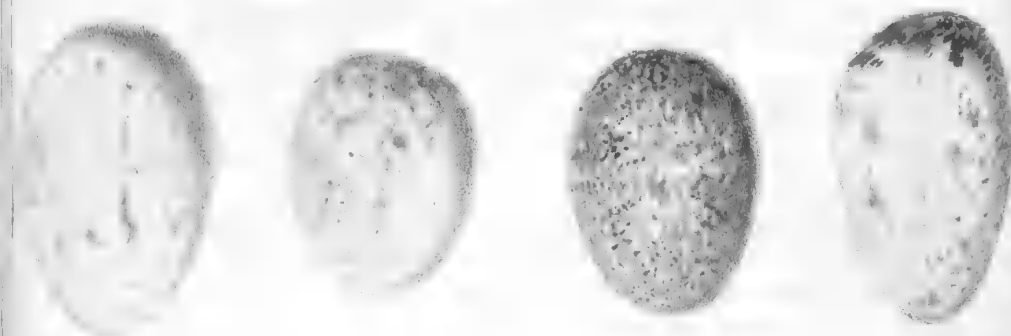
Lanius borealis—*Tyrannulus dominicensis*—*Turdus migratorius*, several specimens—*Zonotrichia savanna*—*Ectopistes carolinensis*—*Pyrrhuloxia rubra*—*P. æstiva*—*Pelicanus fuscus*. “A great many yellow bellied Woodpeckers have been killed; and on several occasions, along with Captain Drummond, a Wheatear has been observed at St. George’s.”



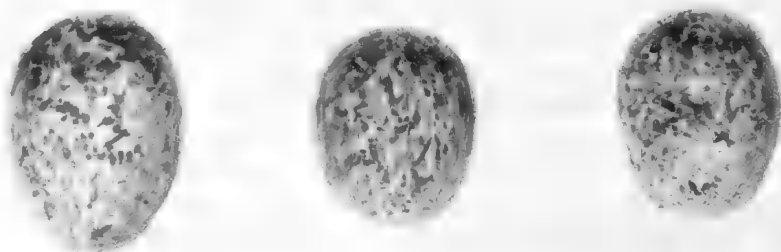




Circus salmionatus



Circus splendens



Colymbus occidentalis
V. G. 1867.

ILLUSTRATIONS OF FOREIGN OOLOGY.

CORVUS CULMINATUS—C. SPLENDENS—ENDYNAMYS ORIENTALIS.

THERE is no economical habit more remarkable in Ornithology than that of the parasitic and artificial propagation or hatching of the eggs; the first was thought to be confined to the common Cuckoo of Europe, but more extensive researches discovered that it was common to various genera of the *Cuculidæ*, and that members of a few other groups also pursued the same instinct. Various causes have been attempted to be assigned for this anomalous habit, but without sufficient reason; and researches and comparisons in the structure of the parasitic species are still wanting, and would without doubt repay the inquirer.

Mr. Blyth, among numerous drawings of eggs, has sent us some of those of the parasitic breeding *Cuculidæ*, and on one of the plates of our present number, we have endeavoured to represent the eggs of both the Cuckoo and those of its foster parents, and between these will be observed the remarkable assimilation in the colour and markings—a wonderful evidence of design in the object contemplated. On the plate are represented the eggs of two species of Indian Crows, *Corvus culminatus* and *splendens*, which show little variation from the general appearance of those from other true crows with which we are acquainted; and underneath them we have placed figures of the egg of the *Endynamys orientalis* or Coël, from Calcutta, which Mr. Blyth writes, “invariably deposits its eggs in the nests of these crows;” and at his request, we copy from his paper upon the Indian Cuckoos (privately printed), the following notice of their habits during the breeding season:—

“The Coël, though a bird of the skulking unobtrusive habits of the *Cuculinæ* generally, and having the same quiet gliding movements from bough to bough, is not particularly shy, allowing of a

near approach, while itself lies still to avoid observation, especially when feeding, at which time they may be shot as fast as a gun can be loaded by watching for them under a tree to which they resort for its fruit, as a spreading banyan in its season, and they are particularly attached to the densely foliaged *Bokul* (Beng.) or *Moulsari* (Hind.)—(*Mimusops elengi*), keeping almost exclusively to this tree while its fruit is ripe, and at other seasons feeding on various berries, which are swallowed entire, and the large seeds of some of them ejected clean by the mouth. Though several may often be seen quietly feeding together, and sometimes in very conspicuous situations, there is no association amongst them, but each pursues its course independently, as we believe do all other *Cuculinae*. As their breeding season approaches, however, about the commencement of the year or a little before, the Coëls become very noisy, and continue so for several months during the hot weather; the frequent utterance of the loud call-note of both sexes (a continuous repetition of the sound *kuil* many times successively, with a liquid intonation of the *l*, and slight variations), though certainly not unmelodious when heard sufficiently far off and in moderation—being thoroughly cuculine in its tone—becomes wearisome from its monotonous reiteration at all hours of the day and night, more or less, and to some persons occasions no slight annoyance. The natives, however, seem to admire it much, as they frequently cage this bird, feeding it almost entirely on boiled rice, with sometimes a plantain! and its voice, when thus heard too close, becomes insufferable to European organs. The male Coël has also another cry (*ho-ā-o*), corresponding to the *cuckoo* note of *Cuculus canorus*, and which is delivered in like manner.* The female, as before remarked, appears to deposit her eggs invariably in the nests of the true *Corvi*, and so abundantly, that we have known five or six Coëls' eggs to be brought in together by a person who had been destroying Crows' nests, each taken from a different one. The egg is certainly so often found alone, that there can be little doubt that the Coël destroys the eggs of the Crow at the time her own is deposited, but it is doubtful whether the young Coël is endowed with the instinct of ejecting any companions it may have, and it would seem

* Lately, we have remarked the *Cuc. varius* occasionally delivers its whistling song-note in this detached manner, when scarcely, however, arrived at full song—*Peer pēūr-pa*, *Peer pēūr-pa*.

that it has not that propensity, but the fact remains to be systematically observed. Mr. Frith informs us, that he has never found more than one Coël's egg in a nest, and in his long experience, has only met with it in those of the two Indian Crows. He has repeatedly seen the common *C. splendens* attack and drive off the female Coël from its neighbourhood; and in one instance observed the latter, while trying to escape the pursuit, dash itself against a pane of glass in an outhouse, with so much force, as to fall dead from the injury it received, the bill and fore-part of the head being quite smashed. The current native story is, that the Crow soon discovers the young Coël to be an interloper in its nest, and drives it away at an early age to find its own provender, but this is certainly not the case, as shown by an anecdote related by Major Davidson, who remarks—'Happening to stand in the verandah of my bungalow, I heard a loud chattering noise on the lawn, and believing that a young Crow had fallen from its nest, I advanced to put it out of the reach of harm. Instead of a Crow, I was much astonished to find, that an old Crow was feeding a young bird of a dark brown colour, transversely striped with cinerous bars. On asking its name of a native who also saw it, he replied, that it was a young Coël. I approached it within a few yards, and saw it receive food from the Crow's bill in the usual supplicating posture, with extended wings and body slightly quivering.* His native informant further assured Major Davidson, that the Coël was always thus reared by the Crow, who invariably continued to feed its adopted nestling until it could shift for itself.

"The egg of the Coël measures generally $1\frac{1}{2}$ inches long, sometimes, in more rotund specimens than usual, little more than 1 inch, by $\frac{3}{4}$ to $\frac{7}{8}$ inch where broadest, having ordinarily the small end well distinguished, and indeed much resembling in size and form the egg of *Dendrocitta rufa*, but of a considerably deeper colour. Still it is of a pallid olive-green of different shades, marked all over with numerous reddish-dusky spots, much as in some Blackbird's eggs, which are more numerous—in some much more numerous—towards the large end, where they incline to form a zone; and notwithstanding the difference of ground colour from the egg of *Cuculus canorus*, there are few acquainted with the latter who would not at once

suggest the Coël's to be a *Cuculine* egg of some kind, from a certain resemblance in its appearance to the Cuckoo's egg, which at once strikes the observer. Filling several blown egg shells of the Coël with water, they were found thus to weigh, from 100 to 120 grains each, generally about the latter; those of *Corvus splendens* we found thus to vary, from 180 to 245 grains, and those of *C. culminatus*, from 235 to 305 grains.*"

The following observations, in a letter from a missionary friend to Mr. Blyth, also bear on the subject. "With respect to the Crow discovering that the bird it has reared is an interloper, and consequently ejecting it from the nest, you seem to have doubts, on account of the anecdote related by Major Davidson. Now, against this, I have to bring my own testimony, and that of an intelligent native, who from his youth has been a keen sportsman and bird fancier. He is also a man of undoubted veracity. He states, that after the Coël has laid its egg in the Crow's nest, it comes often to watch the nest, from a little distance, to see when its young is expelled. This happens as soon as it puts on its speckled dress, which is, when it is fledged. As soon as it is driven away, the mother takes her young into her charge and feeds it. This he has often observed, being in the habit of watching these birds when at Gwaliôr. This statement is confirmed by others.

"As to the mother feeding her young, I have seen it myself. The young, though full grown, sat quietly in a peepul tree, while its mother hunted for fruit, and she several times fed it before me. I watched them near at hand for some time, and at last they both flew away, the mother uttering, as she flew, her well known cry. I have since seen full grown young Coëls feeding themselves alone."

The truth, we apprehend, is, that the Coël produces a series of several eggs, at intervals of two or three days, like the European Cuckoo, and as they are hatched, and the young ejected in succession, she takes charge of each of the latter in turn, and feeds it for a day or two only, by which time it learns to shift for itself, but we regret that we have not had the leisure to observe more *in propria personâ*.

* This great variation should be borne in mind with reference to the note on the subject of the relative weight of birds and of their eggs, given in p. 6, *ante*.

NOTES

ON

THE OSTEOLOGY OF SCANSORES.

BY

T. C. EYTON, Esq., F.L.S., F.Z.S., &c.

Mr. G. R. GRAY, in his genera of birds, has very properly discarded, from the order *Scansores*, all those birds which have not the power of turning one of the three anterior toes backwards. There is one family, however, which ought to be included in it, I allude to that to which *Turacus* belongs, both on account of it possessing that power, and from a similarity in the Osteology with the rest of that group.

There is one osteological character found in detached genera throughout the group, of which I am not aware of the occurrence in any nearly allied order, the absence or existence only in a rudimentary state of the *Os furcatum*. Among the *Psittacidae*, this character is found in *Platycercus* and *Psittacula*, among the *Rhamphastidae* in *Rhamphastos*, among the *Picidae* in *Psilopogon* and *Megalaima*, and in *Turacus buffonii*, where the branches are not ankylosed together at the point where they approach the sternum. Among the Cuckoos also, that bone is very weak and small. In the above named genera, I have observed this peculiarity in the following species:—*Platycercus brownii*, *erythropterus*, and *icterotis*; *Psittacula passerina*, *Nanodes pusillus*, and *venustus*; *Pezoporus formosus*, *Rhamphastos erythrorhynchus*, *Psilopogon pyrolophus*, and in a small *Megalaima*

from Java. The nostrils in scansorial birds are invariably divided by a bony septum, which is not generally the case in other orders, with the exception of *Raptores* and *Loxia*, a great depression is observable at the junction of the intermaxillary bone with the cranium, which extends transversely across the upper surface of the skull in the Parrots, Toucans, Touracos, and *Picidæ*, and in some of the Cuckoos, as *Phœnicophaus*, down the sides to the nostrils. The palatine bones are broad and well developed; and with the exception of among the Parrots, placed horizontally and truncated, or slightly rounded posteriorly, in the Parrots they are bent downwards between the rami of the lower mandible. In the Parrots and Toucans, the orbits are completely separated by the intermaxillary bone; but in the Woodpeckers, Cuckoos, and Touracos, there is a small orifice between them, varying in size in different species.

The sternum of the whole order, with the exception of the Parrots, has the inferior edge of the keel nearly straight; and in all, the anterior edge or front of the bill, is prolonged beyond the transverse anterior edge of the sternum, or in other words, as far as the anterior point of the manubrial process. The latter peculiarity does not exist, that I am aware of, in other birds. The keel is prolonged in the *Fissirostral* group, but the anterior edge is very much scolloped out, or else the inferior point projects forward; and the edge presents nearly a straight line from that point to the base of the manubrial process. The posterior margin of the sternum, with the exception of in the Parrots, and in *Centropus phasianellus*, has two fissures on each side of the keel. The Parrots have the keel much deeper than other *Scansores*; the inferior edge much rounded up to the point, where it meets the *Os furcatum* when that bone exists. In old Parrots, with the exception of a few species, the posterior margin of the sternum is destitute of fissures or foramina; and where any exist, there is only one of the latter on each side. I have, however, the skeleton of a young *Platycercus zonarius*, which has two large foramina on each side, and which, from some small holes between them and the margin of the sternum, have evidently recently undergone a transition by ossification, from fissures to foramina. It would be very interesting, if collectors, who have the opportunity, would ascertain if such is generally the case among the *Psittacidæ*.

In the contour of the latter, at edges of the sternum, there is not much difference among the *Scansores*; those of Cuckoos, Touracos, and Toucans, are, however, proportionably the shortest, and those of Parrots and Woodpeckers the longest, with the exception of *Psilopogon* and *Megalaima*, in which the sternum varies from the Woodpecker form, and approaches that of the Cuckoos. These genera differ, however, from *Cuculidæ* and *Picidæ*, in having the fissures much deeper. Some genera, of the former family, as *Phœnicophanus*, have the internal fissure the largest, which I have not observed to be the case in other families. There is nothing very remarkable in the form of the pelvic bones in *Scansores*, to distinguish them from other birds, but the different families differ between themselves. In the Parrots, Toucans, and Touracos, the *Os pubis*, at the posterior extremity of the obturator foramen, is not ankylosed to the ischium, while the contrary is the case in the *Picidæ* and Cuckoos, the latter of which have that foramen of very small size.

In the Woodpeckers and Toucans, the anterior portion of the ilium is not united at its upper edge, with the superior vertebral processes; but there are, as it were, two channels, one on each side, formed by the iliac bones and those processes. In the Parrots, these bones meet and are perfectly ankylosed. In the Touraco, although these bones are united above, they are open below, leaving a large longitudinal foramen on each side of the processes, from which there is a depression on each side, running backwards towards the caudal vertebra. *Chalcites*, however, varies from the other Cuckoos, and has a pelvic structure similar to the Parrots. There is nothing very remarkable in the structure of the legs and wings of scansorial birds, with the exception of the position of the outer toe on each foot, and the twisting backward of the corresponding articulation on the tarsus, which bone is very short and robust in Parrots, and has a very large calcineal canal, perfectly enclosed, which, with the exception of in the Toucan, which has a small one, is wanting in other *Scansores*. The posterior metatarsus, or the metatarsal bone, to which the phalanges of the inner toe are articulated in the Parrots, is short, broad at its articulation with the phalanges, and tapers abruptly to its junction with the tarsus. The *Picidæ* have this bone not nearly so powerful, longer

in proportion, but of nearly similar shape. The Touraco has it still longer, somewhat flattened at the tarsal extremity, and slightly twisted on its axis.

The *Coracoids*, in *Scansores*, are more produced anteriorly beyond the glenoid cavity, than is found in other birds; and wherever the vestige of the *Os furcatum* exists, the latter is much expanded and fan-shaped at its extremity, and united for its whole breadth with the inner margin of the *Coracoids*. The ribs are very broad from their vertebral extremities to the posterior process, which is also broad at its junction with the rib, is rather acutely turned upwards, and tapers gradually towards its rounded extremity. The remaining portion of the true and sternal ribs, is more flattened and expanded in the Parrots and Touraco than in the other families of *Scansores*. I now give the numbering of the ribs in the different species that I have examined.

In *Piscus viridis*, the ribs are nine in number, the first anterior one being a false one, or not united to the sternum, and the two posterior ones being devoid of the posterior process.

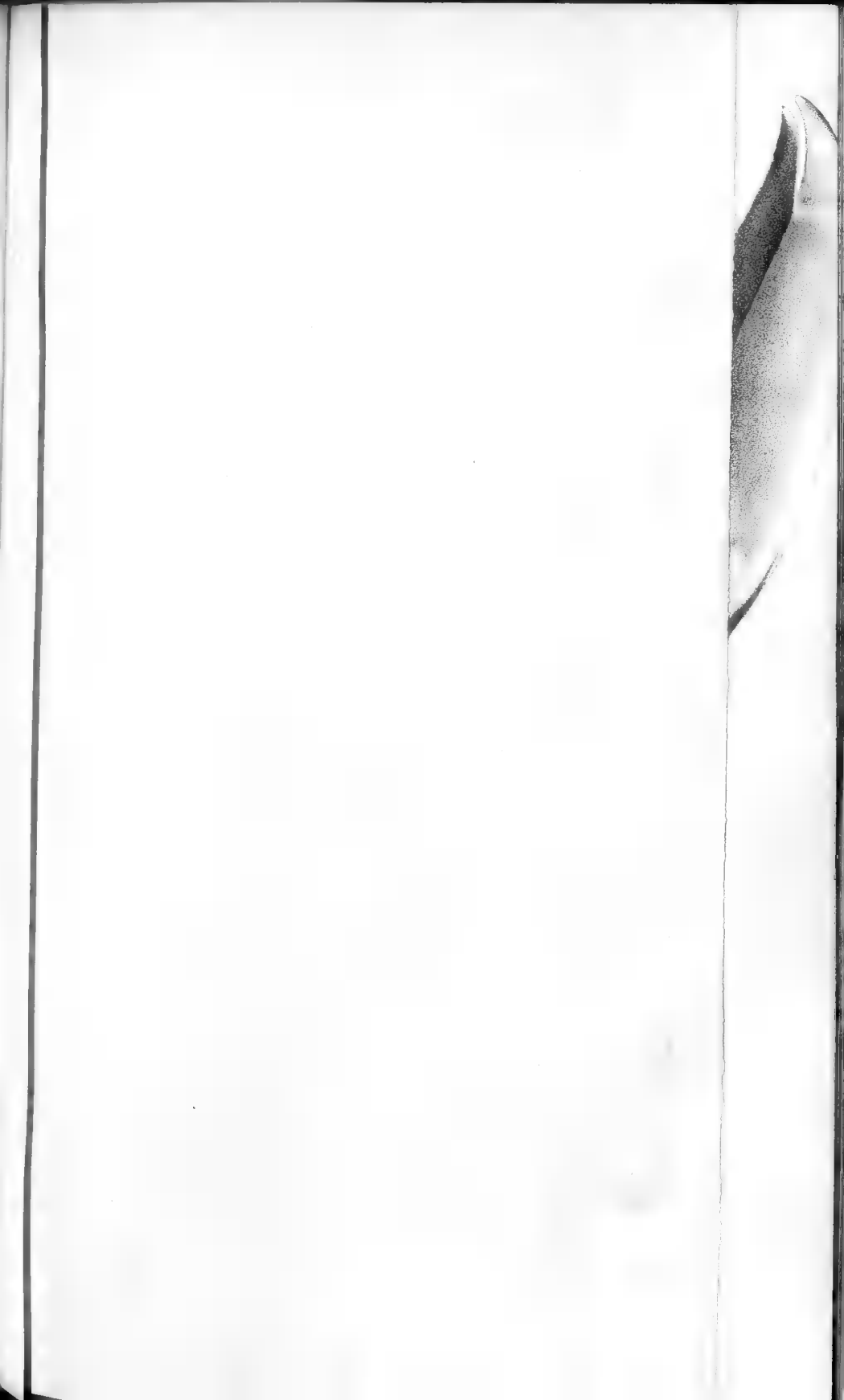
In *Rhamphastos erythrorhynchus*, the ribs are seven, the first anterior being false, and being also, together with the last posterior, devoid of the usual process.

In the *Turacus buffonii*, *Psilopogon*, and *Megalaima*, the ribs are disposed in the same manner as in the Toucan above mentioned.

All the Cuckoos I have examined, have also the ribs arranged in the same manner; but the two hinder ones are devoid of the posterior process.

The Parrots have nine ribs, but the anterior one is often a mere rudiment. Taking this one, however, into consideration, the two first are false, and without posterior processes, as are also the two hinder ones.

Scansores differ from other birds as regards the vertebral column, chiefly in the caudal portion; and as this is most apparent in the Toucans and in the Woodpeckers, in both of which families the tail forms an important organ, or at all events more important than among the other *Scansores*, it is not improbable, that the same form may be found among other birds, particularly *Dendrocolaptes* and *Anabates*, which, although I regard them as Wrens, use their





nat size

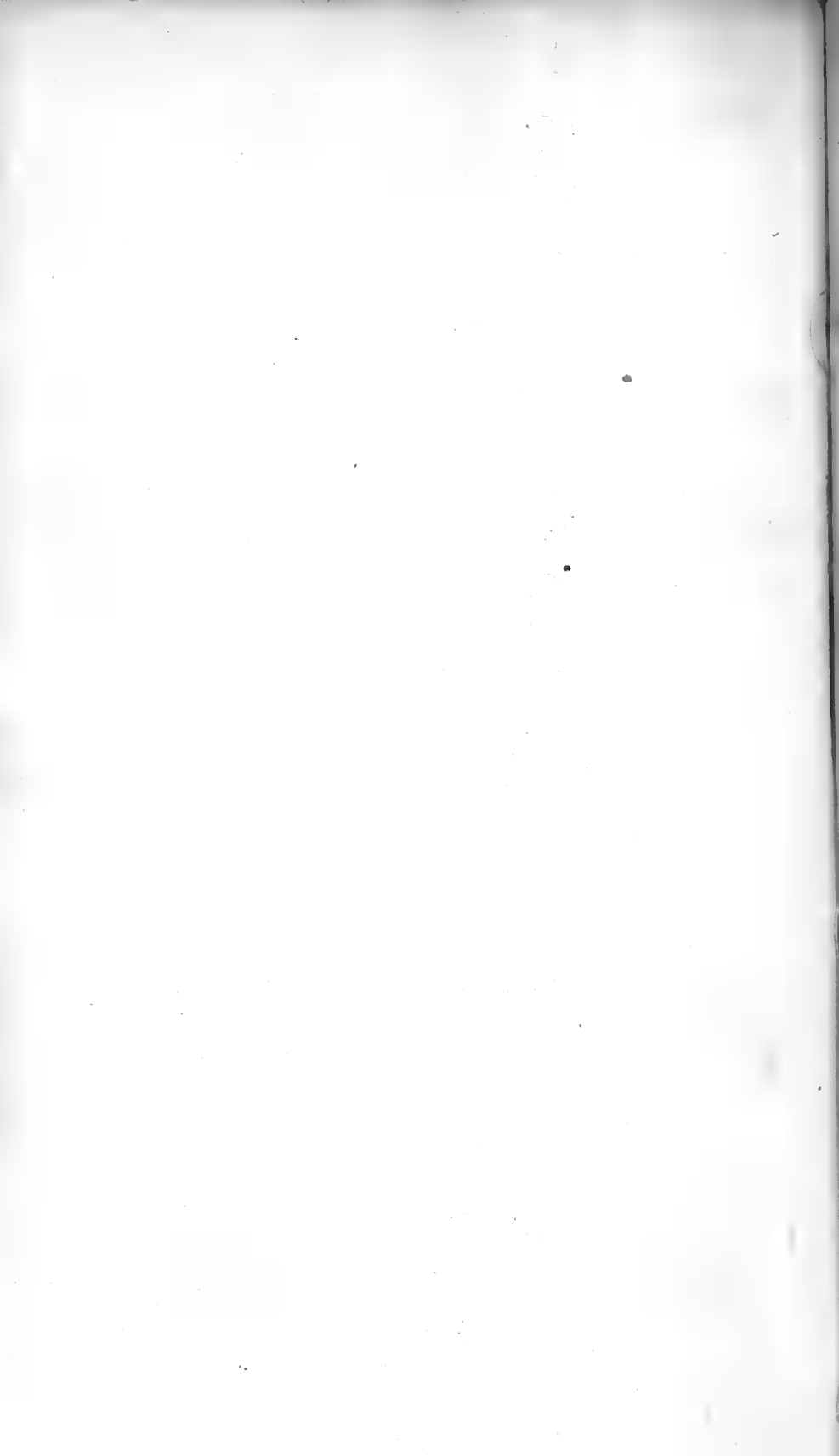
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RHAMPHASTOS ERYTHORHYNCHUS $\frac{2}{3}$ nat size





PSILOPOGON PYROLOPHUS. nat. size.



NOTES ON THE OSTEOLOGY OF SCANSORES.

tails with great effect in supporting themselves during their search for insects on trees.

The Toucan has the power of turning his tail over his back; and, as might be expected, we find a nearly true ball and socket joint, which, in conjunction with the tapering superior vertebral process, enables him to perform this feat.

The Woodpeckers have great motive power in the tail; but the apparatus, although resembling that of the Toucan, is not nearly so perfect.

The terminal joint of the caudal vertebra in the Toucan is broad and much flattened on its lower surface; that joint, in the Parrot, is laterally compressed. The same bone in the Woodpeckers and Cuckoos appears to hold an intermediate station, the bone, at the same time that it is elongated, being compressed and much flattened inferiorly.

The numbering of the vertebræ of those species of *Scansores*, that I have examined, is as follows:—

	Cer.	Dor.	Sac.	Caud.
<i>Rhamphastos erythrorhynchus</i>	12	8	11	7
<i>Plyctolophus galeritus</i>	11	9	11	6
<i>Calyptorhynchus cookii</i>	13	9	11	6
<i>Platyercus zonarius</i>	11	9	11	6
<i>Palaornis columboides</i>	11	9	12	6
<i>Phœnicophaus tricolor</i>	11	9	11	6
<i>Coccyzus chrysogaster</i>	11	8	11	6
<i>Psilophogon pyrolophus</i>	11	9	10	7
<i>Turacus buffonii</i>	12	8	11	7

On comparing the above list with the numbering of the vertebræ of other families of birds, it is found on the average, that there are fewer cervical vertebræ than among *Razores*, *Cursores*, *Grallatores*, or *Natatores*, and that the number is about the same in the *Fissirostral* type, and fewer than in *Raptores*. The sclerotic plates are thirteen in *Rhamphastos*, *Psittacus*, and *Turacus*, and twelve in *Phœnicophaus*.

It now remains for me to point out what station I conceive the group of scansorial birds, as at present limited, to hold amongst birds in general, and also the relative position of the families composing it. I am aware that many Naturalists are of opinion, that the *Psittacide* ought to form a group distinct from *Scansores*, but

NOTES ON THE OSTEOLOGY OF SCANSORES.

in other orders of birds, we shall find as great anomalies in anatomical structure as there is between the Parrots and the remainder of *Scansores*; in fact, among *Scansores*, we find an osteological structure differing from that of the other species in the same family. In *Centropus phasianellus*, we have a sternum with the lower edge of the keel curved, and the posterior edge indented with two fissures only, although this bird cannot be placed otherwise than among the Cuckoos, the remainder of its anatomy, as well as its external form agreeing with them, and in the same particulars in which this bird differs from the Cuckoo does it agree with the Parrots.

Some affinity may be supposed to exist between the *Psittacidæ* and the *Raptores*; there is a similar form of bill. The palatine bones in *Circætos brachydactylus* have their lateral edges bent downwards; the sternum of many species is not very dissimilar, and the feet of both are formed for either grasping trees or prey. The bony septum between the eyes is also generally nearly perfect in both. No bones of a Parrot differing in external appearance more than any other, namely, *Strigops*, have as yet been brought to England, but should the skeleton ever be obtained, it will probably throw some additional light upon the arrangement of the group. It is curious, that in the three groups of birds which are generally placed first in an arrangement of the class, we find each including a group without posterior marginal fissures, thus:—

Without Fissures.	With Fissures.
Hawks. Parrots. Humming Birds and Swifts.	Owls. Cuckoos, Turacus, and Rhamphastos. Goatsuckers and Kingfishers.

On these grounds, therefore, I should be unwilling to separate the parrots from the other *Scansores*, and should arrange the whole group in the following order, beginning the arrangement of birds with the order *Raptores*:—

Sternum, in old birds, without fissures on the posterior margin, but sometimes with foramina; bill much hooked; tarsi short; edge of the sternal keel arched and deep; ischial bones anchylosed at the upper edge to the superior vertebral process.....

PSITTACIDÆ.

Last caudal vertebræ laterally compressed, slightly flattened inferiorly, but not elongated; bill of moderate size, curved

CUCULIDÆ.

Sternum with two fissures on the posterior margin; keel with its edge straight and narrow; ischial bones not anchylosed to the superior vertebral process.....

Toes placed two and two; septum of the orbits entire; the osfurcatum weak, sometimes wanting; anterior edge of the sternal keel projecting as far as the extremity of the manubrial process.....

SCANSORES.

Last caudal vertebræ much flattened inferiorly; bill large and curved

RHAMPHASTIDÆ.

Caudal vertebræ elongated; bill pointed.....

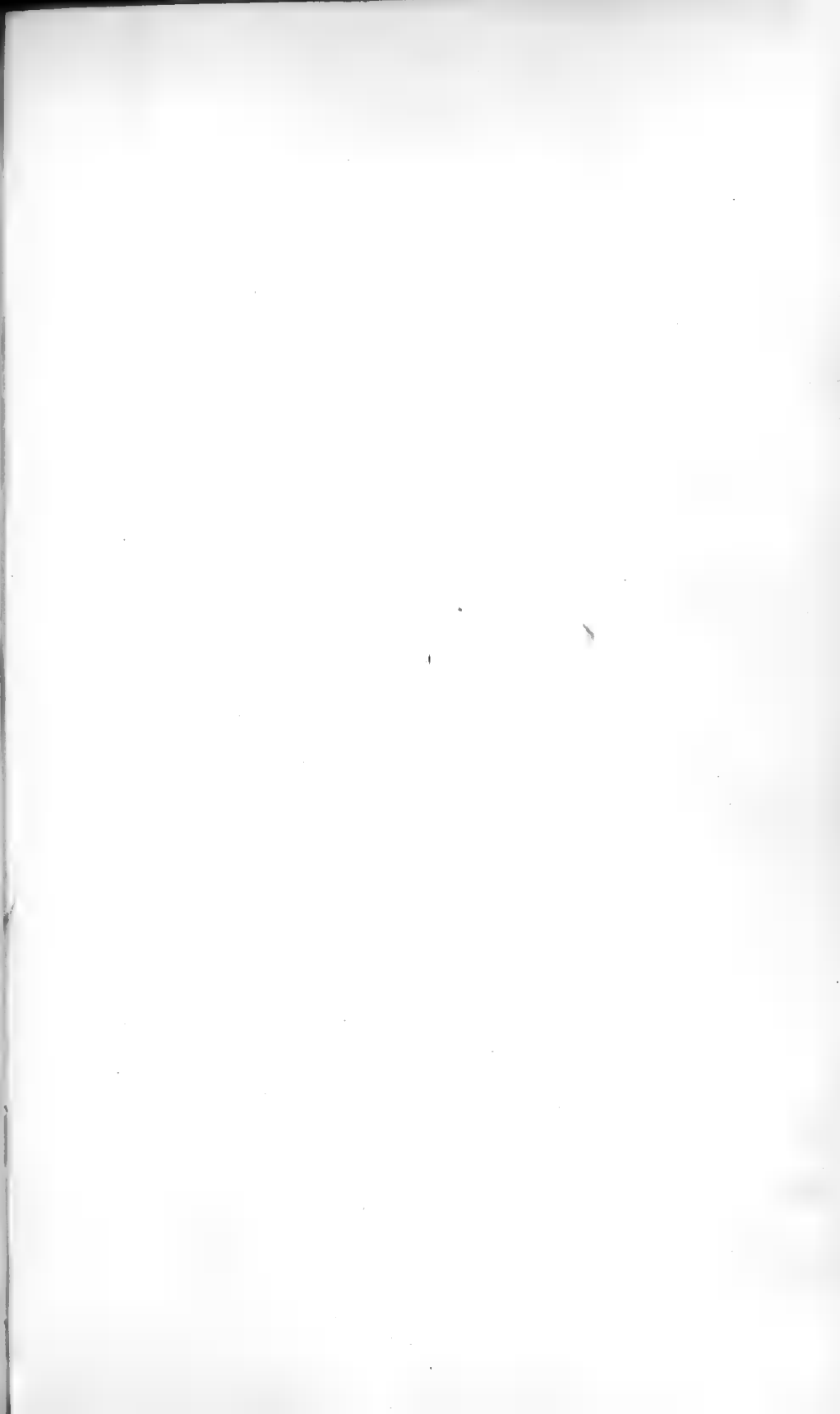
PICIDÆ.

Upper edge of the ischial bones united to the superior vertebral processes, but with a large foramina on each side

TURACUS.

NOTES ON THE OSTEOLOGY OF SCANSORES.

There are some exceptions to the general rules, which I have endeavoured to lay down in the foregoing table, which is the case, not only in Ornithology, but in other sciences, particularly in Botany. In following out a general arrangement of birds, I should place the *Raptores* immediately before the *Scansores* and the *Fissirostral* group, for which I have before suggested the name of *Volitores* immediately after them. I think, also, that the Hornbills belong to the *Fissirostral* group, although they have generally been classed with the Crows. They have the same form of foot as in *Halcyon*, the same short tarsi, with the front deeply channelled; the same elongated calcineal process; the same truncated form to the posterior end of the lower mandible; the same deep depression extending from the back part of the orbits and meeting at the occiput; the same strong osseous ridge extending down the sternum, from the junction of the coracoid to the outer edge of the posterior margin of the sternum; the same form of keel to the sternum; the same form of wing, the ulna and radius exceeding the humerus in length by one-third; the same straight scapula; the same form of *Os furcatum*; the same abbreviated *Os pubis*, and the same truncated posterior margin to the pelvis. The skeletons of *Buceros* I possess, are those of large species; it is therefore probable, that some of the smaller and weaker species would present still greater affinities to the Kingfishers.





Trochilus allardi, Bourc
July 1850

TROCHILUS ALLARDI, BOURC.

Oiseau Mouche, d'Allard; *Ornismya allardi*, *Bourcier*, *Rev. Zool.* Oct. 1839, p. 294.

THE first description of this species is, we believe, in the work above quoted, it formed part of the extensive collection of M. Bourcier, and we are not aware that it has yet been figured.

Species which agree with the description of M. Bourcier were received in our last collections from Professor Jameson of Quito. It must have an extensive range, both in latitude and elevation, if we are correct in referring the Quitian Birds to M. Bourcier's species; the latter gentleman gives their country as Santa Fé de Bogota, while Mr. Jameson gives the western declivity of Pichincha as its habitat, stating, that "it feeds generally on the flowers of a blue Lupine, and that its habits resembled more those of an insect than one of the feathered tribe."

The male has the upper parts metallic green; beneath very pale reddish-orange, becoming almost white on the vent; each feather is broadly tipped with the same colour as the upper parts, and when the plumage is laid close it almost entirely exhibits that tint. On the chin and throat is a triangular gorget, running to a point on the breast, composed of scale-like feathers of a rich and varying emerald green. The wings are deep umber brown. The tail is composed of ten broad feathers, and is slightly forked, the outer exceeding the inner feather by about $\frac{3}{4}$.

The entire length is from 3.5 to 3.9 ; wing, 2.4 ; bill to forehead, $4\frac{1}{2}$.

The female is similar to the male except in the lower plumage, which is pale reddish-orange, and without any trace of the brilliant gorget, the feathers on the chin, throat, and neck, having a very small round brownish-green spot at the tip of each.

ILLUSTRATIONS OF ORNITHOLOGY.

SYNALAXIS FLAMMULATUS, JARD.

THIS bird, which formed a part of our last collection from Quito, we have been unable to reconcile with any described or figured species. It "frequents the lofty table-lands of the Andes, at an elevation of 14,000 feet."

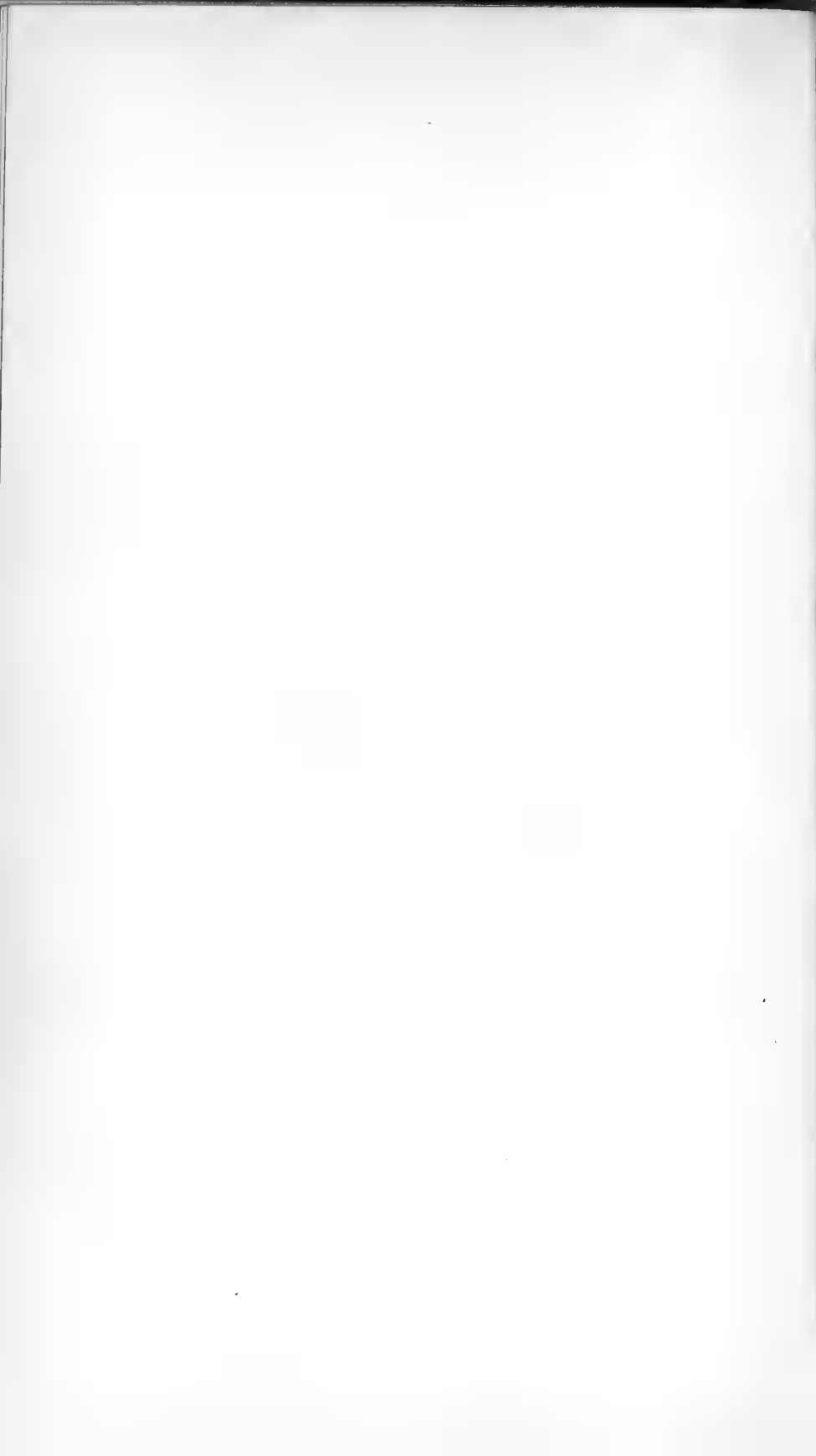
The general colour above is a pale umber brown, and each feather has in the centre a broad somewhat lanceolate streak along the shaft of yellowish-white, on the forehead and crown tinted with ochraceous; the edges of this stripe are bordered irregularly with a deeper tint of umber brown, relieving the white, and at the same time making the entire plumage appear darker than it really is when separated. On the wings the colours become more rufous, maintaining the same central streak; the quills are umber brown, having at the base a pale sienna band, distinctly marked across. The tail is much graduated, the feathers slender and disunited at the tips; the centre feathers are umber brown, paler on the outer edges; those to the outside become paler and more clouded towards the shafts with umber; underneath, the chin and upper part of the throat is pale yellow, and on the other parts the ground colour is a paler umber brown; the centre of the feathers broadly marked with yellowish-white, giving to the centre of the belly and vent a preponderance of that colour. The tarsi and feet appear to have been bluish-gray or lead colour, and the latter are long in proportion to the size of the bird.

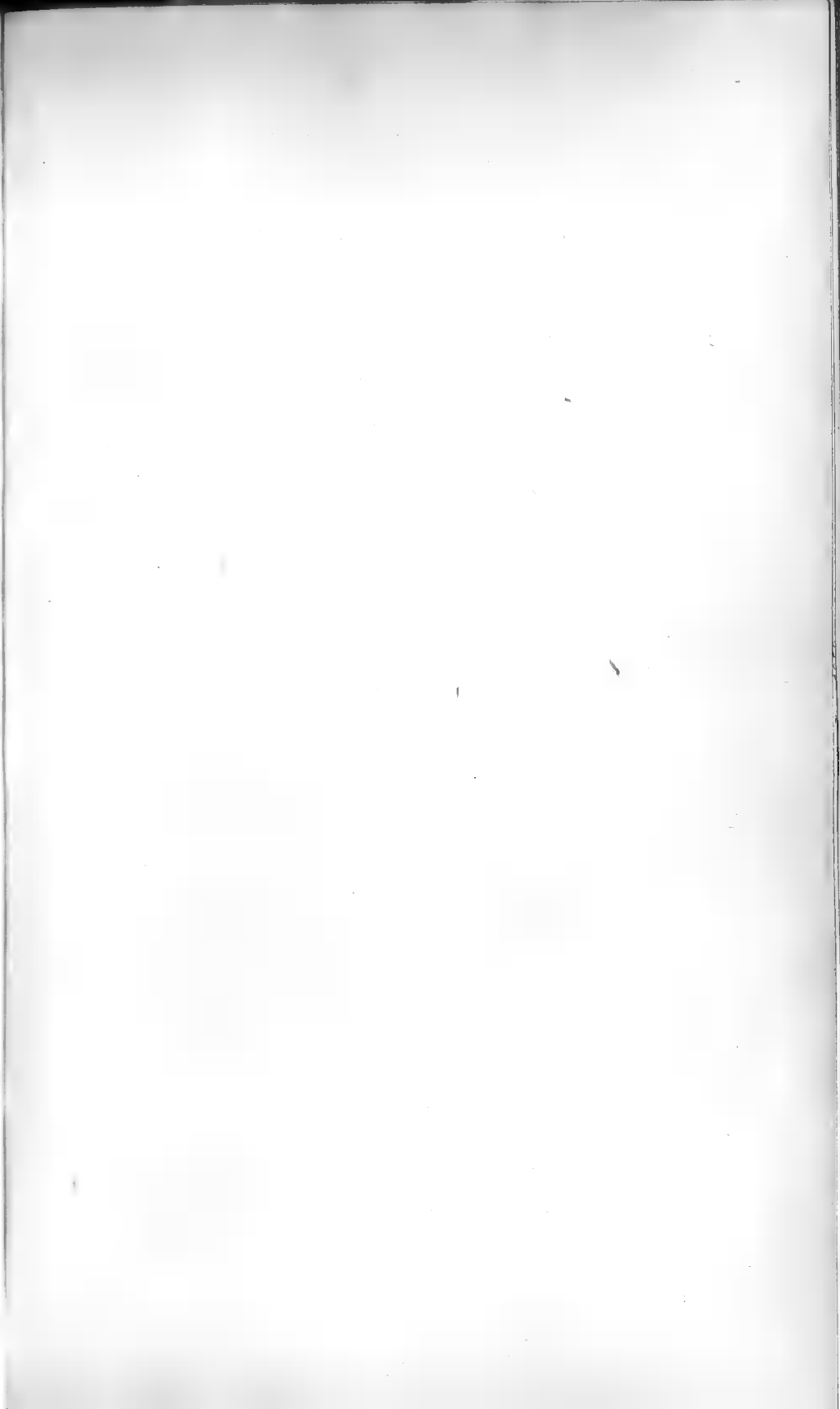
The entire length is, $\hat{6}.5$; of bill to forehead, $\hat{5}$; of wing, $\hat{2}.4$; of tarsus, $\hat{9}$.



Synalaxis flammulatus, Jard.

July 1850.





ILLUSTRATIONS OF ORNITHOLOGY.

ALCYONE CYANO-PECTUS, DE LA FRESN.

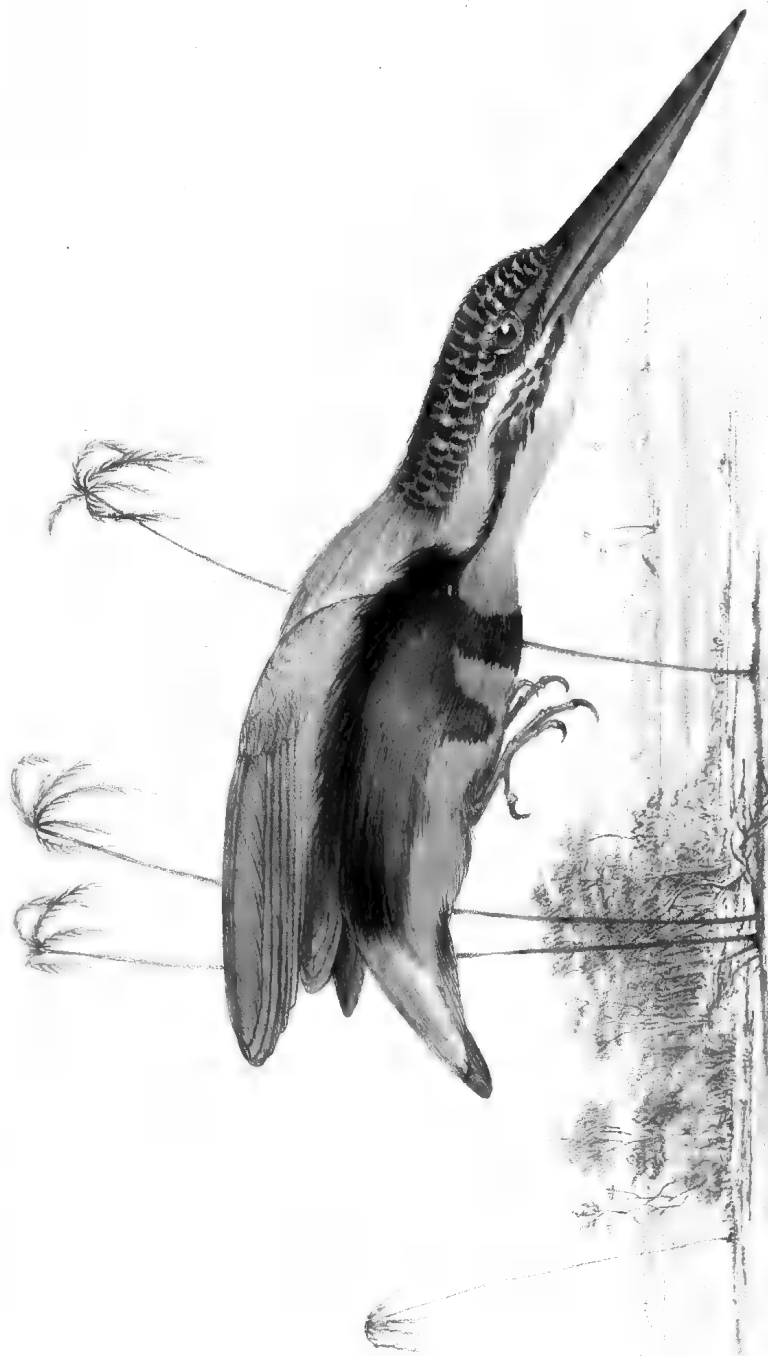
Alcyone cincta of our Plate.—*Ceyx cyano-pectus, de la Fresn., Rev. Zool. 1840, p. 33.*

THIS pretty little Three-toed Kingsfisher, was sent to us by Mr. Eyton for illustration, and the figure and name attached were drawn and printed off before we discovered it to be identical with the synonym of de la Fresnaye, who had already described it. Mr. Eyton's specimen is marked as received from the Philippine Islands.

Ceyx and *Alcyone*, the small Three-toed Kingfishers, are placed by Mr. Gray in separate sub-families, *Halcyoninae* and *Alcedininae*. The distinctions seem to be, the broader and stronger bill of *Ceyx*, with their more uniform Daceline plumage, contrasted with the slender or more truly Alcedine form, slender straight bill, and blue colour of the plumage of *Alcyone*. We are scarcely satisfied with their separation. The species, whether of one or other, are mostly very closely allied, and require care to investigate and separate. A great proportion of them are spread over the Indian Archipelago, and numerous specimens are required to work out the variations they are subject to, and the geographical limits and range of each.

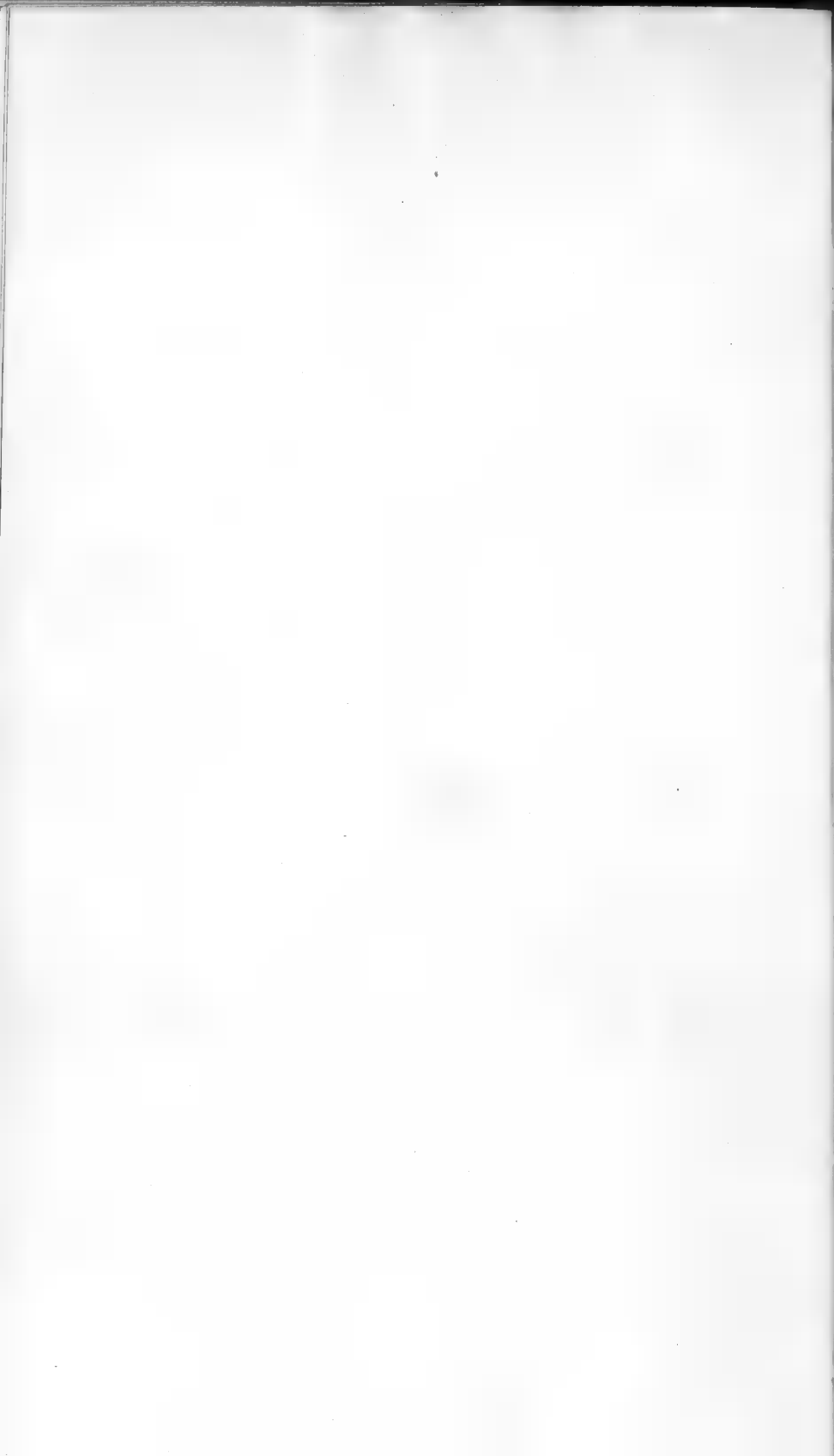
Bill rather slender; upper mandible brown, lower tinted with orange-red; above, the characteristic Alcedine spot before the eye and on the sides of the neck, pale sienna; crown, nape, lower jaw, and auriculars, wings and tail, deep bluish-black; feathers of the crown, tipped with a bar of pale clear ultramarine, more indented on jaw and auriculars; those of the shoulders and scapulars with a narrow spot or dash of same colour; centre of the back pale ultramarine, rump and tail-covers, deeper; below, throat and breast, centre of belly and vent, and under wing-covers, sienna, palest on the chin; lower part of the breast girt with a band of indigo $\frac{3}{4}$ or $\frac{3}{2}$ broad; the flanks meeting nearly in the centre of the belly, and under tail-covers, same colour, in some positions tinted with ultramarine; tarsi and feet yellowish-vermilion.

Entire length, 5.5; bill to forehead, 1.1; to gape, 1.9; of wing, 2.4; tarsus, 3.



Alcyone cineta, Jard.

1854



M E E T I N G

OF THE

BRITISH ASSOCIATION AT EDINBURGH,

JULY 30, 1850.

ORNITHOLOGY OF SECTION D.

In Scotland, Ornithology has not advanced so rapidly of late as in England. In Edinburgh, there are no private collections of any importance; and since the decease of John Wilson the Janitor of the University, as well as the preserver of the objects of Natural History for the Museum, there has been much less interest taken in Zoology by the young men attending the classes. Wilson's stuffing rooms were in the square of the Old College, where he possessed a small collection of neatly mounted specimens of British and Foreign birds; it was rich in the British Game and Birds of Prey, and besides some showy foreign birds set up for attraction, he possessed some of great rarity (such as *Musophaga gigantea*, &c.), which, at the sale of his collection, came into our possession. These rooms, from his official intercourse with the students, were almost always open and were very attractive; and as lessons in preparing animals and birds was one of the Janitor's privileges, there was frequently a large attendance; and many went away, carrying with them the knowledge to prepare, and bearing the seeds of a practical zoology and of a love for nature. The students having these objects constantly before them, often seeing the specimens arrive fresh from the country or from the sea, imbibed an interest, which made them naturalists without their knowing it; some of them are now professors; some men of eminence in science; some of them enlightened travellers; and in one of the papers read before the section,

we had an example of skins prepared in a manner remarkable for its success, and illustrated by notes on their habits, of great value. These were by the son of a gentleman, Professor M'Gillivray of Aberdeen, who will well remember Wilson's rooms in the Old College.

Now, the stuffing department goes on in secret. The dealers in Edinburgh teach if required, but there is no *temptation* to learn. Fenton and Carfrae, both capital preservers, and most respectable persons, have no collections. There is not sufficient demand to keep many specimens for sale; and their work is almost confined to setting up what is sent in by sportsmen, some favourite dog, parrot, or canary, or furnishing up some case of foreign skins, sent from friends or relatives abroad; and even these departments, they tell us, are becoming less frequently called for. The Ornithological collection in the Museum of the University is not arranged so that it can be studied, and the new acquisitions, or private donations, are not accessible. There is a want of some proper and well informed officer as curator, who could superintend, work out, and catalogue the general Zoological collection. There are no rooms or accommodation where specimens can be examined, and drawings or descriptions made by any one working at or interested in any particular group. The really fine collection is therefore almost useless, except as a holiday show; and the Government funds which are expended, are in a manner thrown away, from their inadequacy to furnish the convenience and facilities for study. These are some of the causes which retard the higher branches of Zoology, and make it desirable that a proper representation of the wants of the Museum should be made to Her Majesty's Government.

The Twentieth Meeting of the British Association for the Advancement of Science assembled in the usual manner on the evening of the 30th July, under the presidency of Sir David Brewster, one of its original founders and earliest supporters. It was numerously attended, but the scientific men from abroad did not number those of some former years, and we had no foreign Ornithologist present, Professor Van der Hoeven of Leyden being the only gentleman who represented Zoology from the continent. The British Ornithologists present were, Mr. Selby, who was obliged to leave during the early part of the meeting, Mr. Hugh E. Strickland, and Mr. Gould, who both read papers, and Mr. Eyton. Mr. D. W. Mitchell

ORNITHOLOGY OF SECTION D, 1850.

was present during the last two days; Mr. James Wilson took part in the remarks made upon some of the papers; Mr. Wolley, a gentleman attending the Medical Classes in the University, read a paper on the birds of the Faroe Islands, and we trust we shall be able to continue his name among the list of those who study in the field as well as in the closet; and Mr. Arthur Strickland gave a communication on the "changes of plumage in British birds," but which, unfortunately coming on near the close of the section, was not concluded. By the kindness of these gentlemen, we have received their papers, and the next two parts of the "Contributions" will be devoted to them, as the Ornithological Work of Section D in 1850.

The only other Ornithological information publicly given during the week, was the instructive lecture of Dr. Mantell, upon the extinct birds of New Zealand, delivered in the Music Hall, on the evening of the 5th August. The time was much too short to allow a complete exposition of the subject, but sufficient we would hope was said to interest the hearers, and to cause every one who had friends or opportunities in these distant islands, to lend their help to trace the former history and fate of those gigantic bipeds, which bear so strongly upon the changes and distribution of animal life during a historic period. Dr. Mantell's son, who has settled in New Zealand, has already sent large collections of the bones to his father, which have added much to our knowledge of their structure; and Dr. Mantell stated, that his last letter, received only about a fortnight ago, announced the despatch of a large collection of New Zealand Birds, among which was a skin, supposed to belong to the *Notornis mantelli*, a bird hitherto only known in a fossil state.

ON A PECULIAR STRUCTURE IN
THE RECTRICES OF *VIDUA PARADISEA* (LINN.)

BY H. E. STRICKLAND.

THE group of Ploceine birds which are distinguished by the assumption, during the breeding season, of greatly lengthened rectrices, and to which the generic name *Vidua* was given by Cuvier, have been in more recent times divided into three genera. M. Rüppell retained the name *Vidua* for the form of which *V. regia* (Linn.) is the type, and proposed the name *Coliuspasser* for another group, typified by *F. macrocerca*, Licht. (*C. flaviscapulatus*, Rüpp.) Mr. G. R. Gray proposed a third division, named *Chera*, for the "*Emberiza longicauda*" of Gmelin, distinguished by its longer and more rounded wings, in which the fifth primary is the longest, while in the other two divisions it is the third that is longest. I am disposed to retain all these generic groups as distinct, although they are very closely allied to each other. I must remark, however, that M. Rüppell has founded his genus *Coliuspasser* on a misconception of its true characters. He states, in his "Neue Wirbelthiere zu der Fauna von Abyssinien gehörig," that in *Vidua* it is only the upper tail-covers that are lengthened, the rectrices remaining of ordinary length, while in *Coliuspasser*, the true rectrices are extended far beyond the tail-covers. The fact however is, that if we carefully examine the tails of all these three groups, we shall find that they agree with other Passerine birds, in possessing the normal number of twelve rectrices, and that it is by the prolongation of certain of these rectrices, and not of the tail-covers, that the Whidah Birds acquire their peculiar character. But though *Coliuspasser* and restricted *Vidua* agree in this respect, they are nevertheless well characterized by the different modes in which their rectrices are prolonged. In *Vidua* the four

Fig. 1.

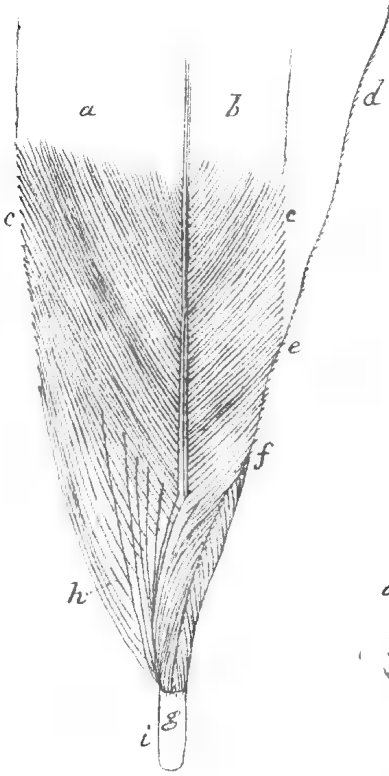
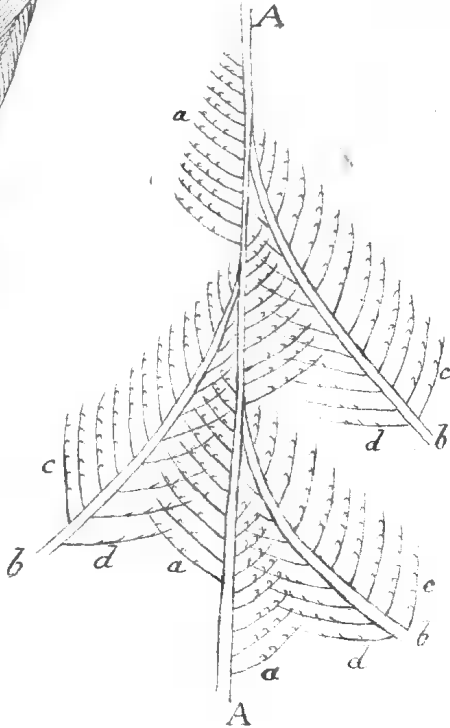


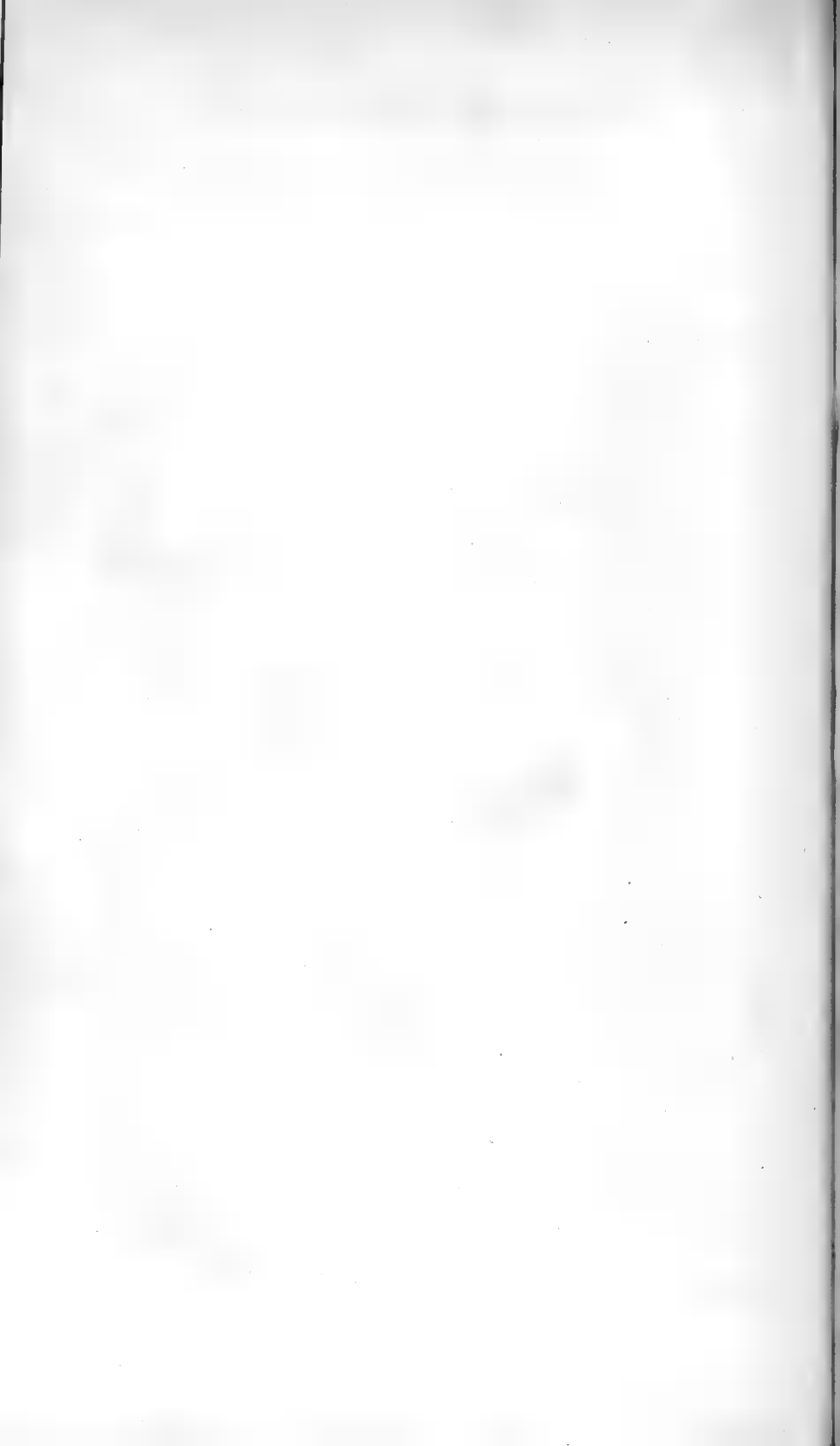
Fig. 2.



Fig. 3.



Submedial Rectrices of
Vidua paradisica (Linn.)
June 1850.



external rectrices on each side are nearly equal and of ordinary length, while the four middle ones, which Rüppell mistook for tail-covers, are abruptly and very greatly lengthened. Of these four middle feathers, the two on one side have their *under* surfaces turned *towards* the under surfaces of the other two. This group will include the species *V. regia* (Linn.), *V. principalis* (Linn.), and *V. paradisea* (Linn.) *V. superciliosa* (Vieill.), said to have only two rectrices elongate, may probably be also referred to this genus.

In *Coliuspasser*, on the contrary, all the rectrices are more or less elongate. Some of them, as *C. macrura* (Gmel.), *C. macrocerca* (Licht.), &c., have the tail simply graduated, the middle rectrices being of moderate length, and the lateral ones gradually shorter. Other species, in which the elongation is carried to a greater extent, have the relative length of the rectrices variously modified. In *C. ardens* (Bodd.), (*V. panayensis*, Gmel.), the tail may be termed furcate, the medial rectrices being shortest, and the outer ones gradually lengthened, though the most external pair is (in my specimens at least) somewhat shorter than the penultimate one. In this species the rectrices are hollowed on their upper side; and it is probable, that in the living bird, the rectrices on each side of the centre have their *upper* surfaces turned towards those of the opposite side, as in the American "boat-tailed grackles" (*Scaphidurus*). This structure of the tail, the exact reverse of that which prevails in the majority of birds, is still more decidedly shown in the *Chera progne* (Bodd.) of Gray, a bird, which, were it not for the different form of the wing, would rank with *Coliuspasser* and not with *Vidua*.

A series of specimens of *Vidua paradisea*, in various stages of moult, collected in Kordofan, by Mr. J. Petherick, has revealed a curious fact in the development of the elongated rectrices, which appears not to have been before noticed. The tail of this bird is a very anomalous one, the submedial pair of rectrices being very greatly elongate, while the medial pair are much shorter, very broad, with a smooth hair-like shaft projecting near two inches beyond the webs. If we now examine the longest (or submedial) rectrices, we shall see that they differ from all the other tail-feathers, in presenting a serrated appearance at their margins. In the other feathers the barbs end in fine points, so that the webs which they compose terminate in an acute margin. But in this particular pair of rectrices, the barbs terminate abruptly, with an obliquely flattened

disk at the extremity of each ; and the webs composed of those barbs, are consequently both blunt and serrated at the margin.

On examining these feathers when in a half-grown state, a singular hair-like filament is seen to spring from their base, which explains the cause of these marginal serrations. This filament is narrow, flat, and thin, much resembling in appearance the barbs of the feathers, but reaching to three or four inches in length. Its distal extremity is free ; but towards the base of the half formed feather it is seen to adhere to the extremities of all the barbs on one (generally the inner) side of the feather, forming a continuous margin or "selvage" to the web. Towards the base of the feather, where the imperfectly formed barbs are collected, as in all young feathers, into a cylindrical bundle, and inserted into a membranous sheath, the barbs belonging to both webs of the feather are seen to be connected at their extremities to the opposite sides of this intermediate filament. As the feather grows and the barbs become mature, their tips are gradually released from this connecting filament, those of the lower or exterior web first, and those of the interior one subsequently. Hence the distal portion of the filament becomes free and waves loosely in the air. It is probable, that when the whole feather reaches maturity, the filament is shed altogether.

The cicatrices, or points of junction between the tips of the barbs and the flat surface of the filament, produce a succession of slight indentations on both sides of the latter, and give it a serrated appearance, which is further increased by the alternate tufts of barbules which fringe its margin. Hence also arise the corresponding serrations on the margins of the feather, which have been before referred to.

It is remarkable, that these filaments, though apparently formed for some temporary purpose in the development of the feather, should exhibit a structure as highly complex as that of the feather-barbs themselves. I allude to the double row of *barbules* ("Strahlen" of German authors) which fringe the outer margin of the filament ; they are not continuous as on the barbs ("Aeste"), but in little tufts, alternating with the surfaces of attachment of the barb-tips. (See *Fig. 2*). These barbules further exhibit those ultimate fringes to which the name *barbicels* has been given.

In ordinary feathers, the barbules on the distal side of the barb are, as is well known, furnished with hooked *barbicels* ("Häkchen"),

while those on the proximal side are simple. But it is remarkable, that in these deciduous filaments which I am describing, *both* series of barbules are furnished with hooked barbicels. The object of these is obviously to embrace the barbules of the feather-barbs, during the attachment of the latter to the filament, and as these barbules are attached to both sides of the filament, it is requisite that the filament should be provided with a double series of hooks.

The object of this singular structure is probably the protection of the feather-barbs during the course of their development. But why so complex and elaborate an arrangement should be confined to two feathers only in the bird, and to one species of bird only (as far as is yet known), is one of the many questions of natural science which must probably remain unanswered.

Explanation of the Plate.

Fig. 1.—Under view of basal portion of one of the submedial rec-
trices of *Vidua paradisea*, in a half developed state.

a. Exterior web; *b.* interior web; *cc.* serrated margin; *d.* free portion of filament; *ef.* portion of filament attached to margin of interior web; *fg.* portion attached to both webs; *h.* barbules of exterior web recently detached from the filament and not yet incorporated into the web; *i.* membranous sheath surrounding the immature barbs.

Fig. 2.—Portion of filament magnified, showing the alternating tufts of barbules on each side.

Fig. 3.—*A.A.* Portion of filament highly magnified, with portions of barbs attached as in *Fig. 1, f. g.*

aa. Filament-barbules, forming two series of tufts, both of which are furnished with hooked barbicels; *bbb.* feather-barbs, belonging to the two opposite webs of the feather, connected at their distal extremities to opposite sides of the filament; *ccc.* barbules of the distal side of the barbs, furnished with hooked barbicels; *ddd.* barbules of the proximal side of the barb, devoid of barbicels, or furnished with only a very few simple ones.

A BRIEF ACCOUNT
OF
THE RESEARCHES IN NATURAL HISTORY
OF
JOHN M'GILLIVRAY, Esq.
THE NATURALIST ATTACHED TO H. M. SURVEYING SHIP THE RATTLESNAKE,
ON THE
NORTH-EASTERN COASTS OF AUSTRALIA, NEW GUINEA, &c.
BY
JOHN GOULD, F.R.S., &c.

IT is no less interesting to the scientific world than it is just to the commanders and naturalists of our exploring expeditions, that the results of their labours should be made known as speedily as possible. It affords me therefore very great pleasure, to communicate to the present meeting, by desire of Sir H. De la Beche and Professor Forbes, an account of the Quadrupeds and Birds procured and observed by Mr. John M'Gillivray, the Naturalist attached to Her Majesty's Surveying Ship Rattlesnake, employed under the command of the late Captain Owen Stanley, in exploring the eastern and northern coasts of Australia.

In the introduction to my "Birds of Australia," which I presume is known to many of my hearers, I have recorded an opinion, that a considerable number of species frequenting the north coast of that country yet remained to be made known to us, but I confess that I was not prepared for the novelties which have rewarded Mr. M'Gillivray's researches, nor to find so many fine species, hitherto supposed to be peculiar to New Guinea, to be equally common to the fauna of Australia.

Before enumerating the results of Mr. M'Gillivray's labours, I must not fail to direct your attention to the zeal with which he has worked in the cause to which he has devoted himself, to the very admirable manner in which his specimens are prepared, the neatness and accuracy with which they are labelled and their sex ascertained by dissection, the place where and the date when killed, and the many valuable notes he has made of their habits; nor must I omit to mention the kind and friendly assistance constantly rendered him by Captain Stanley, of which, it will be seen, he has himself made honourable mention—the result showing how important it is that officers employed in exploring expeditions should have a taste for natural history, as well as the kind of knowledge requisite for duly effecting the more immediate object of the voyage.

I shall now give such portions of the interesting letters with which Mr. M'Gillivray has favoured me, as have reference to those departments of natural history to which I have devoted myself, with such comments as may be necessary, together with such portions of his personal adventures as may appear to be of general interest.

“ *H. M. S. Rattlesnake, Mauritius, 12th May, 1847.* ”

“ As I am sending home my first box of specimens, I accompany them with a short note, to direct your attention to one which I take to be *Thalassidroma leachii*; a *Puffinus* which I have set down as a new species, closely allied to your *flavirhynchus*, and a *Sterna*. I have derived the greatest benefit from your paper on the *Procellariidæ*, which has enabled me to identify the species. The specimen numbered 25 I have called *glacialoides* by guess, there being no description to which I have access.”

As regards the *Thalassidroma leachii*, no specimen was observed by me during my voyage round the world, and the above is the only instance I have heard of of its being seen so far south as the tropics; the *Puffinus* is the *Puffinus cinereus* of the European Fauna, and the above is the first instance recorded of its being seen south of the line; the *Sterna* is the *S. melanorhyncha*, figured in the Birds of Australia. Mr. M'Gillivray was right in considering the bird numbered 25 as *P. glacialoides*.

ORNITHOLOGY OF SECTION D, 1850.

"H. M. S. Rattlesnake,
"Off Cape Howe, South Coast of New South Wales,
"6th February, 1843.

"In the beginning of November last, I sent you in a box of specimens, through Professor Forbes, three lists, showing the daily occurrence of the *Procellariidæ* during our outward voyage; first, between Rio de Janeiro and the Cape of Good Hope; second, between the Cape of Good Hope and the Mauritius; and third, between the Mauritius and Van Diemen's Land."

The following are the lists referred to, and they are of great value, as showing the range of the species enumerated therein; and are peculiarly interesting to me, as they tend to confirm the observations made by myself during my Voyage to and from Australia, of which a full account has been given in my work:—

TABULAR VIEW
OF
OCCURRENCE OF PROCELLARIDÆ.

SOUTH ATLANTIC—RIO DE JANEIRO TO CAPE OF GOOD HOPE.

Date, 1847	<i>Diomedea exulans</i>	<i>D. fuliginosa</i>	<i>D. chlororhynchos</i> and <i>eximata</i>	<i>Procellaria</i> <i>conspicillata</i>	<i>P. atlantica</i>	<i>P. leucocephala</i>	<i>P. mollis</i>	<i>Puffinus n. sp.?</i> Shin, No. 6	<i>Talassitrona</i> <i>leucogaster</i>	<i>Th. wilsonii</i>	Prions	<i>Procellaria</i> <i>glacialis</i>	<i>P.</i> , like <i>Mollis</i> , with white belly	Latitude at Noon	Longitude at Noon
FEB.														South	West
6	...	...	...	1	...	...	...	...	...	...	...	...	...	28.24	38.18
7	...	...	...	3	A few	...	...	...	...	...	...	...	...	28.29	38.20
8	...	...	...	3	do.	...	2	...	...	...	...	...	...	30.51	36.48
9	...	...	...	3	do.	...	A few	...	...	...	...	...	...	33.21	36.55
10	1	...	...	Several	do.	...	do.	...	2 or 3	...	...	...	...	35.21	35.62
11	3	...	...	do.	do.	...	do.	...	do.	...	...	...	...	36.45	33.60
12	3	...	...	do.	do.	...	do.	...	do.	...	...	...	...	37.21	36.73
13	3	...	...	do.	*do.	...	*do.	2 or 3	*do.	...	...	...	...	36.51	27.50
14	3	...	...	do.	do.	...	Numbers.	...	Numbers.	...	...	...	...	36.32	26.23
15	3	...	...	do.	Plentiful	...	Very do.	...	Several	1	...	...	1	36.35	24.76
16	3	...	1	do.	1 or 2	...	1 or 2	1	...	...	...	...	...	36.07	21.04
17	3	...	...	Numbers.	2	...	do.	2	1	1	...	...	...	35.30	19.83
18	3	1	...	Several	2	1	do.	2	1 or 2	...	...	...	1	36.42	18.42
19	1	{Numerous}	1	1	...	...	...	{In prodigious numbers}	4 or 5	...	Many	...	...	38.07	16.42
20	2	3	1	...	...	...	do.	12	...	...	...	...	...	38.05	15.46
21	2	1	...	...	...	...	...	2 or 3	3 or 4	1	1	...	...	37.47	10.13
22	2	...	2	1	...	6	2 or 3	1 or 2	do.	...	5 or 6	...	...	37.26	7.34
23	4	...	*6	2	1	...	...	1	2 or 3	...	...	...	...	36.07	5.00
24	...	...	...	2	*4	...	*2	...	1	...	...	...	...	34.43	4.00
25	1	...	...	2	2	...	1	1	2	...	...	...	...	35.28	3.00
26	1	...	...	1	1	...	2	1	2	...	...	...	...	37.00	1.25
27	20	3	1	1	2	...	2	...	2	1	5 or 6	...	...	38.22	0.25
28	4	...	1	1	2	...	1	...	2	...	Many	...	...	38.52	0.16
MARCH															
1	6	1	1	1	5 or 6	1	12	...	...	1	...	1	...	38.25	4.1
2	...	...	...	...	1 or 2	...	2 or 3	...	...	...	...	...	...	37.38	8.13
3	1	...	...	...	1	...	...	...	...	...	...	...	...	36.48	10.18
4	2	...	...	...	2	...	...	...	...	1	...	...	...	36.41	12.05
5	...	...	...	...	...	...	...	...	...	...	...	...	...	36.22	13.40
6	1	...	...	...	...	...	1	...	...	1	...	...	...	36.26	14.44
7	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...

ORNITHOLOGY OF SECTION D, 1850.

SOUTH INDIAN OCEAN — CAPE OF GOOD HOPE TO MAURITIUS.

Date, 1847	<i>Diomedeæ exulans</i>	<i>D. fuliginosa</i>	<i>D. chlororhynchos</i> or <i>spadicea</i>	<i>Procellaria gigantea</i>	<i>P. aquinivalis</i>	<i>P. atlantica</i>	<i>P. glacialis</i>	<i>P. mollis</i>	Prions	<i>Thalassidroma leucogaster</i>	<i>Th. wilsonii</i>	Latitude at Noon	Longitude at Noon
APRIL													
13	2	2	1	...	...	1	...	2 or 3	1 or 2	Abundant	...	36.16	27.10
14	*12	2	...	...	1	2	...	do.	do.	do.	...	36.52	27.52
15	3	2	...	...	1	1	2	2	5 or 6	do.	1	38.09	29.41
16	1	2	...	...	1	1	2	2	Many	Very do.	...	38.09	32.51
17	4 or 5	2	1	...	1	2	2	5 or 6	...	Numerous	1	37.14	36.20
18	do.	3	...	...	...	...	2	3 or 4	...	do.	...	37.14	37.32
19	3	4	1	...	2	1	2	do.	Many	do.	1	37.50	39.57
20	4	4	...	...	...	4	2	4	...	do.	...	38.23	43.28
21	7	*3	...	...	2	4	2	4	...	do.	...	37.12	45.38
22	5 or 6	3	...	...	1	1	5 or 6	4 or 5	Many	do.	...	37.57	49.57
23	80	3	...	1	1	1	*Numerous	2 or 3	A few	do.	...	36.50	53.18
24	10 or 12	3	...	1	1	1	5 or 6	do.	do.	do.	1	34.26	54.20
25	5 or 6	3	...	...	...	1	12 or 20	do.	do.	do.	...	32.20	55.10
26	1	...	...	...	1	...	1	1	...	2 or 3	...	30.14	56.56
27	...	...	...	...	...	...	3	2	...	2	...	28.15	57.20
28	...	...	...	...	...	1	1	1	...	2 or 3	...	26.57	57.30
29	...	...	...	...	...	1	...	1	...	3	...	27.16	58.30
30	...	...	...	...	...	...	...	1	...	3	...	26.50	60.04
MAY													
1	...	...	...	...	...	...	...	...	...	3	...	25.49	61.08
2	...	...	...	...	...	...	...	...	...	3	...	23.06	60.40

SOUTH INDIAN OCEAN — MAURITIUS TO VAN DIEMEN'S LAND.

Date, 1847	<i>Diomedeæ exulans</i>	<i>D. fuliginosa</i>	<i>D. chlororhynchos</i> or <i>spadicea</i>	<i>D. melanophys</i>	<i>Procellaria gigantea</i>	<i>P. macroptera</i> ?	<i>P. glacialis</i>	<i>P. leucocephala</i>	<i>P. mollis</i>	<i>Daption capensis</i>	Prions	<i>Thalassidroma leucogaster</i>	<i>Th. wilsonii</i>	Latitude at Noon	Longitude at Noon
MAY															
18	...	...	...	...	...	...	...	...	...	...	...	1	...	South	East
19	...	...	...	...	...	...	...	...	1	...	Numerous.	1	...	21.53	56.50
20	...	...	...	...	...	...	...	...	...	...	...	...	...	24.17	57.04
21	...	...	...	...	...	...	...	...	...	...	...	...	...	26.10	58.51
22	...	...	...	...	...	...	...	...	...	...	...	...	...	27.37	61.12
23	...	...	...	...	...	...	...	...	...	...	...	...	...	28.06	63.30
24	...	...	...	...	...	...	1	...	1	...	...	...	1	28.10	65.50
25	...	...	...	...	...	...	1	...	1	...	...	...	...	28.1	67.30
26	...	...	...	...	...	...	1	...	1	...	...	...	...	29.50	67.10
27	...	...	...	...	...	...	1	6	...	...	...	...	...	32.05	60.05
28	1	1	...	...	...	...	1	6	...	1	...	2	...	33.48	70.18
29	...	1	...	...	...	...	1	6	...	...	...	1	...	35.33	72.13
30	1	...	...	...	...	...	1	6	...	1	...	2	...	36.06	74.17
31	1	2	...	...	...	...	1	6	...	2	...	2	...	36.09	76.58
JUNE															
1	4	2	1	...	...	2	*12	...	...	3	2 or 3	1	...	35.01	80.56
2	4	3	1	...	...	2	*12	...	...	6	do.	...	...	35.22	86.32
3	4	8	1	...	1	1	*12	...	1	12	...	...	...	35.40	87.55
4	6	8	2	1	1	1	20	...	1	12	Numerous	...	...	35.52	91.25
5	6	6	*3	1	1	1	12	...	1	...	...	...	...	36.17	95.03
6	4	6	3	1	1	1	5 or 6	...	...	Numerous.	...	...	...	36.42	98.06
7	2	4	2	2	1	1	5 or 6	3	1	6	...	...	...	37.32	101.18
8	2	2	2	2	1	2	do.	...	...	12	Numerous.	...	...	37.58	103.35
9	2	4	...	...	...	3	do.	...	...	12	do.	...	...	38.20	106.36
10	3	6	1	...	...	2	do.	...	...	...	do.	...	...	39.03	110.47
11	3	6	2	...	...	3	Numerous.	3	...	do.	do.	...	...	39.38	114.57
12	...	6	...	...	...	...	do.	...	...	do.	do.	...	...	39.55	117.50
13	...	...	...	...	...	...	do.	...	...	do.	do.	...	...	40.35	121.43
14	2	Numerous.	2	...	...	*2	A few	*3	*Nums.	***do	...	...	...	40.45	123.26
15	2	{ Very numerous	1	...	...	1	{ Very numerous	1	...	do.	do.	...	...	42.10	125.37
16	2	{ Numerous.	2	...	...	...	{ *do.	1	...	A few	do.	...	...	43.44	126.37
17	2	{ Numerous.	1	...	...	1	{ Numerous.	1	...	Numerous.	do.	...	...	43.36	126.37
18	2	{ do.	2	...	...	1	{ do.	...	...	do.	do.	...	...	43.46	127.41
19	2	{ 5 or 6	1	...	...	1	{ do.	...	...	do.	do.	...	...	43.27	129.20
20	2	{ do.	2	...	...	...	{ do.	1	...	do.	do.	...	...	42.58	132.56
21	2	{ do.	5 or 6	...	...	...	{ do.	...	...	do.	do.	...	...	43.24	137.19
22	...	{ do.	1 or 2	...	...	...	{ do.	2	...	do.	do.	...	...	44.02	141.08
23	4 or 5	{ Numerous.	5 or 6	...	...	...	{ do.	...	...	A few	...	...	...	44.04	145.22

“ I was rather fortunate in procuring specimens of *Procellarida*, by dint of fishing, and going out in the jolly boat whenever there was an opportunity; on one of these occasions the boat was capsized, and I lost a valuable gun; upon another, when in latitude $40^{\circ} 45' S.$, and longitude $123^{\circ} 26' E.$, while the boats were trying for deep sea soundings, without reaching the bottom with 3500 fathoms, or nearly four miles of line, I reaped a rich harvest, having procured and skinned two specimens of *Procellaria leucocephala*, one of *P. macroptera*? two of *Prion turtur*, and one of *P. banksii*.

“ In all, I obtained skins and skeletons of

“ <i>Diomedea exulans.</i>	<i>Procellaria leucocephala.</i>
—— <i>culminata.</i>	—— <i>mollis.</i>
—— <i>chlororhyncha.</i>	<i>Puffinus cinereus.</i>
—— <i>fuliginosa.</i>	<i>Prion turtur.</i>
<i>Procellaria aequinoctialis.</i>	—— <i>banksii.</i>
—— <i>atlantica.</i>	<i>Thalassidroma leachii.</i>
—— <i>glacialoides.</i>	—— <i>leucogaster.</i>
—— <i>macroptera</i> ?	—— <i>neréis.</i>

“ Of these I am doubtful about *Procellaria macroptera*. I caught another example of this bird a day’s sail to the southward of Sydney, when a large flock kept in the ship’s wake for a whole morning, during blowing drizzly weather; they eagerly pounced at and followed the bait; but as the ship was going eight knots, it was only by hooking one in the wing that I caught it.

“ The *Thalassidroma nereis* was seen every day during our passage from Hobart Town to Sydney; when in latitude $38\frac{1}{2}^{\circ} S.$ many hovered around the ship, and I shot two from a boat.

“ *Lestrís catarrhactes*. On various occasions, and in different parts of the South Indian Ocean, and off the Cape of Good Hope, single, and once two individuals of this species were observed. I have seen it following and hovering over a bait towing astern, and once saw it chase a Cape Petrel (*Daption capensis*), and force it to alight on the water, where it left it. This bird seldom remained with us for more than half an hour at a time, during which it made a few circular flights about the ship.”

Here is another instance of a bird, hitherto supposed to be peculiar to our own seas, crossing and enjoying a similar range on the other side of the line; I frequently saw it myself, and can affirm, that it resorts to the temperate seas of the latitude in which it was observed by Mr. M’Gillivray, all round the globe.

"Our voyage out was a very prosperous one; we called at Madeira, Rio de Janeiro, the Cape of Good Hope, the Mauritius, and Hobart Town. At some of these places I was rather successful with the dredge; and at sea, the towing net was in constant use whenever the weather permitted. After refitting at Sydney, we went to Moreton Bay, thence to Port Curtis. At Port Molle I shot in the brushes both *Megapodius* and *Talegalla*, also *Chalcophaps chrysochlora*, and a *Macropygia*, respecting which I am anxious to have your opinion; it appears to me to be smaller than *M. phasianella*. Here the captain's servant shot a small *Nectarinia pectoralis*, respecting which I gave you a note of its having been found by Captain Ince and myself to the northward."

I have carefully examined the specimens of *Macropygia*, and find the differences too slight to admit of its being regarded as distinct.

"At Cape Upstart I got a *Podargus*, which I wish you to examine."

"At Moreton Bay we saw *Sula piscator*, *Onychoprion panaya*, and *Anous leucocapillus*, and found the last as far south as off Cape Byron."

"H.M.S. *Rattlesnake*, at Sea, May 12, 1849.

"Moreton Bay, May 19, 1849.

"We sailed from Sydney a few days ago for Moreton Bay, after remaining there a week we proceed to sea, keeping outside of the reefs, and making a straight course for the Louisiade and New Guinea, where the ship will remain surveying until September, when she crosses to Cape York, to meet a vessel from Sydney with provisions. Respecting the route to be taken on our return to Sydney, I know nothing at present, but we expect to be back in January, 1850. I have long been looking forward to the Louisiade and New Guinea portion of the voyage; still, unless we are so fortunate as to discover a harbour on the south coast of the latter, a dead lee shore, nothing more can be done than was effected by Bougainville, who made a running survey without ever being able to land. Our New Guinea prospects are better, however, and with these are associated in my mind visions of *Dendrolagi*, *Cusci*, and Birds of Paradise, mingled with imaginary skirmishes with the natives, &c.; but you shall know the result in due time.

"But I have not yet given you any account of our last cruise of nine months: We left Sydney on the 29th of April, 1848, and after landing Kennedy and his party from a vessel in company, at

Of the above, I consider the *Tanysiptera*, *Syma*, *Drymodes*, and *Carpophaga*, to be new to science, while the remainder have been described as pertaining to the Fauna of New Guinea, and I have accordingly characterized some of these at the meeting of the Zoological Society, held on the 23d of July. I find I have omitted to mention, that among the birds sent home by Mr. M'Gillivray, on a former occasion, were a very fine pair of Rifle Birds, which he considered to be identical with the old *Ptilorhis paradiseus*, but which, had he had examples of the latter bird at hand to compare them with, he would at once have seen was distinct. This very beautiful species I have had the high honour of dedicating to our amiable and excellent sovereign, under the appellation of *Ptilorhis victoriae*. It will be seen, therefore, that the Australian Fauna is graced by no less than three species of this very beautiful genus, viz.—

Ptilorhis magnificus, victoriae, paradiseus.

“ You will oblige me by comparing the *Chlamydera*, from Cape York, with the other members of the genus, as I have a strong suspicion that it may be different. I shot it while playing about a bower. I have sent it to the British Museum.”

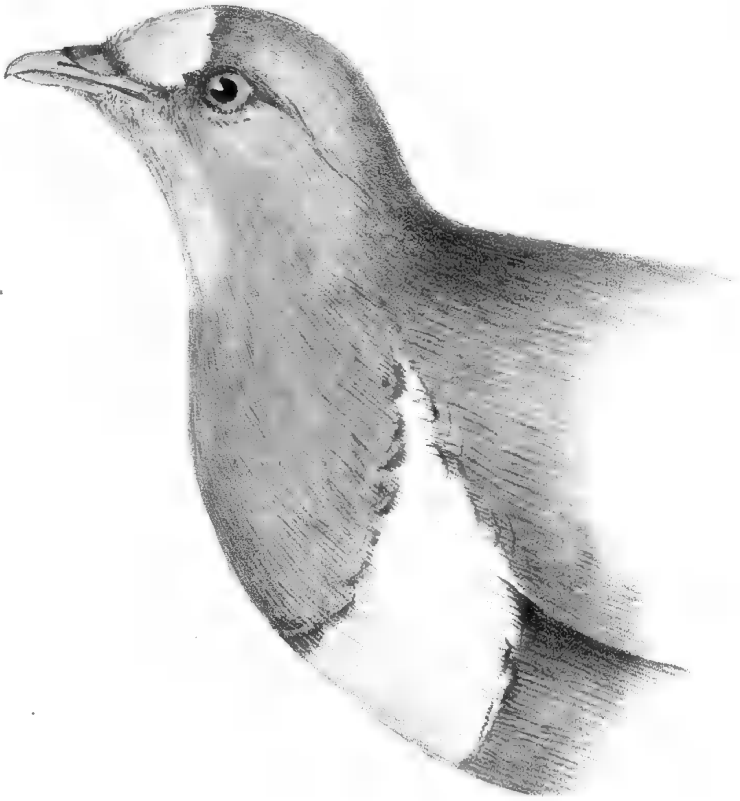
I have complied with Mr. M'Gillivray's wish, and find the bird to be quite distinct, both from *C. nuchalis* and *C. maculata*, and have accordingly named it *cerviniventris*, from the colouring of the abdomen. Thus we have no less than four different species of birds inhabiting Australia, having the peculiar habit of constructing bowers or playing places, viz.—

Ptilonorhynchus holosericeus.

Chlamydera nuchalis, maculata, cerviniventris.

“ After I wrote to you from Moreton Bay, May 19, 1849, we sailed to the northward for Rossel Island, the easternmost extreme of the Louisiade archipelago, which runs west for several hundred miles, until it joins New Guinea. We followed the Bramble through an opening in the barrier reef surrounding the group, and anchored in what is called Coral Haven. Here the survey commenced in longitude 153° 16' E., and latitude 11° 18' S. The natives were at first shy and suspicious; afterwards we had much com-

munication with them, but they proved a warlike and treacherous race; and although we came in collision with them only once, yet on several occasions, hostilities were avoided only by good management on our part. They are copper coloured, with generally huge mops of hair, frizzled out with a long comb; have beautiful canoes, which both pull and sail well; cultivate the ground after a fashion, and even domesticate the Papuan Pig; their weapons are spears and wooden swords. The men wear a breast cloth of pandanus leaves, and the women a short petticoat. We watered the ship at a running stream on Ile Sud Est of the French navigators, and this gave me some opportunities of landing. We had to pull up a mile and a half along a narrow salt and brackish creek, bordered first by mangroves and afterwards by dense jungle which we could scarcely traverse before we could reach the fresh water. The suspicious conduct of the natives, seven or eight canoes full of whom daily landed at the mouth of the creek, rendered it incautious to wander far from the watering party, and hence my operations were sadly crippled. Among the birds many appeared to me to be Australian. I wish you would look at a Lory I shot here; it is nearly allied to *Lorius domicellus*, but differs in the marking of the abdomen; also a *Monarcha* like *M. trivirgata*, but having black wings. Birds were very plentiful, but difficult to see among the foliage and few were killed. Some interesting fresh water, and one or two land shells, were procured here, and also a few plants. At another anchorage I landed on 'Chaumeht' Island, and obtained a *Graucalus*, which I think is your *G. hypoleucus*; also a small swallow, identical with two I sent from Dunk Island, off the north-east coast of Australia. At our various anchorages among the islands of this group, I picked up a considerable variety of fishes, about forty species of which were skinned, and the rest placed in spirits. Our next halting place was at the "Duchateau" Isles; a group of three low, wooded, uninhabited islets, where we had frequent opportunities of landing without molestation. Here we found a *Megapodius*, closely allied to *M. tumulus*, but different and probably new; also a fine *Carpophaga*, very like like *C. oceanica*, but differing in the colouring of the legs from the description given by Lesson of that species. It was very plentiful, and most individuals were furnished with a fleshy caruncle at the base of the bill, of which I have made a drawing in case it should be necessary



to figure it. A second very fine *Carpophaga* occurred only once, which was also the case with a small *Ptilonopus*, the female of which, as might be expected, wants the pectoral band.* A beautiful Halcyon, with a white head, will, if new, prove a fine addition to the Kingfishers; there is also another Halcyon, labelled in mistake *H. macleayii*. After this, we coasted along until we reached the south-east portion of New Guinea, near which I landed twice on an island, named 'Brainie,' but obtained no birds, as shooting could not be practised without running the risk of involving ourselves with the natives. Neither here nor at the only other part of New Guinea where we had an opportunity of landing, did I add any thing to the Ornithological collection. A young *Sus papuensis* of Lesson was skinned; also a specimen of *Cuscus maculatus* brought

* See note, page 105.

off alive by the natives. Another of the latter, originally brought from New Guinea, was afterwards obtained at Darnley Island, making a fine pair of this singular Opossum. We saw a few feathers of Birds of Paradise; plenty of those of a Cassowary; and some heads of a *Buceros* varying much in the number and arrangements of the plates at the base of the bill. I can scarcely convey to you my feelings of deep disappointment, at being for so long a time employed upon a coast where so few opportunities of landing occurred. Had it been prudent so to do, our disposable force was more than sufficient to ascend some at least of the large rivers seen on various parts of the coast, fed by magnificent mountain ranges; one of which, Mount D'Urville, attains an elevation of upwards of 12,000 feet. However, there was no help for it; so after completing the survey, we ran to Cape York, where we arrived in the beginning of October. Here we remained for three months, while the Bramble and some of the boats were engaged in completing the survey of Torres Straits. This gave us an opportunity of seeing much of the neighbouring country; and we were surprised to find several running streams within a few miles of the anchorage, of which, during my five or six previous visits, I had no knowledge; and many fine brushes, inhabited by several species of birds, of the existence of which we were not before aware, although some of them, as the *Aplonis*, were common. Doubtless, many more are yet to be found in the same district, and will be brought to light when an establishment is formed by Government at Cape York, an event soon likely to take place, now that Port Essington has been entirely abandoned.

“But to resume—it was chiefly by our intimacy with the natives that we succeeded in getting so many new birds; and in acquiring a knowledge of their language, I was materially assisted by a white woman, who had resided for four years and a half among a neighbouring tribe, who came to us for protection, and was taken on board and brought on to Sydney, where her friends are living. She was accompanying her husband in a small cutter from Moreton Bay to Port Essington, when the vessel struck on a reef in the Straits, and the men were drowned in attempting to swim on shore. She was rescued by the natives, one of whom, of course, claimed her as his property, and treated her as his gin ever afterwards, but was still very kind and much attached to her. She speaks well of the

tribe which inhabits the Prince of Wales Islands, and were unwilling to part with her; and she escaped to us chiefly by appealing to their cupidity, and representing that she would get axes, &c., from the white men, whom she wanted to see only for an hour or so, after which she would return to her black friends. She is now little more than twenty-one years of age, having run away at fifteen, and although perfectly illiterate, is very sharp (colonial in fact), and has been very observant. From her, besides language, for which I became her pupil, I got much information regarding the manners, customs, &c., of the aborigines.

“The two Bats I sent from Cape York last year I take to be *Molossus australis* and a new *Rhinolophus*. I got one singular Bat there, a red coloured *Harpyia*, with tubular projecting nostrils, the size of a half grown rat; but when brought to me it was partially decomposed, having been shot some hours before, besides being riddled like a sieve. It presents a very woeful appearance in spirits, but I hope will still be sufficiently perfect to be described on our return. I may get another at Cape York, as it is well known to the natives, who, upon at least one occasion, directed my attention to its cry. On our return from Cape York to Sydney, we called at Mount Earnest and Darnley Island, in the Straits, afterwards at one of the New Guinea and one of the Louisiade Islands, from the latter of which we made the best of our way to Sydney, leaving Yule in the Bramble to patch up the many holes in the badly constructed chart. We have now been here three weeks, the Bramble has not yet arrived, and our people are beginning to be apprehensive of accident. Captain Stanley was very ill during the passage down—in short, was at one time in a very dangerous state, and has even now not quite recovered; of course, the news of his father’s death did not contribute to his recovery. We are now, in the absence of any orders to the contrary, about to return to England *via* Cape York, Mauritius, and Cape of Good Hope. Thus, I shall be a second time disappointed of my anticipated circumnavigation of the globe. We shall not start, however, it is said, until June.”

I have thus given a cursory glance at the labours of Mr. McGillivray as regards Quadrupeds and Birds. I know that his collections are equally rich in other departments; and I need hardly say, how interesting it would be to science, if a careful *resumé* of what he has

done in every department should be submitted to the next meeting of the British Association, by which time Mr. M'Gillivray will have returned to this country.

The very next mail that arrived from Sydney, brought the melancholy intelligence of the death of Captain Stanley, the commander of the expedition, to whose kindness and liberality science is greatly indebted for the acquisition of the many novelties alluded to in this paper, who, like his venerable father, the late Bishop of Norwich, ever evinced a warm desire to promote the study of Natural History, and whose death, following so soon upon that of the excellent prelate, must have been a sore affliction to his bereaved family.

Note to Mr. Gould's Paper—"A brief account of the Researches of John M'Gillivray, Esq., in H.M.S. Rattlesnake," &c.

Tanysiptera Sylvia, Gould. Bill and feet sealing-wax red; crown of the head, wings, and five lateral tail-feathers on each side, blue; ear-coverts, back of the neck, and mantle, black; in the centre of the latter a triangular mark of white; rump and two middle tail-feathers, which exceed ten inches in length, pure white; all the under surface cinnamon red.

About the size of *T. Dea*.

Vide Proc. of Zool. Soc. May 14th, 1850.

Halcyon (Syma?) flavirostris, Gould. Bill fine yellow, passing into brown at the tip; crown of the head, back of the neck, ear-coverts, and flanks, cinnamon red; at the back of the neck a narrow broken collar of black; throat and lower part of the abdomen tawny white; back and wings sordid green; rump and tail greenish blue.

Smaller, but nearly allied to the *Syma Torotoro* of M. Lesson.

Vide Proc. of Zool. Soc. May 14th, 1850.

Drymodes superciliaris, Gould. Lores white; immediately above and below the eye a black mark forming a conspicuous moustache; crown of the head and upper surface reddish brown, passing into chestnut red on the rump and six middle tail-feathers; remainder of

the tail-feathers black, tipped with white; wings black, with the base of the primaries and the tips of the coverts white, forming two bands across the wing; throat and centre of the abdomen fawn white; chest and flanks washed with tawny.

About the size of *D. brunneopygia*.

Vide Proc. of Zool. Soc. May 14th, 1850.

Carpophaga assimilis, Gould. Head, throat, and ear-coverts, grey; all the upper surface, wings, and tail, golden green; wing-coverts with a spot of rich yellow at the tip, forming an oblique band across the shoulder; line down the centre of the throat, chest, and abdomen, rich purple; under wing-coverts, vent, thighs, and under tail-coverts, rich orange yellow; basal portion of the inner webs of the primaries and secondaries purplish cinnamon.

Very similar to *C. magnifica*, but considerably less in all its admeasurements.

Vide Proc. of Zool. Soc. May 14th, 1850.

Chlamydera cerviniventris, Gould. Upper surface brown, each feather narrowly margined and marked at the tip with buffy-white; throat striated with greyish-brown and buff; under surface of the shoulder, abdomen, thighs, and under tail-coverts, light, pure fawn-colour.

Intermediate in size between *C. nuchalis* and *C. maculata*, and distinguished from both by the fine fawn-colouring of the under surface.

Vide Proc. of Zool. Soc. May 14th, 1850.

The species described above, are all from the continent of Australia, and were chiefly obtained on Cape York Peninsula.

Nectarinia Australis, Gould. Crown of the head and upper surface olive green; over and under the eye, two very indistinct marks of yellow; throat and chest steel blue; remainder of the under surface fine yellow; bill and feet black.

Differs from *N. frenata* in its larger size, in its straighter bill, and in the stripe of yellow over the eye being almost obsolete. It is the bird spoken of in Mr. M'Gillivray's paper as *N. pectoralis*, which name cannot be retained, as it had been previously applied to another member of the genus.

Vide Proc. of Zool. Soc. May 14th, 1850.

Monarcha leucotis, Gould. Crown of head, back of the neck, back, primaries, and six middle tail-feathers, black; the three lateral tail-feathers on each side black, with white tips; lores, a broad mark over the eye, ear-coverts, sides of the neck scapularies, and upper tail-coverts, white; throat white, bounded below with black, the feathers lengthened and protuberant; chest and abdomen light grey; bill and feet lead-colour.

About the size of *M. trivirgata*.

Vide Proc. of Zool. Soc. May 14th, 1850.

NOTE.—The *ptilonopus*, mentioned on page 102, is nearly allied to the *Columba rivoli*, *Fl. prev.*, figured in the *Iconographie Ornithologique* of O. des Murs, pl. iv., who states that the specimen is in the Parisian Museum, and that its locality is unknown. The bird brought by the Rattlesnake differs from O. des Murs' figure, in wanting the pinkish purple, which there is represented as covering the centre of the abdomen, that part with the vent and under tail-coverts being in the present bird of a pale lemon yellow. They are most probably distinct, and if so, Mr. Gould has suggested the specific name of *P. strophium* for it.—W. J.

SOME OBSERVATIONS
ON THE
BIRDS OF THE FAROE ISLANDS.

BY J. WOLLEY, M.A.

THE Fauna and Flora of the Faroe Islands have received much attention in several departments of natural history, for from their peculiar position, as a connecting link between Europe and North America, through Iceland and Greenland, the character of their productions is a study of importance to the physical geographer. However, observers have been but few, and I therefore venture to offer some small contributions towards their Ornithology, which I collected in the summer of 1849, in a visit of five weeks' duration. The birds have indeed been already described more than once, but many errors are prevalent with respect to those which breed there, and the lines of distinction between true natives, summer and winter residents, and mere wayfarers, are so far incorrectly drawn.

I will only allude, in a few words, to the kind of accommodation which the Faroe Islands afford to the feathered race. Situate in an open sea, and also an intermediate station on the high way to Iceland, they offer a resting place to wanderers over the ocean. Most of the islands of which the group is composed, are mountains, whose foundations are far below the surface of the water, and their sides are divided into horizontal terraces from the bedding of the trap rock. In many places, especially to the north and west, there are precipices of such a stupendous height, as to have their summits generally in the clouds, and they are often perpendicular from top to bottom; but they are frequently interrupted by broad grassy ledges, upon which the sloping turf is generally undermined by the holes of countless Puffins, *Mormon fratercula*. On little shelves, on the face of the precipices themselves, breed the Guillemots; and on any projecting point, the Kittiwakes, *L. tridactylus*, place their nest; whilst the Razorbills, *Alca torda*, are on more

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secure ledges and amongst stones. Here are plenty of sloping hill sides, and open stones for the Shearwater, *Puffinus anglorum*, and Petrel, *Procellaria pelagica*; and there are large blocks of rock, amongst which the Green Cormorant delights to find a sheltered home; for the Great Black-backed Gull, *Larus marinus*, there are inaccessible stacks or drangs — in fact, no bird which is merely in want of house room, need have any difficulty; but he must be prepared to withstand a good deal of rough weather. Fierce blasts of wind frequently rush down from the mountains, mists and rain are almost incessant, and the air is so damp, that the sods of grass, with which the roofs of the wooden houses of men are covered, are even at the end of summer of the most spring-like green; yet there are seldom any uncomfortably hot days in summer, and no very severe cold in winter. With respect to food, there appears to be an abundance of small fish within reach; and the vast swarms of Guillemots, *Uria troile*, and such like birds, would alone be sufficient to show this; Soland Geese, *Sula bassana*, too, find enough of a larger size within a reasonable flight of the station they have chosen. Other marine animals are in plenty, some, probably crustaceous, occasionally in such compact shoals, as, in their sudden rise to the surface, to have given origin to the story of one kind of sea serpent, or rather flat sea monster, the Kraken of Pontoppidan, here called Kraka or Teara-bue; whales too, principally *Phocoena melas*, the Ca'ing Whale, and another species very nearly allied, often in prodigious herds, show the richness of the surrounding sea. The great numbers of Oyster Catchers and Eider Ducks mark the abundance of the productions of the wave-washed rocks. Representatives of almost every tribe of sea-fowl here fare luxuriously. But when we turn to the land, we do not find the same fertility and plenty; there is indeed a great show of green, and in some places plenty of good grass, but generally there is a large proportion of *carices*, *juncaceæ*, and other plants, on a thin covering of peaty soil; and these afforded food to Wild Geese and Swans during the summer in former times. Insects are in small numbers, but not so few but that a Snow Bunting can get a good mouthful for its young; Snipes too are well pleased with their entertainment. Lakes are not numerous, but there are a few which satisfy the wants of the Common Wild Duck, *Anas boschas*, and also of the Red-throated Diver,

Colymbus septentrionalis (for Trout and Salmon are not absent), and they serve as fresh water baths to continued flocks of Kittiwakes. There is no heather that could be sufficient for the Red Grouse, *Tetrao lagopus*; no tree or even shrub of a foot in height.

In this brief sketch of the inducements held out to birds to take up their abode in these islands, we should not omit to notice the general peaceable character of the human inhabitants, who do not constantly molest them; but catch them only at certain seasons, and then with as little disturbance as possible. The parasites of man, the dog and the rat, are their only other enemies, if we except the occasional visits of a kind of whale, which the inhabitants call the Troid Whale, and which they much dread from the havoc it makes amongst their Eider Ducks and their Seals. Sharks are in such plenty as to occupy a vessel constantly in catching them; but they are never known to attack the birds. To the Hooded Crow, *Corvus corone*, and the Raven, *Corvus corax*, the vicinity of man is most advantageous, from the offal and other refuse which falls to their share; but they and some other birds are less agreeable to their feathered neighbours.

The birds which we found breeding in the Faroe Islands are as follows:—

- | | |
|---|------------------|
| <i>Anthus pratensis</i> , Titlark | } all plentiful. |
| <i>Anthus petrosus</i> , Rock Pipit | |
| <i>Saxicola cenanthe</i> , Wheatear | |
| <i>Alauda pratensis</i> , Common Lark, one pair, probably breeding. | |
| <i>Corvus corax</i> , Raven. | |
| <i>Corvus corone</i> , Hooded Crow. | |
| <i>Sturnus vulgaris</i> , Starling. | |
| <i>Emberiza nivalis</i> , Snow Bunting. | |
| <i>Columba livia</i> , Rock Pigeon. | |
| <i>Charadrius pluvialis</i> , Golden Plover. | |
| <i>C. hiaticula</i> , Ringed Plover. | |
| <i>Scolopax gallinago</i> , Common Snipe. | |
| <i>Hematopus ostralegus</i> , Oyster Catcher. | |
| <i>Numenius phaeopus</i> , Whimbrel. | |
| <i>Tringa variabilis</i> , Dunlin. | |
| <i>Tringa maritima</i> , Purple Sandpiper. | |
| <i>Phalaropus hyperboreus</i> , Red-necked Phalarope. | |

ORNITHOLOGY OF SECTION D, 1850.

- Anas boschas*, Mallard.
Somateria mollissima, Eider Duck.
Colymbus septentrionalis, Red-throated Diver.
Uria grylle, Black Guillemot.
Uria troile, Common Guillemot.
Mormon fratercula, Puffin.
Alca torda, Razorbill.
Phalacrocorax carbo, Common Cormorant.
P. cristatus, Green Cormorant.
Sula bassana, Gannet.
Sterna arctica, Arctic Tern.
Larus tridactylus, Kittiwake.
L. argentatus, Herring Gull.
L. fuscus, Lesser Black-backed Gull.
L. marinus, Greater Black-backed Gull.
Lestris catarrhactes, Common Skua.
Lestris richardsonii, Richardson's Skua.
Procellaria glacialis, Fulmar.
Puffinus anglorum, Manx Shearwater.
Thalassidroma pelagica, Storm Petrel.

This list contains thirty-seven birds, of which the half may be considered purely maritime; of the remaining nineteen, nine are purely land, if we include the Rock Pigeon and the Rock Pipit, and ten are littoral, more or less; these divisions however being arbitrary.

There may be several others that breed besides those in the list, as *Mergus serrator*, the Red-breasted Merganser, &c., but if so, they are in very small numbers. I saw also the following in July, or the end of June, but I could not get any indications of their having bred:—

- Ardea cinerea*, Common Heron—a single bird.
Cypselus apus, Swift—one at the end of June.
Calidris arenaria, Sanderling—one pair end of July.
Streptilas interpres, Turnstone—a small flock.
Totanus calidris, Redshank—a good sized flock.
Anas glacialis, Longtailed Duck—one male.

I made special search for and inquiries after a number of birds

which have been said to breed in the Faroe Islands, but which I could not find any traces of; the principal of these were—

- Falco gyrfalco*, Gyr Falcon.
Anser leucopsis, Bernicle.
Anser torquatus, Brent Goose.
Somateria spectabilis, King Duck.
Colymbus glacialis, Great Northern Diver.
Uria brunnichii, Brunnich's Guillemot.
Mergulus melanoleucos, Little Auk.
Alca impennis, Great Auk.
Larus glaucus, Glaucous Gull.

I will proceed to make a few remarks on some of the birds in the first list—there occur in it the names of only two birds which are not known to breed in Britain; the first of these is the Snow Bunting, *Emberiza nivalis*, which breeds very scantily near the tops of the mountains; but in the northernmost islands of the group, on the lower grounds, and in small colonies. A neatly made nest, placed under a large stone, had young almost fully fledged at the beginning of July. We had the pleasure of hearing its sweet little song spoken of with so much delight by the northern voyagers. The second bird, not known I believe to breed in Britain, is the Purple Sandpiper, *Tringa maritima*; this appears to be the Fiadl Murra of one of the older writers on the Birds of Faroe, for we found it breeding on the summits of the mountains in small numbers; young just fledged at the end of June.

Of the Raven, *Corvus corax*, I saw the black and white variety, which has been called a species under the name of *C. leucophæus*; but two were shown to me alive which came out of the same nest with purely black ones; they were marked irregularly and differently from each other, and had none of the characters of a species. The Raven, but still more the Hooded Crow, is almost a domestic bird in Faroe, and very abundant. The Common Snipe, *Scolopax gallinago*, is remarkably tame, and may be seen feeding near houses, and within a few yards of men; it is in considerable numbers. I looked in vain for *S. gallinula*. The Whimbrel, *N. phæopus*, struck me as being one of the most characteristic birds of the island, for it is very abundant, and entirely replaces

the Curlew of the Highlands, as it only very partially does in Shetland. It was constantly flying round us just out of shot, in company with the noisy Oyster Catchers, and occasionally Golden Plovers.

The Red-necked Phalarope, *P. hyperboreus*, we only found in one remarkably swampy little valley, where also bred Dunlins and Golden Plover — the former called in Orkney, Plover's Page, from their habit of attending the Plovers in their flight — Arctic Terns, and the year before we were there, we were told a pair or two of Black-headed Gulls, probably *L. ridibundus*, frequented it. On the margins of the deep pools in this district, we found the nests of *Colymbus septentrionalis*, raised in a remarkable manner to the height of a foot, reminding us of the Swan's nests on the banks of the Thames, a practice I had not seen before in the nidification of either of the *Colymbi* whose nests I know; and here was an adaptation to circumstances, for the water was on a level with the surrounding moss.

The Eider Duck, *S. mollissima*, has of late years been provided with little houses to build in on certain islets; but the great Gulls, *L. marinus*, still rob many of their eggs. The quantity of down procured in the Faroe Islands is very inconsiderable.

The three birds which principally tempt the inhabitants to their feats of rock climbing, are the common Guillemot, *U. troile*, the Razorbill, *A. torda*, and the Puffin, *M. fratercula*; but the Razorbill is comparatively in small numbers, perhaps not more than one to twenty Guillemots. The Puffin is by far the most numerous of the three, and swarms in an almost incredible degree. A hand net, made like a small shrimp net, is raised for them to fly into as they pass; and the sudden exertion upon the grassy slopes gives occasion to many fatal accidents. In climbing for Guillemots with the help of ropes, accidents very rarely happen. All the mode of proceeding in bird catching is just as it was described by Luke Debes 250 years ago. We were shown a tame Puffin, which was known to be twenty years of age; it had lost the triangular plates round the eye. We saw several semi-albino varieties.

I was anxious to see whether there was one or three species of Guillemot in the Faroe Islands as has been said. I could not distinguish there any *Uria brunnichii*, but the so called species *Uria lachrymans* was in plenty, as I had also found it in Caithness,

Sutherlandshire, and the Shetland Isles. It was amongst the other Guillemots in the proportion of perhaps one to ten; it lays a similar egg, as I ascertained myself in several instances; it was of both sexes, and not as the natives thought, of one sex; some of them saying it was the male and some the female. I did not find out whether or not they paired together; but I could not see any thing to lead me to suppose that there existed a specific difference. We should bear in mind that very nearly similar markings about the head, or their absence, formerly led to the making two species of *Alca torda*. Mr. Gould, though he has figured *Uria lachrymans*, doubted its value as a species, but M. Temminck and Mr. Yarrell consider it distinct.

The Black Guillemot, *Uria grylle*, the Sea-pigeon or Dovekie of the Arctic expeditions, is characteristic of the north, but it extends to the islands of the north of Scotland, and even to Ireland and Wales it is said. It lays two eggs, under stones, not far above the sea. When it has young, on the approach of an intruder, it sits, making a plaintive noise like that of the Robin.*

Of the two species of Cormorant I may remark, that the young is considered almost the best of the sea birds; and my friend and myself agreed that it made by no means a bad dish; but I must state, that our only alternative at that time was dried mutton or whale's flesh. Guillemots, too, and their kindred, are very eatable when properly cooked; and we had the opportunity of tasting them at a clergyman's, where were some very good things with which to form a comparison. Gulls are very inferior, but the reported best birds of all, young Shearwaters, we had not the chance of tasting. Of the young of one of the Cormorants we saw a remarkable monstrosity; it had four legs, two of which were combined into one, situated centrally and posteriorly; it was much shorter than the others, and useless. Unfortunately the body had been ate the day before; the skin was to be sent to Copenhagen.

The Soland Goose, called *Sula* by the Faroese, and *Jan van Gent* by sailors according to Landt, whence perhaps our name of Gannet. This bird occupies one large rock, the west end of the Faroe Isles; for the Shetland and Orkney Isles it has the Sule Skerry, which is thirty miles to the west of Orkney. It has selected St. Kilda, off

* It used to breed upon the Isle of May in the Firth of Forth. We have shot it there and taken the young from the nest.—W. J.

the Hebrides, and it has chosen too that most central situation, Ailsa Crag. It is also said to occupy Lundy Island in the Bristol Channel—I know not how truly. Lunde is the Faroese name for the Puffin. A Gannet rock is mentioned off the south-west of Ireland. On the whole east coast of Britain, its only station is the Bass Rock in the Firth of Forth. The name *Sula*, I was told, has a reference to its quickness of sight. It is worthy of note, that each nation modifies the root of a name to some signification in its own language, as Mr. Strickland has admirably illustrated in his etymology of the word *Dodo*. *Sula* is Soland, *Jan van Gent* is Gannet, and perhaps both these last from the German *Gans*, as it has been lately suggested to me. We must also bear in mind, that the appellation of one bird is frequently put on the shoulders of another, as often illustrated in our colonies. Probably the name *Shelder*, which in Shetland and the Faroe Islands is applied to the Oyster Catcher, from its shell eating propensities, has been shifted to the *Sheldrake* (*Tadorna vulpanser*), just as the name Hooded Crow is applied to the *Larus ridibundus* in Orkney. So *Lombvia* is the Faroese name of *Uria troile*, *Loon* the local English of *Podiceps* or of *Colymbus*.

Sterna arctica appears to be the Tern which Graba described as peculiar to the Faroe Islands, under the name of *S. brachytarsa*. It was in some numbers, breeding very late. I found no other species.

In the only two spots where that noble bird, *Lestris catarrhactes*, now breeds in the British Islands, it is preserved only by the utmost vigilance of the proprietors, one of whom, Mr. Edmondston, has succeeded in recovering the stock, after it had been reduced to a single pair in Unst. But in Faroe its breeding places are numerous, though its preservation demands great self control on the part of the people, for its attacks upon any one approaching its nest are most irritating. Its blows are aimed at the head, with the full momentum of the bird's body; and it returns again with the most steady intrepidity imaginable. My friend, who got one thump, took constant and special care to avoid a second; it is only necessary to carry a ramrod or other stick over the head, to prevent the swoops taking full effect. The protection afforded to it lasts only during good behaviour; when a colony is becoming too large, some of them are apt to begin to attack lambs; they are then doomed to the infliction

of a battue, which is supposed to act as a warning to the survivors for some years to come. It is said, that only a few individuals acquire this bad habit, but it then grows upon them, just as in the Scottish Highlands it is a single fox or eagle which gets into the way of carrying off lambs, but which evil disposed one gives a bad name to, and is the death of many of its innocent brethren.

The Skua is one of the birds of which a certain number of heads is required to be given in by every inhabitant annually, by an old law or custom, which reminds one of the mode in which Egbert endeavoured to extirpate wolves in Britain. I do not know whether this is now strictly enforced, but I have seen the people collect heads, when they had an opportunity, either of this bird, or of the Raven, or the Great Black-backed Gull, that is, when they were ready killed for them. I heard that several heads of the Hooded Crow, or Richardson's Skua, might be substituted for one of the larger birds. Skua is the Faroese name of the bird. Richardson's Skua is called Shooi, which I was told has the same meaning as the Greek *διαβολος*; *Scouti allan* is the somewhat similar name, but as in cases I have before mentioned, one with a different meaning used in the north of Britain. *Scouti* is said to have reference in Gaelic to its dirty mode of feeding, *allan* being a common name for several birds, as Allan Yasker is the Osprey or Fishing Allan. In Faroe, Richardson's Skua is also, and more commonly, called *Kjegva*; sailors know it as the Boatswain.

I have to record a very interesting fact with respect to the Fulmar, *Procellaria glacialis*, which has recently adopted some of the cliffs of the Faroe Islands as a summer station. In the time of Landt, who wrote in 1799, it was only known to those who fished far from the shore, but somewhere about the year 1839 it was observed by the rock climbers breeding, for the first time, near Quelboe in Suderoe, and it has since much increased, and is scattered over several spots on the west cliffs of the islands of Skuoe and Great Dimon; in the latter place, the face where it builds is of great height and quite perpendicular, and the ledges are very small and bare. Eight or ten of the nests that I examined consisted of a few small fragments of rock lining a slight depression. The featherless abdomen of the bird is hollowed into a perfect egg cup shape during incubation, so that the single large egg has the warmth applied to it in the most effectual manner.

I will not attempt to speculate on the reason of this remarkable change of locality, in a bird supposed to be so constant in its attachment to certain breeding places. It is not found in Shetland or Orkney. St. Kilda is perhaps its only British and also its most southern station. It is, however, said to breed in the island of Barra, perhaps not South Barra, but Bara and Rona, two rocks far to the north of Cape Wrath and the Lewes, whose position was ascertained with accuracy in one of Parry's Arctic Voyages. The Westmanna Islands, where the Fulmar is described as so abundant, are to the south of Iceland, and not in Faroe, as Mr. Yarrell inadvertently states.

Thalassidroma pelagica lives in any hollow or burrow, even under the floor of a barn. It is in many localities, breeding late in July. I looked in vain for the nearly allied species, *T. leachii*, which is found in St. Kilda.

Of the birds in my third list, I have to say, that I made the most diligent search and inquiry for them.

Colymbus glacialis is believed, as in the north of Britain, to hatch its egg under its wing, so it is not likely that it ever bred in Faroe.

Mergulus melanoleucos is stated to breed in the northernmost of the Faroe Isles, certainly through some mistake. I could neither find it any where, nor hear of any one who had seen it in summer. Even in Iceland I believe it is only known to breed in one island to the north, which lies on the arctic circle. It is a truly arctic bird, far more so than *Uria grylle*.

About *Alca impennis* I made inquiries whenever I had opportunity, but I could learn very little. An old man, Paul Joënsen, had seen one fifty years ago, sitting among the Hedlafuglur, that is young Guillemots and other birds upon the low rocks, and old men told him it was very rare. This was about the time when Landt wrote. Old people have been heard to say, that formerly, when many of them were seen, it was considered a sign of a good bird year, which we may perhaps explain, by supposing that the same kind of weather which prevented *A. impennis* going to the north, also kept more of his congeners from their far northern breeding places. A Gorrufuglur was formerly valued at four Lombyas or Guillemots, when one happened to be caught amongst the Hedlafuglur.

I saw Daniel Joënsen, captain of a vessel belonging to Governor Löbner, which went in 1813 to fetch provisions from Iceland to the half-starved Faroese, and brought back some fifty or sixty of the Gorrfulge amongst other birds. They got them on one of the small rocks which the natives were afraid to visit, near Iceland. With respect to this name, Geirfulga of Iceland, Garefowl of St. Kilda, and Gorrfulgur of Faroe, I could hear no more than a supposition from Sysselmand Winther, that it was taken from the voice of the bird, for such a noise as that made by *Larus marinus* is called *gorra*. It perhaps has a common signification with Gyrfalcon. Wormius, in the sixteenth century, had one sent to him from the Faroe Islands, which he kept alive for several months. Hoier describes the Geirfulge about the same time, and Ray or Willughby saw specimens in the Royal Society's Museum, and also in Tradescants. There are four islands marked in Olsen's large and beautiful map of Iceland, which are called after the Geirfulga; namely, Geirfulga Sker, and Geirfulga Drangr, off Cape Reikianes, the southwest point of Iceland, Geirfulga Sker, to the south of the Westmanna Isles, and another Geirfulga Sker, to the east of Iceland. This last is also called Hvalsbak, and the form of a whale's back would be a very convenient one for the *Alca impennis* to climb up and breed upon. I give all these particulars, as the *Alca impennis* is now looked upon by ornithologists with so much interest as so very rare a bird—so rare indeed, that it has even been suggested that it is extinct. This, however, is not likely to be the case, even without considering the probability of its being found on the Labrador coast. A friend of mine, who visited Iceland three years ago, met with the same fear amongst the natives, about trying to reach these far seaward and whirlpool beset rocks, that the Faroese found on their visit in 1813. But small numbers, both of the eggs and birds, have from time to time been sent from Iceland to continental Europe.

Of birds which are said formerly to have bred in Iceland, I heard of the Eagle, the Wild Goose, and the Swan.

The Eagle, no doubt the Sea Eagle, *A. albicilla*, which is the only one found in Shetland and in Iceland, and which still occasionally is killed in Faroe in the winter. The point of rock on the Tindhholm was pointed out to me where the Eagle had its nest, to which it carried off the child, according to tradition, as related by

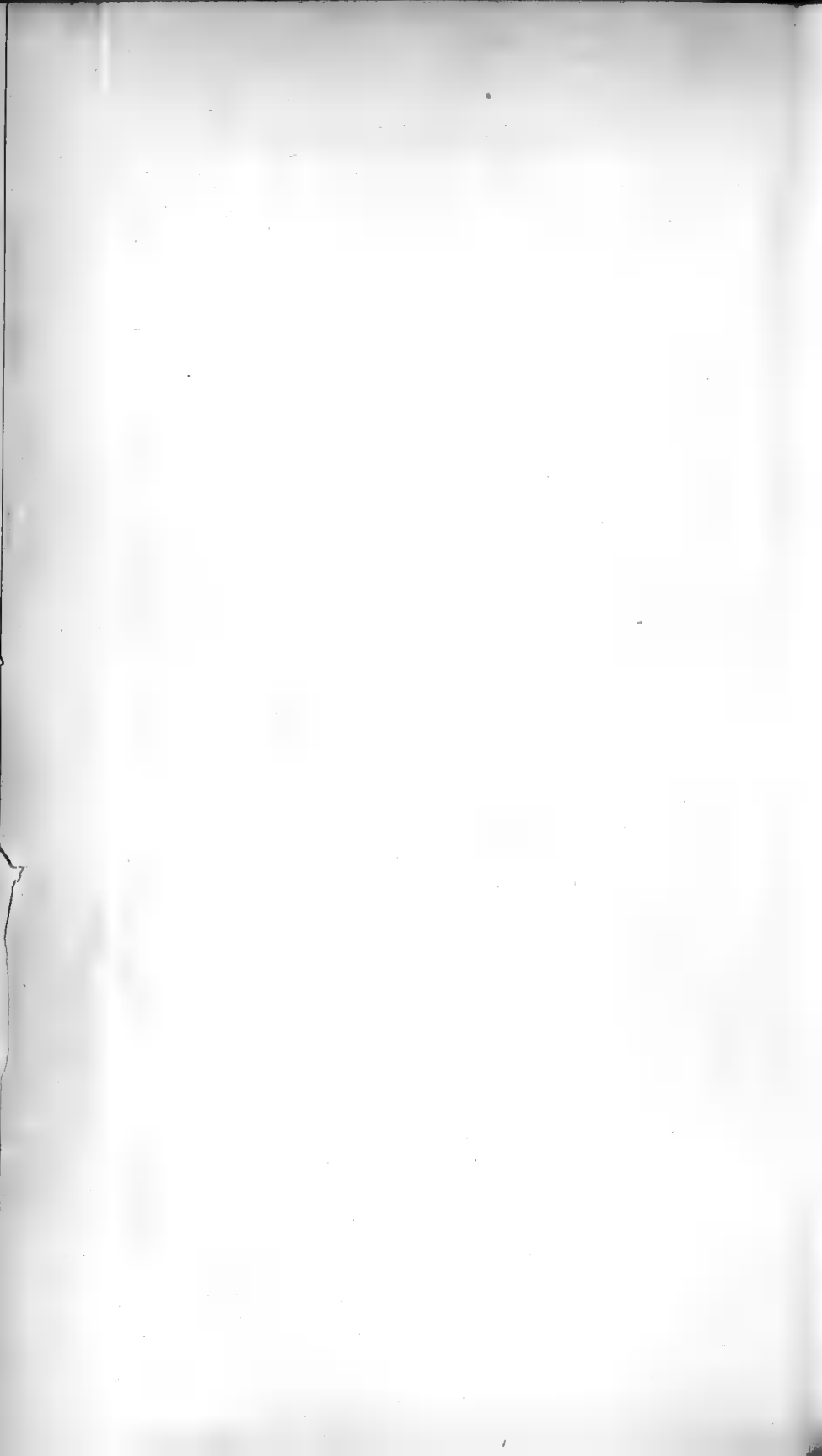
Landt. I think it probable that these stories, so prevalent in all countries where Eagles are found, are many of them true, and not referrible to one common tradition as has been supposed. I have heard in the Highlands several confirmatory particulars.

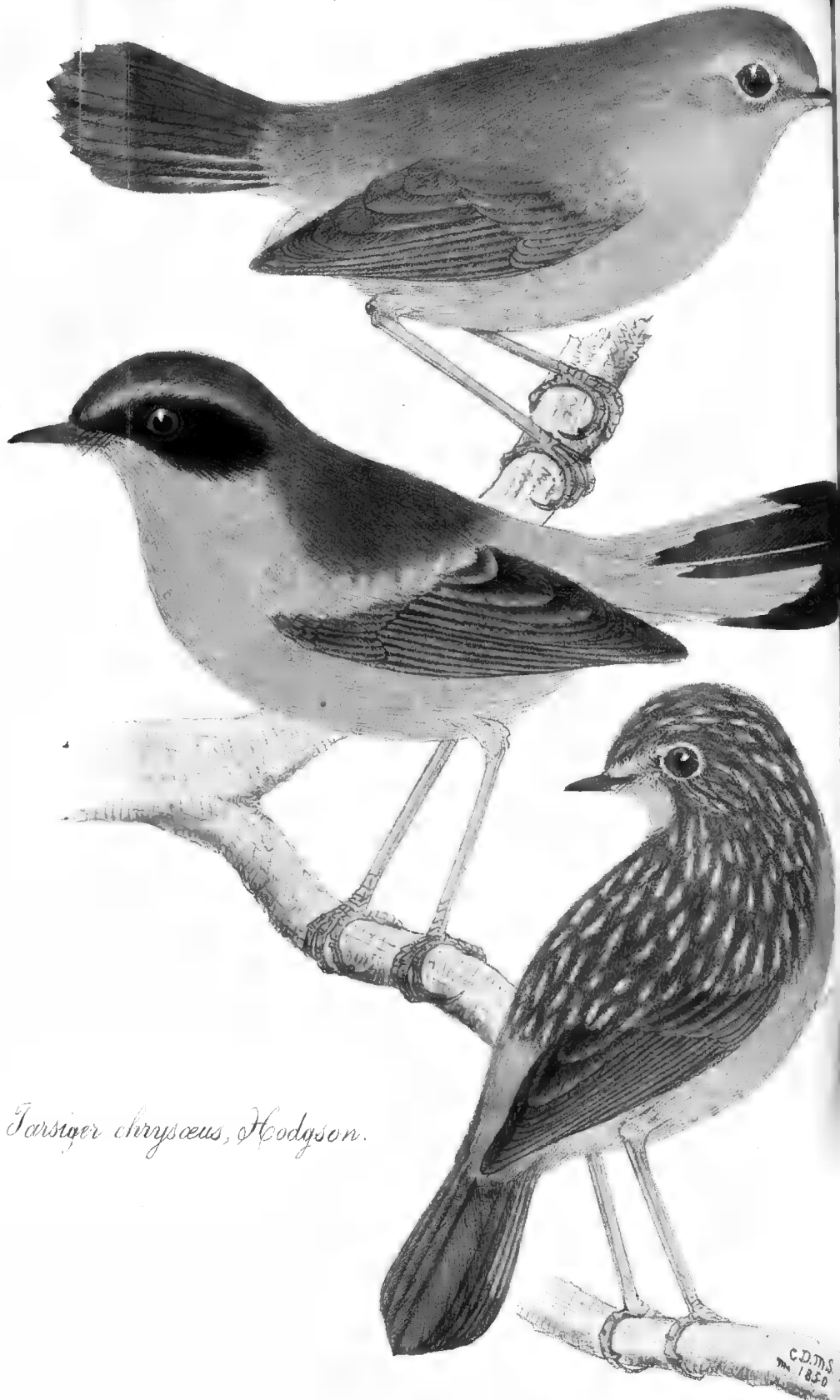
Wild Geese formerly bred in Faroe if not now, and Wild Swans by tradition in two places, each called Oknadal, from this circumstance.

I will not now attempt to compare the ornithology of Faroe more closely with that of the north of Scotland and its islands. Numerous species are absent, and even the ubiquitous Sparrow is there unknown, but there are no doubt many stragglers beyond those which we happened to see.

We cannot conclude this subject better, than by deriving a lesson from the simple and happy people of the Faroe Islands, in their treatment of the birds which surround them. It is a melancholy thing, to see how at almost all the great breeding places of sea-fowl round Britain, the numbers are rapidly diminishing every year, in consequence of the pitiless persecution which afflicts them—slaughtering parties visit them by trainfuls. The rights of the bird climbers established by long usage, require the assistance of the law; and all persons concerned in the coast navigation, should interest themselves to procure, by Act of Parliament or otherwise, protection for sea-fowl at those places, or at that time of year when they throw themselves entirely upon the mercy of mankind, for by such protection alone can their sure and speedy extirpation be averted; and one of the best kind of beacons, the flight and the clamour of birds, be preserved, to warn vessels in foggy weather of their approach to the dangerous headlands of our coast. There are several lighthouses at which the value of the sea-fowl is properly appreciated; and these, with the Bass Rock and Ailsa Crag,* afford happy exceptions to the general rule, and show what may be done. The numbers are not seriously lessened by legitimate bird-catchers any more than in the case of Poultry in a farm yard.

* We regret to say the Bass Rock is not an exception. In the summer of 1848, the last time we visited it, two parties in boats, at about a quarter of a mile distant, were shooting the Geese in mere wantonness, allowing them to float unlifted. It is well known, that they approach any boat which comes near their haunts, and that when one is killed, numbers assemble and hover over it, and this habit is taken advantage of by those would be or rookery sportsmen. The Bass used to be a favourite place for us to visit from 1816 to 1820; and on revisiting it in 1848, the numbers of sea-fowl had very visibly decreased. We cordially agree with Mr. Wolley's suggestion for their preservation during the breeding season.—W. J.



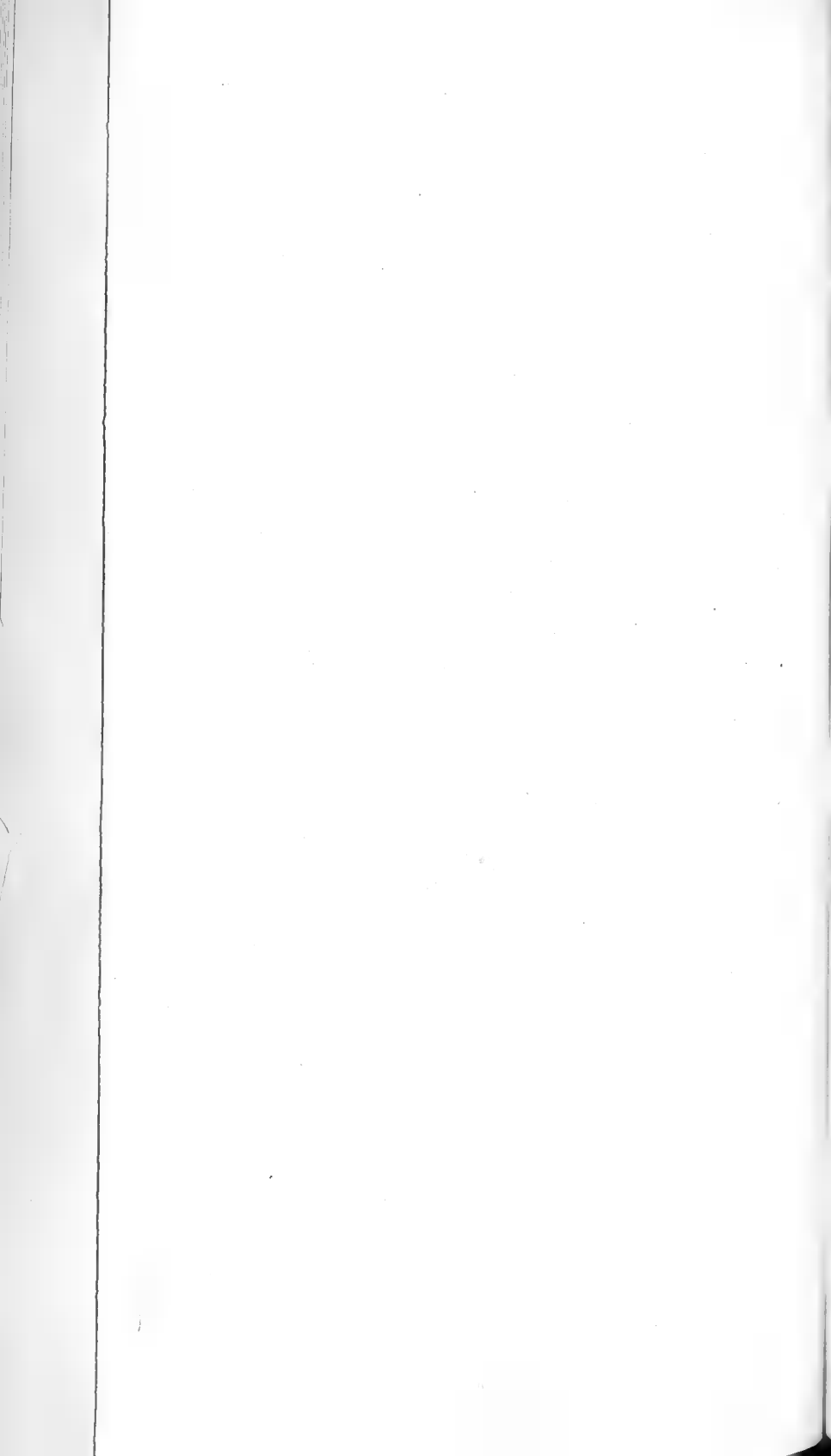


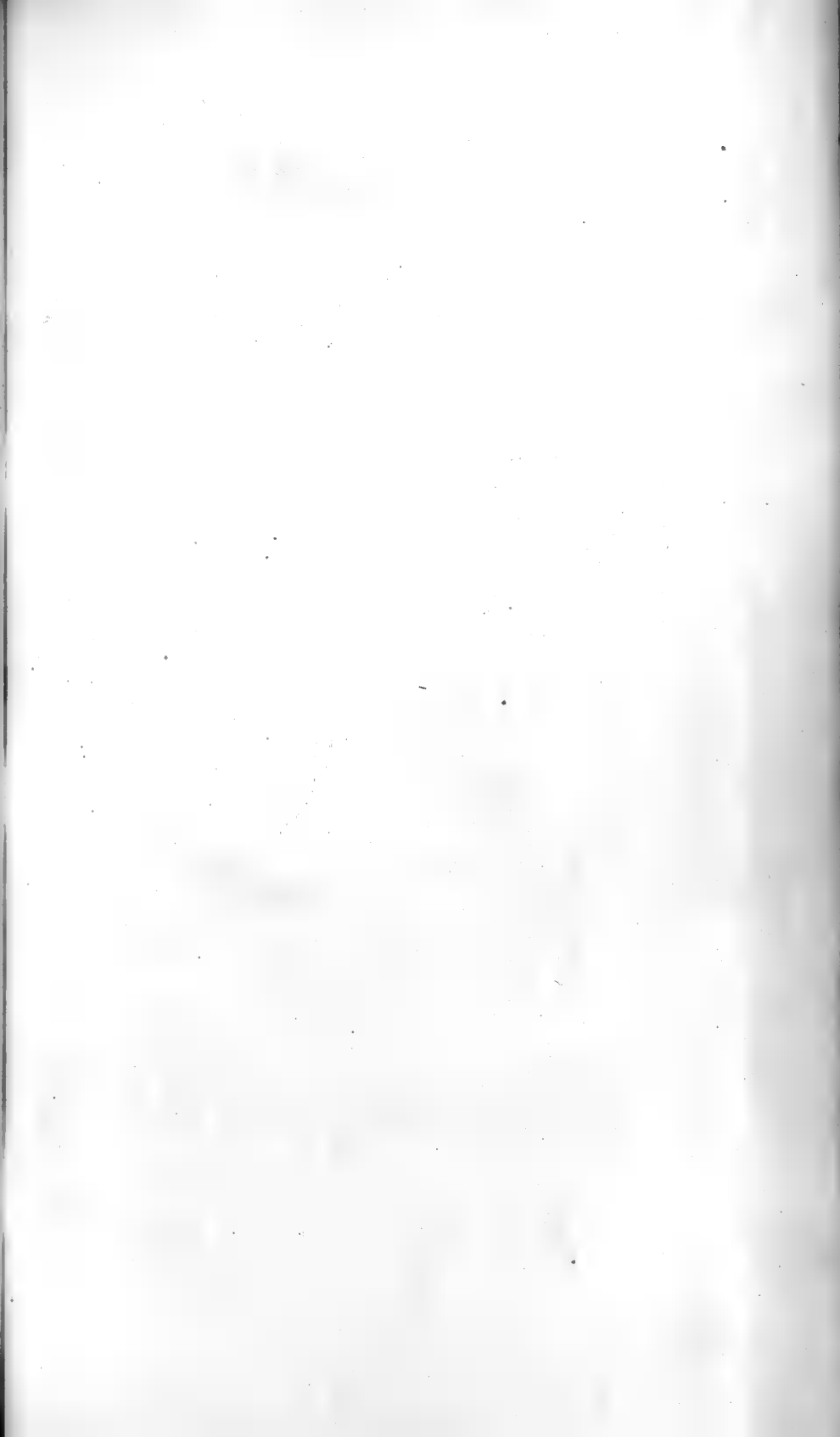
Tarsiger chrysæus, Hodgson.

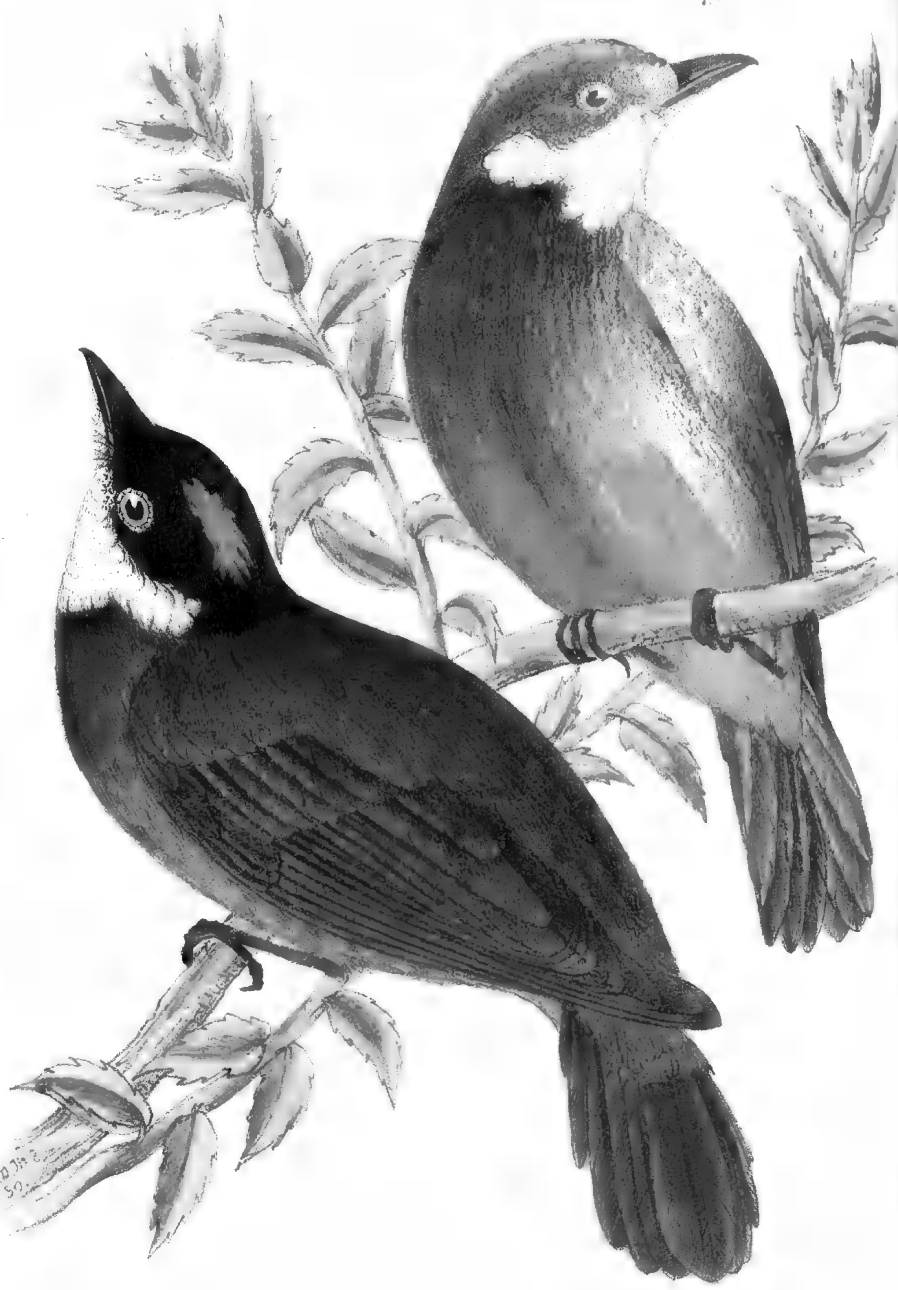
C.D.M.S.
1850



Xanthornus prothemelas, Strickland.







Elonia lineata, Strickland

ELÆNIA LINTEATA, STRICKLAND.

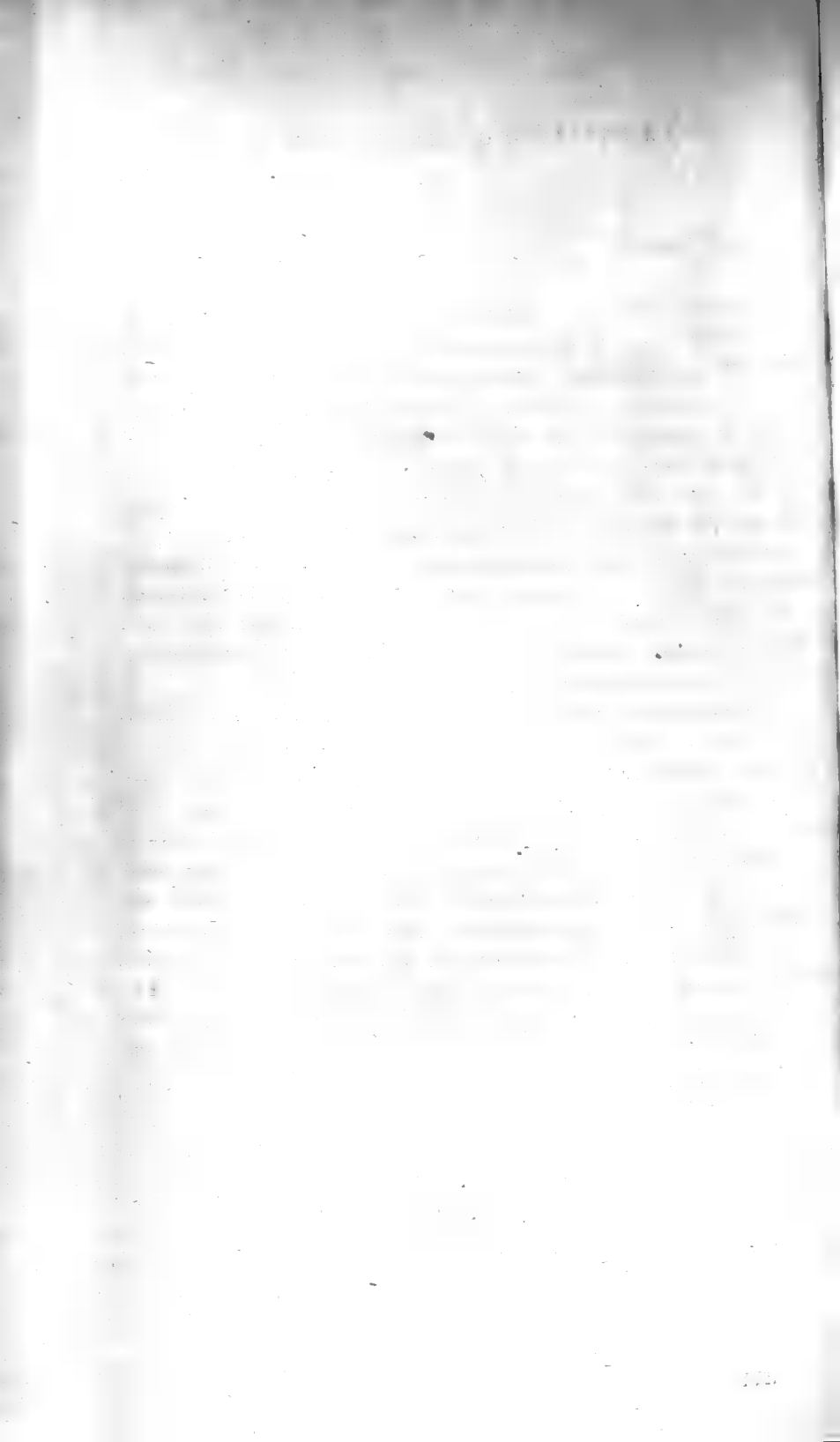
DESCRIPTION.—♂. Front, crown, and sides of head, black, with a spot of vivid orange in the centre of the crown; back, rump, and wings, dark greenish-olive; remiges and rectrices fuscous, narrowly margined externally with olive; chin and throat pure white, the feathers on each side of the throat lengthened into a tuft; upper breast olive, lower breast deep chestnut, becoming paler on the belly and vent; beak and legs black; “irides red;” rictal bristles very short; wings rounded, fourth quill longest.

♀. Front, crown, and upper parts, pure olive-green; spot on the crown vivid yellow; ear-covers dark grey; lower parts as in the ♂.

Long, 5; beak to front, 5; to gape, 7; wide, $2\frac{1}{2}$; high, $1\frac{1}{2}$; wing, 3.3; medial rectrices, 2; external, 1; tarsus, 6; middle toe and claw, $5\frac{1}{2}$; hind ditto, 4.

A pair of these singular birds were received by E. Wilson, Esq., from the upper branches of the Amazon river. At first sight I was disposed to refer the species to the *Tanagridæ*, some of which (e. g. *Tachyphonus quadricolor*, Vieill.) possess rictal bristles and a yellow coronal patch. On further examination, however, it seems to come nearest to the genus *Elænia*, which includes those birds of the great American sub-family, *Tyranninæ*, in which the beak is short, strong, and considerably elevated. The tail, however, is of a peculiar form, and those who are fond of genus-coining would doubtless give it a generic designation in consequence. The six middle feathers are nearly equal, but the three external pairs are rapidly shortened as well as considerably narrowed and pointed.

—H. E. Strickland.



THE DODO

AND THE

PRESUMED EXTINCT BIRDS OF MADAGASCAR AND THE MAURITIUS, &c.

THE remains of the Dodo were long popularly known in Oxford and in the British Museum, and although generally talked of by the public, and latterly attempted to be ranged in most general systems of Ornithology, it was not until the model-monographic and historico-physical investigations of Mr. Strickland and Dr. Melville appeared, that the real interest in the subject arose. It was one of our main objects, these gentlemen write, to draw the attention of others to this subject: "Many a curious scrap of Dodo-knowledge is doubtless still buried in the holes and corners of libraries, museums, and picture galleries, and many a precious bone-fragment still moulders in the caverns and alluvions of the Mascarene Islands." The same views have induced us now to place together the information, that Mr. Strickland has collected since the publication of the "Dodo and its Kindred," with any other that has occurred, in the hope that it might come before individuals placed in or near these islands, and be the means of attracting them to do what they can to clear up the true form and habits of those remarkable birds. Man, and the animals trained by him to the chase, have been the means of extirpating or driving away to more retired haunts, those birds not provided with the powers of flying, and where the locality has been insular, this is more easily and rapidly accomplished. Such has been the case with the gigantic birds of New Zealand, now dwindled down to a few rare specimens of the unobtrusive Apteryx. The Emu of Australia is flying before the settlers, and an Ostrich cannot now be seen within hundreds of miles of the Cape. At the same time, as our information of the interior of large islands has become more extended, there are apparent indications that

some other brevipennate birds do still exist. A second species of *Apteryx* has been discovered in New Zealand; and a late letter from a correspondent to Mr. Blyth in Calcutta, mentions, that *A. owenii* was so abundant in some parts of the Middle Island, as to have served the party for food; if any settlement should take place there, the speedy extirpation of a creature so helpless may be predicted. Extracts from the letters of Mr. M'Gillivray, published in our last part, mention the discovery of a Cassowary on the north-east coast of Australia, a district hitherto very little explored; and traces of the existence of a large wingless bird in the interior of Madagascar, have reached this country, in accounts from the natives, of their being hunted down with dogs, which the information collected by Mr. Surtees, printed in the *Annals of Natural History*, as well as the notices from the *Mauritian Gazette*, which we now also print, tend to confirm.

The following additional remains of parts of the Dodo and Solitaire have come to light since the publication of the "Dodo and its Kindred," and have been noticed from time to time in the "Annals."

Mr. Strickland convicts Oxford of having been the grave of two Dodos. In the original autograph diary of Thomas Crossfield, extending from 1626 to 1640, is the following curious passage:—

"1634. SPECTACULA OXONII IN HOC ANNO.

"The story divided into 5 or 6 parts, invented by Mr. Gosling, sometime schollar to Mr. Camden, enginer, who bestowed the *Dodar*, a black Indian bird, upon y^e Anatomy Schoole. His wife dying, left him some meanes in a chest, wch a maide servant, cunningly getting y^e key of her master, conveyed away, and see he now glad to get his livinge by vsing his wits for such inventions."

The Ashmolean Dodo was in Tradescant's private collection at Lambeth in 1656, and was not transferred to Oxford until 1683. Two Dodos have therefore existed at successive periods in the venerable repositories of Oxford University.

The officers of the Royal Society of Arts and Sciences of Mauritius, discovered in the cabinets of their museum, two bones, which they have, with praiseworthy liberality, sent to Europe. They belong not to the true Dodo, but to the longer legged species, the Solitaire, which inhabited the island of Rodriguez.

These are metatarsal bones, and confirm Mr. Strickland's views of the affinity of the Dodo to the Pigeons, by supplying some parts which were wanting in the specimens figured in the "Dodo and its Kindred."

Mr. Selater, on his recent return from the continent, writes to Mr. Strickland:— "In the Böhmischen Museum at Prague, there is the veritable skull of the Dodo; that is, all the frontal portion, just as much as we would leave in preserving a skin." M. Max. Dormitzer, assistant to the museum, stated, "that it was found among some rubbish, and that it was a long time before they made out what it was."

Mr. Strickland states (p. 61, *Dodo and its Kindred*), that Flacourt, in his *History of the Island of Madagascar*, had mentioned the circumstance that a large brevipennate bird, *Vouron patra*, "a kind of Ostrich, frequented the region of Ampatres, a province in the south extremity of Madagascar." That this may still exist in the interior, is probable from the reports recently received; and its ancient existence bears authority both from the information sent by Mr. Surtees, and from the paragraph alluded to from the *Mauritian Gazette*. The first, communicated by F. R. Surtees, Esq., Her Majesty's Commissioner of Arbitration at the Cape of Good Hope, is as follows:— "It appears, that in October, 1848, when H. M. S. Geyser was cruising off St. Augustine's Bay, Madagascar, a French gentleman, named Dumarecle, who was a passenger on board, gave the following account, which is extracted from the private journal of Mr. John Joliffe, surgeon of the Geyser:— 'After giving an account of some curious monkeys, with white shining silvery hair, M. Dumarecle casually mentioned, that some time previously, when in command of his own vessel, trading along the coast of Madagascar, he saw, at Fort Leven, on the north-west end of the island, the shell of an enormous egg, the production of an unknown bird inhabiting the wilds of the country, which held the almost incredible quantity of thirteen wine quart bottles of fluid! he having himself carefully measured the quantity. It was of the colour and appearance of an Ostrich egg, and the substance of the shell was about the thickness of a Spanish dollar, and very hard in texture. It was brought on board by the natives, the race of 'Sakalavas,' to be filled with rum, having a tolerably large hole at one end, through which the contents of the egg had been

extracted, and which served as the mouth of the vessel. M. Dumarecle offered to purchase the egg from the natives, but they declined selling it, stating, that it belonged to their chief, and that they could not dispose of it without his permission. The natives said, the egg was found in the jungle, and observed, that such eggs were *very rarely* met with, and that the bird which produces them is still more rarely seen.' ”

The following is the notice in the newspapers previously alluded to:—The *Calcutta Englishman*, of August 1850, writes, “We have received Mauritius papers to the 13th ult. The ‘Mauritian’ mentions, on the authority of a Bourbon journal, that a singular discovery has been made in Madagascar. Fossil eggs, of an enormous size have been found in the bed of a torrent. The shells are an eighth of an inch thick, and the circumference of the egg itself is two feet eight inches lengthways, and two feet two inches round the middle. One which has been opened, contains eight-and-a-half litres, or about two gallons! What was to come out of these eggs? Bird or crocodile? The natives seem to be well acquainted with them, and say, that ancient tradition is uniform as to the former existence of a bird, large enough to carry off an ox. This is only a little smaller than the Roc of ancient fable, which waited patiently till he saw the elephant and rhinoceros fighting, and then carried off both at one stoop. Some fossil bones have been found in the same place as the eggs. The Bourbon editor says, he will leave it to the pupils of the great Cuvier to decide to what animal they belong. If they should prove to be the bones of a bird of a size corresponding to the eggs, the discovery will indeed be an extraordinary one.”

From these notices, it will be seen, that the “Dodo and its Kindred” has been the means of drawing attention to the subject; and we trust, that the officers of H. M. S^s on the station which includes Madagascar, Mauritius, Bourbon, and Rodriguez, will use their endeavours to trace out the subject. Let them take every opportunity of questioning the natives or Europeans who have been long resident in the islands, as to the former or present existence of birds that cannot fly, whether large or small; and look among the native dresses and ornaments, for such as are manufactured from feathers or bones which they cannot now procure, or which are very rare and much esteemed. Let them examine the old proceedings of societies, or papers relating to them—files of

THE DODO, ETC.

old newspapers, the earliest published in the island if possible—inquire after, and seek out old official papers that may be still existing in some of the public offices; and if any of the men of law, who, we presume, exist there, possess any old documents relating to the early state of the country and its possessions. The remains of bones have hitherto been found in caverns, on the floors, covered with mould. New caves should be sought for, and their floors examined; excavations should be made at different points in alluvial deposits—in the beds of streams, where bodies floating down were likely to be deposited; and the ruins of old habitations or camping places, around the fires, &c., should be strictly searched. These remarks refer most to the three smaller islands. In Madagascar, the same, so far as possible, should be followed out; and as the field is wider, every method which the ingenuity of the explorer, or the nature and circumstances of the country suggest, should be tried; and we scarcely doubt, that perseverance will be attended with success.



ORNITHOLOGY

OF THE

COASTS AND ISLANDS OF WESTERN AFRICA.

By DR. HARTLAUB.

WE have been long interested in the Ornithology of the Western Coasts of Africa and its Islands, and every collection that is received, however small, testifies to the value of increased research; while our almost constant intercourse with that coast, both by means of our regular and commercial navy, induces us to bring forward all the information we can, as an assistance to those who may be willing to lend their aid. Dr. Hartlaub, of Bremen, has kindly sent to us a paper on the Ornithology of Western Africa, which he has drawn up for the Academic Gymnasium of Hamburg. It appears that a portion of the funds of that institution are set aside under the management of a committee, for the advancement of Natural History, and a scientific traveller is from time to time sent out to explore some little known or interesting region. The introductory observations by Professor Wiebel will best explain this:—

“Although for centuries the West African Coast and Islands have at many points been taken possession of by Europeans, and visited by ships without number, yet they are so little known in reference to natural history, that the Association for Natural Science in this country, and the museum committee, have especially taken upon themselves to employ in the interest of science, the mercantile expeditions which sail from this port, so far as their own power and the readiness of the freighters and captains allow. The Association found a support in this endeavour, well worthy of thanks, in the munificence of the Portuguese consul-general, Mr. Ribeiro dos Sanctos, who offered them a free station and passage for a naturalist, to be sent out in one of their ships which sailed in the end of June, 1841, to the Portuguese possessions on the Western Coast of Africa. The great expectations joined with this magnanimous attempt, were, alas! not to be fulfilled, as our traveller, Mr. Wrede, fell a victim to the fatal fever of the climate, at Novo Redondo, a few weeks after his arrival in Benguela, which also carried off the

honoured leader of the expedition, Mr. Ribeiro dos Sanctos himself, on the 16th January, 1842.

The museum committee received an equally kind offer on the part of Mr. Epffenhausen, in the spring of 1847, for the equipment of Mr. H. Weiss, who in June of that year sailed for the west coast, in the ship *Adolphus*. His instructions directed him at first to the investigation of the group of islands lying in the Gulf of Guinea, the zoology and botany of which are still so little known, although much peculiarity is to be expected from their position and formation, and their healthy climate is not perilous to the life of the European like that of the coast; but by accustoming him to the peculiar modes of life in a warm zone, it teaches him to protect himself against the hurtful influence of coast fever. Our traveller arrived on the 20th August, 1847, at the Portuguese island of St. Thomas, from thence, a very favourable opportunity presenting itself, he made a trip to the Gold Coast, and returned by Prince's Island to St. Thomas. The three packages received from him up to this time, confirm our supposition, that still much may be gained here for science, of the most valuable kind; and the museum of natural history has been put in possession of many novelties, particularly in the department of Ornithology, the descriptions of which have been undertaken by Dr. G. Hartlaub in Bremen, corresponding member of our Association for Natural Science."

Dr. Hartlaub has taken great pains in consulting the various authorities who have noticed the species from these regions of Africa, and has drawn up a list, amounting to no less than 505* species, adding to each the locality and authority for it, together with their distribution in the north and south of the continent or in Europe. These observations, on their geographical distribution, will be read with interest by every Ornithologist.

"The zoological collections which have arrived at the Hamburg Museum, from the traveller Carl Weiss, in two different consignments from the Western Coast of Africa, present enough of new and interesting facts in the field of Ornithology, to join with them some general observations on the birds of this region. These collections were principally found in three localities; namely, on Prince's Island and St. Thomas', both situate near the Equator, and at Elmina on

* In the Prince of Canino's *Conspectus Avium*, sixteen birds are mentioned from Western Africa, which are not in Dr. Hartlaub's present list—increasing the number recorded as from these regions to 521.

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the Gold Coast. Only a few species come from Wineba, Accra, and Anamaboe. The following are the birds sent by Weiss:—

ST. THOMAS' ISLAND.

- | | |
|--|---|
| 1 <i>Milvus ægyptius</i> , Gm. | 14 <i>Spermestes cucullata</i> , Sw. |
| 2 <i>Athene leucopsis</i> , Nob. | 15 <i>Psittacula pullaria</i> , L. |
| 3 <i>Cypselus abyssinicus</i> , Licht. | 16 <i>Chalcites smaragdineus</i> , Sw. |
| 4 <i>Coracias garrula</i> , L. | 17 <i>Turtur simplex</i> , Nob. |
| 5 <i>Alcedo cæruleocephala</i> , Gm. | 18 <i>Treron abyssinica</i> , Lath. |
| 6 <i>Zosterops lugubris</i> , Nob. | 19 <i>Numida rendallii</i> , Sw. |
| 7 <i>Turdus olivaceofuscus</i> , Nob. | 20 <i>Coturnix histrionica</i> , Nob. |
| 8 <i>Drymoica ruficapilla</i> , Fraser. | 21 <i>Ardea thalassina</i> , Sw. |
| 9 <i>Muscipeta atrochalybea</i> , Thomp. | 22 <i>Ardea bubulcus</i> , Sav. |
| 10 <i>Onychognathus fulgidus</i> , Nob. | 23 <i>Ardea gularis</i> , B. |
| 11 <i>Ploceus grandis</i> , Fraser. | 24 <i>Numenius phaeopus</i> , L. |
| 12 <i>Euplectes erythropus</i> , Nob. | 25 <i>Gallinula chloropus</i> , L. |
| 13 <i>Sycobius st. thomæ</i> , Nob. | 26 <i>Phalacrocorax africanus</i> , Gm. |

PRINCE'S ISLAND.

- | | |
|--|--------------------------------------|
| 1. <i>Dicrurus modestus</i> , Nob. | 3. <i>Spermestes cucullata</i> , Sw. |
| 2. <i>Lamprotornis ignita</i> , Nordm. | 4. <i>Halcyon torquata</i> , Sw. |

ELMINA — (WINEBA, ACCRA, ANAMABOE).

- | | |
|---|---|
| 1. <i>Cypselus abyssinicus</i> , Licht.
(Anamaboe) | 16. <i>Laniarius barbarus</i> , Sh. |
| 2. <i>Alcedo picta</i> , Bodd. | 17. <i>Laniarius major</i> , Nob. |
| 3. <i>Merops albicollis</i> , Vieill.
(Wineba) | 18. <i>Laniarius leucorhynchus</i> , Nob. |
| 4. <i>Merops bicolor</i> , Daud. | 19. <i>Ploceus textor</i> , Gm. |
| 5. <i>Merops erythropterus</i> , Gm. | 20. <i>Euplectes oryx</i> , L. |
| 6. <i>Nectarinia cyanocephala</i> , V. | 21. <i>Corythaix buffonii</i> , V. |
| 7. <i>Nectarinia splendida</i> , Sh. | 22. <i>Pogonias vieillotii</i> , Leach. |
| 8. <i>Nectarinia chalybea</i> , L. | 23. <i>Macronyx flavigaster</i> , Sw. |
| 9. <i>Crateropus platycercus</i> , Sw.
(Accra.) | 24. <i>Hoplopterus inornatus</i> , Sw. |
| 10. <i>Cossypha verticalis</i> , Nob. | 25. <i>Glareola pratincola</i> , L. |
| 11. <i>Platysteira melanoptera</i> , Gm. | 26. <i>Charadrius minor</i> , L. |
| 12. <i>Muscipeta laticauda</i> , Sw. | 27. <i>Charadrius bitorquatus</i> , Licht. |
| 13. <i>Campephaga phœnicea</i> , Lath. | 28. <i>Charadrius marginatus</i> , V. |
| 14. <i>Telephorus senegalus</i> , L. | 29. <i>Himantopus vulgaris</i> , V.
(Accra.) |
| 15. <i>Laniarius gambensis</i> , Licht. | 30. <i>Parra africana</i> , Gm. |
| | 31. <i>Sterna minuta</i> , L. |

Among these fifty-nine species, eleven appear marked as new and hitherto undescribed.

The birds collected at St. Thomas, have a peculiar interest, from the circumstance, that with the exception of *Ploceus grandis*, brought home and described by Fraser, no other from that place has hitherto come to the knowledge of the scientific world. That among the twenty-six hitherto known species of this island, nine are found which have never been met with in any other locality, is at all events a circumstance worthy of remark, although not solitary among the fauna of islands. The occurrence, although rare, of our *Coracias garrula* at St. Thomas, where the bird, according to the observation of the collector, was known by nobody, is remarkable enough, for the distribution of this European bird, so far as known, does not extend over the northern parts of Africa. Of the remaining species of this island, named above, *Muscipeta atrochalybea* has only as yet been observed at Fernando Po. *Numenius phaeopus* and *Gallinula chloropus*, are cosmopolites, the occurrence of which is not remarkable on an equatorial island.

Among the four birds collected by Weiss on Prince's Island, two appear to belong to it peculiarly, namely *Lamprotornis ignita* and *Dicrurus modestus*, if our conjecture be not confirmed, that the latter is identical with *D. erythrophthalmus*, observed by the Duke of Würtemberg in Sennaar, but not yet described.

Weiss collected thirty-one species at Elmina. Only two of these, both belonging to the genus *Laniarius*, appear on closer comparison to be new. However, this collection is not without interest in other respects, *Merops bicolor*, Daud., and *Muscipeta laticauda*, Sw., are among the more remarkable species. The former, hitherto very rare in collections, is a species of the genus *Merops*, distinguished by its completely anomalous colour, which as yet has only been collected by Perrcin in Congo, a very distant locality; the latter is a small typical species of the genus *Muscipeta*, found numerously in Asia and Africa, which Swainson, supposing it to be from New Holland, has described and figured as a *Myiagra*. A species of *Cypselus*, collected by Weiss at Elmina and on St. Thomas, is found to agree with *C. abyssinicus*, Hempr. Ehrenb., lately described by Streubel.

Under West Africa, as a zoological province, is to be classed Senegambia in the most proper, and Guinea, in the widest sense of

the word. Senegal, namely, forms to the north, somewhat abruptly, the boundary of the west coast which has been zoologically investigated; the wide range, from the river to 30° north latitude, has yet, so far as known to us, never been investigated by any zoologist. We could not name a single species of bird, the fixed habitat of which may be sought for with certainty on this extended line of coast. It must be of no small interest to be able to follow the transition of the variegated and glittering ornithology of the Senegal region, to the unadorned, and according to Drummond's and Schousboe's communications, quite European stamp of that of Morocco. On the south, West Africa is bounded not less naturally by Benguela; for, as the west coast of Senegambia and Guinea, in its whole extent abounding in rivers, marshes, salt and fresh-water lakes, in many directions hilly, and in a great proportion covered with impenetrable forests, becomes northwards from Senegal, a dry coast, poor in vegetation, with a desert character; so, on the other side, the luxurious wooding of marshy Benguela seems towards the south almost suddenly to cease, and the farther stretch of coast to the Great Fish River, is arid and unfruitful. The ornithology of the West African Coast, thus limited, belongs, as may be seen from the above mentioned physical condition, to the brightest and most variegated of all zones. With reason Swainson reminds us of the corresponding forms of the opposite coast of South America — how there, the many coloured species of *Tanagra* and *Pipra*, *Icterus* and *Ampelis*, but above all, the charming Humming-birds, sparkling in the metallic glow of all colours (of which about 300 species are already known), help to enliven the rich landscape; while here abound the gayest and most wonderfully coloured species of the genera *Coracias*, *Merops*, *Alcedo*, *Laniarius*, *Oriolus*, splendid metallic-tinted *Lamprotornes*, *Chalcites*, and *Nectarinia*, the beautiful forms *Musophaga* and *Corythaix*, lastly, numerous large and small *Fringillidæ*, often of very pretty and variegated colours, which fill the air and woods with their voice, and whose multiplicity and beauty excites a warm expression of admiration in the visitors of this country. The genera peculiar to Western Africa, are one *Gypohierax*, one *Chelictinia*, one *Chaunotus*, two *Spermospiza*, two *Nigrita*, one *Onychognathus*, one *Musophaga*, one *Picathartes*. Hitherto the genus *Podica* has been described as quite exclusively West African; a

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second species was discovered not long ago in Malacca. The family of the *Trogonidæ*, represented in South and North East Africa by one and the same species, is wanting in West Africa. On the other hand, there is found only here the single species yet discovered in Africa, of the gorgeously coloured genus *Pitta*, numerously represented in Asia and Australia. The same is the case with the Cuckoo-form *Zanclostomus*, analogous to the American *Coccyzus*.

The West African genera, *Melanornis* and *Ptilopachus*, Rüppell found also in Abyssinia, whilst the distribution of the genera *Corvinella* and *Pyrenestes*, indigenous to Western Africa, extends also only over the south of this continent. If one would, in order to add to this, assume for certain generic forms centres or issue-points of distribution, such seem to be required for the genera *Nectarinia*, *Trichophorus*, *Laniarius*, *Sycobius*, *Numida*, and perhaps some others in Western Africa. Of the 494 species cited in the following catalogue, Western Africa has only 103 common with Eastern Africa, 40 with Southern Africa, and 57 with both. Hitherto about 47 species of European birds have been observed there; amongst them are 28 species of the order of *Grallæ*, L.; nearly 300 species may be considered as peculiar to Western Africa. A tabular list, arranged by families, will illustrate this.

I. RAPACES, 30 SPECIES.

<i>Vulturidæ</i> ,	2	Species.	Thereof peculiar to W. Africa,	1	Species.
<i>Falconidæ</i> ,	19	"	"	2	"
<i>Strigidæ</i> ,	9	"	"	3	"

II. PASSERES, L., 300 SPECIES.

<i>Caprimulgidæ</i> ,	3	Species.	Thereof peculiar to W. Africa,	1	Species.
<i>Hirundinidæ</i> ,	9	"	"	3	"
<i>Todidæ</i> ,	7	"	"	2	"
<i>Alcedinidæ</i> ,	15	"	"	10	"
<i>Meropidæ</i> ,	15	"	"	7	"
<i>Upupidæ</i> ,	3	"	"	1	"
<i>Nectariniadæ</i> ,	23	"	"	19	"

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<i>Luscinia</i> æ,	32	Species.	Thereof peculiar to W. Africa,	27	Species.
<i>Turdid</i> æ,	29	„	„	23	„
<i>Muscicapid</i> æ,	17	„	„	14	„
<i>Ampelid</i> æ,	8	„	„	3	„
<i>Laniid</i> æ,	21	„	„	15	„
<i>Corvid</i> æ,	3	„	„	3	„
<i>Sturnid</i> æ,	12	„	„	7	„
<i>Fringillid</i> æ,	92	„	„	64	„
<i>Colid</i> æ,	2	„	„	1	„
<i>Musophagid</i> æ,	5	„	„	5	„
<i>Bucerotid</i> æ,	9	„	„	6	„

III. SCANSORES, 39 SPECIES.

<i>Psittacid</i> æ,	8	Species.	Thereof peculiar to W. Africa,	7	Species.
<i>Picid</i> æ,	19	„	„	16	„
<i>Cuculid</i> æ,	13	„	„	7	„

IV. COLUMBÆ, 14 SPECIES.

*Columbid*æ, 14 Species. Thereof peculiar to W. Africa, 5 Species.

V. GALLINÆ.

<i>Meleagrina</i> æ,	3	Species.	Thereof peculiar to W. Africa,	3	Species.
<i>Tetraonid</i> æ,	6	„	„	3	„
<i>Pteroclin</i> æ,	3	„	„	1	„

VI. STRUTHIONES, 4 SPECIES.

*Struthionid*æ, 4 Species. Thereof peculiar to W. Africa, 1 Species.

VII. GRALLÆ, 72 SPECIES.

<i>Charadrid</i> æ,	16	Species.	Thereof peculiar to W. Africa,	7	Species.
<i>Ardeid</i> æ,	32	„	„	11	„
<i>Scolopacid</i> æ,	17	„	„	1	„
<i>Rallid</i> æ,	7	„	„	3	„

VIII. ANSERES, 22 SPECIES.

<i>Anatidæ</i> ,	5	Species.	Thereof	peculiar	to W. Africa,	0	Species.
<i>Procellariadæ</i> ,	1	„	„	„	„	0	„
<i>Laridæ</i> ,	11	„	„	„	„	6	„
<i>Pelecanidæ</i> ,	4	„	„	„	„	0	„

The value of these numerical statements is, of course, only approximate; but they may be sufficient, in connection with the following catalogue of species,* in some measure to give a distinct view of the great peculiarity of West African Ornithology, as well as its connection and alliance with that of South and North-east Africa. It is difficult to discover the reason that far more species belong in common to West and North-east Africa, than to West and South Africa. A comparative view of the physical construction of these different parts of the country gives but little explanation. Migratory habits give perhaps more, as has been proved by observation. The periodical migration of the Senegambian species, as Swainson has already remarked, has been shown to be towards the south of Africa. It is only in this way the fact can be explained, that Levaillant found *Lamprotornis cenea* and *aurata*, as well as *Laniarius barbarus* in the Namaqua country. Swainson's assumption that Barbary on the north, and Senegal in the south, bounds the distribution of this latter species, rests upon error. It is proved that no specimen of this bird has been observed north of Senegal; on the other hand, it is found along the whole coast of Guinea. As it is known in the class Mammalia, in the case of certain Antelopes, that of these, distinct but very nearly allied species, are represented at remote points of their peculiar countries, so a similar peculiarity is made known to us among the numerous examples of the birds of Africa. We are reminded of this in *Laniarius barbarus* (W. Afr.), *L. erythrogaster* (N. E. Afr.), and *L. atrocineus* (S. Afr.), as well as in *Prionops plumatus* (W. Afr.), *P. cristatus* (N. E. Afr.), and *P. talacoma* (S. Afr.), in *Corythaix buffonii* (W. Afr.), *C. leucotis* (N. E. Afr.), and *C. persa* (S. Afr.) Many species, indi-

* We have not printed the catalogue.

genous to West, as well as also to North-east Africa, are only represented in the South by an analogous species, as for example, *Merops nubicus* and *bullockii*, the southern representatives of which are evidently *M. nubicoides* and *bullockoides*. The *Psittacus levaillantii*, indigenous to South Africa and Abyssinia, is identified by an exceedingly nearly allied species, *P. pachyrhynchus*, in Senegambia. That a great many species of birds of the west coast are migratory, has been lately fully confirmed by C. A. Gordon, in Jardine's "Contributions to Ornithology for 1849." A very valuable notice is to be found there, of about thirty birds, observed and collected by Gordon at Cape Coast. What makes this paper particularly interesting, is, that an account of the habits of the birds of Western Africa is communicated therein, the first and only one of any importance we can at present remember.

If we cast a glance on the special distribution of the single orders in Western Africa, the birds of prey are tolerably numerous; among them we meet with the rare and interesting genera *Gypohierax* and *Chelictinia*, the latter an analogous form of the American *Elanoides*. The strikingly small representation of the Vultures, a family which, by the numbers and size of individuals of their numerous race, fill an important place in African zoology, must be due to the want of high open rocky mountains, as well as of sterile plains in Western Africa, both of which form the favourite place of residence of birds of the Vulture species in other regions of this part of the world.

Of the great order *Passeres*, about 300 species are known in Western Africa. The genera *Coracias*, *Alcedo* (L), and *Merops*, are characteristic by their number of species and richness of colour, the latter by certain species of remarkable beauty (*M. gularis*, Sh.) *Halcyon acteon*, a bird not very rare at Sierra Leone, lives equally numerous on the Cape de Verd Island St. Jago (Forster, Darwin, Bennet). Of the *Nectariniæ*, Western Africa possesses about twenty species peculiar to it. The remarkable occurrence of a species of *Pitta*, *P. angolensis*, has already been mentioned. Among the remaining birds of the Thrush species, the genus *Trichophorus*, among the *Muscicapidæ*, the genera *Muscipeta* and *Platysteira* come in the foreground as characteristic. A remarkable species of this family is that described by Vieillot, as *Platyrhynchus musicus*, a bird of Angola, correctly raised by Lesson to the rank of a

genus, and named by him *Bias*. The *Ampelidæ* also, represented in Western Africa by the genera *Dicrurus* and *Campephaga*, show a species interesting on account of its splendid and varied colouring, namely, *C. lobata*. Moreover, the genera *Laniarius* and *Lamprotornis*, found nowhere more rich in species than on the west coast, belong to the ornaments of African Ornithology; both can show a successive series of the most beautiful species, as for example, *Laniarius gutturalis*, *Lamprotornis ignita*, *splendida*, and *leucogaster*. As one of the most remarkable peculiarities of West African Ornithology, we may bring forward its extraordinary richness in birds of the *Fringillidæ*, of which more than eighty species are found in the genera *Ploceus*, *Textor*, *Euplectes*, *Sycobius*, *Vidua*, *Nigrita*, *Spermospiza*, *Pyrenestes*, *Estrilda*, *Amadina*, &c. To this may be added, that very many of this group, as for example, all the *Ploceinæ*, live in company, and are particularly numerous as individuals. The Larks and *Saxicola*,* found so rich in species in South and North-east Africa, number here only very few representatives, which is explainable from the character of the West African country. One of these, the small Lark-like *Pyr-rhulanda*, is repeated in the Cape de Verd Islands. In conclusion, the last members of this order, must not remain unmentioned, as they include the most splendid ornaments of African Ornithology, namely, the beautiful genera *Musophaga* and *Corythaix*. *M. violacea* is one of the most beautiful, *C. gigantea* one of the most wonderful birds of all zones. Of the nine species of *Buceros* in Western Africa, *B. albocristatus*, Cass., standing next to *B. comatus*, deserves particular mention. The *Scansores* are only slightly represented by about forty species. Wagler has already shown the striking want of Parrots in Africa. Of the fifteen species which are known on this continent, not fewer than eight inhabit the west coast. As a dwarf form of the family of the *Bucconidæ*, represented by the genera *Pogonias* and *Barbatula*, we class *Pogonias sulcirostris* as a bird particularly characteristic of Senegambia. The only Wood-

* Thienemanu's remark, that the geographical distribution of the genus *Saxicola* shows a striking agreement with that of the genus *Erica* among plants (Fortpflanzungsgeschichte der Vögel, Number 5, page 238), certainly strikes one at first sight, yet on closer observation proves erroneous. For, independent of this, that the central distribution of the heaths and the Stonechats in South Africa in no way agree, the very numerous distribution of this genus of birds in the north-east part of Africa, so poor in heaths, cannot be brought into unison with such a view.

peckers known till now in Western Africa, belong to the smaller and more unobtrusive species of this form. The Cuckoos appear with thirteen species of the genera *Indicator*, *Centropus*, *Zanclotomus*, *Cuculus*, *Oxylophus*, and *Chalcites*. A species of this latter genus, *Ch. smaragdineus*, ranges with the most beautiful birds of Africa; at the same time, only very few of the West African *Scansores* occur in North-east, and still fewer in South Africa. The dove form is represented by fourteen species, the most numerous belonging to the genera *Treron*, *Turtur*, and *Peristera*. Only five of these appear to be peculiar to Western Africa; among them, the *Turtur simplex*, discovered by Weiss, and the *Peristera puella*, Schleg., very striking from its dark blood-red colouring. In the order of Gallinaceous birds, the genus *Numida* appears in the foreground, with some very beautiful and marked species, *N. vulturina* and *cristata*. A third species, *N. rendallii*, the most common in Senegambia, is distributed over the Cape de Verd Islands. West Africa is poor in the species of *Francolinus* and *Pterocles*. The dwarf form, *Ortyxelos*, is exclusively peculiar to it. *Coturnix histrionica*, the species of Quail discovered by Weiss on the Island of St. Thomas, may ultimately prove identical with the South African *C. delegorguei*. Bustards do not find their peculiar kind of country on the west coast of Africa; *Otis denhami* only occurs far in the interior. No order, next to the *Passeres*, is so rich in species in Western Africa as the *Grallæ*, L., of which twenty-two appear to belong peculiarly to it. We meet with numerous European species, even from the far north, as the *Limosa lapponica*. Among the *Charadriadæ*, occur the beautiful *Cursorius chalcopterus*, as well as three species of *Glareola*. Not fewer than eighteen species of Heron inhabit the banks of rivers and lakes, marshes and salt lagoons of the west coast, of which many only occur here, as *Botaurus leucolophus*, *Nycticorax cucullatus*, *Ardea sturmii*, *calceolata*, *typhon*. Next them appear the genera *Mycteria*, *Leptoptilos*, *Ciconia*, *Platalea*, *Anastomus*, *Scopus*, *Tantalus*, *Ibis*, of the latter four species. The family *Rallidæ*, on the other hand, is proportionally only slightly represented, and has only two species peculiar to Western Africa, *Corethrura pulchra* and *Podica senegalensis*. Among the strikingly small number of birds of the Duck species, which

are known in Western Africa, *Nettapus madagascariensis* deserves particular mention, as well as the American *Dendrocygna viduata*, the specific difference of which, as *A. personata* (Duke of Würtemberg), we, after careful comparison of Brazilian and Senegambian specimens, cannot allow. That South Africa, so scarce in water, should be richer in Ducks than the region of the west coast, so full of lakes and rivers, is not easily explained; yet the more moderate climate of the former—more consonant to the *Anatidæ* must certainly not be overlooked as a cause. Although the new species of *Sternæ*, described in Western Africa by Swainson should be added, it is at least doubtful with regard to one of these. Perhaps it is only accidental that no species of *Podiceps* has yet been found there.





ILLUSTRATIONS OF ORNITHOLOGY.

CASARCA LEUCOPTERA, BLYTH.

SOME time since, a drawing was received from Mr. Blyth of a Duck, which he considered to be new; and in our last communication from him, a second sketch was enclosed, and he informs us that he had received both sexes of the bird alive from Mergui, together with the Argus and great Firebacked Pheasants, and other birds of interest, which were not previously known so far northward. Mr. Blyth considers it a true *Casarca*, and has named it as above, from the white patch upon the shoulders. The male is rather larger than the female as in *C. rutila*, with fewer black spots and consequently more white on the head and neck; the back less mottled with dusky, and the under parts much darker than in the female, which last has a strong tinge of the hue of *C. rutila*. These are proposed to be sent alive to this country.

MENURA ALBERTI, GOULD.

M. Alberti, *Prince of Canino, Consp. Gen. Av.* p. 215.

THE addition of a new species to a form of which one only, or a very few individuals at most were known, is always of much importance, and if the form should belong to one of great peculiarity of structure, it is of still greater value, serving to clear up and fix the points of affinity which required to be confirmed by an additional example. Such has been the case with *Menura*, a remarkable Australian form, and until now known only by a single species, the Pheasant or Lyre-Tail of the colonists, the *Menura superba* of Davies and modern Ornithologists.

Mr. Gould, in the spring of the present year, received specimens of *M. alberti* from his Australian collector, and immediately after brought it under the notice of the Linnæan Society, pointing out the distinctions between it and the old species, and naming it in honour of His Royal Highness Prince Albert. It is found on the Richmond river, and among the Brushes of the eastern coast of Australia. No description has been yet published, although figures have been already lithographed, and will appear in the Supplement to the Birds of Australia. Meanwhile, Mr. Gould has permitted us to draw up a description, from a series of specimens, for the use of these "Contributions," and we have placed the characters of the two species together, that they may be easily compared. *M. alberti* is distinguished by the more rufous colour of the upper parts, and by a difference in the structure of the more conspicuous feathers of the tail.

♂ *Above*, crown, auriculars and back of the neck, blackish umber brown, slightly tinted with sienna on the forehead; the cheeks and around the eyes bare, with a few scattered narrow feathers; back, wings, rump and upper tail-covers, umber brown, with a tint of sienna, brightest on the two last; tail black, the outer feathers with indistinct sienna bars, two centre feathers pale umber brown. *Beneath*, chin, throat and upper part of the neck, dull sienna; breast and flanks pale yellowish umber brown; centre of belly and thighs, yellowish-grey; under tail-covers bright sienna;



a. Menara superba.

b. M. alberti.



ILLUSTRATIONS OF ORNITHOLOGY.

tail grey, the barbs of the loose feathers appearing white; bill, legs and feet, black. Entire length, 3.2; bill to forehead, 1.5; to gape, 1.9; wing, 10.3 to 5; tarsus, 4.1; tail to extremity of loose feathers, 1.9; outer feather, 1.6.5.

In the structure of the tail, *Menura alberti* presents some variations from that of the old species, the long lyre feather on the outside equalling the other feathers in length, is represented by one which is here the shortest. It is composed of very broad webs, loose but not separated, and on the inner there are slight indications of sienna bars. The next six feathers on each side are similar in structure, having wide separated barbs, but they are finer and shorter than in *M. superba*. The two centre feathers are also of the same structure, and cross each other at the base; but the inner webs are broader, the outer rudimentary barbs stronger and placed more thickly; the entire tail considerably shorter.

♀ *Above*, crown, back of the neck and auriculars, blackish umber brown; back, wings, rump and tail-covers, umber brown with a tint of sienna; quills, dark blackish umber brown; tail cuneiform, all the feathers with the barbs united, black, the twelve centre feathers tipped with reddish umber brown, centre feathers exceeding the others, pointed, crossing; outer webs broad, inner narrow at the base and gradually widening, umber brown. *Beneath*, nearly as in ♂.

Entire length, 2.5 to 6; tail to centre feathers, 1.5; central tail-feathers exceed the others by about 3.

♂ Plumage downy, colours that of ♀ more rufous on the crown; tail cuneiform, tipped with sienna; centre feathers not elongated. Entire length, 2.1 to 2.

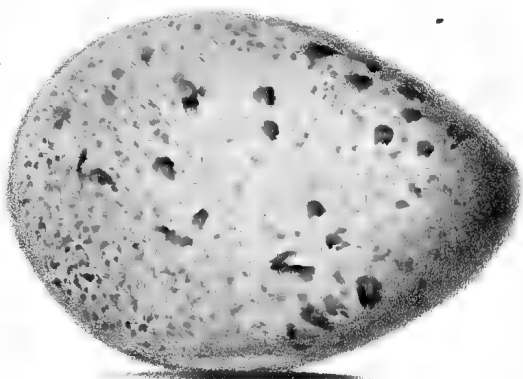
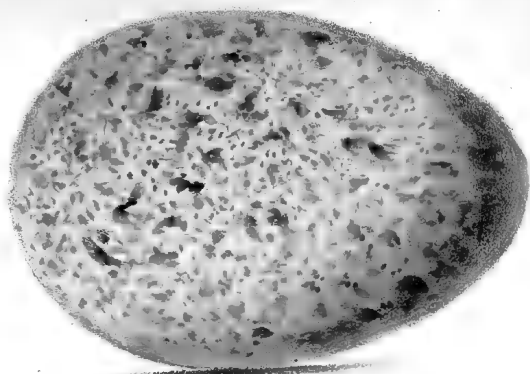
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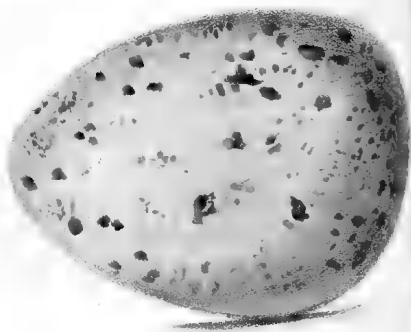
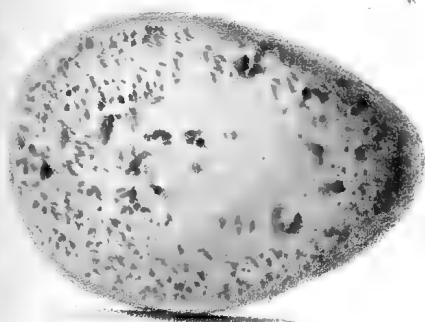
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Loophophorus impigeranus



Bocerasia megalopha.
May 1880.

ILLUSTRATIONS OF FOREIGN OOLOGY.

LOPHOPHORUS IMPEYANUS — PURCRASIA MACROLOPHA.

DRAWINGS of the eggs of these two birds were forwarded to us by Mr. Blyth, for whom we believe they were procured by Captain Thomas Hutton, in whose valuable and interesting notes "On the Nidification of Indian Birds" (Journ. Asiat. Soc. Beng. vol. xviii. pp. 3-681), we have the following short descriptions:—

"These birds (*Lophophorus impeyanus*) do not occur so low down as Mussooree, but are found in abundance on the next range; in days of yore, they were found at Simla, but civilization has of late years banished them to the less disturbed localities. It makes no nest, but lays its eggs on the ground, the number not satisfactorily ascertained, as one nest contained three and another four eggs, of a pale brown or sandy hue, thickly sprinkled over with reddish-brown spots and dashes. Diameter, $2\frac{1}{2} \times 1\frac{1}{8}$."

"For the eggs of this species (*Purcrasia macrolopha*) I am indebted to a friend who took them in June from the ground, where there were no other symptoms of a nest than a slight scratching away of the leaves and grass. The eggs were five in number, of a sandy brown, sprinkled over with specks and large spots, and blotches of deep red brown, resembling dried blood. Diameter, $2\frac{1}{8} \times 1\frac{7}{8}$."

In form and in the colouring, these eggs resemble those of the *Tetraonidæ*, which are generally marked with reddish or brown spots and blotches — not those of the *Phasianidæ*, where the form is rounder, and the colouring uniform and without markings. The markings and colourings of the Capercailzie and Common Black Game of Europe (*T. urogallus* and *tetrix*) are very similar.

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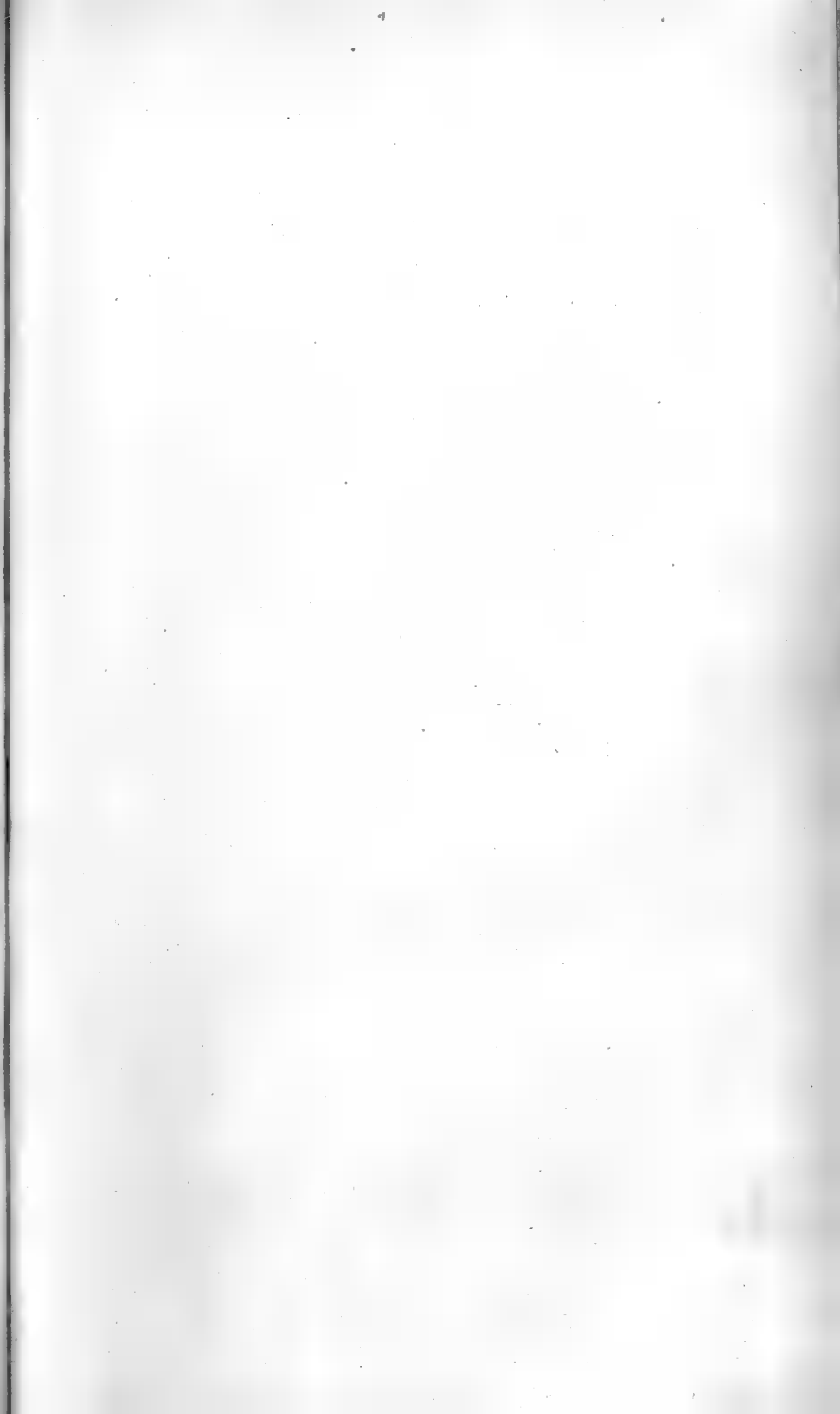
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C.D.M.S.
July 1850.

Coereba nitida, Hartlaub.
Paroides flammiceps Burton.

CÆREBA NITIDA, HARTLAUB.

Cæreba nitida, *Hartlaub* in *Rev. Zool.* 1847, p. 84. — *Gray*, *Gen. Birds*, App. p. 5.

THIS beautiful little bird is thus described by Dr. Hartlaub:—

“*Nitide cyanea; alis, caudâ, loris et gutture nigerrimis; pedibus pallide flavis, rostro nigro.*”

“Resembles *C. cærulea* (Linn.), but differs, first, in its smaller size; secondly, in the length of the beak, which is $4\frac{1}{2}$ in *C. nitida* and 5 in *C. cærulea*; thirdly, in the different shade of the blue, which is brighter and without that violet tint which we see in *C. cærulea*; it is nearly the same as the blue of *Ampelis cotinga*; fourthly, in the greater extent of black on the throat.”

Total length, 3.6; beak to front, $4\frac{1}{2}$; to gape, 5; wing, 1.9; medial and external rectrices, 1.1; tarsus, $4\frac{1}{2}$.

Dr. Hartlaub's specimen was obtained in the north of Peru, probably, however, on the east side of the Andes, for the one here figured was procured by Mr. E. Wilson, from the upper branches of the Amazons.—*H. E. Strickland.*

PAROIDES FLAMMICEPS, BURTON.

Ægithalus flammiceps, *Burton* in Proc. Zool. Soc. pt. iii. p. 153; *Blyth* in Journ. As. Soc. Beng. v., xvi. p. 444. — *Dicaeum sanguinifrons*, *Hay* in Journ. As. Soc. Beng. v., xv. p. 44.

THIS pretty little bird is interesting as furnishing an Asiatic example of the Africo-European genus, *Paroides* (*Ægithalus*, Vig.) of which only four or five species are known. Though generally classed with the *Parinæ*, its true affinities are as yet very uncertain. Mr. Blyth remarks, that it occurs in flocks, and frequents the branches of lofty trees. Mr. Hodgson does not appear to have met with it in Nepal.

Crown vivid orange red; hind head and upper parts, yellowish-olive; wing-covers, remiges and rectrices fuscous, margined with yellowish-olive; chin orange red, passing into orange on the throat and breast, and into pale yellow on the lower parts; beak plumbeous, the margins pale; legs blackish.

Total length, 3.3; beak to front, 3; to gape, 4; wing, 2.4; all the rectrices, 1.5; tarsus, 5.

Habitat, India, Doon, Simla, and other north-west Himalayan localities.—*H. E. Strickland*.

NOTE

ON THE

RECTRICES OF *VIDUA PARADISEA*.

(CONTRIB. ORN. 1850, p. 88.)

ABOUT three months after my notice of the remarkable structure of the submedial rectrices of *Vidua paradisea* was printed, I was not a little surprised to find that this peculiarity had been long since described and figured by that exceedingly accurate observer, Brisson. In his *Ornithologia*, vol. iii. p. 123, after describing the submedial pair of rectrices, he adds, "Ex alveolo à quo hæc ultima rectrix oritur, gracillimum exit filum, rectricis longitudinem ferè adæquans, cui rectricis pinnularum exteriorum apices arctè cohærent." No description can be more exact than this*—and in his Plate viii. fig. 1, he has correctly represented the attachment of these filaments to the web of the feather. One might have expected that so unique a structure would have induced Brisson to dilate a little regarding it, but he was too dry a describer to indulge in any philosophic reflections; and this extraordinary structural phenomenon has apparently remained unnoticed by any subsequent observers, till a recent examination of a series of specimens from Cordofan drew my attention to it.—*H. E. Strickland.*

* In my description, I have inadvertently stated, that the filament adheres to one (generally the *inner*) side of the feather. On re-examining the specimens, I find that I should have said "generally the *outer*" side, conformably with Brisson's statement. In the Plate (lix.) fig. 1, *a* is the *interior* and *b* the *exterior* web.—*H. E. S.*

[The page contains extremely faint and illegible text, likely bleed-through from the reverse side of the document. The text is arranged in several paragraphs and possibly a list or table, but the characters are too light to be transcribed accurately.]

GRUS ANTIGONE.

(PAGE 19.)

A LETTER received from Mr. Blyth has the following notes to his former communication upon the Cranes of India:—

“Captain Tickell has since met with the true ‘Sara’s’ eggs, and acknowledges his former mistake in a letter just received.”

“*Grus leucogeranos* is mentioned by Schlegel to occur in Bengal, though I never heard of it in any part of India except in Rajhastan, where my friend Lieutenant James, lately assured me that he had repeatedly seen this conspicuous and unmistakeable bird, though he never succeeded in shooting one.”

The following *errata* in this paper, chiefly in the spelling of the proper names, should be corrected:—

- | | | |
|------------------------------|-------------------------|-----------------------------|
| Page 19, line 6 from bottom, | for <i>migratory</i> , | read <i>non-migratory</i> . |
| ... 20, line 12 from top, | for <i>Churro</i> , | read <i>Churrs</i> . |
| ... 20, line 17 from top, | for <i>Behary</i> , | read <i>Behar</i> . |
| ... 22, line 14 from bottom, | for <i>district</i> , | read <i>districts</i> . |
| ... 23, line 5 from top, | for <i>Guzret</i> , | read <i>Guzrat</i> . |
| ... 24, line 9 from bottom, | for <i>Jewer</i> , | read <i>Jewar</i> . |
| ... 24, line 12 from bottom, | for <i>Meerat</i> , | read <i>Meerut</i> . |
| ... 25, line 19 from top, | for <i>green</i> , | read <i>grain</i> . |
| ... 26, line 9 from top, | for <i>Gorackpore</i> , | read <i>Gorakpur</i> . |

LETTER received from Mr. [Name] on the 12th inst. contains a copy of the [Name]...
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The following is a list of the names of the persons mentioned in the above letter...

No.	Name	Address
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CONTRIBUTIONS

TO

ORNITHOLOGY

FOR

1851.

BY

SIR WILLIAM JARDINE, BART.

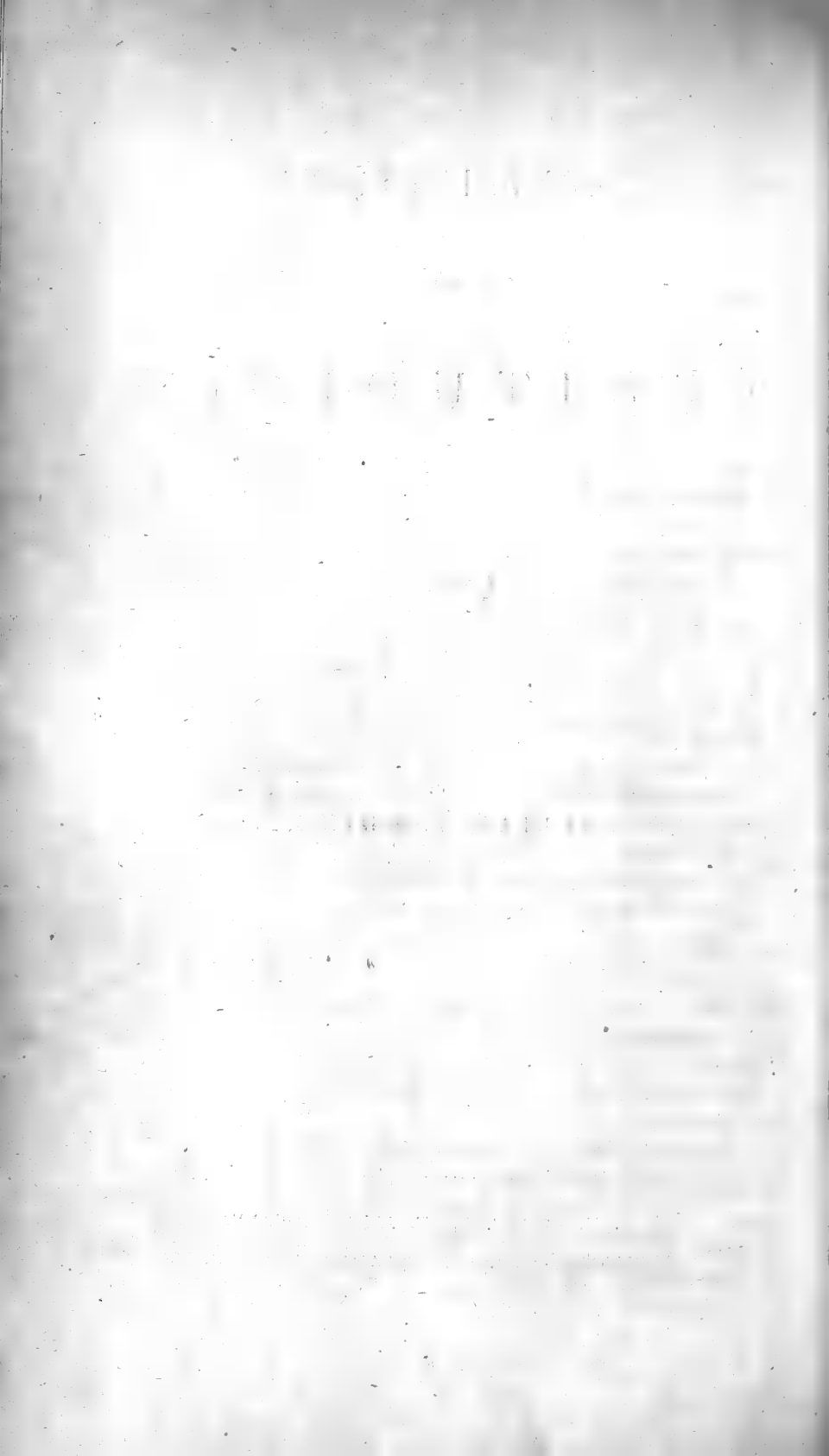
F. R. S. E., F. L. S., ETC., ETC.

EDINBURGH:

W. H. LIZARS, 3, ST. JAMES' SQUARE.

LONDON: REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1852.



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ORNITHOLOGY IN 1850.

IN commencing another year of "*Contributions*," it may be of use to our readers to run shortly over what has been accomplished in Ornithology during the last twelve months in our own country.

It is a remarkable fact, that although the working and scientific ornithologists of Great Britain can only rank comparatively as a small band, and that the science generally has not got into the circle of those considered fashionable, more Ornithological works of large size, and of an illustrated and expensive character, have been patronised and published than in any other branch of Zoology, and it is only in Botany where there has been any approach to it. What is the cause of this, and how are they supported? for they do not find their way into all the public libraries, and few private individuals can afford them. Nevertheless, during the last thirty years, we have had a great mass of Ornithological works of unrivalled magnificence and fidelity of illustration, annually appearing and brought to a completion. We have only to state as examples, the *British Birds* of P. J. Selby, Esq., two folio volumes of coloured plates; Sir W. Jardine and P. J. Selby's *Illustrations of Foreign Ornithology*, begun at a time when that branch had waned almost to extinction; Audubon's *Birds of America*, commenced under Edinburgh auspices, and whose artists first recognised the merits of the "Woodman's" pencil;* all the Government publications, from the Northern

* Since writing the above, we regret to observe the following announcement from the *New York Herald*:—

"DEATH OF AUDUBON THE ORNITHOLOGIST.—John James Audubon, the deservedly renowned naturalist, died in New York, on the 27th of January, at his residence on the banks of the Hudson river, in 155th street. He had arrived at the age of seventy-six, and has gone down to the grave, leaving a name distinguished among the scientific men of every nation, a name earned by a steady perseverance in the beautiful field of Ornithology, the cultivation of which demands fancy, taste, judgment, and a general love of nature."

Zoology of Richardson and Swainson, to the Zoology of the Erebus and Terror, improperly permitted still to remain uncompleted; Fraser's *Zoologia Typica*; Gray and Mitchell's *Genera of Birds*; the extensive works of Mr. Gould, so successfully carried on for a long series of years, all these testify that patronage for works of this kind is not wanting while there are many other works of less pretension, which show us that a demand does exist. Still we consider the really working men are very limited; there are a good many gentlemen scattered over the country who take an interest in Ornithology, particularly of any thing that may occur among our native birds, and there are a few sportsmen who preserve what occurs to themselves or their friends; but we mean, that there are very few who possess or are forming extensive general collections, or who, by keeping pace in their libraries or correspondence, are aware of the "present state," or what is daily adding to our knowledge. Lord Derby is an excellent patron of Ornithology, and whatever enters his large collection is at the service of science. Mr. Edward Wilson has made very extensive collections for his brother in America, and which are kindly made available to us before they leave this country. George Robert Gray continues successfully to work out the resources of our great national collection; but with Ourselves, Hugh E. Strickland, T. C. Eyton, and Mr. Gould, are almost if not solely, the only other persons actively engaged in this science. Three of the latter only, possess extensive and increasing general collections and libraries; but to these we hope we may now add P. L. Sclater, of Corpus Christi College, Oxford, who has commenced his collection, and is now working out some groups with great exactness.

Among the ornithological works now in progress, or that have been completed during the past year, those of John Gould may be stated as the most extensive and important. That gentleman commenced his career as an ornithologist many years since, and with the assistance of Mrs. Gould, an ornithological draftsman of first rate eminence, completed the *Birds of Himalaya*, *Birds of Europe*, the greater portion of the *Birds of Australia*, and several monographs, all in a style of excellence and completeness, that places them at the head of works of this class. During the present year, one of the previous monographs has been completed, another has been commenced, and an entirely new work has reached its second

part. The monograph completed by the publication of the third part, is that of the *Odontophorinæ*, or American Partridges, considered a few years since as forming a group of birds very limited in numbers, but which is found in the present work to contain thirty-five species, all of which are well figured and described on thirty-two plates, and at a price of eight guineas. The monograph which has been commenced, is that of the *Trochilidæ* or Humming Birds, of which one part only has been published. It is a subject of great extent, and at the same time of great interest. The figures which have been published are perhaps the most successful that Mr. Gould and his artist, Mr. Richter, have yet accomplished, both in the delicacy of the drawing and the accessaries to the figures, and in the representation of the changing colours, which has been attempted by a particular process, both in the printing and colouring. The new work which Mr. Gould has undertaken, is the most important in a general view, as it embraces the Ornithology of one of the quarters of the world, almost an entire zoological province, "*The Birds of Asia.*" "It is intended," he writes in his prospectus, "that the present work shall embrace the Birds of the Asiatic continent only; to attempt to include in it the Ornithology of the Indian Archipelago, New Guinea, the Moluccas and the islands of the Southern Ocean, would be an act of temerity; somewhere a line of demarcation must be drawn, and here the author will confine himself, not too rigidly, within the continental boundary. Many species, common alike to India and Europe, and to India and Australia, have been already figured in his '*Birds of Europe*' and '*Birds of Australia*;' these of course will not be delivered to the possessors of those works unless especially demanded at the close of the publication, and hence to them it will be less voluminous and expensive than might be at first inferred from such a title as '*The Birds of Asia.*'"

Two parts have been published during the past year, each containing seventeen plates, and in each a portion is more particularly devoted to the illustration of some particular genus, thus in Part I. *Sitta* is illustrated, in Part II. *Nectarinia*. The contents of these two parts are—

PART I.

Falco jugger.
Pitta nipalensis.
 — *cyanea.*
Pericrocotus solaris.
 — *erythropygus.*
Chrysophlegma flavinucha.
Sitta formosa.
 — *cinnamoventris.*
 — *castaneoventris.*
 — *leucopsis.*
 — *himalayensis.*
Cochoa viridis.
 — *purpurea.*
Cissa pyrrhocyanea.
Fringilla burtoni.
Yuna indica.
Nucifraga multipunctata.

PART II.

Caprimulgus mahrattensis.
Nyctiornis athertoni.
 — *amictus.*
Niltava grandis.
 — *sundara.*
 — *macgregoriae.*
Lophophorus impeyanus.
Nectarinia ignicauda.
 — *goalparensis.*
 — *vigorsii.*
 — *nipalensis.*
Syrrhaptes tibetianus.
Pterocles exustus.
 — *fasciatus.*
Glareola melanoptera.
Certhia nipalensis.
C. — himalayana.

Of other illustrated works, the last part of the Zoology of Dr. Smith's South African expedition, after a very long delay, has been published, and that work can now be obtained complete, the Ornithology forming a thick volume, and a very important one to those working at species from that and other regions of Africa. We are sorry not to be able to announce the completion of another Government work, "The Zoology of the Erebus and Terror." The plates to the wanting part of the Ornithology have been for a long time lithographed by Wolf, but we do not know what retards its publication.

"*A History of British Birds, by the Rev. F. O. MORRIS, B.A., with an illustration of each species, accurately coloured,*" has reached its ninth part. Each part contains four coloured plates, besides descriptive letterpress, the price one shilling. The "*Nests of Eggs of British Birds,*" upon the same plan, and by the same author, is also announced, so soon as a sufficient number of subscribers have been obtained.

The concluding volume of the "*Birds of Ireland,*" by William Thomson, Esq., Belfast, will not come into the past year, though it is almost out of the printer's hands.

"A List of the Specimens of British Animals in the Collection of the British Museum, Part iii., *Birds*," is one of those useful catalogues of the zoological contents of the great national collection, of which twenty-four parts have already appeared. This one, we are told in the introduction, has been prepared by Mr. George Robert Gray, the senior superintendent of the ornithological department, and a short extract from that portion of the work will best explain its objects.

"The principal object of the present catalogue has been to give a complete list of all the birds that have been recorded as found in Great Britain (should not *and Ireland* been added?), indicating at the same time those species that are contained in the collection, and pointing out those peculiarities as regards age, sex, habitat, and the source from which the specimens were obtained, which are mentioned after the specific name and its synonyma; while the localities of those species not contained in the collection are also recorded." From this catalogue we gain a knowledge of the extent of the collection of British Birds, the species admitted being understood to be all *British killed*; and we regret to learn from it, that there is a want of an instructive series of the different states, incident to age and sex, while several of our common or easily obtained species are nearly or altogether absent. As an example of this, there is only one specimen of *Sitta europea*, *Anthus arboreus*, *Muscicapa atricapilla*, all easily procured. None of *Regulus ignicapillus* or *Anthus rupestris*, the latter common around every part of our shores, where the locality is suitable. Only a single specimen of *Tetrao tetrix*, no female. No *Uria ringua*, &c., &c. A very trifling expense would easily render much more perfect this department of our ornithological collection.*

"*Game Birds and Wild Fowl, their Friends and Foes*, by A. E. KNOX, M.A., F.L.S., author of *Ornithological Rambles in Sussex*.—London, Van Voorst, 1850." Although not a book of Scientific Ornithology, we include this in our list of the year, as containing many notes and traits of the manners of our native species; and notwithstanding that the habits of our British birds have been already pretty

* The habitat given for *Scolopax brehmi*, was "Jardine Hall," and "vicinity of Enniskillen," not "near Lockerby."

strictly analyzed, something may now and then be gathered from new observers. It is, however, more a book for the sportsman than for the ornithologist.

“*Proceedings of the Zoological Society of London, with Illustrations. Part III., July to December 1849.*” Three years since, it was thought, by the indefatigable secretary of the Zoological Society, that it would be for its welfare, and would tend also to relieve its “*transactions*” from the mass of miscellaneous and shorter communications that come before it, were its “*proceedings*” published in an illustrated form. The Proceedings of 1848 were accordingly published in three parts, including a notice of all that had come before the meetings between January and December in that year. They were illustrated by exceedingly beautiful plates, chiefly lithographic, and altogether formed a volume reflecting much credit upon its editor. The same plan was followed out in 1849, Parts I. and II., being published in that year; but Part III. did not appear until the month of August, 1850, completing the second volume. For the year 1850, then, no Proceedings have yet at this date (February, 1851) been published.* Part of the Proceedings for 1849 having only come before the public in the by-gone year; we ought to notice their contents, with the remark however, that a little exertion might have put us in possession of the papers communicated during the session of 1850. — *On New Species of Mammalia and Birds from Australia*, by JOHN GOULD, F.R.S., F.Z.S., &c., p. 109. See “*Ornithology of Section D of Contributions for 1850,*” p. 92. A figure of both sexes of *Ptilorhis victorice* is given. — *Description of Three New Species of Indian Birds*, by JOHN GOULD, F.R.S., &c., p. 112. *Ruticilla grandis*, *Yunx indica*, and *Sitta leucopsis*. — *On the Lorine genus of Parrots, Electus, with the Description of a New Species, Electus cornelia*, by CHARLES LUCIAN PRINCE BONAPARTE, F.M.L., F.Z.S., &c., &c., p. 142. Prince Bonaparte restricts *Electus* to three species, all from the Moluccan Islands — *E. puniceus*, Gm., *E. grandis*, Gm., and *E. cornelia*, Bp. Specific descriptions, &c., are given of all; that for the last is

* We have just (February, 1851), received Part I., January to April, 1850, of the *Proceedings*. This is exceedingly unfavourable to the Society. Names given to new species at their meetings in January 1850, and not PUBLISHED until February 1851, cannot stand before those conferred in the interval.

"*E. coccineus*, dorso alis caudaque purpureo-fuscescentibus; margine alarum remigibusque apice cyaneis; tectricibus inferioribus rubro cyaneoque variis; abdomine crisso, et caudæ apice, rubris concoloribus;" a figure is given, pl. x. — Notice of a Hybrid Crowned-pigeon, hatched in the menagerie, by D. W. MITCHELL, Sec. Z.S., &c., &c., p. 170; figures of the young birds newly hatched are given.

The *Annals and Magazine of Natural History, including Zoology, Botany, and Geology*. Vols. v. and vi. *Second Series, On the Occurrence of Charadrius virginiacus, Borkh. at Malta*, by H. E. STRICKLAND, Esq., M.A., F.G.S., p. 40. The occurrence of this species in Malta is given on the authority of letters from Captain Drummond, 42d Regiment, in 1846. The specimens were afterwards seen by Mr. Yarrell, who considered them identical with *C. virginiacus*, which has almost a cosmopolite distribution, while *C. pluvialis* is restricted. The former is not mentioned in the latest accounts of the Ornithology of Malta, Sicily, or Greece. — *Natural History of Ireland, Birds*, vols. i. and ii., by WILLIAM THOMSON, Esq., Belfast, a review of, p. 218. — *Descriptions of some New Species of Birds of the Family Caprimulgidae*, by JOHN CASSIN, p. 30. An Extract from the Proceedings of the Academy of Natural Sciences of Philadelphia, vol. iv. p. 236. The species described are *Hydropsalis limbatus* and *segmentalis*; *Anthrostomus sericeocoudatus*, all from South America. — In Proceedings of Zoological Society, of a date nearly twelve months previous (February, 1849), printed in this volume, we have *Description of a New Species of Parrot, Psittacus (it is a Pionus) rüppellii*, p. 77. — "Uniform dark-bronze colour, with the lesser and under wing-coverts bright yellow; the feathers on the thighs, orange-yellow; length, 9.6; bill from gape, 10; wing, 5.6; tail, 3.3; tarsi, 6. Habitat, river Nunez." — *Description of a New Species of Nutteracker, Nucifraga multipunctata*, by JOHN GOULD, F.R.S.L., &c., p. 134. It is from Simla in India, and is described from a specimen in the Museum of Philosophical Society of York. — *Notice of a Peculiarity of Structure observed in the Aorta of the Wild Swan*, by JOHN DAVY, M.D., F.R.S.E. and L., p. 139. — Under the title "*Ipswich Museum*," p. 147, is given in the substance of a lecture delivered by Professor Owen, at the anniversary meeting, "*On Gigantic Birds of New Zealand, and Geographical Distribution of Animals*." — *On a new species of the genus Glareola, G. nuchalis*,

also on a new species of the genus *Cultriodes*, *C. rufipennis*, by J. R. GRAY, F.L.S., &c., p. 224.

The only original ornithological communication in vol. vi., exclusive of a notice or two in the Miscellanea, is *Supplementary Notices regarding the Dodo and its Kindred*, No. 9, by H. E. STRICKLAND, M.A., F.Z.S., p. 290; these notices forming a supplement of the information received from various sources since the publication of the work on "The Dodo and its Kindred," by Mr. Strickland and Dr. Melville, have been printed in "Contributions for 1850," p. 123; and copies on thin paper have been distributed by post in quarters abroad, where information may be expected to be derived.

The Zoologist, a popular miscellany of natural history, conducted by EDWARD NEWMAN, F.L.S., Z.S., &c., has reached volume eighth, and contains many ornithological notices, particularly of the occurrence of the rarer species of this country. They are in fact so numerous, that nothing short of an index could give an idea of them; but the subjects in the volume have the advantage of being classified, and the departments therefore are easily looked over.

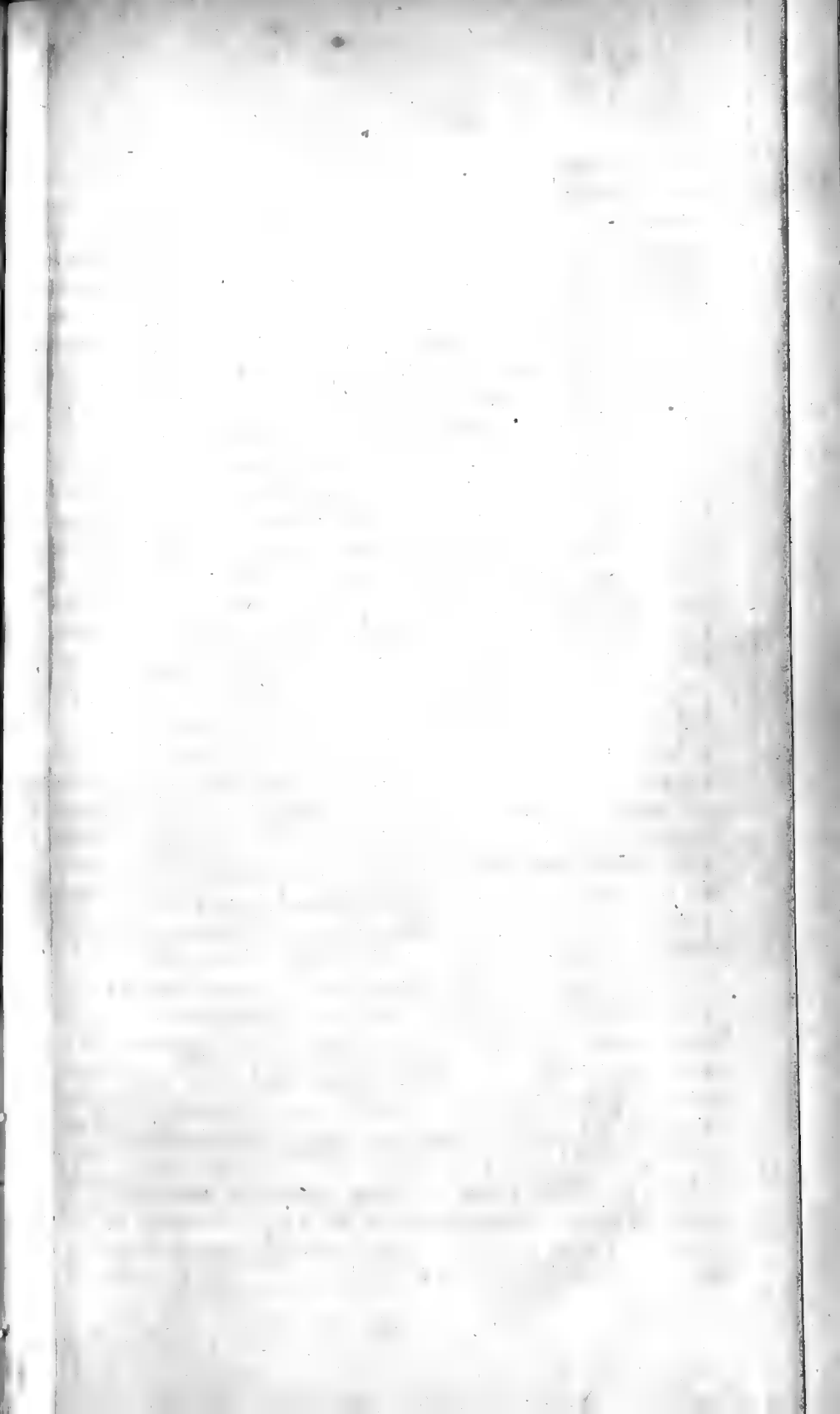
In the "*Quarterly Journal of the Geological Society of London*," edited by the Assistant Secretary, we have "*Notice of the Remains of the Dinornis and other Birds*," recently collected by Mr. Walter Mantell, in the Middle Island of New Zealand, by GIDEON A. MANTELL, Esq., LL.D., &c., vol. vi. p. 319. The statement which Dr. Mantell made to the British Association in Edinburgh, of the probability of a skin of one of the supposed extinct birds forming part of a collection dispatched by his son (*Contrib.* 1850, p. 87), caused its arrival to be watched with considerable interest. On the arrival of the collection, the existence of the *Notornis* was proved to be correct, a skin of the bird having been procured by Mr. W. Mantell from some sealers in Dusky Bay, who perceiving its tracks upon the snow, had pursued and captured it alive with the assistance of their dogs. It was kept alive for some days, and afterwards killed and eaten by the crew, Mr. Mantell being fortunately in time to rescue the skin. Since its arrival in this country, it has been exhibited before the Zoological Society, and identified by

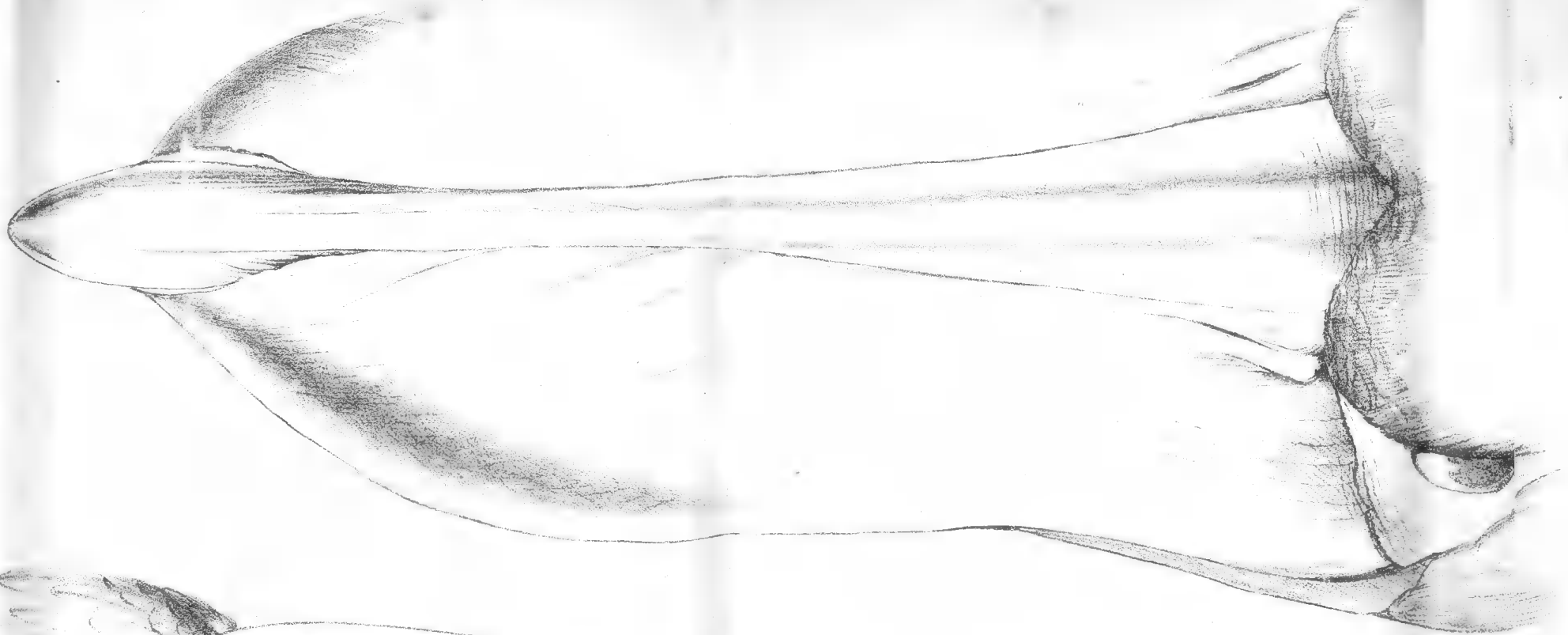
Professor Owen with the supposed fossil bones formerly described by that anatomist; and Mr. Gould has made a lithograph figure of the size of life, which will be published almost immediately in a new number of the "*Icones Avium.*" Dr. Mantell would not trust the specimen out of London, and we therefore at the time missed the opportunity of examining the skin; but Mr. Gould has permitted us to make an outline from his plate, which will convey some idea of the form; this is mechanically reduced to one-fourth the size of the original. Twenty pounds were offered for the skin by the British Museum, and afterwards twenty-five by a private individual, but both were refused, and the specimen is now stuffed, and placed in a glass shade in Dr. Mantell's drawing-room, where he kindly allows it to be seen by visitors. We had the satisfaction of seeing the specimen a few days since, and can speak to the accuracy of the figures we have reduced, with one exception. The form and texture of the wing is the remarkable character of the genus. This, as represented, is short and much rounded, and it was stated to be of a soft texture. So far as we could observe, without handling the specimen, the quill-feathers are soft, loose and flexible, they would be scarcely capable of raising or sustaining a bird of so heavy a form, and could only aid the running powers, which were mentioned to be very swift, and are a remarkable carrying out of the wing-structure of the New Zealand birds. In the figure, this flexible texture is not sufficiently expressed, and neither Mr. Gould's plate, nor our reduction from it, convey the idea of that structure. We have great hopes that some of those other gigantic birds, hitherto considered as only fossil, will still be discovered. All our information tends to show, that at a comparatively very late period, these birds have existed; and we do not know how lately whalers and sealers may have been feasting on the last of these remarkable creatures, without any one near to rescue even a mutilated bone or feather. The following extract from the *Gardeners' Chronicle* of last year bears upon this subject. "We find the following in a recent number of the *Sidney Herald*. If Mr. Taylor can be relied on, this bird may probably be still discovered alive, as Europeans advance into the southern island of New Zealand. In the second number of the *New Zealand Magazine*, and in a paper by the Rev. R. Taylor, on the Geology of New Zealand, is the following statement:— 'Mr. Meurant, employed by

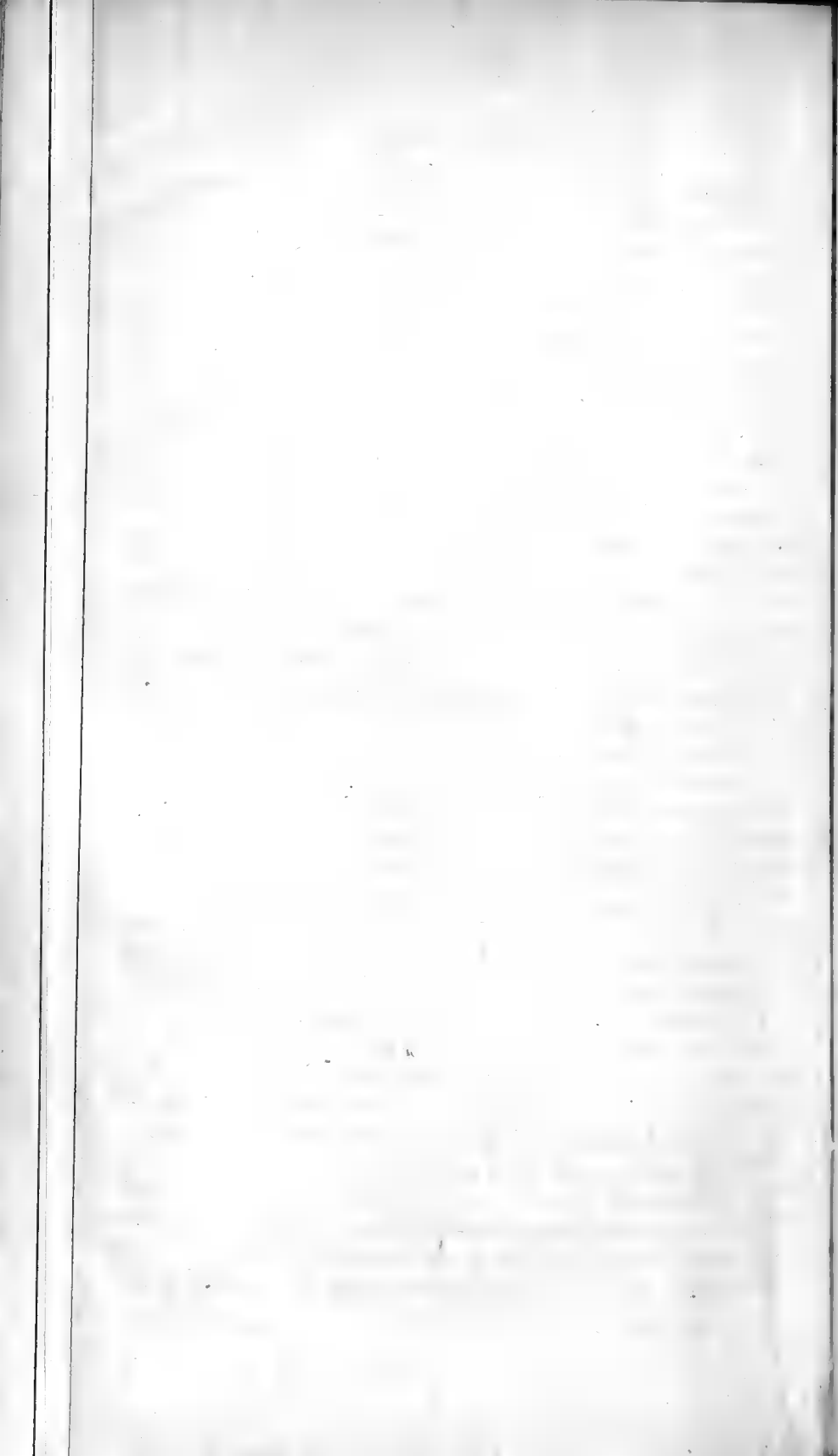
the Government as native interpreter, stated to me, that in the latter end of 1813, he saw the flesh of the Moa in Molyneaux Harbour. Since that period he has seen feathers of the same kind in the natives' hair. They were of a black or dark colour, with a purple edge, having quills like those of the albatross in size, but much coarser. He saw a Moa bone which reached four inches above his hip from the ground, and as thick as his knee, with flesh and sinews upon it. The flesh looked like bull beef. The slaves, who were from the interior, said that it was still to be found inland. The natives told him, that the one whose flesh he had seen was a dead one, which they had found accidentally. That they had often endeavoured to snare them, but without success. A man named George Pauley, now living in Foveaux Straits, told him he had seen the Moa, which he described as being an immense monster, standing about twenty feet high. He saw it near a lake in the interior. It ran from him, and he also ran from it. He saw its footmarks before he came to the river Fairi and the mountains. Thomas Chapeland, the man who interpreted for Meurant, was well acquainted with the Maori language. He also saw the flesh, and at first they thought it was human.' ”

As our acquaintance with the birds of the southern hemisphere and with the less known islands increases, we shall in all probability gain more information respecting the “wingless birds” as they have been termed, and be able better to trace the modifications of that remarkable ornithic deviation, where the important and characteristic organ is either abortive or rendered incapable of its functions by a peculiarity of structure. The attention of the Linnæan Society was lately called by Mr. Westwood to the existence of a “wingless bird” on Lord Howe's Island, situate between New Holland and Norfolk Island. Here Captain Poole, of the East India Company's service, discovered the bird in question. It is about the size of a rail, and was considered good eating by the settlers. A note from Mr. Westwood, since received, states, that specimens had reached Sydney, and might soon be expected in this country.

If we except the *Notornis* already mentioned, and the singular bird from Africa lately described by Mr. Gould, under the name of *Balœniceps*, there has been no great additions made to our ornithological knowledge or collections during the past year. Some very







interesting and beautiful species were procured by the Rattlesnake, on her surveying voyage around the north coast of New Holland, and these have been noticed in our account of the Ornithology of Section D, of British Association (*Contrib.* 1850, p. 85); so also in our last part was *Menura alberti* described (*Contrib.* 1850, p. 142-18). We have mentioned the traces received of the existence of a wingless bird in Lord Howe's Island, and the existence of a large bird in the interior of Madagascar has almost been proved by the exhibition of its eggs at a recent scientific meeting in Paris.

"At yesterday's sitting, M. Geoffrey St. Hilaire presented the bones and eggs of a huge bird, a native of Madagascar. Two of the eggs are entire but the other is broken. It is calculated, from the measurement made, that each of them can contain eight litres of liquid, or as much as six ostrich eggs, or 148 hen eggs. M. Geoffrey St. Hilaire supposes this gigantic bird to be a perfectly distinct genus. He has given to the genus the name of *Æpyornis*, and to the species that of *maxima*. The remains exhibited yesterday were last year obtained at Madagascar, by a merchant captain, named Abadie, and by him sent to the Isle of Reunion and thence to France." — *Galignani*.*

The remarkable bird described by Mr. Gould under the name of *Balaniceps rex*, was procured by Mr. Mansfield Parkins, during an excursion to the White Nile, along with a considerable collection of other birds, which have been placed in Mr. Gould's hands to describe. We enjoyed an opportunity lately of examining the specimen considered to be a male (both sexes were procured), and noted down the following description. The accompanying outlines will give some idea of the form and proportions of the bill. (See Pl. 68.)

The specimen is, *above*, uniformly of a brownish-gray, of a deeper and bluer tint on the scapulars, secondaries, quills and tail; *beneath*, the tint is much paler, the feathers on the breast lanceolate and darker in the centre, and those of the flanks having the shafts dark and conspicuous. The specimen certainly is in immature and not perfectly full plumage, and it is probable, that in the full breeding dress, the upper parts will a good deal resemble the colouring of *Ardeola virescens* and its allies. On the occiput, which is at present furnished with a comparatively short tufted crest, new feathers of a darker and fresher bluish tint are making their

* We shall print the entire account given in the *Comptes Rendus* in our next part.

appearance; on the lower part of the neck and back, new lanceolate feathers are appearing of the dark bright reflected green of *A. virescens*, bordered with a clear narrow pale margin. Some of the scapulars are coming in of the same colours, and we have little doubt, that the whole back, when in a perfect state, will exhibit this plumage. The scapulars are broad but lengthened, reaching nearly to the rump; the secondaries are long, slightly exceeding the quills, and at the ends pliant and hanging over; the quills are *heron-like*, the third longest, and are of that opaque (both above and below) gray so peculiar in the family; extreme tips of quills black; the entire wing is that of a *heron*, but with an infusion of crane-like structure in the secondaries and covers. The tail exhibits nothing peculiar, is square and as in the *Hérons*, it indicates by the young feathers that it would also be of the dark green colour of the adult upper parts. Underneath, the plumage does not present any peculiarities; but upon the breast where the feathers are lanceolate, we have many new ones appearing, having a dark centre and broad pale edges, which would exhibit a more variegated plumage when perfected than that which now clothes it.

The very extraordinary bill which has influenced Mr. Gould in his views of its affinity, slightly recedes upon the forehead, the mandible has a very strong central keel, projecting in the fore part upon the inside of the palate, and terminating by a very powerful hook, evidently intended as a formidable weapon in seizing its prey. The sides of this part are dilated, and though externally showing no inequality, are found on the inside to be strengthened by a strong elevated rib, bordering each side a short distance from the edge. The nostrils are high, nearly close to the edge of the keel, and covered with a membrane or skin, not situate in the groove by the side of the keel as in the *Pelicanidæ*; a bare space extends from the base to the anterior edge of the eye, and to the gape. The maxilla is formed of two powerful rami, the cutting edges sheathing in the mandible. The tongue unfortunately had been removed. The wide space between the rami of the maxilla would seem at first to indicate a pouch; but we do not perceive or consider that there is any, or any power of dilatation or distention beyond what would be warranted by their wide form, certainly none such as we have in the true pelicans, or in *Sula* or *Carbo*. In the true Pelicans also, the opening of the larynx is far advanced upon the palate, in

ORNITHOLOGY IN 1850.

Balæniceps it must be beyond the line of the base of the bill, as it had been cut away. The legs are not long in proportion to the size, but the toes are lengthened and are completely destitute of any connecting web or membrane; the hind toe is articulated on the same plane as the others, and rather upon the inside or inclining inwards, which Mr. Gould considers as indicating the pelicanoid form of a grallatorial foot.

Entire length of specimen	52.
Of wing to longest quill	27.
Bill to extremity of gape	9.8.
„ to base or division from bare facial skin	9.2.
„ to eye, centre of	10.
Depth of upper mandible at base	3.5.
Depth of bill at base of ramus of under maxilla	5.
Breadth of bill above at widest part	4.2.
Entire length of leg from knee to plane of toes	25.5.
Bare part of tibia, outside	5.
„ „ inside	6.
Length of tarsus	11.5.
Of toes, outer	6.2.
„ centre	8.
„ inner	7.2.
„ hind	5.

In our own country, to judge from the pages of the Zoologist, many rare visitants have occurred. Among these, it seems ascertained, pp. 2650 and 2734, that the American Gray Shrike has been killed in Warwickshire and one or two other places. The Rev. J. Smith, Monquhitter, mentions a specimen of the Pied Flycatcher killed near Brackly Castle, Aberdeenshire, and of the Woodlark, in the plantations of Duff House in Banffshire—this being their first noticed occurrence in Scotland. Another curious subject recorded in the same volume, is the unusual number of Waxwings which appeared in 1849-50. The direction of the flights was from east to west, and the principal localities the eastern or coast districts of Durham and Yorkshire on the north, and of Norfolk, Suffolk, Essex and Kent on the south. They were observed from November, 1849, to March, 1850, January having been the prin-

cipal month of their appearance, and during which no fewer than 429 are recorded having been killed; while during the whole time they were observed, 586 specimens were known to have been obtained—a most useless slaughter. We are glad to observe the form of the tail in the Snipes is beginning to attract attention; and we shall ascertain soon what is the extent of the variation, and whether *S. brehmi* is a good species. The bird mentioned, p. 2073, only differed in the proportion of the length of the tail-feathers, and is not stated to possess sixteen as *S. brehmi* should do.

ORNITHOLOGICAL NOTES.

BY H. E. STRICKLAND.

I. ON AN HITHERTO UNNAMED SPECIES OF *DACNIS*.

DACNIS MELANOTIS, Strickland.

THIS species was long since figured in Buffon's *Planches Enlumînées*, pl. 669, but has never yet received a specific name which can be logically retained. By older authors it was regarded as a variety of their *Certhia* or *Dacnis cayana*. Mr. Gray was the first to distinguish it specifically; but he erroneously applies to it the Linnæan specific name *cayana*, and has moreover figured its head under the name of *D. cyanocephala*. The two species may be thus distinguished:—

1. *Dacnis cayana* (Linn).

Sylvia cayanensis cœrulea, Briss. Orn., vol. iii. p. 534, pl. 28, fig. 1.

Blue Manakin, Edwards' Birds, pl. 263, fig. inf.

Motacilla cayana, Linn. Syst. Nat., vol. i. p. 336.

Sylvia viridis, Briss. Orn., vol. iii. p. 531, pl. 28, fig. 4.

Motacilla cyanocephala, Gm. Syst. Nat., vol. i. p. 990.

Fringilla cœrulea, Koclruter in Nov. Com. Petr., vol. xi. p. 434, pl. 15, fig. 6.

Fringilla cyanomelas, Gm. Syst. Nat., vol. i. p. 924.

Nectarinia bicolor, Becklemichew in Nouv. Mém. Soc. Mosc., vol. i. p. 378, pl. 23.

Dacnis bicolor, Gray, Gen. Birds, sp. 5.

Nectarinia cyanocephala, Swains. Zool. Ill., ser. i. pl. 117.

Dacnis cyanocephala, Gray, Gen. Birds, sp. 2 (nec plate 34, fig. 2.)

ORNITHOLOGICAL NOTES.

Dacnis cyanater, Less. *Traité Orn.*, p. 458.

Blue; front, chin, throat, upper back, wings and tail, black; remiges and wing-covers edged with blue.

Habitat. Brazil, Cayenne (?)

2. *Dacnis melanotis*, Strickland.

Pitpit bleu de Cayenne, Buff., *Pl. Enl.* 669, figs. 1, 2.

Sylvia cayana, γ., *Lath. Ind. Orn.*, p. 546.

Dacnis cayana, Gray, *Gen. Birds*, sp. 1.

Dacnis cyanocephala, Gray, *Gen. Birds*, pl. 34, fig. 2.

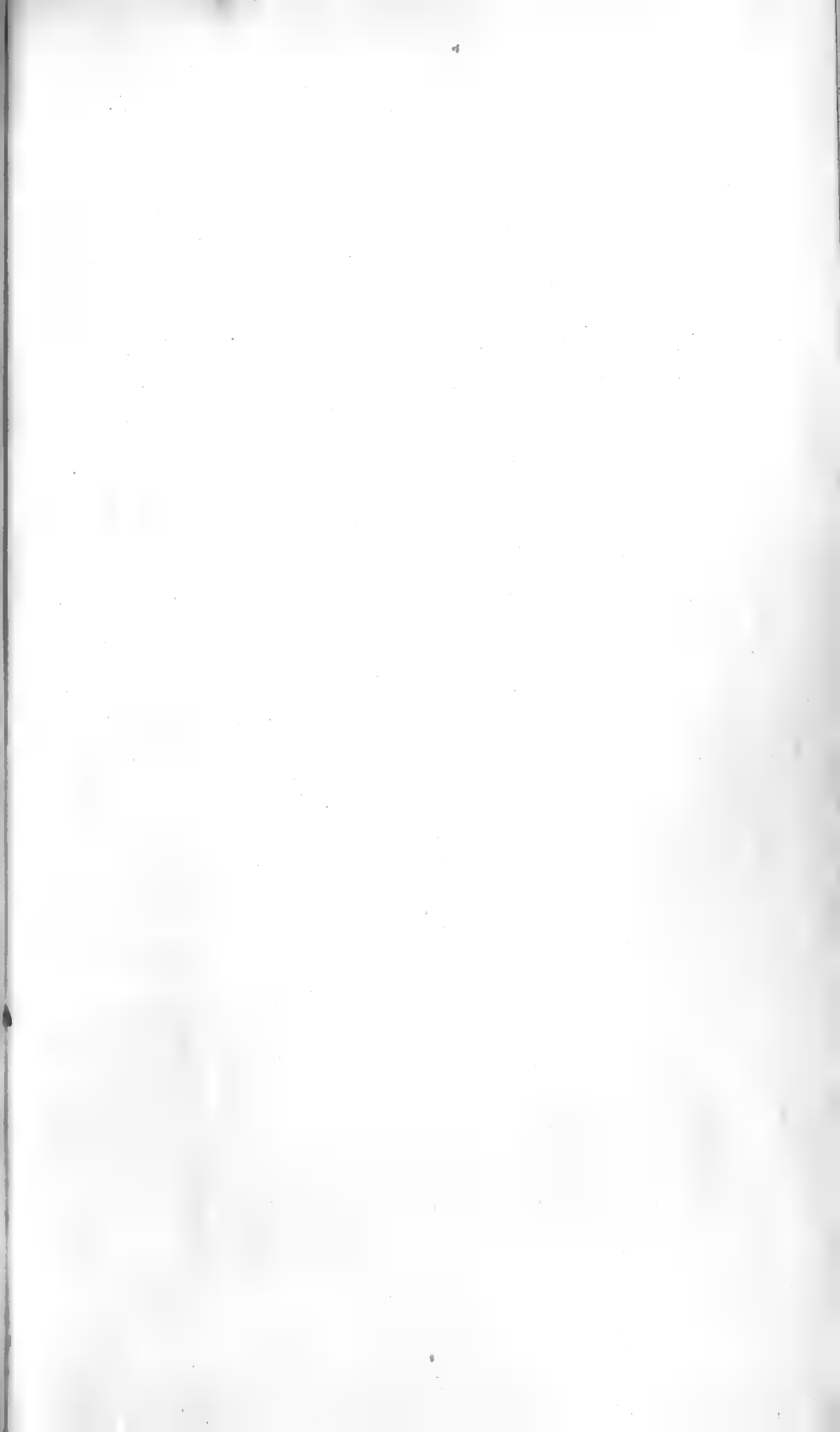
Blue; front, cheeks, ear-covers, sides of neck, upper back, wings and tail, black; middle of belly and lower tail-covers, white.

Habitat. Cayenne (?), Demerara.

GOLDANA CAPISTRATOIDES.

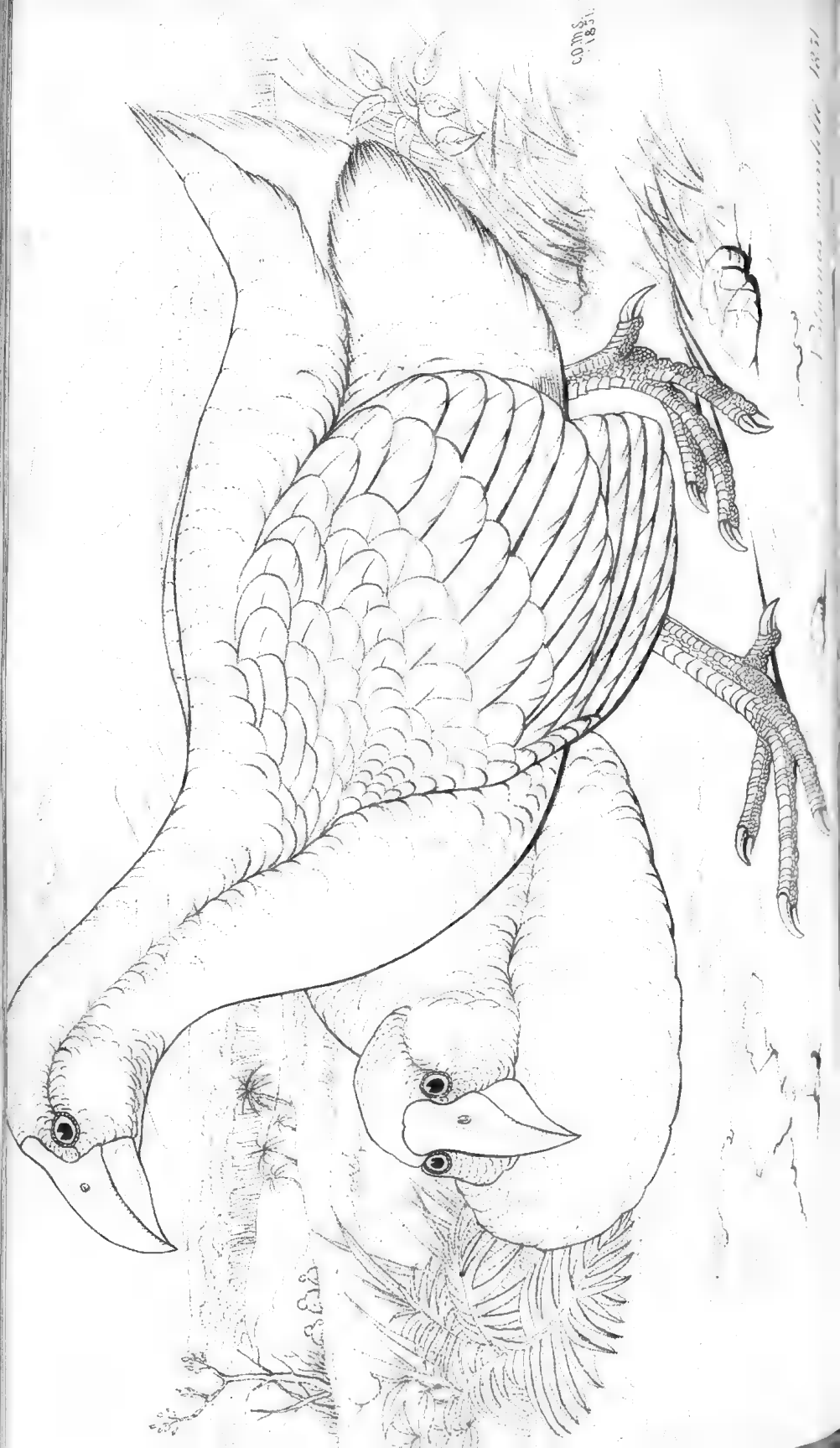
CONTRIB. ORN. 1849, p. 128.

THIS bird should have been called *Drymocotaphus capistratoides*. It is incorrectly stated that the bird "belongs to Mr. Blyth's genus *Goldana*," whereas the latter word was not coined by Mr. Blyth, but by Mr. G. R. Gray, in the first edition of his "List of the Genera of Birds," 1840, p. 25, as a synonyme of *Brachypteryx*, Horsfield, on the alleged ground that the latter word was pre-occupied in entomology. This, however, was a mistake, the name *Brachypteryx* not having been repeated in any other department of zoology, if we may trust Agassiz's *Nomenclator Zoologicus*. Mr. Gray seems to have perceived this error, as in his two later editions of the "Genera of Birds," he restores the name *Brachypteryx* and omits his name *Goldana* altogether; consequently the latter name should not have been applied to the species *nigrocapitata* and *capistratoides*, which belong to a distinct generic type from *Brachypteryx montana*, and I would therefore substitute the generic name, *Drymocotaphus*, which Mr. Blyth has proposed.—H. E. S.



1851
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Nouvelle Classification des Picinées ou Pics, devant servir de base à une Monographie de ces Oiseaux Grimpeurs, accompagnie de planches peintes. Par M. Alfred Malherbe. 8vo. Metz, July, 1850.

AFTER several years devoted to the study and classification of the family of *Picidæ*, M. Malherbe has issued the above pamphlet as a kind of *Prodromus* to the monograph which he intends to publish of the entire family. He here gives us his definitions of the genera, and the names and synonymes of a few illustrative species of each genus, and adds such critical observations as appear necessary. Before referring to the arrangement of M. Malherbe, we must make a few remarks on his nomenclature. And here we regret to find, that in a work intended as a permanent authority for the study of *Picidæ*, the author should have boldly discarded the whole of the generic names previously established, except two, and substituted an entirely new terminology of his own. He says, "To avoid the confusion caused by the creation of new genera, which are perhaps too numerous in Ornithology, I have thought it useful to adopt a termination which has the great advantage of reminding us of the Linnæan genus, of which these genera are subdivisions. Thus, all my genera of *Picidæ*, with four toes, are indicated by the termination *picos* or *picus*, and those with three toes, by the termination *picoides*."

At the time—some eighty years ago—when naturalists first began to add to, or to subdivide the genera of Linnæus, it might have been worth considering whether the principle adopted by M. Malherbe was attainable in practice, and whether the *memoria technica* which it afforded, was sufficiently valuable to justify the use of such sesquipedalian words as it would frequently produce. But it is vain to hope for any such symmetrical system of nomenclature now, when some 20,000 generic names have been introduced into zoology; and if it cannot be uniformly adopted throughout the whole animal kingdom, why are we to be expected to make an exception in favour of one family of birds? The only safe principle to follow in zoological nomenclature, is the law of priority, rigidly

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carried out. Eight years ago, the British Association issued a code of rules based upon this great principle. These rules have since been translated, discussed, and substantially adopted by the most eminent naturalists of France, Germany, Italy, Sweden, and America, and it is therefore to be regretted, that so meritorious a zoologist as M. Malherbe should have departed from them.

For some reason which he does not explain, the author spoils the uniformity even of his own nomenclature, by using in some cases the termination *picos*, and in others *picus*. The termination *picos* cannot, in any case, be used in zoology; *first*, because there is no such word in the Greek language as $\pi\iota\kappa\omicron\varsigma$; and, *secondly*, because, if there were, it would become *picus* when adopted into the Latin form employed in zoology. The rules for Latinising Greek words are short and simple, and had the author followed them, he would not have issued such a word as *Phaiopicos*, but would have written it *Phaeopicus*; still less would he have given us a word half French and half Latin, in the case of *Colombpicus*, when it might have been so easily made into *Columbpicus*.

It will be useful to enumerate the nineteen genera of *Picidae* adopted by M. Malherbe; and we will at the same time add the synonymous generic names which are equivalent to his, and which, on the ground of priority, ought to be retained.

In thus making a *concordance* between his system and that of others, we do not imply that the previously formed genus is in each case exactly coincident in extent or in definition with his genus; but merely that the Malherbian genus *includes the type-species* of the previous author, whose generic name must therefore be regarded as synonymous with it, and be retained accordingly.

1. *Megapicos*, Malh. = *Campephilus*, Gray, 1840. Type, *C. principalis* (Linn.)

2. *Dryopicos*, Malh., Section I. = *Dryocopus*, Boie, 1826. Type, *D. martius* (Linn.)

—————, Section II. = *Hemilophus*, Swains., 1837. Type, *H. mackloti* (Wagler.)

3. *Picus*, Linn., Malh. = *Picus*, Linn., 1735. Type, *P. major* (Linn.)

4. *Picoides*, Lacep., Malh. = *Picoides*, Lacep., 1799. Type, *P. tridactylus* (Linn.)

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5. *Micropicos*, Malh. = *Hemicercus*, Swains., 1837. Type, *H. concretus* (Temm.)

6. *Celeopicos*, Malh. = *Celeus*, Boie, 1831. Type, *C. flavescens*, (Gm.)

7. *Phaiopicos*, Malh. = *Meiglyptes* (more properly *Miglyptes*), Swains., 1837. Type, *M. tristis* (Horsf.)

8. *Dendropicos*, Malh. = *Dendrobates*, Swains., 1837. Type, *D. fulviscapus* (Licht.)

9. *Mesopicos*, Malh. — This is an original genus of M. Malherbe's. The type-species is *M. goertan* (Gm.) This genus is included by Swainson and Gray in *Dendrobates*, but M. Malherbe separates it on the ground of its having the external toes nearly equal (in his *Dendropicos*, the hinder one is commonly longest), the fourth, fifth, and sixth remiges longest (in *Dendropicos*, the third, fourth, and fifth are longest), and in the plumage being plain olivaceous (in *Dendropicos* it is spotted or banded). These characters seem to us barely sufficient for generic separation.

10. *Indopicus*, Malh. = *Chrysocolaptes*, Blyth, 1843. Type, *C. sultaneus* (Hodgs.)

11. *Brahmapicus*, Malh. = *Brachypternus*, Strickland, 1841. Type, *B. aurantius* (Linn.)

12. *Chloropicoides*, Malh. = *Tiga*, Kaup, 1836. Type, *T. tri-dactyla* (Swains.)

13. *Chloropicos*, Malh., Sections I., II. = *Gecinus*, Boie, 1831. Type, *G. viridis* (Linn.)

————— Section III. = *Chloronerpes*, Swains., 1837. Type, *C. rubiginosus* (Swains.)

14. *Chrysopicos*, Malh., Section I. = *Campethera*, Gray, 1841. Type, *C. brachyrhyncha* (Swains.)

————— Section II. = *Chrysoptilus*, Swains., 1831. Type, *C. punctigula*, Bodd.

15. *Colombpicus*, Malh. = *Leuconerpes*, Swains., 1837. Type, *L. dominicanus* (Vieill.)

16. *Melanopicos*, Malh., Sect. I. = *Melanerpes*, Swains., 1831. Type, *M. erythrocephalus* (Linn.)

————— Section II. = *Tripsurus*, Swains., 1837. Type, *T. flavifrons* (Vieill.)

17. *Zebrapicus*, Malh. = *Centurus*, Swains., 1837. Type, *C. carolinus* (Linn.)

18. *Linneopicus*, Malh. — An original genus, of which *L. herminieri* (Lesson) is the type. It seems closely allied to *Melanerpes*, especially to *M. torquatus*.

The following are the characters assigned to *Linneopicus*:—
 “Beak long, pointed, and a little curved; the sides compressed. Lateral grooves hardly visible on the upper mandible. Chin covered with small hair-like feathers, as far as the symphysis (*échancrure*), which extends half the length of the beak from the rictus. Fourth and fifth remiges longest and almost equal; sometimes the fourth or fifth exceeds the other, but very slightly; the third differs little from the two last mentioned. Tail long, graduate. Anterior outer toe longer than the posterior outer toe. No crest. Quills of remiges and rectrices blackish. Neither sex has any moustache or band on the lower jaw.”

19. *Geopicos*, Malh., Section I. = *Colaptes*, Swains., 1827. Type, *C. auratus* (Linn.)

————— Section II. = *Geocolaptes*, Swains., 1837. Type, *G. olivaceus* (Lath.)

From the above summary, it appears that though M. Malherbe has introduced seventeen new generic names, only two of these are new or original genera. All the remaining generic groups had been long since recognised by other authors, their definitions drawn up with more or less exactness, and their type-species permanently determined. But though the chief generic subdivisions of the *Picidae* were thus already prepared to M. Malherbe's hand, this gentleman's labours are not the less to be commended, for the diligence with which he has investigated and generalized the characters of the groups, and determined the generic position of the numerous species of this family. — *H. E. S.*

ON SOME NEW SPECIES OF *CALLISTE*.

By PHILIP LUTLEY SCLATER, Esq.

I HAVE been lately attempting to form a collection, and arrange as complete a synonymy as lay in my power, of the *Tanagridæ*, of which family a vast number of new species have been recently described; and particularly of the genus termed, not inappropriately, *Calliste*, the most splendidly coloured group of the whole series. Among these I find three unnamed species, very closely allied to the *Tanagra punctata* of Linnæus, and forming with that a small section of the genus *Calliste*, which I now proceed to describe.

The whole number of species of this genus that I am now acquainted with is about forty-four, including certain aberrant forms, denominated *Procnopis* by M. Cabanis, but which I cannot at present determine to be sufficiently distinct to warrant generic separation.

Mrs. Strickland has been so kind as to draw figures of two of the new species here described; of the third I shall attempt as clear a description as possible, giving at the same time, for the sake of comparison, the specific characters of the only previously recognised species of the group.

CALLISTE PUNCTATA, LINN.

Tangara viridis indica punctulata, *Brisson*, Orn. vol. iii. p. 19. — *Tanagra punctata*, *Linn.* Syst. Nat. vol. i. p. 316; *Desmarest*, Hist. Nat. des Tang. pl. 8 and 9. — *Calliste punctata*, *Gray's Genera*; *Edwards*, pl. 262; Pl. Enl. 133, fig. 1.

♂ *Calliste supra viridis*, nisi in dorso inferiore, nigro punctata; loribus atris; pennibus caudâque nigris viridi limbatis; subtus flavescenti-albida, gutture pectoreque nigro punctatis, rostro pedibusque nigris.

ON SOME NEW SPECIES OF *CALLISTE*.

Long. tota, 4.5; pennæ, 2.5.

♂ Minor, punctis minoribus et levioribus.

Long. tota, 4.1; pennæ, 2.3.

Habitat in Cayanâ et Demerarâ.

♂ Above, green; head, neck, and upper back, spotted with black; lores black; wings and tail, black, edged with green; beneath, yellowish white; throat and breast spotted with black; beak and feet black.

Whole length, 4.5; of wing, 2.5.

♂ Smaller; spots smaller and lighter.

Whole length, 4.1; of wing, 2.3.

Inhabits Cayenne and Demerara.

This bird, of which I give a description for the purpose of comparison with the following three, newly described, was first noticed by Brisson as "*Tangara viridis indica maculata*." Linnæus, quoting this description, and associating with it Edwards' figure of the "*Parus maculatus*," formed hence his *Tanagra punctata*.

Buffon's figure, Pl. Enl. 133, fig. 1, also represents this species; and Desmarest has figured both sexes in his *Histoire Naturelle des Tangaras*. It appears to be a common bird in Cayenne and Demerara, from which country I have seen many specimens.

CALLISTE VIRESCENS, SCLATER.

PLATE LXIX. FIG. 1.

Tangara tachetè de Cayenne, Pl. Enl. 301, fig. 1.

Calliste suprâ subtûsque viridis, maculis paucis nigris in pectore et gutture notata; dorso medio viridi-cœruleo; alis caudâque nigris eodem plumbeo-cœruleo limbatis; rostro pedibusque nigrescentibus.

Long. tota, 4.0; pennæ, 2.2½.

Habitat in Cayanâ.

Above and below green, slightly spotted on the breast with a faint black medial speck on each feather; middle of the back, between the wings, greenish blue, which also forms the edgings of the otherwise black feathers of wings and tail; bill and feet blackish.

ON SOME NEW SPECIES OF *CALLISTE*.

Whole length, 4.0; wings, 2.2½.

Inhabits Cayenne.

I believe the bird figured Pl. Enl. 301, fig. 1, and which has hitherto been confounded with the true *C. punctata* (Linn.), to be of this species, of which I have two specimens, bought at a London dealer's. There is a similar one at the British Museum, and I have also seen one other. I believe them all to be in a somewhat immature state, from the general appearance of their plumage. I should suppose that the adult bird would show more yellow beneath.

The present bird may be readily distinguished from the three affine species, by the comparative absence of spots, the leaden-blue of the back, wings, and tail, and the smaller size of the beak. It is the smallest of the four species here described.

CALLISTE XANTHOGAстра, SCLATER.

♂ *Calliste supra viridis, nisi in dorso inferiore, nigro punctata; loris atris; caudâ, pennis, et spatio inter alas nigris, latè cœrulescenti-viridi limbatis; infra flavo-viridis, maculis in pectore nigris; ventre medio flavo, lateribus virescentibus; mandibulâ inferiore albicante; superiore pedibusque nigricantibus.*

Long. tota, 4.0; alæ, 2.4½.

Habitat Rio Negro.

Above, green, spotted on head and neck with black; lores black; tail-feathers, wings, and space between them, black, the feathers broadly margined with bluish-green. Below, yellowish-white, with black spots on the breast; belly in the middle yellow, sides greenish; upper mandible and feet black, lower whitish.

Whole length, 4.0; wing, 2.4½.

Inhabits Rio Negro.

I am indebted to Mr. Edward Wilson for the loan of this bird, which M. Verreaux of Paris received from the Rio Negro along with other new and rare species of the same genus. It is closely allied to the following species, *C. chrysophrys*, Sclater, but the colouring beneath is bright yellow instead of white, and the black spots are much less conspicuous. The colour which lines the wing and tail-feathers is also more of a bluish tinge, and not so bright as

ON SOME NEW SPECIES OF *CALLISTE*.

in *C. chrysophrys*; and there are no traces of that golden hue on the front and superciliary feathers, whence the latter species takes its name.

CALLISTE CHRYSOPHRYS, SCLATER.

PLATE LXIX. FIG. 2.

Spotted Emerald Tanager, *Lath. Gen. Hist. vi. p. 19.*

Calospiza punctata, *Wieg. Arch. 1844, p. 286.?*

„ „ *Tschudi, Fauna Peruana, p. 203.?*

Calliste suprâ lætè viridis, capite summoque dorso nigro maculata; loris atris; fronte, genis, superciliisque aureis; remigibus secundariis tectricibusque nigris, latè cœruleo-viridi marginatis; primariis caudâque nigris viridi limbatis; subtùs cœrulescenti-candicans, punctis rotundis in pectore nigris; ventre medio crissoque flavicantibus, lateribus virescentibus: caudâ infrâ cœrulescente, pennis fuscis; pedibus et rostro nigris, mandibulâ inferiore albo notatâ.

Long. tota, 5.0; alæ, 2.8.

Habitat in Columbiâ, Venezuelâ, et insulâ Trinidad.

Above, golden green, passing into golden-yellow on front and supercilia, spotted, principally between the wings, with black; lores black; secondaries and tertials broadly edged with bright greenish-blue; tail black, edged with the same green as the back; breast bluish-white, with conspicuous round black spots; belly yellowish, sides green; tail below bluish, wings dusky; feet and beak black; lower mandible crossed with a white stripe.

Whole length, 5.0; wing, 2.8.

Inhabits Columbia, Venezuela, and Trinidad.

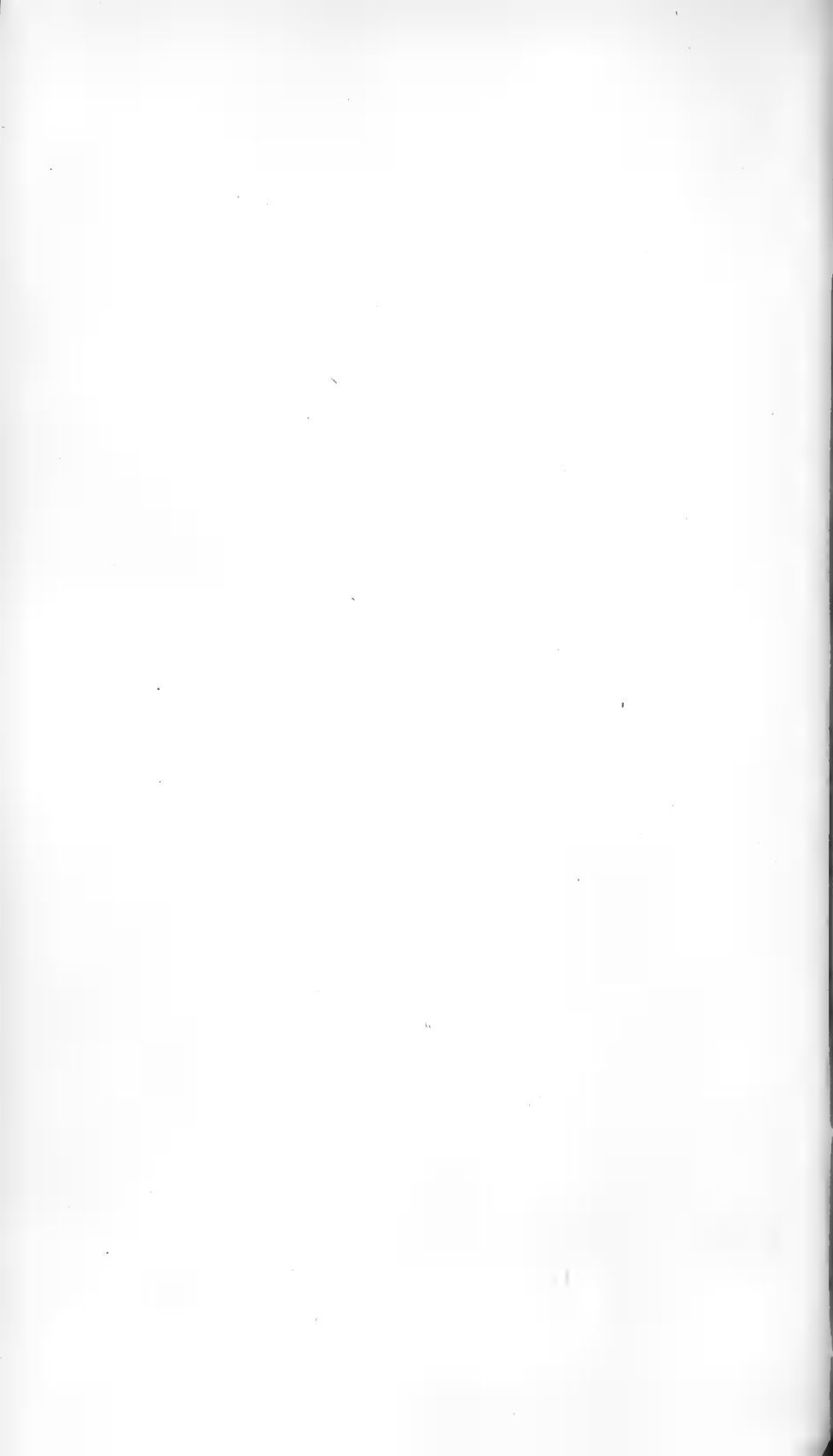
I have little doubt that I am correct in quoting the second synonyme as belonging to this species, though M. Tschudi does not say any thing of the golden yellow of the front and supercilium, which are very bright in the adult birds. The specimen here figured was sold to me by Mr. Cuming, as having been brought from Bolivia by Mr. Bridges, but I believe it nevertheless to be a Venezuelan specimen, from its resemblance to another skin of this species from



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- 1 *Calliste virescens*, Schaler. 1850.
2 *Calliste chrysophrys*, Schaler.



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that locality. I have likewise skins of the same bird from Trinidad and Santa Fè de Bogota, and Mr. E. Wilson has lent me one from Anolaima; it is also from New Grenada. In the British Museum are examples brought by Mr. Dyson from Venezuela. The Bogota and Anolaima birds are not quite so long in the wing as the Venezuelan, and there is not quite so much golden colour on the head, but this is probably owing to age or sex. The Trinidad skins agree very closely with the Venezuelan, except in the wings being 2 shorter.*

It may be distinguished from *Calliste punctata* (Linn.), by the purer white of the breast, the golden colouring of front and head, and the broad blue edges of the secondaries and tertiaries, which in *C. punctata* are of the same green as the rest of the body above.

* Since the plate of *C. chrysophrys* was engraved, the Prince of Canino has described a species under the name of *C. guttulata*, which is probably the same, though his expression, "croupion jaune," seems hardly applicable to it. See *COMPTES RENDUS*, Jan. 20, 1851.



MONOGRAPHIE DES LOXIENS.

WE have received an important work just published in Holland — “*Monographie des Loxiens par CH. L. BONAPARTE et H. SCHLEGEL ; ouvrage accompagné de 54 planches coloriées, Lithographiées d'après les dessins de M. Bâdeker et autres naturalistes—Leiden et Dusseldorf, 1850, 4to., pp. 72.*—The authors enter at length into the affinities and arrangements of the *Loxiadæ*; and although we do not agree with all their views, we consider the observations and information contained in the introduction of so much interest, that we have printed that portion of it entire. The work itself is indispensable to every ornithologist, and the plates of all the species are executed with great fidelity and distinctness. In the catalogue of Willis, the price is entered at £4, 7s. 6d.; in that of Williams & Norgate, at £3, 15s.

“Les Auteurs sont peu d'accord quant aux limites de la Famille des FRINGILLIDES, qu'ils étendent plus ou moins pour y comprendre parfois, non seulement tous les Conirostres granivores, mais même plusieurs Dentirostres comme les *Tanagrîdes*, des Subulirostres comme les *Alouettes*, et qui pis est jusqu' à des VOLUCRES, tels que les *Phytotomes* à bec dentelé, et les *Colious* qui n'ont absolument rien de commun avec nos oiseaux. Quant à nous, après l'avoir restreinte de plus en plus au fur et à mesure que nous l'étudiions dans ses rapports, nous en sommes venus à en exclure, non seulement les *Alouettes*, les *Tangaras* et ces autres Oiseaux qui n'ont avec elle que des rapports éloignés, mais même les *Plocéides* qui en sont certainement beaucoup plus proches. Notre Famille des *Plocéides*, dont le type se retrouve dans les différents genres de *Tisserins* qui forment le noyau normal de la Famille, sous le nom de *Plocéens*, se compose en outre de la Sous-famille des *Veuves* (*Viduinæ*), et d'une troisième que nous nommons *Estreldinæ*, composée de ces nombreux et élégants petits Passereaux connus généralement sous les noms de

Bengalis, *Sénégalis*, etc., qui vivent tous en Asie, en Afrique ou dans l'Océanie, et que la conformation de leur bec organe auquel on a coutume de donner beaucoup trop d'importance, a fait jusqu'ici ranger parmi les *Fringilliens*, malgré leur première remige courte et les autres traits qui les distinguent. Les *Plocéides* en effet diffèrent des *Fringillides* précisément comme les *Sturnides* des *Ictérides*. Tandis que les *Plocéides*, tous étrangers à l'Europe, sont confinés dans les parties chaudes de l'ancien continent, les *Fringillides* se trouvent répandus par toute la terre, mais plus spécialement attachés à l'hémisphère boréal; c'est à dire qu'ils appartiennent plus proprement à notre Europe, à la Sibérie, au plateau central de l'Asie, et à l'Amérique septentrionale.

“ Quoique nous l'ayons ainsi circonscrite, cette Famille ne laisse pas que d'être encore fort riche en espèces, n'en comptant pas moins de 450, réparties en presque cent genres dans les six Sous-familles des *Emberizinae*, *Spizinae*, *Geospizinae*, *Pitylinae*, *Fringillinae*, et *Loxiinae*. Ces deux dernières, plus intimement liées peut-être que les autres, forment pour ainsi dire le centre de la Famille, tant par le nombre, qui excède celui de toutes les autres ensemble, que par la conformation plus normale des espèces.

“ La première Sous-famille, celle des *Emberiziens*, est bien caractérisée par la contraction de la mandibule supérieure, par cela plus étroite et s'emboîtant dans l'inférieure, et par le tubercule du palais (appelé *grain d'orge*) plus ou moins développé, mais toujours assez pour que le palais soit convexe ou plane pour le moins, au lieu d'être concave ou excavé comme dans les cinq autres Sous-familles. Les genres *Plectrophanes* avec ces cinq espèces de Nord des deux mondes, *Cynchramus* avec son unique Européenne à plumage d'Alouette, *Schœnicola* avec ses trois à bec de forme variée, mais si semblables par la couleur, *Fringillaria* dont deux seulement des douze espèces Africaines s'égarèrent pour ainsi dire en Europe, et *Emberiza* composent à eux seuls ce premier groupe. Vingt espèces au moins, toute d'Europe ou de l'Asie septentrionale, appartiennent encore à ce dernier genre quoiqu' ainsi restreint.

“ La seconde Sous-famille, celle de nos *Spiziens* qui se rattache d'un côté aux *Emberiza* et se perd de l'autre dans les vrais *Pinsons*, paraît être essentiellement Américaine, car non seulement elle a son siège principal dans l'Amérique du Nord, mais elle s'étend dans la méridionale, domain exclusif des *Tangarides*, tandis qu'elle n'est

représentée que par quelque espèce perdues en Europe et dans le Nord de l'Asie. Outre la transition déjà notée des *Euspiza* avec les *Emberiziens*, et celle non moins évidente des *Struthus* et des *Paroaria* qui sont presque des Pinsons, avec les *Fringilliens*, il existe des rapports directs avec les *Pityliens*, voire même des points de contact (sans l'intermédiaire de ceux-ci) avec les véritables *Tanagriens*; le genre *Spiza* surtout, trop anormal peut-être pour donner le nom à la Sous-famille, en ayant jusqu' aux couleurs brillantes.

“ Nous établissons ainsi la série :

“ 1. *Euspiza* avec sept espèces dont deux Américaines, deux Asiatiques, et trois Européennes.

“ 2. *Oriturus*, BP., nouveau genre à bec conique, allongé, à queue très longue et très étagée : il se compose de deux espèces, l'une à plumage varié du Mexique (*Oriturus mexicanus*, BP.), l'autre de la Sibérie (*Oriturus wrangeli*, BP.) à plumage uniforme.

“ 3. *Melanodera*, BP., aussi formé pour deux espèces, mais de l'Amérique méridionale si semblables aux Verdiers qu'elles leur avaient été réunies sous les noms de *Chlorospiza xanthogramma* et *melanodera*.

“ 4. *Gubernatrix* avec son unique espèce du Brésil, *Gubernatrix cristatella*.

“ 5. *Melophus*, Sw., pour une espèce également huppée de l'Asie centrale, *Emberiza lathamii* ou *erythroptera*.

“ 6. *Lophospiza*, BP., petit groupe formé par nous pour des élégants oiseaux peu connus de l'Amérique méridionale, rangés inconsidérément parmi les *Bruants* et les *Linottes*, et confondus avec des *Tanagriens* qui en ont en quelque sorte le plumage.

“ 7. *Paroaria*, BP., réuni à *Spiza*, mais en outrageant la nature. Ces *Cardinaux des Spiziens* sont au nombre de six, qu'il faut chercher dans les Auteurs parmi les *Loxiens*, les *Moineaux* et les *Tangaras*, et que cependant leurs couleurs font rapprocher à la première vue et que cependant leur structure est plus approfondie de leur structure et de leurs mœurs. Ce n'est pas d'eux qu'on pourra dire que l'apparence est trompeuse !... mais bien à propos d'eux que l'on peut répéter qu'un peu de science est pire que l'ignorance la plus complète.

“ 8. *Tiaris*, Sw., ayant pour type la *Fringilla ornata*, WIED, (*elegans*, TEMM.), du Brésil, à laquelle on a réuni des Oiseaux d'autres contrées et même d'autres Sous-familles.

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“ 9. *Poospiza*, CABANIS, genre formé pour les *Chipius* d'Azara, si mal placés avec les *Pipilo* : nous en connaissons cinq espèces dont une nouvelle.

“ 10. *Phonipara*, BP., comprenant six à sept petites espèces des Antilles et du Mexique, aussi pétulantes que jolies : son type est la *Loxia canora*, GM., à face et poitrine noires, à sourcils et gorge jaune d'or.*

“ 11. *Volatinia*, REICHENB., formé pour le *Tanagra jacarini*, L., qu'ils ne faut pas confondre avec la *Fringilla splendens*, VIEILL., seconde espèce du genre, beaucoup plus noire et à epaulettes blanches, et encore moins avec le *Combassou* (*Hypochera nitens*, BP.), qui appartient à la famille Africaine des Veuves.

“ 12. *Spiza*, BP., Ces *Spiziens-Tangaroides* qui égalent et surpassent même en beauté les Tangaras, par le Pape du moins, appelé pour cela *Non-pareil*, auquel se rattachent deux espèces du midi et de l'ouest des Etats-Unis (*Fringilla cyanea et amœna*), et deux autres encore plus méridionales (*Spiza versicolor et leclancheri*.)

“ 13. *Struthus*, BP., Ce nom est celui que son type portait en commun chez Boie avec les véritables Pinsons, et qu'Audubon, n'admettant pas sans doute de pareilles restrictions, pourtant si convenables, a changé depuis en *Niphaæ*. Ces Oiseaux nous offrent un bec de Pinson encore plus que les *Paroaria*, et un plumage blanc et noirâtre : nous en connaissons quatre espèces, une de l'Amérique méridionale, une du Mexique, une troisième de la côte ouest de l'Amérique septentrionale qui se retrouve pour le moins dans les îles qui relient l'ancien au nouveau continent, et le *hyemalis*, si commun dans toute la partie orientale de l'Amérique du Nord et qui, en sa qualité de Danoise, mais du Groënland, a été peu judicieusement admise dans l'Ornithologie Européenne.

“ 14. Ici pourrait se placer le singulier *Pinson bicolore*, TOWNSEND, de Amérique du Nord la plus occidentale, noir à tectrices

* The bird here alluded to, is the *Fringilla lepida*, Linn. Syst. p. 320 (*Emberiza olivacea*, Linn. Syst. p. 309; *Spermophila olivacea*, Gray, Gen. Birds, App., p. 18.) The true *Loxia canora* of Gmelin is a distinct species, figured by Brown, Ill. Zool., pl. xxiv. f. 1. His original specimen is still preserved in the Newcastle Museum. The cheeks are brown, surrounded by a semicircle of yellow, extending from the chin to the temples. The crown is an olive gray, the back greenish olive, or as Brown describes it, “a pale dirty green.”—H. E. Strickland.

MONOGRAPHIE DES LOXIENS.

moyennes des ailes blanches ainsi que les bordures étroites des rémiges et des rectrices, dont les trois extérieures portent en outre une tache blanche à la pointe. Ses habitudes nous l'ont fait regarder comme le type d'un genre sous le nom de *Calamospiza*, tandis que presque en même temps M. Audubon, frappé aussi par la conformation de son ongle, l'appellait *Corydalina*.

" 15. *Phrygilus*, CABANIS, pour une dizaine espèces de l'Amérique du Sud la plus méridionale, telles que *Fr. alaudina*, KITTLITZ, *Fr. gayi*, EYEDOUX, et *Fr. diuca*, Molina qui pourrait même former un genre à elle seule.

" Suivent les genres.

" 16. *Passerella*, Sw., de l'Amérique du Nord, dont nous connaissons cinq espèces à plumage grivelé, mais bien distincts par leurs becs.

" 17. *Zonotrichia*, Sw., qui nous en offre une douzaine presque toutes de l'Amérique septentrionale, parmi lesquelles *Fringilla comata*, WIED, d'un gris brun à plumes bordées de blanc-roussâtre : les joues d'un blanc cendré : le sommet de la tête, la face et la gorge noires : le dessous du corps blanc, mais les plumes cendrées à la base : le bec jaune : la queue très allongée à rectrices égales, la dernière seulement de chaque côté se montrant plus courte.

" 18. *Chondestes*, Sw., détaché non sans raison du précédent à cause de sa queue cunéiforme. A son type de l'ouest de l'Amérique septentrionale (*Fringilla grammaca*, SAY), figuré dans l'Orn. Américaine, viendront peut-être s'adjoindre deux autres espèces des Antilles.

" 19. *Passerculus*, Bp., avec deux espèces.

" 20. *Coturniculus*, Bp., avec six.

" 21. *Peucaea*, AUDUB., avec deux, toutes de l'Amérique septentrionale.

" 22. *Tardivola*, Sw. (*Leptonyx*, Sw., *Emberizoides* ou *Chlorion*, TEMM., *Coryphasiza*, GR.), comptant trois espèces dans l'Amérique du Sud, dont l'*Emb. melanotis*, TEMM., est la mieux connue.

" 23. *Embernagra*, LESS., avec ses douze espèces, rappelant comme son mauvais nom l'indique, et les Bruants et les Tangaras, mais appartenant aux Spiziens.

" 24. Puis finalement, *Ammodromus*, Sw., avec sept espèces des deux Amériques, dont le bec est beaucoup plus effilé et les penes de la queue (qui affectaient déjà cette tendance dans les genres précédents), tout-à-fait pointues. Ce caractère si exagéré dans le Do-

lychonix oryzivorus a fait donner à divers *Ammodromes* le nom spécifique de *caudacutus*, soit qu'on les ait rangées dans le genre *Fringilla*, ou même dans *Oriolus*.

“ La troisième Sous-famille est celle des *Géospiziens*, singulier groupe de Pinsons terrestres, dont on ne connaît que quinze espèces toutes propres aux îles Gallapagos, toutes à plumage sombre, et non moins bien circonscrit par ses caractères zoologiques et ses mœurs, que par la région géographique dans laquelle il se trouve confiné.* Jamais hommage, d'autant plus éclatant qu'il est involontaire, n'a été rendu suivant nous au Système naturel et au parallélisme de ses bonnes coupes, qu'à propos de ces Oiseaux. Les Ornithologistes qui, adoptant une Famille des *Coccothraustiens* entièrement basée sur le caractère empirique de la grosseur du bec, y placent tous nos *Géospiziens* ensemble, ne peuvent se décider à les separer les uns des autres, quoique les huit *Geospizae* à bec de *Coccothraustes*, les trois *Camarhynchus* à bec pour ainsi dire de Loxie ou de Perroquet, diffèrent par la bec des trois *Cactornis* et surtout de la *Certhidea* encore plus que les Chardonnerets des Gros-becs. Avouons donc tout haut et explicitement que les Gros-becs ne sont que des Fringilliens à bec épais, comme la *Certhidea* n'est qu'un *Géospizien* à bec effilé : les *Geospiza*, des *Géospiziens* à gros bec, comme les Chardonnerets des Fringilliens à bec mince. Toutes les formes de bec (qui varie en grosseur dans le même genre), se retrouvent donc dans chacune des Sous-familles ; et celle dont nous traitons est si évidemment naturelle, que nul jusqu'à présent n'a osé y porter la main, ni même pensé à la démembrer.

“ Notre quatrième Sous-famille, celle des *Pityliens*, a été le plus souvent rangée en grande partie, l'on ne sait trop pourquoi, avec les *Tanagrides* dont nous n'avons pas à nous occuper ici. Bien loin en effet de leur appartenir, ils nous semblent même ne représenter parmi les Fringillides que les *Pyrangas*, qui s'éloignent le plus du type Tanagrien ! Aucun Pitylien ne se trouve dans l'ancien monde, et fort peu même dans l'Amérique du Nord : ils abondent en revanche dans la partie Sud du nouveau monde.

“ Les genres *Arremon* avec ses vingt espèces, et *Saltator* non moins nombreux, les relient avec les Spiziens : tandis que *Pipilo*, quoique intimement lié avec *Arremon* par quelques unes de ses dix espèces (beaucoup plus qu'avec *Poospiza* qu'on lui avait réuni !), s'en

* *Camarhynchus* is, we believe, also found upon the continent of South America.

éloigne davantage, et se rattache au célèbre *Habia* dont Cabanis a fait son genre *Lamprospiza*, et même à *Bethylus* dont on connaît maintenant deux espèces rangées parmi les Pies-grièches. Nous avons isolé sous le nom de *Psittospiza** l'élégant *Saltator reifferti* de Boissonneau, et avec le Dr. SCHIFF de Francfort nous appellons *Pyrrhulagra* un nouveau genre dont *Fringilla noctis*, L.† est le type, et qui contient deux au trois espèces semblables par la couleur si non par le bec. Ce nouveau genre qui par *P. portoricensis* indique le passage vers ceux à formidable bec nos conduit droit au genre *Spermophila*, Sw. Nous sommes ainsi bien aises de débarrasser les vrais *Fringilliens* de ces innombrables espèces de prétendus Bouvreuils américains !

“ C'est à un petit démembrement de ce grand genre que nous réservons le nom *Sporophilus*, Cabanis, resté sans emploi : son type est la *Pyrrhula nigra* du Brésil, espèce qui se rapproche le plus des Bouvreuils.

“ Si le genre anormal *Psittirostra*, qui n'a rien de commun avec les Loxiens, est véritablement un Fringillide, ce dont nous doutons grandement, c'est ici que nous placerions son unique espèce des îles Sandwich.

“ C'est avec moins d'hésitation que nous y rangeons le singulier genre *Paradoxornis*, GOULD (*Bathyrynchus*, ou *Heteromorpha*), et ses cinq espèces dont deux au moins montrent une forte analogie aux *Léiothriciens*, et même, ne fût ce que par les moeurs, aux *Mésanges*.

“ Par son remarquable bec, le *Cardinalis sinuatus*, BP., qui à la vérité pourrait constituer un genre à part (*Pyrrhuloxia* ?) que les teintes pourraient faire inclure parmi les Loxiens, rattache ici le genre *Cardinalis*, BP., dont la ptilose peu serrée ressemble aussi à celle du genre *Paradoxornis*, et qui comprend deux autres espèces certaines, outre quelque douteuses.

“ Nous restreignons le genre *Guiraca* à deux Oiseaux parfaitement jetés dans le même moule, que l'on ne saurait ni désunir ni associer à d'autres. L'un est la belle *Loxia ludoviciana*, L., (*rosea*, WILS., *Fr. punicea*, GM.) des États-Unis : l'autre, la *Guiraca melanocephala*, Sw., du Mexique, que l'on a placé sans raison dans le genre *Pitylus* et qui a reçu successivement les noms spécifiques de *guttata*, *maculata*, *xanthomascalis*, et *epopaea*.

* Characterized by Reichenbach under the title of *Chlorornis*.

† *Loxogilla* has been applied generically by M. Lesson (1831) to *F. noctis*, LINN.

“ Nous y rattachons le nouveau genre *Cyanoloxia*, BP., dont le type *Loxia caerulea*, L., a été aussi considéré comme une *Guiraca*, mais à laquelle nous réunissons trois au quatre autres *Pityliens* bleus inextricablement confondus, et ballotés dans les genres *Loxia*, *Fringilla*, *Guiraca*, *Coccoroborus*, *Pyrrhula*, et peut-être même *Tanagra*.

“ C'est la *Loxia grossa*, L., qui restera le type du genre *Pitylus*, comme l'a en effet voulu Cuvier son fondateur, tandis que les trois espèces vertes, *cayennensis* (nommée *canadensis* ! par la perpétuation d'une faute typographique), *episcopus*, LICHT., et *atro-olivaceus*, LAFR., dont *Pitylus personatus*, LESS., *P. poliogaster*, DUBUS, et *P. flavo-cinereus*, CASSIN, ne doivent être que des synonymes, constituent le genre *Caryothraustes*.

“ REICHENBACH a aussi l'intention de constituer le genre *Cissurus* pour la *Fringilla gnatho*, LICHT., dont ne diffère ni le *P. atrichalycæus*, JARD., ni *l'erythrorhynchus*, SW., ni *l'ardesiacus*, SW., la femelle : mais il est impossible de séparer cette espèce de *Loxia grossa* qui ne s'en distingue que par sa gorge blanche. C'est encore à ces *Pityliens* que tient de près le genre *Periporphyrus*, REICHENB., contenant la *Loxia erythromelas*, GM., de Cayenne, et la non moins brillante espèce voisine du Mexique nommée *Fringilla celæno* par LICHENSTEIN, *Pitylus atropurpuratus* par LAFRESNAYE et, l'on pourra à peine le croire, *Pyrranga ! mexicana* par LESSON.

“ Avec Cabanis nous limitons le nom de *Coccoroborus* à quatre espèces assez semblables, telles que notre *Guiraca magnirostris* (qu'il ne font pas confondre avec celui de SWAINSON), le *Pitylus aureiventris*, LAFR., et le *chrysopeplus*, VIG. C'est par elles que nous terminons la série des *Pityliens*, car ce n'est pas seulement par leur gros bec, mais même par leurs couleurs qu'elles se rattachent aux *Hesperiphones* et aux *Coccothraustes*, les premiers des *Fringilliens*.

“ 5. Les *Fringilliens*, type et centre de la Famille, sont comme nous l'avions déjà dit, de beaucoup les plus nombreux : et c'est par degrés encore plus insensibles qu'ils mènent au *Loxiens* dont traite notre ouvrage. Il est donc nécessaire de jeter un coup-d'œil plus approfondi sur cette sous-famille qui se lie plus intimément avec celle dont nous nous occupons. Les *Loxiens typiques* se fondent en effet pour ainsi dire avec les *Bouvreuil*s, tandis que les *Loxiens montifringillacés*, dont deux espèces (constituant chacune un sous-genre) n'ont pas même de rouge, tiennent encore plus étroitement aux *Pinsons* : et que, sans leurs teintes rouges, les *Loxiens linotacés*

(à la vérité boréales) ne pourraient guère être séparés des Serins, des Tarins et des Chardonnerets.

C'est par le genre *Mycerobas*, Cabanis, qu'en quittant les *Pytiliens* dont on faisait aussi des *Gros-becs*, nous commençons la série des Fringilliens. Ce genre toutefois ne se compose pour nous que du seul *Cocc. melanoanthus*, HODGS., au *fortirostris*, LAFR., à l'énorme bec, car les autres espèces Asiatiques se rattachent plutôt à notre second genre *Hesperiphona*, quoiqu'il ait pour type la *Fr. vespertina* de l'Amérique septentrionale, et puisque le prétendu *Mycerobas papa* des îles Bonin est pour nous le type d'un genre à part qui, quoique anormal parmi les Loxions, n'a rien à faire avec les Fringilliens en question. Sans parler du prétendu *Guiraca abeillii*, LESS., du Mexique, les quatre espèces Asiatiques intermédiaires entre *Mycerobas* et *Hesperiphona*, et toutes modelées sur le même type, quoiqu'elles se rapprochent de plus en plus de *Coccothraustes* suivant l'ordre où nous les nommons, sont : *H. icteroides* de l'Himalaya, la plus anciennement connue ; l'occidental *C. speculigerus*, BRANDT, presque Européen, et dans l'extrême Orient le *melanurus* de la Chine, et le *personatus* du Japon.

“ Suit immédiatement dans le Système le *Coccothraustes*, BRISSON, réduit à notre espèce d'Europe et à sa très légère variété du Japon.

“ Nous avons aussi dû former un genre que nous appelons *Callacanthis* avec REICHENB., pour la réception de cette belle espèce de l'Asie centrale dont GOULD, guidé par les couleurs et se souciant par trop peu du bec, avait fait un *Carduelis*, et dont il vient beaucoup plus raisonnablement de faire une *Fringilla* dans ses BIRDS OF ASIA. Outre qu'il s'est évidemment rapproché de la nature, il vaut toujours mieux laisser une espèce dans son ancien genre que de particulariser d'une manière fautive ou même douteuse.

“ Nous ne connaissons que cinq espèces à laisser dans le genre *Fringilla* réformé ; les deux d'Europe (*Fr. cælebs* et *Fr. montifringilla*) ; une de nord de l'Afrique (*Fr. spodiogenis*, BP., *cælebs* var. MALHERBE) tout aussi typique, de sorte que les trois espèces ne diffèrent guère que par la couleur de leurs joues, grises, noires ou rousses ; et deux des îles Canaries, dont une encore normale (*Fringilla canariensis*, VIEILL., ou *Fr. tintillon*, WEBB et BERTHOLLET) et l'autre (*Fr. tedia*, WEBB) que l'on a réuni avec les Moineaux, mais qui n'en a ni les mœurs ni le bec ; et dont la femelle surtout rappelle la *Fr. cælebs*. Son bec est seulement plus fort et beaucoup

plus allongé. Il est impossible de ne pas conserver à ce petit genre si bien circonscrit le nom de *Fringilla*, L., quoique Cuvier l'ait dans un temps nommée *Cœlebs*, et que Boie en ait fait son genre *Struthus*. Depuis longtemps les Oiseleurs reconnaissent deux races dans l'espèce commun du Pinson qui sert en ce moment d'exercice à un GEOFFREY St. HILAIRE de la troisième génération. Puisse-t-il marcher sur les traces de son père et de son ayeul ! nous ne saurions exprimer de voeu plus amical et en même temps plus digne d'être exaucé !

“ Les Moineaux francs (*Pyrgita* CUV., mais mieux *PASSER*, BRISS., et de toute le monde) non moins que les vrais Pinsons, sont tous de l'ancien Continent ; et les premiers même montrent, surtout dans leur mode de nidification, une grande analogie, je dirai presque affinité, avec les *Plocéides*. Nous connaissons plus de vingt espèces ou races de Moineaux francs qui auraient besoin d'une bonne Monographie, et d'études approfondies faites d'après le vivant et sur les croisements !

“ Le genre *Petronia* suit le genre *Passer* avec lequel on le réunit souvent, mais que nous croyons tout autant rapproché des Verdiers : il ne compte que deux ou trois espèces fort voisines dont les nouvelles, par leur bec moins fort, se rattachent au nouveau genre *Xanthodina*, SUNDEVALL, qui porte comme lui une tache jaune sur la poitrine. Nous connaissons cinq espèces de ce groupe en Afrique et en Asie, dont quelques unes sont les *Gymnornis* du Major HODGSON. Quant au genre *Pyrrhulauda*, SMITH, ou *Coraphites*, Cabanis, qui a aussi quelque affinité avec les Moineaux, il appartient cependant à la Famille des Alouettes, comme le prouvent les ouvertures de ses tarses.

“ Nous soutenons notre genre *Chlorospiza*, le nom de *Ligurinus* rappelant par trop d'autres Fringilliens, tout en le limitant à quatre ou cinq espèces de l'ancien monde ; les prétendus Verdiers de l'Amérique, malgré leur ressemblance de forme et de couleur, n'étant que des Spiziens dont nous avons constitué notre genre *Melanodera*. Nos espèces de ces véritables Verdiers sont la *Fr. incerta*, RISSO, que vous venons encore de revoir à Gènes vivante et parfaitement adulte, chez le Marquis CHARLES DURAZZO ; le Verdier commun (*L. chloris*, L.), la nouvelle espèce si voisine, plus petite et plus jaune, de Syrie (*Fr. chlorotica*, EHRENB.), et les deux du Japon, *Fr. kawariba major* et *minor*, SCHLEGEL, dont la dernière nommée

Fr. chlorion par TEMMINCK, ne semble pas différer de la *Fr. sinica*, L. C'est après avoir désiré depuis bien des années de pouvoir examiner la dernière que nous venons enfin de la retrouver dans les Magasins du Muséum de Paris, envoyée de Macao par les Missionnaires.

“C'est par le *Carduelis spinoides* de Vigors, du plateau des Indes, non de TEMMINCK du Japon qui ne diffère pas de notre *Chr. spinus*, dont le gros bec rappelle encore celui des Verdiers, que nous entrons dans le genre *Chrysomitris*, BOIE (*Spinus*, BREHM.). Cet oiseau qui n'a ni les formes ni les couleurs du Chardonneret ne saurait être distrait du joli groupe des Tarins dont nous connaissons dix-sept espèces. Quinze réparties dans toutes les parties du monde, moins l'Océanie (une d'Europe, deux d'Asie, et douze d'Amérique), sont non seulement typiques, mais souvent à peine différentes ; c'est à dire semblables au *Chr. spinus* si commun en Europe et qui s'étend par la Chine où il a reçu le nom de *Fr. sinensis*, GM., jusq' au Japon où, quoiqu' on en puisse dire, l'espèce est la même : tandis que deux des Antilles, *Carduelis cucullatus*, SW., et FR., *cubæ*, GERVAIS (si tant est qu'elles diffèrent entre elles) s'éloignent des autres, par leurs couleurs surtout. La troisième espèce, d'Asie, est nouvelle et se trouve en Sibérie : c'est *Fr. pistacina*, EVERS., plus petite que *spinus*, d'un vert pistache plus roussâtre et marqué de blanchâtre sur les pennes des ailes et de la queue où l'espèce commune l'est de jaune : nous ne l'avons trouvée qu'au Musée de Berlin. Les Tarins verts d'Amérique sont — 1. *Chr. stanleyi*, de la Californie supérieure, figuré par AUDUBON, dont le bec beaucoup plus forte que dans les suivants rappelle un peu celui du *spinoides*. 2. *Chrys. pinus* dont on ne connaît que la livrée sous laquelle il envahit du nord en grandes bandes les États-Unis où WILSON l'a fait connaître. 3. *Chr. macropterus*, DUBUS, du Mexique, espèce si semblable à la précédente, mais parfaitement distincte par ses ailes plus longues et plus amples à large miroir doré, et par ses grands pieds. 4. Le *Chr. atratus* que nous a fait connaître d'Orbigny, propre à l'Amérique méridionale, et dont le nom rappelle si bien le plumage noir, contrastant avec la belle couleur jaune du ventre, du double miroir et de la base des pennes alaires et caudales. 5. *Chr. mexicanus*, SW., ou *Fr. melanoxantha*, LICHT., figurée par AUDUBON sur sa planche 427 ; noir dessus, jaune en dessous : la base des rémiges et les rectrices latérales blanches. C'est à cette espèce essentiellement Méxicaine et

qui est le *Ligurinus mexicanus niger* de BRISSON, si non son *Ligurinus mexicanus* (le *Cacatototl* si non *l'Acatechichictli* d'HERNANDES) que le nom spécifique de *mexicanus* doit être conservé ; car l'oiseau auquel GRAY voudrait exclusivement l'appliquer (*Emberiza* non pas *Fringilla mexicana*, L.) n'est point un *Fringillien*, mais un *Spizien à tête jaune* capturé à bord d'un vaisseau ! et celui d'AUDUBON figuré à la pl. 433-4-5, est une espèce nouvelle qu'il a depuis appelé *Chr. yarrellii*. 6. *Chrysom. magellanica* que VIEILLOT, a figuré le premier dans ses Oiseaux chanteurs et dont *l'icterica*, LICHT., et le *campestris*, SPIX, ne semblent pas différer, est tout aussi typique que les autres. Le genre *Sparagra* de REICHENBACH repose sur un *Plocéide* pris pour cette espèce américaine. Sa tête est entièrement noire, et son bec plus robuste que dans notre Tarin. 7. *Chrysomit. notatus* dont nous devons la connaissance au BARON DUBUS, excellente espèce quoiqu' établie sur un caractère exceptionnel, comme son auteur nous l'a lui même démontré. Elle est très semblable à la précédente, mais son bec est beaucoup plus long et plus effilé, ses couleurs sont plus vives ; le noir de la gorge descendant plus bas, couvre la poitrine ; le miroir de l'aile est fort grand et d'un beau jaune d'or qui ressort d'autant plus que les couvertures des ailes et les rémiges sont entièrement noires, étant privées des bordures jaunes que porte sur les couvertures et les tertiaires le *Chr. magellanicus*. Sa patrie est le Mexique et il est plus que probable que c'est elle qui se montre parfois dans quelques parties des Etats-Unis, quoique les descriptions et les figures publiées dans ce pays soient évidemment prises sur le véritable *magellanicus*. 8. *Chrys. psaltria* est le joli petit *Fringillien* que nous devons à SAY qui l'a rapporté de l'expédition du Major Long aux montagnes rocheuses, que nous avons figuré dans notre Continuation à WILSON, et qui a depuis été retrouvé au Mexique. 9. *Chr. spinescens* se trouve au Musée de Berlin qui l'a reçu de St. Féda Bogota : il est très semblable à notre Tarin, mais plus petit : le noir du sommet de la tête, des ailes et du bout de la queue est plus intense, et manque entièrement à la gorge, tout le dessous étant jaune, sans les stries ni le fond blanchâtre du ventre, comme dans notre espèce d'Europe. 10. Le *Chrysomitris marginalis*, BP., ressemble encore plus, si c'est possible, au Tarin d'Europe, mais il est plus grand, a le noir à la gorge encore plus foncé, le front mais point les sourcils jaunes : les rectrices brunes depuis la base, et le bec

beaucoup plus courte et robuste, presque de Serin. C'est lui qui se trouve indiqué comme var. δ . du *Fr. spinus* par GMELIN, mais non pas comme var. γ . (*novæboracensis*) que n'est autre que *C. tristis* en plumage d'hiver : il provient du Chili et se voit à Berlin et à Paris. 11. *Chrys. yarrellii*, AUDUB., que cet auteur avait d'abord appelé *Fr mexicana*, et qui se trouve aussi dans la partie occidentale de l'Union, ressemble au *Chr. tristis*, mais a les bandes des ailes d'un beau jaune, et non blanches comme lui. 12. Le joli *Chryso-mitris tristis* enfin, ce véritable *Goldfinch* est, par ses habitudes surtout, intermédiaire entre les deux genres *Chryso-mitris* et *Carduelis*.

“ Nous ne connaissons que trois véritables Chardonnerets, tous de l'ancien continent : notre commun, *l'orientalis* qui est en même temps la *Fr. subulata*, ILLIG, et le *caniceps*, VIG. de l'Himalaya.

“ C'est ici que nous placerons, ne sachant où le mettre plus convenablement, le singulier petit genre *Hypoloxias*, LICHT. (*Loxops*, CABAN.) dont le mâle est rouge et la femelle verdâtre, qui rappelle les *Becs-croisés* et se lie peut-être au genre *Psittirostra* ! C'est bien gratuitement qu'on en a faite une Linotte ! . . . et que par une erreur inexplicable on l'a confondu avec *Linaria brevirostris* !

“ Deux petits genres intermédiaires aux Serins doivent aussi trouver ici leur place : ce sont *Auripasser*, BP., et celui qu'avec le Dr. SCHIFF de Francfort nous appellerons *Poliospiza*. Le premier a pour type la *Fringilla lutea*, LICHT., à laquelle on doit associer, comme normale, la charmante espèce nouvelle d'Abyssinie *Fr. euchlora*, et l'on peut y placer comme espèce anormale la *Fringilla simplex*, LICHT., de Nubie (qu'il ne faut pas confondre avec la vrai Moineau de ce nom). Par son bec turgide et surtout par sa coloration, elle montre une grande affinité avec les *Erythrospiza*. Le second petit genre, remarquable par son plumage lâche et ses courtes ailes, ne renferme jusqu'à présent que la seule *Fr. tristriata* de RÜPPELL.

“ Le Ciri (*Citrinella alpina*) toujours confondu avec le VENTURON (*Serinus meridionalis*) véritable SERIN, est pour moi le type du genre *Citrinella* appelé depuis *Dryospiza* : il est impossible d'en séparer la *Fr. citrinelloides* d'Abyssinie, et la *Loxia totta* SPARMANN, du Cap, représentée avec le bec trop fort par cet auteur, oubliée par GRAY dans la laborieuse liste de son magnifique *Genera of Birds*, et reproduite par LESSON sous un nom nouveau. Peut-

être aussi faudra-t-il lui adjoindre quelques autres espèces Africaines intermédiaires entre elles et les Serins, telles que *Fr. nigriceps*, *canicollis*.

“ Et à propos des Serins faisons remarquer l'inconséquence de ceux qui, tout en admettant une foule de genres moins tranchées élèvent la voix contre celui si naturel de *Serinus* et placent son type si connu de tout le monde, le Serin des Canaries (*Fringilla canaria*, L., *Serinus canarius*, BP.), dans le genre *Crithagra* sous la famille des Bouvreuils (*Pyrrhulinae*), tandis qu'ils insistent avec raison sur l'impossibilité d'éloigner la *Serinus meridionalis* des véritables *Fringilliens*: séparant ainsi, pour les placer dans deux Familles différentes, deux oiseaux que le groupe le plus réduit ne peut manquer de comprendre! Ce seul fait suffirait pour condamner irrévocablement la Sous-famille des *Pyrrhulien*s qui est aussi artificielle que sont naturels les petits groupes bien composés tels que *Serinus*, *Chrysomitris*, etc. Nous proposons au reste d'appeler par ce nom de *Serinus* les nombreuses espèces de l'ancien continent, laissant le nom de *Crithagra* aux Américaines qui ont une certaine affinité avec les Spiziens et dont plusieurs sont encore plus jaunes que les Serins eux-mêmes, comme *Emberiza brasiliensis*, GM., et *Fr. flaveola*, L.* Il en est aussi de vert grisâtre en dessus comme *Fr. luteiventris*, MEYEN; et de presque tout gris comme *Fr. xanthorrhoa*, BP., qui ne se trouve pas dans l'ouvrage de GRAY, et manque dans presque tous les Musées.

“ Le genre *Serinus*, principalement Africain, est encore un exemple éclatant du peu d'importance que l'on doit accorder à la forme et à la grosseur du bec. La (*Loxia sulphurata*, L.) en effet, malgré son formidable bec tout aussi gros que celui du *Coccothraustes* n'est qu'un véritable Serin (*Serinus sulphuratus*, BP.), et nous trouvons toutes les dégradations par *S. butyraceus* et plus d'une douzaine d'autres espèces Africaines jusqu'à *Linaria gularis*, SMITH, *Serinus striolatus*, BP. (*Pyrrhula striolata*, RÜPP., *Carpodacus striolatus*, GR.), qui montre en effet le bec d'un *Carpodacus* dont il a même toute l'apparence: mais ce n'est qu'un Serin à bec de grosseur moyenne, que RÜPPELL s'étonne de ne point voir prendre de rouge seulement

* *Crithagra* was originally (1827) formed by Mr. Swainson, having *C. sulphurata* for the type, and it cannot now be changed at the will of any ornithologist to another group; besides the *F. flaveola*, LINN., has been generically characterized by Boié, in the Isis, so far back as 1828, under the name of *Sicalis*.

à cause de l'idée preconçue que ce soit un *Bouvreuil* ou *Oiseau-rouge*, nonobstant sa tendance évidente à la couleur verte ! Parmi les vingt espèces qui nous sont connues, nous ne signalerons plus que les deux Asiatiques nouvelles et les deux d'Europe. Notre *Serinus syriacus*, recueilli par HEMPRICH à Bischerra ressemble au *Venturon*, mais il est un peu plus forte, de couleur plus claire et plus jaune, sur les ailes surtout : les pennes latérales de la queue sont blanchâtres sur leur moitié intérieure. Le *Serinus leucopygos*, ainsi nommé par le savant LICHENSTEIN dans le Musée de Berlin, vient aussi de l'Asie mineure : il est cendré, blanchâtre en dessous, avec des flammèches obscures, et le croupion blanchâtre sans taches. Peut-être n'est il pas adulte. Nous ne parlerons du *Fr. serinus*, L., auquel les noms spécifiques de *flavescens*, *meridionalis*, *hortulanus*, et bien à tort *brumalis*, ont été imposés, que pour confirmer que le prétendu *Serinus islandicus* n'est qu'un exemplaire plus forte que l'on supposait venir d'Islande, comme Faber lui-même s'en est depuis convaincu. Les marchands au reste continuent à en fournir aux amateurs ! Nous terminons la série des Serins par le *Serinus pusillus* qui par sa tache d'or au front nous mène au genre *Catamblyrhynchus*, LAFR. (*Betamontia*, BP.), composé d'une seule espèce de l'Amérique du Sud (*Cat. diadema*,* LAFR. ou *B. capitauria*, BP.), qui nous mène droit aux Bouvreuils. Plusieurs espèces pourraient fort bien se trouver confondues sous le nom de *Fringilla pusilla*, vu que l'oiseau de PALLAS provenant du Caucase ou de l'Altaï, aurait, à en juger par la mauvaise figure de sa *Zoographia Rosso-asiatica*, les tarses beaucoup plus longs et plus grêles que les nombreux exemplaires (*Serinus aurifrons*? † BLYTH) que nous recevons depuis peu de l'Himalaya et qui ont aussi le jaune du front beaucoup plus vif, si non plus étendu.

“ Les véritables Bouvreuils se réduisent à six espèces en comptant même pour telles les deux races d'Europe qui ne diffèrent guère que par la taille, et la *Pyrrhula epauletta*, HODGSON, du Népal, dont on a formé le genre *Pyrrholeptes*. Les trois autres sont *Pyrrhula orientalis* de la Faune du Japon, plus petite que les nôtres et à dos et gorge rougeâtres ; *Verythrocephala*, VIG., de l'Himalaya figurée par

* This bird will be found to be essentially *Tanagrine*, and to range not far from *Euphonia*.

† *Emberiza*? *aurifrons*. Blyth Journ. As. Soc. xvi. p. 476. Specimen in collection of H. E. Strickland, from Siberia, agrees with Blyth's description.

GOULD, dont tout le sommet de la tête et la nuque sont rouge dans le mâle et roux-jaunâtre dans la femelle ; *P. nepalensis* enfin, pareillement du Népal, est d'une plus grande taille, à tête jaune-olivâtre dans le mâle, brun-cendré chez la femelle, et se fait remarquer par sa queue longue et échancrée.

“ C'est pour former la sixième et dernière Sous-famille que nous réservons le nom de *Loxiens*. On a pu voir par la rapide énumération des genres et espèces des cinq premières que, nous dépouillant de toute idée préconçue et en vogue jusqu'à ce jour, nous la composons d'une manière toute différente de nos devanciers. En effet nous y groupons autour des Becs-croisés (*Loxia*), non seulement les Dur-becs (*Corythus*) qui en diffèrent à peine, et les genres *Uragus*, *Carpodacus*, *Erythrospiza*, démembrements du genre artificiel *Pyrrhula*, mais, outre quelques genres anormaux, les Linottes elles-mêmes et leur proches parents, les *Montifringilla*, qui, quoique intimement liés avec les *Erythrospiza* le semblent encore plus avec les véritables Pinsons, dont on a grand peine à les séparer. On a vu par contre que nous en avons exclu les véritables Bouvreuils pour les ranger parmi les Fringilliens, et les *Paradoxornis* ainsi que le singulier genre *Psittirostra* qui sont tout au plus des *Pityliens* ! La teinte, bien plus que la couleur rouge est de rigueur pour nous faire admettre un *Fringillide* parmi les *Loxiens*, non que nous la considérons comme caractère essentiel, comme on s'est plu à le dire et à le répéter, mais parce que ce caractère en représente d'autres moins difficiles à saisir qu'à énumérer et qui rendent notre Sous-famille éminemment naturelle. Du reste la *Fringilla incerta* prend aussi une teinte orangée sur le front et n'est qu'un VERDIER (*Chlorospiza*), tandis que la *Fr. pusilla*, PALLAS, à front tout à fait orange, est un véritable Serin (*Serinus*). Les Cardinaux bien plus rouges que presque tous nos *Loxiens* sont des *Pityliens* : d'autres Fringillides marqués de rouge, les Cardinaux dominicains (*Paroaria*), sont des *Spiziens* ; les flamboyants *Pyrangas* enfin et les *Ramphocèles*, des TANAGRIDES !

“ C'est par les *Uragus*, dont nous admettons deux espèces ou races principales (*U. sibiricus* et *sanguinolentus*, que nous commençons la série des *Loxiens*, tout en reconnaissant que ce petit genre assez bien caractérisé lie les *Corythus* avec les *Carpodacus* ; et que dans cette manière de dérouler la série, le genre *Corythus* dont le bec affecte la forme de celui du Bouvreuil et se fait remarquer par sa largeur, devrait suivre, non précéder les *Becs-croisés*. Les deux espèces en effet

qui le composent, et qui ont donné lieu à l'établissement de deux genres, celle de l'Himalaya *Corythus subhaemachalanus*, HODGSON, se rapproche presque autant des *Carpodacus* que la typique des *Becs-croisés*. Cette dernière se retrouve dans le nord des deux hémisphères, et l'on serait tenté de considérer les individus d'Amérique comme appartenant à une espèce distincte pour laquelle les noms de *canadensis*, *americana*, *splendens*, ont déjà été employés. Mais les exemplaires du Kamtschatka que nous avons examinés tout récemment semblent trancher la question en sens contraire, puisqu'ils nous offrent des teintes tout aussi brillantes que ceux d'Amérique. La *Loxia flamengo*, SPARMANN, n'en est qu'une variété albine.

"Sept *Becs-croisés*, en y comptant la *Loxia rubrifasciata*, seront appréciés par nos lecteurs. Malgré son très gros bec différemment conformé et sa couleur écarlate de *Pyrranga* et de *Cardinal* plutôt qu'à teintes de *Loxien*, l'excellent genre *Hamatospiza*, BLYTH, ne peut-être éloigné des *Becs-croisés* et des *Corythus*, surtout à cause de sa femelle verte à croupion jaune. Sa seule espèce, le *Sipahi* d'HODGSON, que l'on a voulu rapporter, je ne sais trop pourquoi, à *Loxia batanensis*, LATHAM, et qui pourrait aussi bien être rapportée à *Loxia indica*, GM., est certainement *Loxia fulgens*, LAFR., comme nous venons de la vérifier d'après son type. Il serait intéressant de pouvoir identifier également la *Loxia carlsoni*, DAUDIN, basée sur la figure de SPARRMANN.*

"En attendant que ses mœurs et ses affinités soient mieux connues, c'est ici que l'on doit intercaler, quoiqu'il brise évidemment la sérié encore plus que le précédent, notre nouveau genre *Chaunoproctus* qui a pour type le *Fringilla papa*, KITTLITZ, ou *ferreirostris* VIG., placé à tort parmi les *Coccothraustes* et réuni plus malheureusement encore avec *Mycerobas*. Nous empruntons son nom générique à Aristophane, l'appliquant après deux mille ans, à une époque où il semble crée pour notre papal oiseau.

"Le genre *Carpodacus* si peu compris des Ornithologistes avant que BOIE n'indiqua son affinité avec les Linottes et que nous le constituions sous le nom *Erythrospiza*, offre lui même plusieurs petits

* In the collection of H. E. Strickland there is a Crossbill distinct from any of those above enumerated, and differing in all its proportions from *L. americana*.
L. mexicana, STRICK. — colours nearly as in *L. americana*; entire length, 6.2.— of wing, 3.9.— of bill to base, 8.— depth of bill at base, 4.— Hab. near the city of Mexico.

groupes dont quelques uns ont été élevés au rang de genres, et qui pis est, disséminés dans différents groupes suivant la forme et la grosseur du bec des espèces.

Le plus grand des Loxiens qui nous soit connu *L. rubicilla*, ou *C. caucasicus*; le *C. rhodochlamys* de la Sibérie occidentale; notre *Carp. sophia* de l'Himalaya; et même le *Passer roseus*, de PALLAS, forment le petit groupe des *Rubicilla*. Leur bec quoique fort n'est nullement renflé, et ressemble plutôt à celui du Pinson ou du moins du Verdier, qu'à celui des Bouvreuils.

“ *Fringilla rhodopepla*, VIG., *Carpodacus thura*, BP., et *Fr. rhodocroa*, VIG., par leurs ailes courtes et leurs becs de Pinson constituent le sous-genre *Propasser*, HODGS., propre aux régions Himalayennes.

“ Par ses couleurs sombres, ses pieds grêles, ses ailes longues, et son petit bec comprimé, encore plus grêle et droit, caractères qui l'ont fait ranger parmi les Linottes, le *Carpodacus saturatus* mérite d'être isolé comme *Procarduelis*, HODGSON. Cabanis a même été jusqu'à l'éloigner des autres espèces pour le rapprocher des vrais Pinsons comme type de son genre *Pyrrha*.

“ Notre *Carpodacus puniceus* (*rubeculoides*, HODGS.), à bec allongé, à teintes différemment distribués, le rouge de sa gorge étant plus cramoisi, mieux défini et plus restreint, a aussi donné lieu au genre *Pyrrhospiza*, BLYTH., ou *Propyrrhula*, HODGS. Mais sa femelle est tout-à-fait semblable à celle de *C. rhodopepla*: l'unique individu qui se voit au Musée de Leyde offre une singularité dans le bec dont la mandibule inférieure est coupée par une carène transversale à la moitié de sa hauteur! Ces femelles noirâtres et grivelées dont le plumage contraste tellement avec la pâle livrée d'un gris uniforme et presque isabelle des espèces plus méridionales, rappellent un peu les Étourneaux.

“ Quoiqu'il en soit, c'est aux *Pyrrhulinotæ*, d'HODGSON, qu'il convient de conserver plus particulièrement le nom de *Carpodacus*. Cette petite division comprend le *Carpodacus purpureus*, des parties septentrionales et orientales de l'Amérique du Nord, que son bec de Pinson et sa couleur rouge à la fois plus rose et plus sombre, fait parfaitement reconnaître; le *frontalis* des parties occidentales et méridionales, le *rhodocalpus*, CABANIS, du Mexique, ne nous en paraissent que le jeune. Son bec est court et bombé, son rouge cramoisi est mieux circonscrit, son ventre toujours strié. *L'Erythrina* type du genre, sans parler de notre Europe où elle s'avance

plus ou moins de l'Orient, se retrouve depuis la Perse où elle se montre avec des teintes plus pâles jusqu'au Kamtschatka où elle les a plus vives et d'un rouge qui ne tire ni au rose comme en Perse, ni au cromoisi comme dans le Nord de l'Europe. Elle est très commune dans l'Inde où elle a reçu plusieurs noms, parmi lesquels il faut ajouter à ceux enregistrés dans le corps de l'ouvrage celui de *rubiceps*, CUVIER, que nous venons de vérifier sur son type dans les magasins du Jardin des plantes. Encore plus pâle que les exemplaires persans de la précédente s'offre à nous comme dernière espèce la *Fringilla synaitica*, LICHT., de l'Arabie, dont la femelle est même de couleur isabelle. Par ses teintes donc cet oiseau à couleur du désert fait le passage au genre *Erythrospiza*, mais c'est le seul trait qu'il a en commun avec ce petit groupe méridional, car pour le bec et pour la forme des ailes et même par la disposition de la teinte rose, cette espèce du sud de l'Asie se rattache à celles du Nord des deux continents.

“ Le genre *Erythrospiza* comme nous l'avons restreint, par ses ailes longues et aiguës se montre intermédiaire aux *Carpodques* et aux *Montifringilles*. Nous en connaissons trois espèces, l'*obsoleta*, la *githaginea* et la *phœnicoptera*. Leur bec plutôt de Bouvreuil a une forme toute particulière, quoique plus au moins fort, et leurs couleurs se retrouvent aussi les mêmes, bien que plus ou moins vives. L'*E. phœnicoptera* qui est en même temps la *Pyrrhula rhodoptera* de LICHT., et la *Fringilla sanguinea* de GOULD, se trouve en Syrie et en Perse, et se fait de suite reconnaître à sa grande taille et à ses belles ailes à pennes élégamment lisérées de rose. L'*E. githaginea* ou Trompette de l'isle de Malte n'en est qu'une pâle miniature; il n'est pas sûr que le nom de *payrœudævi* qui lui fut donné dans le grand ouvrage de l'Expédition d'Égypte ne doive avoir la préférence; tandis que sa nature essentiellement méridionale nous fait douter de l'identité de la prétendue *githaginea* de Sibérie signalée par BRANDT avec notre espèce.

“ En récapitulant et faisant une Revue générale de tous ces Oiseaux teints de rouge l'on parvient à les reconnaître rien qu'à la différente nuance des plumes de leurs dos! En effet sans parler de *Corythus subhæmachalanus* qui les a couleur de brique, nous les voyons dans *Carp. rubicilla* d'un gris de cannelle: dans *rhodochlamys* rose-cendrées; *sophia* a ses plumes sombres entourées de rose et de gris: le plumage de *C. roseus* est teint de rose; celui de *rhodopepla* de

pourpre ; de *thura* d'olivâtre ; celui de *rhodocroa* de bai-roux : dans *saturata* il est noirâtre ; dans *punicea* fuligineux ; *C. frontalis*, qui offre le rouge le plus cramoisi, a cependant le dos gris : *erythrina* l'a brun : *purpurea* mélangé de rougeâtre et de brun ; *synaitica* de rose-nankin : *Erythrospiza phaenicoptera* de jaune ; *githaginea* de gris-brun de cendre très clair ; *obsoleta* de gris isabelle.*

“ Les Pinsons de neige beaucoup plus rapprochés que les précédents des Fringilliens auxquels ils tiennent par les vrais Pinsons, encore plus que ceux-là par les Bouvreuils, forment trois sous-genres dont les deux derniers n'ont qu'une espèce chacun. Le premier ou *Leucosticte*, SWAINSON, qui avait reconnu sa parenté avec les Linottes tient encore du moins comme celles-ci aux *Erythrospiza* par quelques bordures roses, et compte cinq espèces : le *tephrocotis* de l'Amérique boréale, et les quatre espèces plus ou moins confondues, sous le nom de *Passer arctous*, en partie débrouillées par BRANDT qui a appliqué successivement à deux le nom de *Fr. gebleri* avant d'avoir bien étudié leurs changements de plumage et de coloration du bec ! et dont la plus grande est à la fois *Linaria griseinucha*, BRANDT, *Leucosticte griseigenys*, GOULD, et *Montifringilla pustulata*, CABANIS.

“ Le second genre *Fringalanda*, HODGS., nous montre une analogie avec les Moineaux du moins par le plumage, et se rapproche comme son nom l'indique, non seulement des Fringilliens, mais des véritables Pinsons : l'on ne connaît que la seule espèce, *Fr. nemoricola*, de l'Himalaya, qui émigre par grandes bandes comme ces Oiseaux.

“ Le genre *Montifringilla* propre, établi pour la *Fr. nivalis* est plutôt un Fringillien qu'un Loxien ; étant aux Pinsons ce que *Plectrophanes* est aux Bruants, mais il ne peut être éloigné des Linottes, des *Erythrospiza* et surtout des groupes précédents.

“ Nous terminons la Famille par les deux genres de Linottes, *Linota*, BP., et *Acanthis*, BREHM, restreint, leur appliquant ces noms plutôt que ceux *Cannabina* et *Linaria* qui appartiennent à la Botanique.† Ils tiennent aux Serins, aux Tarins et aux Chardonnerets, comme les *Montifringillæ* aux Pinsons, les vrais Loxiens et la première Section des Loxiens aux Bouvreuils. Parmi les premières ou véritables Linottes à bec court, plutôt fort, et à narines découvertes,

* Plate 22, *Carp. rhodopeplus*, and Pl. 23, *Carp. thura*, are one species — Pl. 24, *Carp. sophia* ♂ and Pl. 25, *Carp. rhodochlamys* ♀ are ♂ and ♀ of same species.

† We cannot agree to this separation, the forms are essentially the same.

nous énumérons la *Linota cannabina* si commune par toute l'Europe, dont la *L. fringillirostris*, BP., de l'Inde diffère à peine par son bec de Pinson et par ses teintes plus douces mais plus vives; et comme troisième espèce la *L. montium* que quelques-uns veulent être la *Fr. flavirostris* de LINNÉ. Ce nom est trop incertain pour pouvoir le lui conserver: BREHM l'a transporté à un Sizerin; et nous l'avons trouvé appliqué dans le Musée de Paris, peut-être justement, à la *Montifringilla arctoa* en hiver, lorsqu' en effet elle a le bec jaune. Quant à la *Linota brevirostris*, GOULD, de notre *Liste comparative des Oiseaux d'Europe et d'Amérique*, c'est avec l'Ornithologiste anglais que nous avons décidé en 1837 d'appeler ainsi une Linotte de la Perse occidentale qu'il s'était réservé de décrire, mais que nous n'avons pu retrouver ni dans ses écrits, ni dans ses collections. Au reste les Linottes de ces contrées ont en effet le bec plus court et les teintes plus claires, se montrant intermédiaires à la *cannabina* et à la *fringillirostris*, comme elles le sont géographiquement.

"Le genre *Acanthis*, BREHM, contient la Sizerins à bec droit et aigu comme celui des Tarins et des Chardonnerets, mais toujours plus courte, à narines cachées par de petites plumes rigides qui s'avancent sur le milieu du bec. Plusieurs espèces, races, ou variétés existent, bien difficiles à fixer parmi les nombreux individus sur lesquels on parvient aisément à établir des espèces nominales en prenant les types aux extrémités de la série et choisissant les nains et les géants de chacune, comme a fait BREHM. Nous n'en signalerons pas moins.

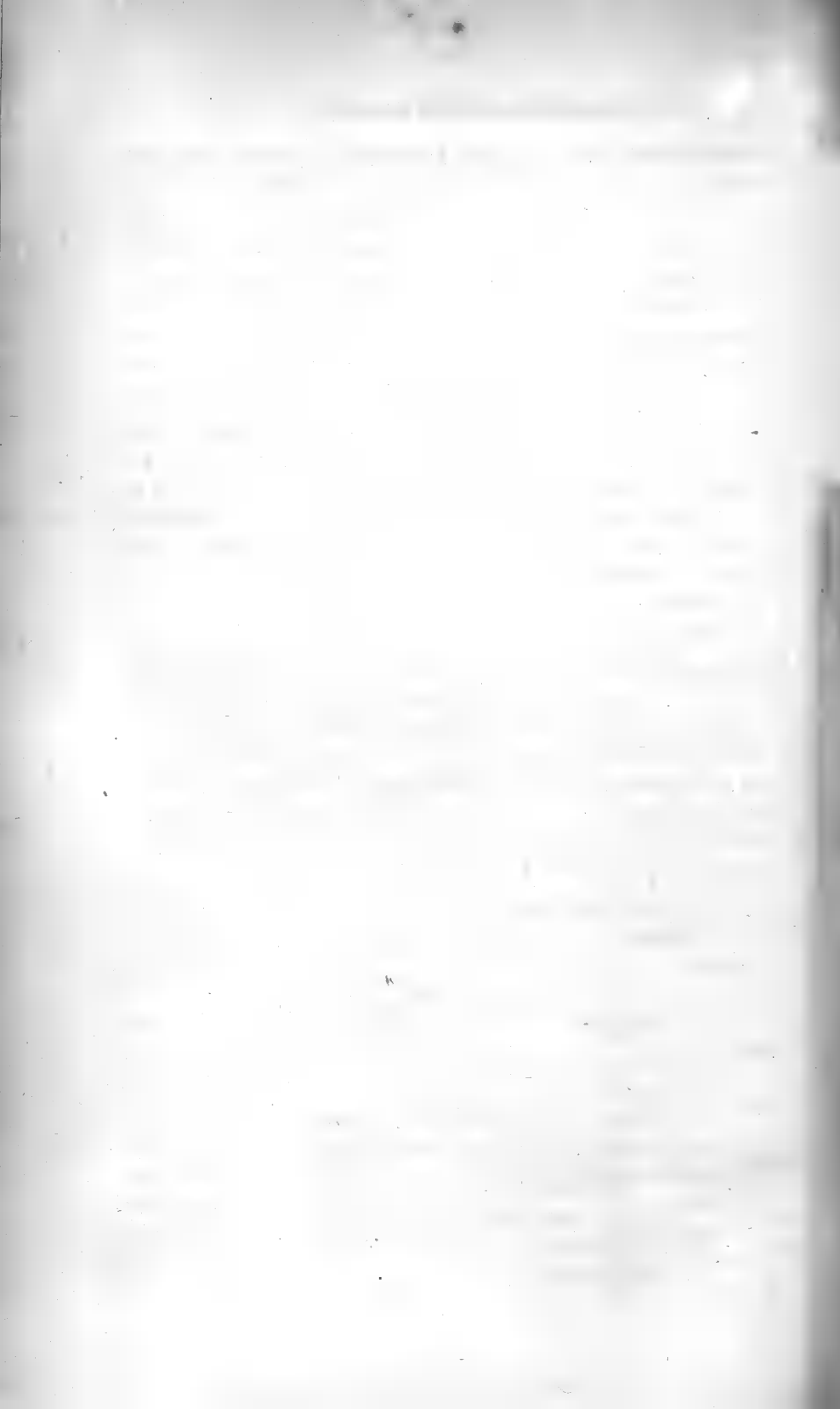
"1. *Acanthis rufescens*, *Fringilla linaria*, ou *Linaria rufescens*, VIEILL., *flavirostris* de BREHM.

"2. *Acanthis linaria* ou *Linaria borealis*, VIEILL.

"3. La grosse *Acanthis hollbölli*, BREHM, à bec puissant.

"C'est à ces mêmes espèces ou races que se rapportent les variétés *alnorum* et *betulorum* indiquées par SUNDEVALL comme ayant, l'une le bec fort couvert de plumes simplement à la base, avec le noir de la gorge plus étendu et les freins noirs; l'autre comme ayant le bec petit, couvert de plumes au delà de la moitié, avec le noir de la gorge restreint, et les freins roussâtres.

"4. *Linaria canescens*, GOULD (*borealis*, TEMM., *hornemanni*, HOLLBÖLL) du Groënland, plus facile à distinguer que les autres par sa longue queue, et son croupion blanc."



SYNOPSIS

OF THE

TANAGRINE GENUS *CALLISTE*,

WITH DESCRIPTIONS OF NEW SPECIES.

By PHILIP LUTLEY SCLATER, B.A.

THE Prince Canino, in a paper in the *Comptes Rendus de l'Académie des Sciences*, for January 20, 1851, has divided this genus into several others, and M. Reichenbach forms two or more of it. But some of the names proposed cannot be used, having been previously employed in different senses; and I am unwilling to establish new ones in their places, seeing, in the first place, that Ornithology is already overburthened with the multitude of new genera, and secondly, because there appears absolutely no difference of structure in the forty-eight birds hereafter named, sufficient to warrant generic separation. They, however, divide themselves naturally into groups, to which I have given names, not as *genera* or *subgenera*, but merely for the sake of greater convenience of arrangement.

These are as follows:—

Sectio A	<i>Callistæ tataones</i>	2 species	} 48
B	<i>Callistæ typicæ</i>	8 ...	
C	<i>Callistæ punctigeræ</i>	6 ...	
D	<i>Callistæ procnopides</i>	13 ...	
E	<i>Callistæ flavæ</i>	6 ...	
F	<i>Callistæ lampræ</i>	6 ...	
G	<i>Callistæ gyrolæ</i>	3 ...	
H	<i>Callistæ cœruleæ</i>	4 ...	

SYNOPSIS OF THE

For those who use minor subdivisions, the genera embraced in *Calliste*, as here considered, will be

Tatao, Bp. (1851) = *Aglaiia* (Sw.) Reich.

T. paradisea, Sw.; *Tanagra tatao*, Linn. Sp. Typ.

Calliste, Boié, 1826 = *Calospiza*, G. R. Gray (1840.)

C. tricolor (Gm.) Sp. Typ.

Procnopsis, Cab. (1844.)

P. atro-cærulea, Cab. Sp. Typ.

————— (?) *Calliste*, Bp. (1851.)

— (?) *cayana* — *Tan. cayana*, Linn. Sp. Typ.

Gyrola, Bp. (1851.)

G. chrysoptera, Sw.; *T. gyrola*, Linn. Sp. Typ.

————— (?) *Callospiza* (Bp.), 1851.

— (?) *brasiliensis* (Linn.) = *Call. barbadensis*, Bp. Sp. Typ.

A. — CALLISTÆ TATAONES.

1. CALLISTE TATAO (LINN.)

Tanagra tatao, *Linn. Syst. Nat. i. p. 315.* — *Aglaiia paradisea*, *Sw. Class. Birds, ii. p. 286.* — *Calliste tatao*, *Gray's Gen. p. 366, No. 13.*

♂ Suprà crissoque atra; vertice lateribusque capitis viridissimis; dorso postico flavissimo, rubro notato; subtùs humerisque vivide cæruleis, gutture purpureo.

♀ Mari similis sed coloribus minùs vividis.

Junr. dorso postico toto flavo, gutture humerisque vix purpureis.

Habitat, Cayenne; Demerara (Rich. Schomburgk); Brazil, near Rio de Janeiro (D'Orbigny)? Anolaima, New Granada?

Figured, Desm., *Tan.*, pl. 1. ♂. Edwards, pl. 349; Pl. Enl. 127, fig. 27; fig. 1 (fig. pessima — tail supplied from some other bird) Kitt. Kupf. Vog. pl. 31, fig. 3. Hayes, Osterly Park, p. 32.

The *Anolaima* specimens differ from the Cayenne — *first*, in being larger, the wing being $3. \frac{1}{2}$ instead of 2.7 ; *secondly*, in the green of the head descending half way down the nape, while in Cayenne specimens it only reaches to the top of the crown. They have also less purple on the breast, and a greater amount of blue on the lesser wing-coverts. Should they prove distinct, which I think not

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unlikely, there being no other other *Calliste* common to Cayenne and New Granada, I propose to call the New Granadian bird *Calliste cœlicolor*.

2. CALLISTE YENI (D'ORB. AND LAFR.)

Aglaia chilensis, Vigors, Proc. Zool. Soc. 1832, p. 3. — *Aglaia yeni*, D'Orb. and Lafr. Mag. de Zool. 1837, p. 31. — *Calliste yeni*, Bp. Consp. Av. p. 234.

♂ Similis *C. tatao*, sed dorso postico ruberrimo.

Habitat, Yungas and Yuracares, Bolivia (D'Orb.), Eastern Peru (Tsch.), Rio Negro (Verraux).

Figured, D'Orb. Voy. Am. m. Ois. pl. 24, fig. 2.; Jardine and Selby, Illust. of Orn., N.S. pl. 26.

B. — CALLISTÆ TYPICÆ.

3. CALLISTE TRICOLOR (GM.)

Tanagra tricolor, Gm. Syst. Nat. i. p. 891. — *Tanagra tatao*, Pr. Max. Beit. zur Nat. iii. p. 459. — *Calliste tricolor*, Gray's Gen. p. 366, No. 1.

♂ Subtùs capiteque cœrulea; cervice remigumque marginibus externis cum ventre imo viridissimis; fronte, gulâ, mento, dorsoque medio atris; dorso postico flammeo; humeris purpureis.

Long alæ, 2.♂.

♀ Coloribus obscurioribus; dorso postico flavo, nec flammeo.

Habitat, Brazil, Rio de Janeiro, Cabo Frio, and Guira-pina. (Pr. Max.); Rio de la Plata.

Figured, Desm. Tan. pl. 3 ♂; Pl. Col. pl. 215, fig. 1 ♀; Pl. Enl. 33, fig. 1; Kitt. Kupf. Vog. pl. 31, fig. 1.

4. CALLISTE FESTIVA (SHAW.)

Tanagra tricolor, Var. β, Gm. Syst. Nat. i. p. 392. — *Tanagra festiva*, Shaw, Nat. Misc. pl. 537. — *Tanagra tricolor*, ♀ Desm. Tan. pl. 4. — *Tanagra cyanocephala*, Vieill. Nov. Dict. d'H. N. xxxii. p. 425; Enc. Method. N. xxvi. p. 780. — *Tanagra rubricollis* (Temm.), Max. Beit. zur Nat. iii. p. 456. — *Tanagra trichroa*, Licht. Verz. der Doubl. p. 30. — *Calliste festiva*, Gray's Gen. p. 366, No. 2.

♂ Subtùs, dorso postico, remigibusque externè viridibus; summo capite gulâque purpureis; cervice omninò rubrâ; fronte, mento, dorso medio humerisque atris, his aurantio marginatis.

SYNOPSIS OF THE

Long. alæ, 2. 5.

♀ Obscurior, dorso medio viridi, nigricante marginato.

Habitat, Brazil, Rio de Janeiro, Guira-pina (Pr. Max.)

Figured, Desm. Tan. pl. 4 ♂; Pl. Enl. 33, fig. 2 ♂; Pl. Col. 215, fig. 2 ♀; Nat. Misc. pl. 537; Swains. Orn. Draw. pl. 5 ♂; Kitt. Kupf. Vog. pl. 31, fig. 2; Donov. Nat. Rep. pl. 23.

5. CALLISTE FASTUOSA (LESSON).

Tanagra fastuosa, Less. Cent. Zool. p. 184. — *Calliste fastuosa*, Gray's Gen. p. 366, No. 20.

♂ Fronte pectore summo dorso medio que superiore atris; capite et vitta circa summam cervicem pulchre cæruleo-viridibus; tectricibus alarum minoribus thalassino-viridibus; uropygio secundariorumque marginibus externis aurantiis; remigibus rectricibusque nigris purpureo marginatis; subtus purpurea, ventre summo dilutior; rostro pedibusque nigris. Long. alæ, 2. 6.

Habitat, Brazil (Lesson).

The only examples I have ever seen of this species, are in the British Museum, labelled (1839) 12, 18, 26.

Figured, Lesson's Cent. Zool. pl. 58.

6. CALLISTE CYANOVENTRIS (VIEILL.)

(1819) *Tanagra cyanoventris*, Vieill. Nov. Diet. d'H. N. xxxii. p. 426. — (1820) *Tanagra elegans*, Pr. Max. Reise n. Bras. i. p. 187. — *Tanagra citrinella*, Temm. Pl. Col. 42, fig. 2.

♂ Suprà aurea, dorso medio nigro striata; remigibus rectricibusque externè viridibus; fronte gulâque nigris, subtus cyanea.

Long. alæ, 2. 7.

♀ Coloribus minus vividis.

Habitat, Brazil, Espirito Santo (Pr. Max.)

Figured, Pl. Col. 42, fig. 2 ♂; Sw. Orn. Draw. pl. 6 ♂.

7. CALLISTE AURULENTA (LAFR.)

♂ *Tanagra* (*Aglaia*) *aurulenta*, Lafr. Rev. Zool. 1843, p. 290. — *Callospiza pulchra*, Tschudi, Wieg. Arch. 1844, p. 285. — *Calliste aurulenta*, Gray's Gen. App. p. 17.

♂ Aureo-flavissima, dorso medio nigro-maculata; fronte, auribus, rectricibus, remigibusque atris; harum secundariis tectricibusque aureo-viridi marginatis; subtus aureo-castanea.

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Long. alæ, 3.0.

♀ Mari similis, sed subtus flavior.

Habitat, New Granada, Santa Fé de Bogota.

Figured, Tschudi's Faun. Per. pl. 18, fig. 2.

8. *CALLISTE ARTHUSI* (LESSON).

Tanagra arthus, Less. Illus. Zool. pl. 9.—*Calliste arthus*, Bp. Consp. Av. p. 235.

♂ *C. aurulentæ*, simillima, sed subtus brunneo tincta; gulâ, sicut caput suprâ, aureo-flavâ; abdomineque medio citrino-flavo.

Habitat Venezuela, Curiana near Cariaco (Dyson).

Figured, Lesson, Ill. Zool. pl. 9.

M. Lesson states this bird to be from Mexico, but the skins I have seen have been Venezuelan; and Mr. Dyson informs me, he found it on the estate of Curiana, near Cariaco, 2000 feet above the sea.

9. *CALLISTE ICTEROCEPHALA* (Bp.)

PLATE LXX. FIG. 1.

Calliste icterocephala, Bp. Compt. Rend. de l'Ac. Sc. Par. 1851, p. 76.

♂ Suprà subtusque flavissima; dorso summo alarumque tectricibus nigro striatis; pennis caudâque nigris, viridi limbatis; gutture et circulo circum collum argenteis; rostro pedibusque nigris.

Habitat, Ecuador, Punta Playa (Bourcier).

This beautiful species, which is figured pl. lxx., seems to come nearest to *Calliste aurulenta*, though the Prince Canino compares it with *Calliste zanthocephala* (Tsch.) It may be distinguished from all other species of the genus by the peculiar bluish silver-like colour of the throat, which is continued round the back of the neck, and forms a complete collar. M. Bourcier found this species in the valley of Punta Playa, south of Quito. The specimen figured is the property of Mr. Edward Wilson—one other is in the Parisian National Collection.

SYNOPSIS OF THE

10. CALLISTE THORACICA (TEMM.)

Tanagra thoracica, *Temm.* Pl. Col. pl. 42, fig. 1.—*Calliste thoracica*,
Gray's Gen. p. 366, No. 4.

♂ Suprà infràque lætè viridis, suprà nigro striata; vertice orbitis que
cyaneis; fronte et maculâ gulari atris; pectore, tectricibus alarum mi-
noribus mentoque aurantiis; abdomine medio crissoque flavescens.

Long. alæ, 2.5.

♀ Coloribus minùs vividis, maculâ thoracicâ minus atrâ.

Habitat, Brazil (*Temminck*); Rio de Janeiro.

Figured Pl. Col. 42, fig. 1.

C.—CALLISTÆ PUNCTIGERÆ.

11. CALLISTE SCHRANKI (SPIX.)

Tanagra schranki, *Spix.* Av. Bras. vol. ii. p. 38.—*Aglaia melanotis*, *Sw.* Av. in
Men. p. 355.—*Calliste schranki*, *Gray's Gen.* p. 366, No. 17.

♂ Viridis, suprà nigro striata; fronte et regione ophthalmicâ atris;
vertice aurulentâ; uropygio et corpore medio subtùs flavis.

Long. alæ, 2.7½.

♀ Coloribus minùs vividis.

Habitat, Yuracares, Bolivia (*D'Orb.*); Eastern Peru (*Tsch.*);
Rio Negro (*Verraux.*)

Figured *Spix.* pl. 51, vol. ii.; *D'Orb. Vog. l'Am. m.* pl. 24, fig. 1.

12. CALLISTE CHRYSOPHRYS, SCLATER.

? *Callospiza punctata*, *Tschudi*, *Wieg.* Arch. 1844, p. 286.—? *Calliste guttulata*,
Bp. *Compt. Rend. Ac. Sc. Par.* 1851, p. 76.—*Calliste chrysophrys*, *Sclater*, *Jard.*
Orn. Cont. 1851, pt. i. pl. lxxix. fig. 2.

♂ Suprà viridis, nisi in uropygio nigro maculata; infrà albida
præcipùe in pectore nigro punctata; fronte orbitisque aureo-flavis.

Long. alæ, 2.8.

Habitat, Venezuela (*Dyson*); Trinidad, New Granada; Santa
Fé de Bogota and Anolaima.

Figured, *Orn. Cont.* pl. lxxix. fig. 2.

I am still uncertain whether the Prince Canino's species is iden-
tical with mine. His description was taken from a single specimen

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brought by M. Bourcier from the valley of Mindos, north-west of Quito, and placed by him in the Museum of the Jardin des Plantes.

13. *CALLISTE PUNCTATA* (LINN.)

Tanagra punctata, *Linn. Syst. Nat. i. p. 316.* — *Calliste punctata*, *Gray's Gen. p. 366, No. 12.*

♂ Similis *C. chrysophryi* sed minor, orbitis flavis carens, punctis minoribus.

Long. alæ, 2.5.

♀ Minor, punctis pænè obsoletis.

Long. alæ, 2.3.

Habitat, Cayenne and Guiana.

Figured Edward's pl. 262; *Pl. Enl. 133, fig. 1*; *Desm. Tan. pl. 8 ♂, pl. 9 ♀.*

14. *CALLISTE RUFIGULA* (Bp.)

Tanagrella rufigula, *Bp. Compt. Ren. Ac. Sc. Par. Jan. 20, 1851.*

Suprà nigra; interscapuliis alisque virescente marginatis, uropygio virescente immaculato; subtùs gulâ crissoque rufis; pectore lateribusque virescentibus nigro punctatis; abdomine medio albido.

Habitat, Calacali, north of Quito, Ecuador, Bourcier.

Figura nulla!

The Prince Canino considers this a *Tanagrella*, but it appears to me to form one of the *Callistæ punctatæ*. In form and general style of colouring it approaches very near the last species. Indeed, the under surfaces of the two birds present an entirely similar appearance, with the exception of the rufous throat and crissum of *C. rufigula*; and although in the plumage above the upper half of *C. rufigula* is clouded over with black, the feathers are still minutely bordered with green as in *C. punctata*.

15. *CALLISTE XANTHOASTRA*, SCLATER.

Calliste xanthogastra, *Sclater, Jard. Orn. Cont. 1851, part i.*

C. similis C. punctata; sed minor, rostro minore, ventre flavo.

Long. alæ, 2.4½.

SYNOPSIS OF THE

Habitat, Rio Negro (Verraux, No. 8622.)

Figura nulla!

16. CALLISTE VIRESCENS, SCLATER.

Calliste virescens, *Sclater*, *Jard. Orn. Cont.* 1851, part i.

Supra infràque herbaceo-virescens; punctis paucis minutis in capite et pectore nigris; alis caudàque nigris cærulescente limbatis; ventre medio crissoque flavescens.

Long. alæ, 2. $2\frac{3}{4}$.

Habitat, Cayenne.

Figured, *Jard. Orn. Cont.* 1851, part i. pl. lxxix fig. 1.

Since I described this species, I have obtained another specimen, apparently more adult, which however only differs from the one figured in the absence of the bluish band between the wings.

D.—CALLISTÆ PROCNOPIDES.

17. CALLISTE NIGROVIRIDIS (LAFR.)

Tanagra nigroviridis, *Lafr.* *Rev. Zool.* 1843, p. 69. — *Calliste nigroviridis* *Gray's Gen.* p. 366. No. 23.

♂ *Atra*; corporis subtus, capitis, cervicis, uropygiique plumis cyaneo terminatis; alis caudàque nigris cæruleo limbatis.

Long. alæ, 3. 0.

♀ *Minor*, coloribus minùs splendentibus.

Habitat, Venezuela (Dyson); New Granada, Santa Fé de Bogota; Calacali, Ecuador (Bourcier).

Figured, *Mag. de Zool.* 1843, pl. 43.

Mr. Dyson, who has kindly furnished me with some localities of Tanagers, observed by himself in South America, informs me, that he found this species in company with *Calliste chrysophrys* and *atricapilla* (Lafr.), near La Colonia di Tovar, in the province of Caraccas, 8000 feet above the sea. It is common in collections from Bogota. The Prince Canino says, in describing this species as brought from Ecuador by M. Bourcier, '*Pectore nigerrimo.*' This does not agree with the true *C. nigroviridis*, which has the breast

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feathers pointed with cyanean blue; so if the description is right, the species is probably different.

18. *CALLISTE THALASSINA* (STRICKLAND).

Calliste thalassina, *Strickland*, *Ann. Nat. Hist.* xiii. 1844, p. 419. — *Aglaia wilsoni*, *Lafr. Revue Zoolog.* 1847, p. 71.

Capite gulâque cyaneis; regione auriculari cum marginibus alarum thalassinis; pectore dorsoque summo atris; dorso postico lateribusque ventris lætè cæruleis; abdomine medio crissoque albis.

Long. alæ, 2.7.

Habitat, Guaunco, Peru (*Lafr.*); Rio Negro (*Verraux*, No. 8616.)

Figured, *Icon. Orn.* pl. 56, fig. 2. My specimen seems to be New Granadian.

19. *CALLISTE CYANOCOLLIS* (D'ORB. and LAFR.)

(1837) *Aglaia cyanicollis*, *D'Orb. and Lafr. Mag. de Zool.* 1837, p. 33. —

(1838) *Aglaia cæruleocephala*, *Sw. An. in Men.* p. 356.

Atra; capite toto, gulâ et remigibus externè cæruleis; dorso postico, alarumque tectricibus, vividè aureo-*viridibus*.

Long. alæ, 2.6½.

Habitat, Yuracares, Bolivia (*D'Orb.*); Eastern Peru (*Tschudi*); Anolaima, New Granada.

Figured, *D'Orb. Voy. l'Am. MÉR.* pl. 25, fig. 1.

20. *CALLISTE LABRADORIDES* (BOISS.)

Aglaia labradorides, *Boiss. Rev. Zool.* 1840, p. 67. — *Calliste labradorides*, *Gray's Gen.* p. 366, No. 25.

Metallico-virescens; fronte, lineâ latâ a vertice ad dorsum medium, remigibus rectricibusque nigris, his cærulescente limbatis; crisso rufescente.

Long. alæ, 2.7.

Habitat, Santa Fé de Bogota.

Figured, *Voy. de la Venus*, Ois. pl. 5 fig 2.

SYNOPSIS OF THE

21. CALLISTE XANTHOCEPHALA (Tschudi).

Callospiza xanthocephala, *Tsch.* Wieg. Arch. 1844, p. 235. — *Calliste xanthocephala*, *Gray's Gen. App.* p. 17.

Lætè viridis; fronte, loris, gulâ dorsoque summo nigris; dorso medio alisque nigris viridi marginatis; ventre medio crissoque pallidè rufis; capite toto aureo.

Long. alæ, 2.4.

Habitat, East Peru (Tschudi.)

Figured, Tschudi Faun. Per. pl. 17, fig. 2.

22. CALLISTE RUFICERVIX (Fl. Prevost).

Aglaia ruficervix, *Fl. Prev. Voy. de la Venus*, Ois. t. v. fig. 1.

Atro-cyanea; capite purpurascete, nuchâ rufo-castaneâ; abdomine medio crissoque pallidè rufescentibus.

Long. alæ, 2.7.

Habitat, Santa Fé de Bogota.

Figured, *Voy. de la Venus*, Ois. t. v. fig. 2.

23. CALLISTE LEUCOTIS, SCLATER.

Calliste ruficervix, *Bp. Compt. Rend. Ac. Sc. Par.* 1850, p. 77.

♂ Plumis basi plumbeis; abdomine crissoque pallidè rufescentibus; capistro loris et fasciâ transversali verticis nigris; fronte posticè cerviceque atro-cyaneis; nuchâ rufo castaneâ; maculâ utrinque auriculari, tectricibus alarum minoribus, plumisque axillaribus albis.

Habitat, Ecuador (Bourcier).

The above specific character is Prince Canino's description of a *Calliste*, brought from the Republic of Ecuador by M. Bourcier, and which the Prince Canino identifies with *C. ruficervix* (Fl. Prevost). But it appears to me to be a different, though nearly affine species, as *Calliste ruficervix* has no white on the ear-coverts or wings. I have therefore given it the name of *leucotis*. Upon show-

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ing to M. Bourcier a specimen of the true *ruficervix*, he informed me, that the one he had brought home, which Prince Canino had described, was decidedly different, having white ear-coverts.

24. *CALLISTE ATROCÆRULEA* (Tschudi).

Procnopis atrocærulea, Tsch. Wieg. Arch. 1844, p. 235. — *Calliste atrocærulea*, Gray's Gen. Supp. p. 17.

Suprà atra; capite colloque viridi-cæruleis, sincipite maculâ dilutè stramineâ nitente; dorso nigerrimo; uropygio cæruleo; alis nigris ex violaceo cæruleo marginatis; tectricibus superioribus cæruleis resplendentibus, subtùs cærulea, gutture cinereo lavato.

Habitat, Eastern Peru (Tsch.); Bolivia (Bridges).

The only two specimens I have seen of this species are in the Knowsley collection: they were brought from Bolivia by Mr. Bridges. The species appears to me to come very near *Calliste ruficervix*; indeed, the Prince Canino (Compt. Rend. Ac. Sc. Par. 1851, Jan. 20), states them to be synonymous; but the present species may be distinguished by its black back, and want of the pale rufous colouring of vent and crissum.

25. *CALLISTE ATRICAPILLA* (LAFR.)

T. (*Aglaia*) *atricapilla*, Lafr. Rev. Zool. 1843, p. 290. — *Calliste atricapilla*, Bp. Consp. Av. p. 235, No. 26.

♂ Nitidè griseo-cærulea, capite nigro; pectore toto gulâque glauco-viridibus; pennis caudâque nigris griseo-cæruleo limbatis.

Long. alæ, 2.9.

♀ Metallico-virescens; pectore mari similie sed obscurior; ventre medio crissoque griseo-albescentibus.

Habitat, New Granada (Lafr.); Popayan (Mus. Derb.); Venezuela, La Colonia di Tovar (Dyson).

Figura nulla!

SYNOPSIS OF THE

26. CALLISTE ARGENTEA (Tschudi).

Procnopis argentea, *Tsch.* *Wieg. Arch.* 1844, p. 285. — *Calliste argentea*, *Gray's Gen. Supp.* p. 17.

Suprà e cæruleo cinerea, splendore argenteo, pileo nigerrimo; alis nigris è cæruleo limbatis; subtus nigra, gutture stramineo-fusco, hypochondriis dorso concoloribus.

Habitat, Wood Region of North and Middle Peru (Tsch).

Figured, *Faun. Per.* pl. 14, fig. 2.

This species I have never seen. The description agrees tolerably well with the last species, except the expression '*gutturè stramineo-fusco.*' The throat in *C. atricapilla*, both ♂ and ♀ is bright green.

27. CALLISTE VASSORI (Boiss.)

T. (*Euphonia*?) *vassorii*, *Boiss. Rev. Zool.* 1840, p. 4. — *Aglaia diva*, *Less. Echo du M. S.* p. 57. — *Calliste vassorii*, *Gray's Gen.* p. 366, No. 26.

♂ Vividè cærulea; fronte, loris, caudâ, alisque nigris; harum tetricibus cæruleo marginatis.

Long. alæ, 2.9.

♀ Griseo-cineracea, subtus clarior.

Habitat, Santa Fé de Bogota.

Figured, *Mag. de Zool.* 1841, pl. 23 ♂.

28. CALLISTE MELANONOTA (VIEILL.)

(1819) *Tanagra melanonota*, *Vieill. Nov. Dict. d'H. N.* xxxii. p. 407. — *Tanagra vittata*, *Temminck*, *Pl. Col.* 48.

♂ Lætè cærulea; dorso medio nigrescente; alis caudâque nigris cæruleo limbatis; vittâ latâ oculari cum fronte atrâ; infra leviter brunnea.

Long. alæ, 3.0.

♀ Mari similis sed suprâ nigrescens; capite uropygioque cærulescentibus.

Habitat, South Brazil; Paraguay (Azara); Maldonado (Darwin).

Figured, *Pl. Col.* 48, fig. 1 ♂, fig. 2 ♀.

TANAGRINE GENUS *CALLISTE*.

29. *CALLISTE CASTANEOVENTRIS*, SCLATER, Sp. Nov.

Suprà fusco-cærulea, pennis caudâque nigris fusco-cæruleo limbatis; loris et regione oculari atris; infrâ brunneo-castanea; pedibus mascillâque nigris, mandibulâ brunnescente.

Long. tota, 6.4; alæ, 3.1½.

Habitat, Bolivia (Bridges).

This new species is closely allied to the preceding; but may be distinguished by the lengthened form of the beak, as well as by the uniform dusky blue of the upper surface, and deep chesnut brown of the lower. It is well provided with rictal bristles, as *C. melanota*. I have seen only one specimen, which is in the collection of the Earl of Derby, to whose kindness I am indebted for an opportunity of examining and describing it. It was brought by Mr. Bridges from Bolivia.

E.—*CALLISTÆ FLAVÆ*.

30. *CALLISTE FLAVA* (GMEL.)

Tanagra flava, *Gm. Syst. Nat. i. p. 896.*—*Tanagra chloroptera*, *Vieill. Nov. Dict. d'H. N. xxxii. p. 407.*—*Tanagra formosa*, *Vieill. Enc. Meth. p. 773.*—*Callisto flava*, *Gray's Gen. p. 366, No. 15.*

♂ Pallidé fulvo-flava, subtùs rufescentior; vittâ latâ a mento ad medium ventrem atrâ; alis caudâque nigris cærulescente limbatis.

Long. alæ, 2.8½.

♀ Ochracco-virescens; infrâ albescentior; ventre imo crissoque rufescentibus.

Habitat, Brazil, Pernambuco (Swains.); Rio de Janeiro, Paraguay (Azara).

Figured, Sw. Zool. Ill. N. S. pl. S. N. ♂

31. *CALLISTE RUFICAPILLA*, SCLATER, Sp. Nov.

♂ Virescens; loris capitisque lateribus nigris; pileo ferrugineo; subtùs aliquòt cærulescens; crisso testaceo; maxillâ pedibusque nigris, mandibulâ albicante.

SYNOPSIS OF THE

Long. alæ, 3.0.

♀ *Infrà non cærulescens* ; abdomine medio albido.

Habitat, New Granada, Santa Fé de Bogota.

Figura nulla

32. CALLISTE CHRYSONOTA, SCLATER.

? *Tanagra cayana*, *Linn. Syst. Nat.* p. 315.—? *Fringilla autumnalis*, *Linn. Syst. Nat.* i. p. 320.—*Tanagra cayana*, *Desm. Tan. t. x. (Certè)*.—*Calliste chrysonota*, *Sclater, Jard. Orn. Cont.* 1850, pl. li.

♂ Pallidè nitido-flava pileo in ferrugineum trahente ; fronte, loris, et regione auriculari nigris ; gulâ purpurascente ; pennis caudâque nigris cæruleo limbatis.

Long. alæ, 2:7½.

Junior, pileo ferrugineo carens ; suprâ fusco-viridis ; uropygio subtùsque pallidior ; ventre crissoque rufescentibus ; *Calliste flavæ* ♀ simillima, sed minor.

Long. alæ, 2.5½.

Habitat, Cayenne and Demerara.

Figured, *Desm. Tan. t. x.* ♂ (haud adult), *Orn. Cont.* 1850, pl. li. ♂ (haud adult).

Believing the previous species, which I have now named *Calliste ruficapilla*, to be the true *cayana* of Linnæus, I gave the present one the name *chrysonota* ; but having obtained more specimens, I find that *this* is the common Cayenne bird of the group, while the previous one is its New Granadian representative ; and I am thereby induced to believe, that the present is probably the one which ought to bear the name *cayana*. Yet it is so difficult to reconcile Brisson's description, from which Linnæus formed his species, with either, that I think it less likely to create further confusion, to keep for the present the new name *chrysonota* for this species.

It may be distinguished from *C. ruficapilla* by its smaller size, black front, and peculiar pale buffy yellow colouring of the back. The specimen figured in the Contributions last year was not quite adult. The adult ♂ has a deep purplish blue on the throat, and bluish edges to the wing and tail-feathers.

TANAGRINE GENUS *CALLISTE*.

33. *CALLISTE CUCULLATA* (SWAINS.)

Aglia cucullata, Sw. Orn. Draw. pl. 7. — *Calliste cucullata*, Gray's Gen. p. 366, No. 9.

♂ Viridescens, infra rufescente mixta; pileo nigro-cinnamomeo; pectore-cærulescente.

♀ Coloribus minùs lætispectore non cærulescente.

Long. alæ, 2.8½.

Habitat, Brazil?

Figured, Orn. Draw. pl. 7. ♂

I have only seen what is apparently the ♀ of this species—it is in Mr. Strickland's collection. It may be distinguished from its affines, by the dark cinnamon of the head and larger size of the beak.

34. *CALLISTE CASTANONOTA*, SCLATER.

Tanagra gyrola, Pr. Max. Beit. zur. Nat. iii. p. 471.

♂ Suprà castanea; oculorum ambitu lorisque nigris; alarum tectricibus, dorsoque postico pallidè flavis; pennis caudâque nigris cærulescente limbatis; infra nitidè viridis; ventre summo cærulescente, imo medio albicante; crisso tibiisque rufis; rostro nigro; pedibus fuscis.

Long. tota, 5.5.; alæ, 3.1½.

♀ Mari similis; sed dorso nigro, alarum tectricibus virescentibus nec flavis (Pr. Max.)

Habitat, South Brazil, Rio Grande do Sul (Pr. Max.)

Mr Gray refers Prince Maximilian's bird to *Calliste peruviana*, Desm., which it resembles very closely; but the back in the latter species is of a fine glossy black. The description given above for the female of the present species would in that respect suit *Calliste peruviana* ♂; but Prince Maximilian describes his *T. gyrola* ♀ as having the wing-coverts green, whereas in *Calliste peruviana* ♂ they are of the same pale yellow as in the present species. The above description is taken from a specimen in Mr. Strickland's collection; I have seen others in the Brussels and Liverpool Museums.

SYNOPSIS OF THE

35. CALLISTE PERUVIANA (DESM.)

Tanagra peruviana, *Desm. Tan.* pl. 11. — *Aglaia melanota*, *Sw. Orn. Draw.* 31, 43.
— *Calliste peruviana*, *Gray's Gen.* p. 366, No. 8.

♂ Loris interscapulisque aterrimis; capite castaneo; dorsi dimidio postico alarumque tectricibus pallidè flavis; infra læte viridis, tectricibus caudæ inferioribus rufis.

Long. alæ, 2.9.

♀ Interscapulis nigrescenti-viridibus nec atris; dorso postico alarumque tectricibus viridibus nec flavis; capite subtusque minus lætis; ventre medio flavescente albido.

Habitat, Peru (Desm.)? South Brazil, Rio de la Plata.

Figured, *Desm. Tan.* pl. 11 ♂; *Sw. Orn. Draw.* pl. 31 ♂, pl. 43 ♀.

F. — CALLISTÆ LAMPRÆ.

36. CALLISTE CYANOPTERA (SWAINS.)

Aglaia cyanoptera, *Sw. Orn. Draw.* pl. 8. — *Tanagra argentea*, *Lafr. Rev. Zool.* 1843, p. 69. — *Calliste cyanoptera*, *Gray's Gen.* p. 366, No. 10.

Calliste argenteo-virescens; capite toto, gulâ, alis, caudâque atris; remigibus reatricibusque cæruleo limbatis.

Long. alæ, 3.0.

Habitat, Venezuela.

Figured, *Sw. Orn. Draw.* pl. 8.

37. CALLISTE LARVATA (DU BUS).

Calliste larvata, *Du Bus, Esq. Orn.* pl. 9. — *Aglaia fanny*, *Lafr. Rev. Zool.* 1847, p. 72.

♂ *Calliste capistro*, loris, collo inferiore, interscapulio, pectore, alis et caudâ suprâ nigerrimis; fronte, genis, temporibus, humeris et epigastrii lateribus nitidè azureis; occipite nuchâ et lateribus capitis ponè tempora virescenti-stramineis; gula rubiginosâ; tergo, uropygio, ventris lateribus et tectricibus alarum minoribus cyaneis in glaucum vergentibus; epigastrio albo; ventre et crisso fulves-





C.D.M.S.
1851.

1. *Calliste ictercephala*, Bon.
2. *C. lunigera*, Sclater.

TANAGRINE GENUS *CALLISTE*.

centi-albidis; remigibus, tectricibus alarum mediis et majoribus, et tectricibus virescenti aureo extus marginatis. — (Du Bus).

♀ Coloribus minus vividis. — (Du Bus).

Habitat, Tabasco, Mexico (Ghiesbriecht); Veragua, Central America (Warzewickz.); Chamalican River, Spanish Honduras (Dyson).

Figured, Esq. Orn. pl. 9; Icon. Orn. pl. 56, fig. 1.

The only examples I have seen, were brought from Chirique in Veragua by M. Warzewickz.

38. *CALLISTE LUNIGERA*, SCLATER, Sp. Nov.

PLATE LXX. FIG. 2.

Tanagra, *Verraux's* Catalogue, No. 8620.

Capite et regione oculari auricularique pulcherrimè aureo-citrinis; dorso superiore, fronte, gulâ loris, pennis, caudâque, et maculâ lunari utrinque post aures atris; dorso inferiore, alarumque tectricibus minoribus, nitidè cæruleo-viridibus; secundariis tertiariisque tenuitè cæruleo marginatis; pectore nitidè virescente; ventre omninò et crisso rubescenti-brunneis; rostro nigro; pedibus pallidè brunneis.

Long. tota, 5.2.; pennæ, 2.7½.

Habitat, Rio Negro (*Verraux*).

This bird was received by Mr. Edward Wilson from M. *Verraux*; it is the only individual I have seen of the species. I am much indebted to Mr. Wilson for the loan of this and many other rare species described in the present paper.

39. *CALLISTE LAMPROTIS*, SCLATER, Sp. Nov.

Capite summo vividè rubro aurantio regione oculari cum gulâ et cervice ponè atris; regione auriculari flavissimâ; interscapuliis alis caudâque nigris cærulescente-viridi limbatis; dorso postico pectore et lateribus ventris purè cærulescenti-viridibus; ventre medio crissoque pallidè rufescentibus; rostro nigro; pedibus fuscis.

Long. tota, 5.3.; alæ, 2.9.

Habitat, Bolivia (*Bridges*).

This species is without doubt very nearly allied to the last, but there are differences between them sufficient to prevent their being

SYNOPSIS OF THE

considered as merely varying from sex or age. The whole side of the head, which in the last species presents the well-defined black marking whence the bird derives its name, is in the present species covered with a patch of the most brilliant king's-yellow. The general size of the two species is nearly the same, but in *C. lamprotis* the bill is smaller, the *orange* of the head is of a more reddish tinge, the eye is entirely surrounded by black, and the whole of the wing-feathers, including the primaries, are lined with green. The only specimen I have seen is in the British Museum. For an opportunity of examining and taking a description of it, I am much indebted to Mr. G. R. Gray. It was brought from Bolivia by Mr. Bridges.

40. CALLISTE PARZUDAKII (LAFR.)

Tanagra parzudakii, *Lafr. Rev. Zool.* 1843, p. 97. — *Calliste parzudakii*, *Gray's Gen.* p. 366, No. 27.

Capite supra aureo; lateribus cum fronte ruberrimis; loris, gulâ, maculâ subauriculari, interscapulari, remigibus, rectricibusque atris; tectricibus alarum, uropygio, subtùsque aurato-viridibus, corpore subtùs rufescente tincto.

Long. alæ, $3.2\frac{1}{2}$.

Habitat, Santa Fé de Bogota.

Figured, *Mag. de Zool.* 1843, pl. 41.

This species may be distinguished from all others of the genus, by the brilliant red of the front and sides of the head.

41. CALLISTE CHRYSOTIS (DU BUS).

Calliste chrysotis, *Du Bus, Esq. Orn.* pl. 7.

Nitidè viridis; capite, loris, caudâque atris; pennis interscapulariisque atris nitido-viridi marginatis; fronte et regione ophthalmicâ fulvo-auratis; ventre medio crissoque rufo-castaneis.

Habitat, Peru (Du Bus), Rio Negro (Verraux).

Figured, *Esq. Orn.* pl. 7.

TANAGRINE GENUS *CALLISTE*.

G. — *CALLISTÆ GYROLÆ*.

42. *CALLISTE GYROLA* (LINN.)

Tanagra gyrola, Linn. Syst. Nat. i. p. 315. — *Aglaia chrysoptera*, Sw. An. in Men. p. 356. — *Calliste gyrola*, Gray's Gen. p. 366, No. 5.

♂ *Lætè viridis*; capite mentoque rufis; maculâ flexurali aureâ; ventre cærulescente.

Long. alæ, 2.7.

Junior, *viridis unicolor*, capite rufo carens.

Habitat, Cayenne and Demerara.

Figured, Desm. Tan. pl. 6 ♂; Pl. Enl. 133, fig. 2 ♂; Edwards, pl. 23; Desm. Tan. pl. 7 (avis junior?)

43. *CALLISTE GYROLOIDES* (LAFR.)

(1838) *Aglaia peruviana*, Sw. An. in Men. p. 356. — *Aglaia gyrola*, D'Orb. and Lafr. Mag. de Zool. 1847, p. 32. — *Callospiza gyrola*, Tsch. Wieg. Arch. 1844, p. 286. — (1844) *Calliste cyaniventris*, Gray's Gen. p. 366, No. 19. — (1847) *Aglaia gyroloides*, Lafr. Rev. Zool. 1847, p. 279. — *Calliste gyroloides*, Bp. Consp. Av. p. 234.

Similis *C. gyrolæ*, sed uropygio etiam cærulescente, alis longioribus.

Long. alæ, 3.1½.

Habitat, Peru (W. Hooker); Wood region of North and Middle Peru (Tschudi); Yuracares, Bolivia (D'Orb.); New Granada, Anolaima, and Santa Fé de Bogota.

Figura nulla!

44. *CALLISTE DESMARESTI* (GRAY).

Tanagra gyrola, Swans. Zool. Ill. N. S. pl. 28. — (1844) *Calliste desmaresti*, Gray's Gen. p. 366, No. 6. — (1847) *Aglaia viridissima*, Lafr. Rev. Zool. 1847, p. 277.

Omnino *viridis*; capite mento tibiisque lætè rufis.

Long. alæ, 2.7.

Habitat, Trinidad; Venezuela, Caraccas (Hartlaub).

Figured, Sw. Zool. Ill. N. S. pl. 23.

H.—CALLISTÆ CÆRULEO-NIGRÆ.

45. CALLISTE BRASILIENSIS (LINN.)

Tanagra brasiliensis, *Linn. Syst. Nat.* i. p. 316. — (?) *Tanagra barbadensis*, *Kuhl. Ind. ad Pl. Enl.* p. 3. — (?) *Calliste albiventer*, *Gray's Gen.* p. 366, No. 11. — *Calliste brasiliensis*, *Gray's Gen.* p. 366, No. 11. — *Callospiza barbadensis*, *Bp. Comp. Rend.* 1851, p. 30.

♂ Dilutè cyanea; occipite, dorso medio, rectricibus, remigibusque atris; harum primariis cyaneo marginatis; ventre medio, crisso, plumisque axillaribus albis.

Long. alæ, 2.3½.

♀ Coloribus minùs intensis.

Long. alæ, 2.0½.

♂ Junior, tectricibus alarum minoribus albis.

Long. alæ, 2.3.

Habitat, Brazil generally (Pr. Max.).

Figured, *Pl. Enl.* 179, fig. 1; *Pl. Enl.* 155, fig. 1?

The bird figured *Pl. Enl.* 155, fig. 1, to which Kuhl gave the specific name "*barbadensis*," and Mr. Gray "*albiventer*," is probably this. It may however be = *C. flaviventris* ♀, as Seba, the original authority for the species states it to be "*ex insulis Berbicensibus*," which Brisson mis-copied into "*Barbadensibus*." Hence the name "*barbadensis*." I cannot imagine why the Prince Canino should have preferred this name, giving a wrong locality as it does, to the older Linnæan and most correct specific designation of "*brasiliensis*."

46. CALLISTE NIGRICINCTA (Br.)

Aglaia nigricincta, *Bp. Proc. Zool. Soc.* 1837, p. 121. — *Calliste nigricincta*, *Gray's Gen.* p. 366, No. 16.

Similis *C. brasiliensi*; sed minor, rostro minore, capite et caudæ tectricibus virescente tinctis.

Habitat, Peru (*Non vidi*).

Figura nulla!

TANAGRINE GENUS *CALLISTE*.

47. *CALLISTE FLAVIVENTRIS* (VIEILL.)

Tanagra mexicana, *Linn. Syst. Nat. i. p. 315.* — *Fringilla tricolor*, *Linn. Syst. Nat. i. p. 323.* — *Tanagra flaviventris*, *Vieill. Nov. Dict. d'H. N. xxxii. p. 411.*

♂ Intensè cyanca; occipite, dorso, alis, caudâque atris; maculâ flexurali thalassinâ; abdomine et crisso flavis.

Long. alæ, 2.9.

♀ Abdomine flavescente-albido.

Habitat, Cayenne; Trinidad; Barra do Rio Negro (Wallace).

Figured, *Desm. Tan. pl. 5; Pl. Enl. 290, fig. 2.* Edwards, pl. 350.

I have not retained the Linnæan name *mexicana*, because it indicates a wrong locality.

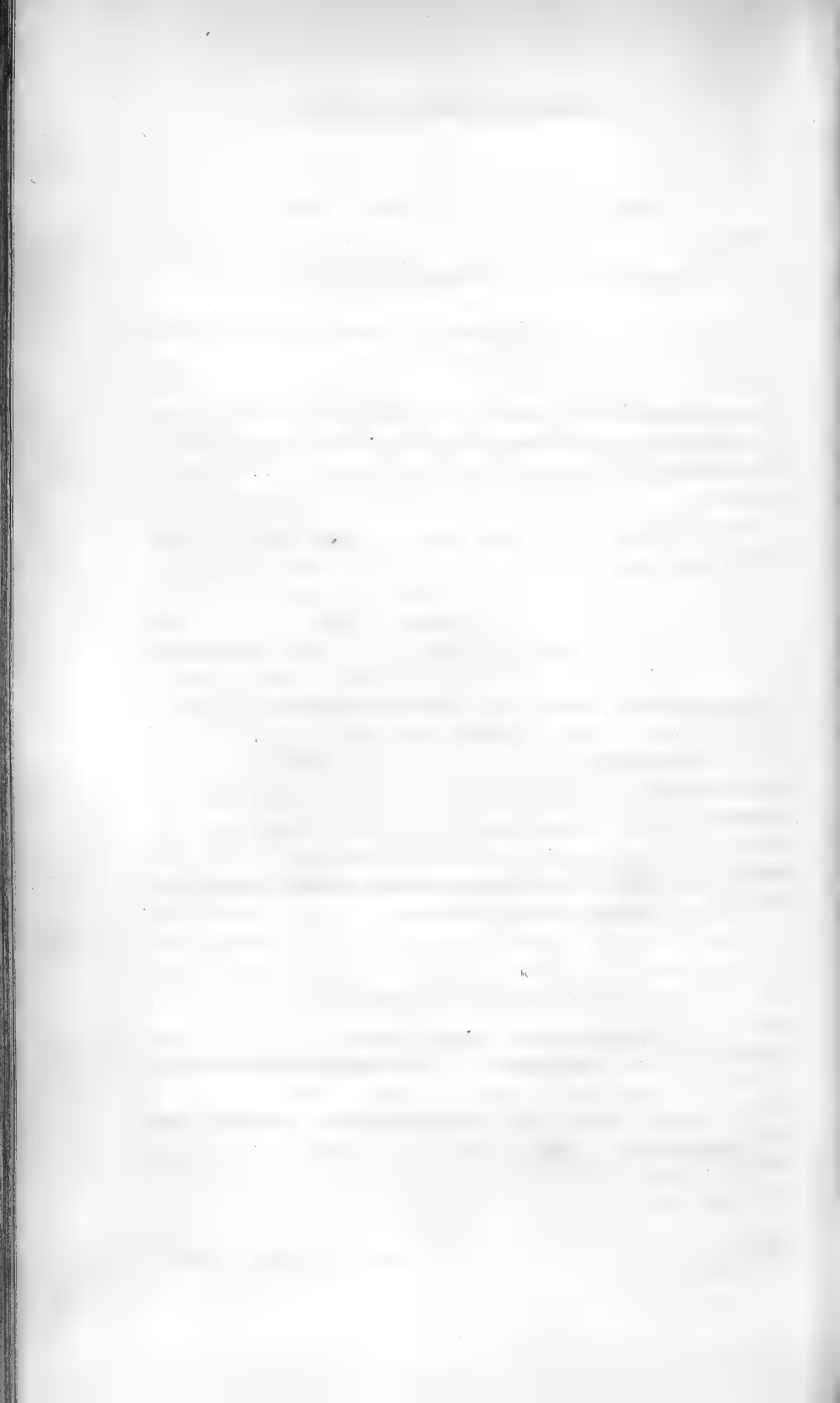
48. *CALLISTE BOLIVIANA* (Bon.)

Aglaiia mexicana, *D'Orb. and Lafr. Mag. de Zool. 1837.* — *Tanagra flaviventris*, *D'Orb. Voy. l'Am. m. p. 270.* — *Callospiza boliviana*, *Bp. Compt. Rend. Ac. Sc. Par. 1851, p. 80.*

Minor; nigricans; fronte tantùm, genis, gulâ, pectore, lateribus, uropygio humerisque cyaneis; ventre flavissimo (Bp.)

Long. alæ, 2.7½.

Habitat, Guarayos and Yuracares, Bolivia (D'Orb.); Lucia (Mus. Derb.) A skin received from Mr. Wallace, at Copiu, near Para, July, 1849, may belong to this species. It differs from the preceding only in the want of the thalassine flexure-spot and shorter wing. But it is singular, if this is so, that on the other hand from Barra do Rio Negro, high up in the interior, Mr. Wallace has remitted the Cayenne species. Specimens in the British Museum marked (1843) 5, 24, 94, are said to be from Lima.



ON TWO NEW SPECIES OF *EUPHONIA*, DESM.,
ALLIED TO *E. CHLOROTICA*.

By H. E. STRICKLAND.

THE genus *Euphonia* (so named by Desmarest, but erroneously written *Euphone* by some authors) has been much entangled with the genera *Calliste* and *Tanagra*, by those who have overlooked its true characters. It is, however, a very strongly marked genus of the great family *Tanagridæ*, and presents no indications of a transition into other genera. The remarkable and unique anatomical structure of the intestines, which are wholly devoid of a stomach (that organ being represented by a minute tubercle), proves a wide physiological separation from the other *Tanagridæ*. The denticulations of the upper mandible, varying from two to four in number in different species, but never, I believe, reduced to unity, afford a convenient external character for determining the genus.

I have before me five species of *Euphonia*, all of which agree in having the throat and upper parts glossy black, the front and lower parts being yellow. From this similarity in plumage, they have been more or less confounded under the specific name of *chlorotica*, which belongs to one of them. Specimens of all these species occur in Mr. Sclater's collection and in my own.

1. *EUPHONIA CHALYBEA*, MIKAN.

Tanagra chalybea, *Mikan*, Del. Faun. Bras. pl. 3. — *Euphone ænea*, *Sundevall*, in *Vetensk. Acad. Handl.* 1833, pl. xi. fig. 4. — *Euphone pardalotus*, *Lesson*, in *Écho Mond. Sav.*

Large; greenish black above; mandibles tumid; primaries narrowly margined with yellow externally; no white on rectrices; wing, 2.8.

Habitat, Brazil.

Note.— Prince of Canino has made a new genus of this species from its tumid bill, *Pyrrhuphonia*. — P. L. S.

ON TWO NEW SPECIES OF *EUPHONIA*.

2. *EUPHONIA CHLOROTICA*, LINN.

Tanagra cayanensis nigro-lutea, *Briss. Orn.* vol. iii. p. 34, pl. 2, f. 3. — *Tanagra chlorotica*, *Linn. Syst. Nat.* vol. i. p. 317. — *Tanagra violacea*, β *Lath. Ind. Orn.* p. 430. — *Euphone chlorotica*, *Sundevall*, in *Vetensk. Acad. Handl.* 1833, pl. x. f. 2, 3.

Purplish black above; yellow front extending to the summit of the eye; lower parts, tail-covers included, pure yellow; basal half of inner web of all the remiges, white, with a nearly transverse termination; a post-medial square white spot on the inner web of the external pair of rectrices. Beak moderate, whitish at base; wing, $\dot{2}.i$.

Habitat, Cayenne (Brisson), Brazil (Sundevall).

3. *EUPHONIA TRINITATIS*, STRICKLAND, SP. NOV.

Bluish-black above; yellow front extending behind the eye; lower parts, tail-covers included, deep yellow; margin of inner web of all the primaries white, for two-thirds their length, the white extending across the web on the secondaries; a large medial oval white spot on the inner webs of the two external pairs of rectrices. Beak moderate, whitish at base; wing, $\dot{2}.2$.

Habitat, Trinidad, Cumana, Venezuela, St. Thomas (Sclater).

4. *EUPHONIA STRICTIFRONS*, STRICKLAND, SP. NOV.

Golden Titmouse, var. *Edw. Birds*, vol. v. p. 113, desc. 2.

Small; head purplish-black, back bluish-black; yellow front extending only to the fore part of the eye; lower parts pure yellow; lower tail-covers white; margin of inner web of all the primaries white, for two-thirds their length, the white extending across the web on the secondaries; inner webs of the three external pairs of rectrices medially white, their base and tips black. Beak moderate, whitish at base. Wing, $i.9$.

Habitat, Surinam (Edwards), Cayenne (Sclater).

ALLIED TO *E. CHLOROTICA*.

On this species Mr. Sclater remarks, "Cabanis has described a bird in Schomburgk's *Reise nach Guiana*, vol. iii., which he calls *Euphonia minuta*, and which he describes as very like the female of *Euphonia chlorotica*, but smaller, and probably ♀ of a smaller species. Therefore I think it not unlikely, that your *E. strictifrons* is the male of this species."

5. EUPHONIA XANTHOGAстра, SUNDEVALL.

Golden Titmouse, *Edw. Birds*, pl. 263, f. sup. — *Euphonia xanthogaster*, *Sundevall*, in *Vetensk. Acad. Handl.* 1833, pl. x. f. 1.

Purplish black above; lower parts, tail-covers included, and front to behind the eye, orange-yellow; two or three first primaries wholly black, the basal half of the inner webs of the remaining remiges white, with an oblique termination; a postmedial oblong white spot on the inner web of the external pair of rectrices. Beak moderate, wholly black. Wing, 2.4.

Habitat, Brazil (Sundevall), Surinam (Edwards).

It is impossible to say whether the *Euphonia affinis*, thus vaguely described by Lesson, *Revue Zoologique*, 1842, p. 175, belongs to the present group, and whether in that case it forms a sixth species, or is synonymous with one of the above: "Capitis dimidiâ parte, thorace, abdomine, tectricibusque inferioribus aureis; sincipite, collo, gula, dorso, alis caudâque cyaneo violaceo tincto; alis totis nigerrimis; rostro nigro, pedibus rufis. — Hab. Realejo." This most careless of writers has not told us *which half* of the head is yellow, but from the *sinciput* being violaceous, it would appear to be the posterior half. I suspect, however, that Lesson meant to write *occipite* for *sincipite*, in which case the front would be yellow, and the general coloration of the bird would agree with the group before us, though its red legs and Mexican *habitat* probably indicate a distinct species.

Mr. Sclater remarks, "I believe Edwards' figure to be intended for *E. chlorotica vera*, and not for this species, which is not from Surinam, but from N. Brazil and New Granada.



DESCRIPTION

OF

SOME NEW SPECIES AND A NEW GENUS OF *DENDROCOLAPTINÆ*.

BY T. C. EYTON, Esq., F.L.S.

Dendrocolaptes multistrigatus, Eyton.

D. rostro parùm arcuato valdè depresso cultrato; gulâ, maculis triangularibus capitis vittâque postoculari flavo, rufis; singulis pennis pectoris latè, colloque superiore angustè medio eodem colore strigatis; abdomine pectoreque imo flavo-rufis singulis pennis quatuor striis angustis atris et transversis notatis; illis pectore atro marginatis; dorso brunneo-olivaceo, inferiore parte uropygio remigibus rectricibusque latè cinnamoneo rufis his apicibus brunneo viridi vix tinctis; rostro mandibulâ superiore atro inferiore ad basin corneo.

Long. corp. 10.5.; rost. 1.6.; tar. 1.

This species of *Dendrocolaptes* approaches nearer to *D. platyrostris*, Spix, in the form of the bill than to any other species, but has it more slender, not so broad at the base, but at the same time more depressed. The specimen from which the above description is taken is in Lord Derby's Museum at Knowsley.

Picolaptes validirostris, Eyton.

P. rostro valido, arcuato, cultrato, ad basin palidè brunneo; capite brunneo-atro, pennis singulis in medio rufo-flavo latè strigulatis et nigro-fusco fimbriatis, striis colli mediis staturâ inter illos capitis et dorsi; gula genisque sordidè albis; pectore abdomineque pennis in medio parte eodem coloris fusco leviter fimbriatis; uropygio

DESCRIPTION OF SOME NEW SPECIES

remigibus reetricibusque læté cinnamoneo-rufis, remigibus externis apicibus brunnis viridi parcé tinctis; pedibus brunneo-corneis.

Long. corp. 8.5; ros. fron. 1.5; tarsi, 9; alæ, 4.5.

The above may be easily distinguished from the other species of *Picolaptes*, by the greater length and strength of the bill. The specimen is in the Knowsley Museum.

Picolaptes atripes, Eyton.

P. præcedente similis sed pennis medio parte læté albis nigro fimbriatis, rostro brevior et gracillior, et pedibus atris.

Long. corp. 8.5; ros. fron. 1.5; tar. 9; alæ, 4.7½.

This species approaches very nearly to the preceding one, but may be at once distinguished from it by the superior length of the wing, the slenderness of the bill, the black or very dark brown feet, and by the centre of the feathers being pure white instead of dirty white. A specimen is in Lord Derby's Museum and another in my own.

DENDREXETASTES, N. G.

Generic Character.

Rostrum validum, arcuatum, parúm cultratum, haud altior quam latum, naribus magnis vix ovalibus.

Pedes tarsique validi, cauda duabus reetricibus mediis longissimis.

Dendrexetastes capitoides, Eyton.

D. capite, dorso abdomineque brunneis, pectore, gulâ colloque posteriore, pennis medio parte laté albis, atris, dein brunneo fimbriatis, gulâque brunneo solummodo fimbriatâ; uropygio, reetricibus remigibusque laté rufo-cinnamoneis illis apicibus brunneo-viridi anteriore latere præpillatis.

Long. corp. 9; ros. fron. 1.2; tar. 11; ala, 4.

From the form of the bill in this curious genus it might at first sight be supposed to be related to the *Capitonia*; but being destitute of bristles at the base of the bill, and also the toes being placed, three in front and one behind, point out its true position to be among

AND A NEW GENUS OF *DENDROCOLAPTINÆ*.

the *Dendrocolaptinæ*. It also agrees with the latter family in the structure of the tail and in the style of the plumage. The specimen from which the above description is taken is in the Knowsley Museum, and was purchased from Mr. Leadbeater, the locality is unknown. I cannot conclude this paper without expressing my thanks to Lord Derby for the facilities which he has always afforded me in exploring the riches of his Museum.

THE UNIVERSITY OF CHICAGO

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Trochilus verticeps. Gould.

May, 1851.

TROCHILUS (THALURANIA) VERTICEPS, GOULD.

APRIL, 1851, PL. LXXI.

THIS Humming Bird was sent by post from Quito to Mr. Gould, by Professor William Jameson, March, 1851, but without remark. Mr. Gould considers it new, and has sent us the following description. It is similar in every respect to *T. columbiana*, except that it is capped with *green* instead of *blue*, and that it is a trifle larger in size.

“Forehead and anterior part of the head occupied by a round spot of shining green; throat and breast also shining green; back of the head, neck, back, rump, and upper tail-coverts, dark glossy green, washed with bronze on the back of the neck; shoulders metallic blue passing into green; wings purplish-black; tail greenish-black, and considerably forked; abdomen dark glossy blue; under tail-coverts greenish-blue margined with white; tarsi clothed with grayish-white feathers; bill black; feet fleshy-brown.”

Total length, $4\frac{1}{4}$ inches; bill, $\frac{7}{8}$; wing, $2\frac{3}{8}$; tail, $1\frac{7}{8}$.

TURDUS AURANTIROSTRIS, HARTLAUB.

PLATE LXXII.

Turdus aurantirostris, *Hartl. Rev. et Mag. de Zool.* ii. 1850, p. 153. — *Catharus immaculatus*, *Bonp. Conspect.* p. 278 (Auct. Hartl.)

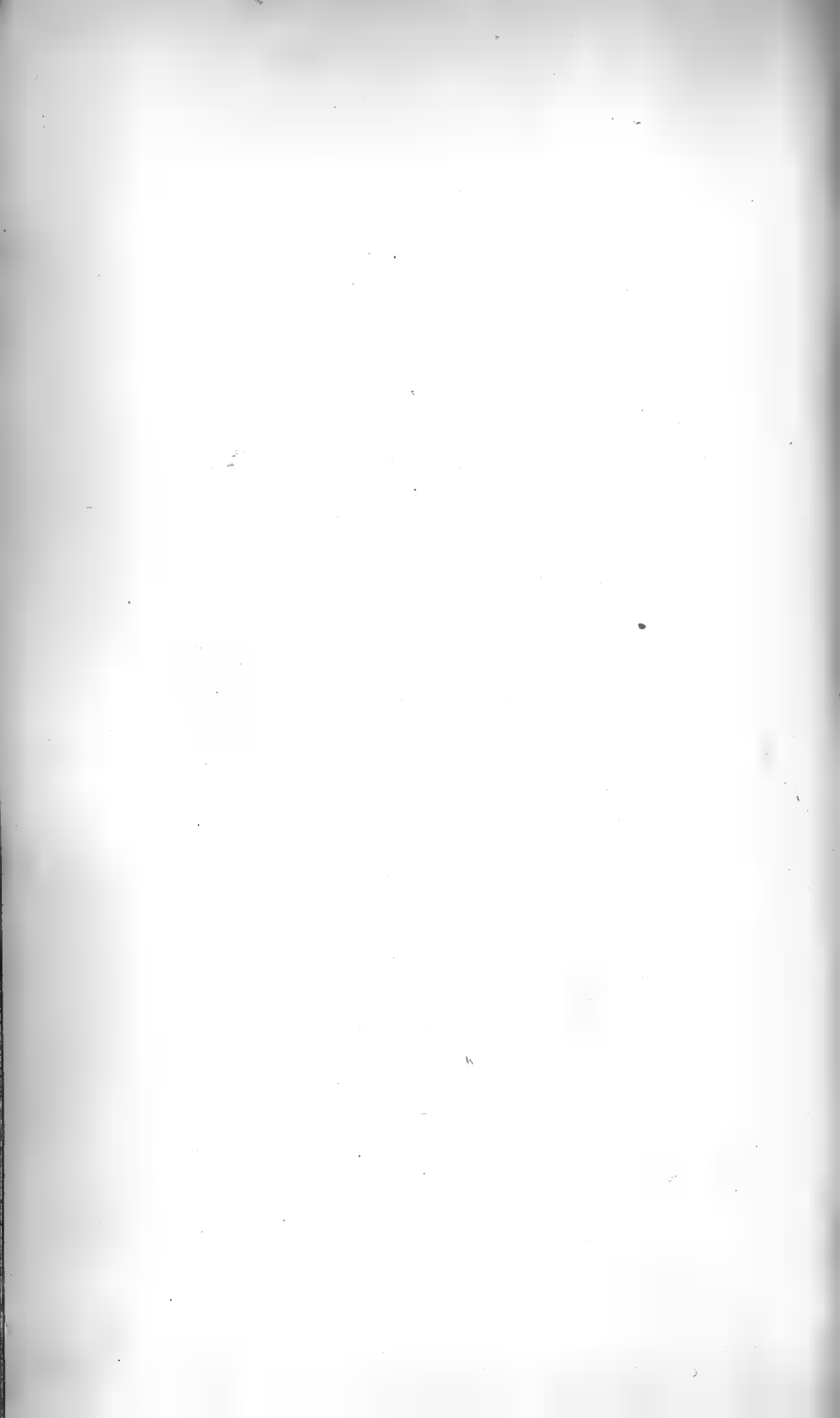
M. HARTLAUB of Bremen has kindly forwarded to us a drawing of a thrush from Venezuela, which he last year described in the *Revue et Magazine de Zoologie*. Our plate is lithographed from this drawing, and we add below the observations which accompanied it. A bird is described by the Prince of Canino in his *Conspectus*, from the Caraccas, which M. Hartlaub refers to this, and of which the Prince constitutes a new genus, though to judge from the drawing now received, we would have considered it a true Thrush.

“I formerly described the bird from a very fine specimen, freshly imported from Caraccas. It had then the beak and the naked skin round the eye of a lively orange colour. When I saw the same specimen about one year later, all this fine colour had vanished, and the same parts were of an obsolete yellow. Bonaparte’s generic separation is to be adopted, at least I adopt it with great pleasure. He says in his generic character ‘*cauda brevis*.’ This is not quite correct, and I would propose to put for it *cauda breviuscula*.”



Reve & Nicols, imp

Turdus aurantirostris, *Hartl.*



SYNOPSIS

OF

THE GENUS *EUPHONIA*,

WITH DESCRIPTIONS OF NEW SPECIES

By PHILIP LUTLEY SCLATER, MAY, 1851.

THE Prince Canino separates this genus, which is a very natural one, taken as a whole, into several others. None of the divisions appear to me to deserve that high rank, being founded chiefly on the style of plumage. I have used his names for the sections in the following paper where they can be adopted, but prefer keeping *Euphonia* as a generic name for all the species.

SECTIO I^{ma} *EUPHONIA*.

A	<i>Cæruleo-cephalæ</i> (<i>Cyanophonia</i> , BP.).....	3 species.
B	<i>Chloroticæ</i> } (<i>Euphonia</i> , BP.).....	{ 6 ...
C	<i>Violacæ</i> } (<i>Euphonia</i> , BP.).....	{ 3 ...
D	<i>Nigrîtæ</i> } (<i>Euphonia</i> , BP.).....	{ 3 ...

SECTIO II^{da} *CHLOROPHONIA*, BP.

A	<i>E. Virides</i>	5 species.
B	<i>E. Serrirostres</i>	1 ...

SECTIO III^{tia} *PYRRHOPHONIA*, BP.

A	<i>E. Tumidirostres</i>	2 species.
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SYNOPSIS OF THE GENUS *EUPHONIA*,

SECTIO I^{ma} *EUPHONIA*.

A.—*EUPHONIAE CÆRULEOCEPHALÆ*.

Subtùs, nisi gutture, flavæ; capite cæruleo.

1. *EUPHONIA MUSICA* (GMEL.)

Pipra musica, Gmel. Syst. Nat. i. p. 1004. — *Emberiza flavifrons*, Sparm. Mus. Carls. No. 92. ♀ — *Euphonia cæruleocephala*, Sw. Class. Birds, ii. p. 286. — *Euphonia musica*, Gray's Gen. ii. p. 367, No. 1. — *Cyanophonia musica*, Bp. Rev. Zool. 1851, No. 3.

♂ Violaceo-atra; capite cæruleo; frontali vittâ flavissimâ nigro marginatâ; gulâ atrâ; subtùs cum dorso postico brunneo-aurantia.

Long. alæ, 2.5.

♀ Olivaceo-viridis, subtùs levior; gulâ flavescente; capite cæruleo; vittâ latâ frontali flavissimâ, nigro marginatâ.

Long. alæ, 2.4.

Habitat, St. Domingo (Mus. Brit.); Cayenne?

Figured, Pl. Enl. 809, fig. 1 ♂; Desm. Tan. t. 19 ♂ — 20 ♀; Sparm, Mus. Carls. pl. 92 ♀; Vieill. Gal. des Ois. Supp. pl. S. N. ♂ and ♀.

There are two skins of this species in the British Museum, which Mr. George Gray has kindly allowed me to examine, received from San Domingo, to which island Buffon attributes his "*Organiste*," whence Gmelin formed the name "*Pipra musica*." A ♀ in my own collection is apparently from Cayenne. This is curious, as the Trinidad species is *E. nigricollis*, of which I have several ♂s and ♀s received from that island. The figures of Desmarest and Vieillot both give a yellow throat to this species; but I believe Desmarest's bird to have been in an immature state, as there are appearances of the black on each side of the neck, and Vieillot's figure was probably merely copied from it.

2. EUPHONIA NIGRICOLLIS (VIEILL.)

PLATE LXXV. FIG. 1.

(1818) *Pipra cyanocephala*, *Vieill. Nov. Dict. d'H. N.* xix. p. 165 ♀? — (1819) *Tanagra nigricollis*, *Vieill. Nov. Dict. d'H. N.* xxxii. p. 41. — (1823) *Tanagra aureata*, *Vieill. Enc. Méth.* p. 782. — *Tanagra chrysogastra*, *Cuv. Reg. An.* 2 ed. p. 366. — *Euphonia musica*, *Max. Beitr. Zur Nat.* p. 443. — *Euphonia nigricollis*, *D'Orb. and Lafr. Mag. de Zool.* 1839, p. 30. — *Cyanophonia aureata*, *Bp. Rev. Zool.* 1851, No. 3.

♂ *Violaceo-atra*, capite *cæruleo*; dorso postico subtusque *aurantia*; gutture et fronte *aterrimis*.

Long. alæ, 2.4.

♀ *Flavo-olivacea*, subtùs *flavescentior*; capite *cæruleo*; fronte *angustè rubrà*.

Habitat, Brazil, Cabo Frio, Rio de Janeiro (Pr. Max.); Corrientes and Rincon de Luna (D'Orb.); Paraguay (Azara); Bogota; Trinidad; Ecuador (Verreaux).

3. EUPHONIA ELEGANTISSIMA (Bp.)

Pipra elegantissima, *Bp. Proc. Zool. Soc.* 1837, p. 112. — *Euphonia cælestis*, *Less. Rev. Zool.* 1839, p. 42. — *Euphonia elegantissima*, *Du Bus, Esq. Orn.* pl. 8.

♂ *Suprà cum gutture violaceo-atra*; capite *cæruleo*; fronte *nigro-castaneo*, *atro-marginato*; subtùs *flavo-æruginosa*.

Long. alæ, 2.7.

♀ *Similis E. nigricollis* ♀, sed fronte *castaneo latiore et intensiore*; gulâ *rufescente*.

Long. alæ, 2.7.

Habitat, South Mexico; Santo Pedro, near Oaxaca (Du Bus).

Figured, *Esq. Orn.* 8, fig. 1 ♂, 2 ♀.

SYNOPSIS OF THE GENUS *EUPHONIA*,

B. — *EUPHONIAE CHLOROTICÆ*.

Subtùs, nisi gutture, cum capite flavæ.

4. *EUPHONIA CHLOROTICA* (LINN.)

Tanagra chlorotica, Linn. Syst. Nat. p. 317. — *Euphonia chlorotica*, Licht. Verz. der Doubl. p. 29.

♂ Violaceo-nigra, capite dimidio subtùsque aureis; reetricibus duabus extimis albo notatis.

Long. alæ, 2. ï.

♀ Suprà olivacea, subtùs flavescens.

Long. alæ, 2. ö.

Habitat, Cayenne and Demerara.

5. *EUPHONIA TRINITATIS*, STRICKLAND.

Euphonia trinitatis, Strickl. Jard. Orn. Cont. 1851, p. 72.

♂ Cæruleo-atra, nec carmino tincta; capite toto subtùsque, nisi gutture, flavis.

Long. tota, 3. ö; alæ, 2. ä.

Habitat, Trinidad; Venezuela, Cumana; St. Thomas.

This species differs from the preceding, in being steel-blue-black without the carmine tinge on the back of the head and throat; also the *whole* top of the head is bright yellow.

6. *EUPHONIA STRICTIFRONS*, STRICKLAND.

Euphonia strictifrons, Strickl. Orn. Cont. 1851, p. 72. — *Euphonia pumila*, Bp. Rev. Zool. 1851, No. 2.

E. æneo-nigra, occipite cæruleo tincta; vittâ frontali angustâ, subtùsque, nisi gutture, flavis; crisso albo.

Long. tota, 3. ö; alæ, 2. ö.

Habitat, Cayenne.

May be immediately distinguished from others, by the narrowness of the frontal spot and white under tail-covers. I suspect *E. minuta*, Cabanis, of Schomburgk's Reise n. Guiana to be the ♀ of this species; which name, if this be so, will have the priority over Mr. Strickland's.

7. EUPHONIA CHALYBEA (MIKAN).

(1820) *Tanagra chalybea*, *Mikan*, Faun. and Flor. Bras. pl. 3. — (1834) *Euphone*
ænea, *Sund.* Kon. Vet. Ac. Hand. 1834, p. 309. — *Euphone pardalotes*, *Less.*
Echo de M.S. 1844. — *Euphonia chalybea*, *Strickl.* Jard. Orn. Cont. 1851, p. 71.

♂ Suprà cum gulâ nigro-ænea; fronte subtùsque flavis; rostro
 robusto, tumido.

Long. alæ, 2. 5.

♀ Suprà olivacea; subtùs corpore medio grisso; lateribus flaves-
 centibus.

Habitat, Brazil (Mikan).

8. EUPHONIA XANTHOGASTRA (SUNDEVAL).

Euphonia xanthogastra, *Sund.* So. Vet. Ac. H. 1833, t. x. fig. 1. — *Euphonia brevi-*
rostris, *Bp.* Rev. Zool. 1851, No. 3.

♂ Similis chloroticæ sed major, rostro majore, pileo toto abdo-
 mineque fulvo-flavis nec aureis; rectrice unâ extimâ albo notatâ.

Long. alæ, 2. 5.

Habitat, North Brazil, New Granada, Anolaima.

Figured, *Sv.* Vet. Ac. Hein. 1833, t. x. fig. 1 ♂.

M. Verreaux's specimens of *E. brevirostris*, *Bp.*, certainly belong
 to this species, though the Prince Canino's short description is
 hardly sufficient for its identification.

9. EUPHONIA RUFICEPS, D'ORB. AND LAFR.

Euphonia ruficeps, *D'Orb.* and *Lafr.* Mag. de Zool. 1839, p. 30.

F. suprà cum gutture nigro-violacea; capite summo castaneo;
 infrâ pectore abdomineque mediis rufescentibus, lateribus flavis;
 unâ aut duabus extimis rectricibus albo notatis (D'Orb.)

Habitat, Yuracares, Bolivia (D'Orbigny).

Figured, *D'Orb.* Voy. de l'Amér. MÉR. p. 22, fig. 2.

Non vidi.

SYNOPSIS OF THE GENUS *EUPHONIA*,

C.—*EUPHONIAE VIOLACEÆ*.

Subtùs omnino cum capite flavæ.

10. *EUPHONIA VIOLACEA* (LINN.)

Tanagra violacea, *Linn. Syst. Nat.* p. 315.—*Euphonia violacea*, *Licht. Verz. der Doubl.* p. 29.

♂ Nigro violacea; capite a fronte ad oculos subtùsque flavis; reatricibus 2 aut 3 extimis albo notatis.

Long. alæ, 2.2.—2.4.

♀ Olivaceo-viridis; subtùs corpore medio in flavum trahente.

Habitat, Trinidad; Cayenne; Guiana (Schomburgk); Brazil, Rio de Janeiro.

11. *EUPHONIA LANIROSTRIS*, D'ORB. AND LAFR.

Euphonia laniirostris, *D'Orb. and Lafr. Mag. de Zool.* 1839, p. 30.

E. similis E. violacea, sed æneo-nigra nec violaceo tincta; capite summo subtùsque flavissimis; rostro robustiore.

Long. tota, 4.5; alæ, 2.4½.

Habitat, Bolivia, Yuracares, Yungas, Guarayos, and Santa Cruz de la Sierra (D'Orb.); Brazil (Verreaux), No. 10,831; Chiriqué (Mus. Brit.)

This species is blue-black without the purple tinge of *E. violacea*, and the yellow both on the head and beneath is much brighter. Specimens in the British Museum were brought from *Chiriqué* by Captain Kellett.

12. *EUPHONIA MELANURA*, SCLATER, SP. NOV.

E. similis E. violacea, sed minor, pileo toto flavo; reatricibus omninò nigris, neque albo notatis.

Long. tota, 4.0; alæ, 2.3.

WITH DESCRIPTIONS OF NEW SPECIES.

Habitat, Barra do Rio Negro (Wallace). Mr. Wallace has sent home many skins of this species from Barra, at the junction of the Rio Negro with the Amazon. They all agree in the absence of white markings on the tail-feathers, and greater amount of yellow on the head than in the common species.

D.—EUPHONIAE NIGRITÆ.

Suprà omnino nigræ.

13. EUPHONIA RUFIVENTRIS (VIEILL.)

Tanagra rufiventris, Vieill. Nov. Dict. d'H. N. xxxii. p. 426. — *Euphonia rufiventris*, Gray's Gen. p. 367, No. 12. — *Euphonia bicolor*, Strickl. Jard. Orn. Cont. 1850, part 2.

E. nigerrima, cæruleo tincta; primariis fuscis, olivaceo-marginatis; abdomine rubro-aurantio, lateribus flavescentibus.

Long. alæ, 2. 3.

Habitat, Peru.

Figured, Orn. Cont. 1850, pl. 49, fig. 2; Vieill. Gal. des Ois., Suppl.

14. EUPHONIA PECTORALIS (LATH.)

Pipra pectoralis, Lath. Ind. Orn. Supp. p. 57. — *Euphonia rufiventris*, Licht. Verz. der Doubl. p. 30. — *Euphonia castaneiventris*, Vieill. Gal. Ois., Supp. — *Euphonia umbilicalis*, Less. Trait. d'Orn. p. 46 (♀) — *Euphonia pectoralis*, Gray's Gen. p. 367, No. 7.

♂ Suprà, subtùsque ad imum pectus nigro-violaceo-cærulea; abdomine toto brunneo castaneo; pectoris lateribus lætè flavis.

Long. alæ, 2. 4½.

♀ Olivacea; nuchâ pectore et abdomine medio griseis; ventre imo crissoque castaneis.

Long. alæ, 2. 4.

Habitat, Brazil, most provinces (Pr. Max.); Bahia (Licht.)

Figured, Vieill. Gal. Ois. Supp. ♂.

SYNOPSIS OF THE GENUS *EUPHONIA*,

15. *EUPHONIA CAYANA* (LINN.)

Tanagra cayana, *Linn. Syst. Nat.* p. 11. — *Tanagra cayennensis*, *Gmel. Syst. Nat.* p. 894. — *Euphonia cayana*, *Bp. Consp. Av.* p. 233.

E. tota atro-violacea; pectoris lateribus aurantiis.

Long. alæ, 2. 5.

Habitat, Cayenne; Guiana (Schomb.)

Figured, *Pl. Enl.* 114, fig. 3. ♂; *Desm. Tan.* pl. 26.

SECTIO II^{da} *CHLOROPHONIA*.

A.—*CHLOROPHONIAE VIRIDES*.

16. *EUPHONIA VIRIDIS* (VIEILL.)

Tanagra viridis, *Vieill. Nov. Dict. d'H. N.* xxxii. p. 426. — *Pipra chlorocapilla* *Shaw's Zool.* vol. xiii. p. 255. — *Euphonia viridis*, *Gray's Gen.* p. 367, No. 10. — *Procnias viridis*, *Tschudi's Fauna Per.* p. 107.

♂ Capite toto et pectore lætè viridibus; dorso toto cum ciliis oculorum vividè cæruleo; infrà citrino-flava.

Long. tota, 4. 2; alæ, 2. 5.

♀ Collo postico tantùm cæruleo, dorso toto capite concolore; ventre medio flavescente, lateribus virescentibus.

Habitat, Brazil, Santa Fé de Bogota.

Figured, *Pl. Col.* 36, fig. 3.





Fig. 1. *Euphonia nigricollis*, Vieill.

2. *Euphonia cyathigerus*, Vieill.

17. EUPHONIA FRONTALIS.

Chlorophonia frontalis, Bp., Verreaux, Specimen No. 10, 583.

Similis *E. viridi*, sed fronte flavâ; uropygio colloque postico tantùm cæruleis; dorso medio viridi.

Long. tota, 5.0; alæ, 2.5½.

Habitat, Ecuador (Verreaux).

A single specimen of this bird, in a collection just received by Mr. Edward Wilson from M. Verreaux, is labelled as above quoted; but I am not aware that the name has been yet published.

18. EUPHONIA PYRRHOPHRYS, SCLATER, SP. NOV.

PLATE LXXV. FIG. 2.

E. lætè viridis; capite purpurascente-cæruleo, fronte superciliisque rubris; ventre medio flavescente; lateribus virescentibus.

Long. tota, 4.0; alæ, 2.6½.

Habitat, Columbia?

A skin of this species has been some time in my possession; the only other I have seen, is in the British Museum, No. (1844) 12, 29, 30.

19. EUPHONIA PRETREI, LAFR.

Tanagra (Euphonia) pretrei, De Lafr. Rev. Zool. 1843, p. 97.

E. lætè viridis; capite purpurascente-cæruleo; torque pectorali vix apparente nigro-castaneâ; ventre medio castaneo, lateribus et uropygio flavissimis.

Long. alæ, 2.6.

Habitat, Columbia.

Figured, Mag. de Zool. 1843, Ois. t. xliii.

Specimens are in the British Museum, labelled, 1843, 2, 9, 14.

SYNOPSIS OF THE GENUS *EUPHONIA*,

20. *EUPHONIA OCCIPITALIS*, Du Bus.

Euphonia occipitalis, *Du Bus*, Esq. Orn. pl. 14.

♂ Lætè viridis ; semitorque vix apparente ponè et vertice cæruleis ; vittâ pectorali nigro-castaneâ ; ventre crissoque flavis ; lateribus viridibus.

Long. alæ, 2 . 8.

♀ Lucidè viridis ; pennis nigris eodem viridi limbatis ; maculâ occipitali et semitorque haud benè definito cæruleis ; infrâ abdomine medio flavescente.

Long. alæ, 2 . 8.

Habitat, Mexico (Du Bus).

Figured, Esq. Orn. pl. 14, ♀. M. Du Bus describes and figures only the ♀. A pair of this beautiful species, in the British Museum, were collected by De Lattre. They are numbered (1843) 6, 13, 27 ♂, — 28 ♀.

B. — SERRIROSTRES.

21. *EUPHONIA SERRIROSTRIS*, D'ORB. AND LAFR.

Euphonia serrirostris, *D'Orb.* and *Lafr.* Mag. de Zool. 1839, p. 30.

Euphonia suprâ olivacea, cæruleo-griseo parum micans ; fronte usque ad verticem flavâ ; remigibus nigro-olivaceo limbatis ; rectricibus nigris, olivaceo marginatis ; tribus literalibus maculâ magnâ albâ intûs versus apicem notatis ; subtûs aureo-flava ; collo olivaceo ; maxillâ quatuor minutis dentibus instructâ (*D'Orb.*)

Habitat, Bolivia ; Guarayos, Santa Cruz (*D'Orb.*)

Figured, *D'Orb.* Voy. pl. 23, fig. 2.

(*Non vidi*).

The true position of this species seems rather uncertain.

SECTIO III^{ta} PYRRHOPHONIÆ.

22. EUPHONIA JAMAICÆ (LINN.)

Fringilla jamaica, *Lin.* Syst. Nat. i. p. 323. — *Euphonia jamaica*, *Gosse* Birds, Jamaica, p. 238.

♂ Suprà schistaceo-cærulea, uropygio viridi tincto; gutture pectore et lateribus pallidè griseis; ventre flavo, crisso albido (*Gosse*).

♀ Mari similis, sed tectricibus caudæ superioribus cum tibiis flavescenti-viridibus, ventre flavo carens.

Habitat, Jamaica (*Gosse*).

Figured, *Gosse's* *Illust. Orn. Jam.* pl. No. 59. ♂ and ♀.

23. EUPHONIA CINEREA (LAFR.)

Euphonia cinerea, *Lafr.* Rev. Zool. 1846, p. 277.

E. tota grisea, suprà colore pallidè thalassino micans; remigibus fuscis, griseo-albo tenuissimè marginatis; subtùs dilutior, cinerascens; medio abdomine crissoque lateribus pallidè citrinis; crisso et subcaudalibus pallidè ochraceis; caudâ brevissimâ; rostro forti, alto, suprà subtùsque incurvo; maxillâ propè apicem utrinque serratâ; mandibulâ altâ, valdè sursùm recurvâ (*Lafr.*)

Habitat, Columbia (*Lafr.*)

(*Non vidi*).

I have inserted, in what seems to me to be their proper places, all the synonymes that apparently represent real species; I now add an account of such names as I cannot at present identify with certainty.

(1.) *Euphonia olivacea*, *Desm.* Tan. pl. 27.

E. suprà olivacea, subtùs flavescens, ventre subgriseo.

Long. 3 pouces.

Habitat, Cayenne (Desm.)

This description seems to agree very well with

(2.) *Euphonia minuta*, Schomb. Reise n. Guiana, iii. 671, which M. Cabanis describes as follows—“Very like *E. minuta* ♀, but considerably smaller. The yellow-green of the upper surface is somewhat lighter, while the yellow on the front is entirely wanting. Throat, middle of the belly, and under tail-coverts white-gray. Upper mandible with three indentations near the tip.” This may be a good-species, but I have some idea that both descriptions may be intended for *E. strictifrons*, Strickl. ♀, which would be like *E. chlorotica*, ♀, but smaller; but as I have never seen the ♀ of this species I cannot speak confidently on the subject.

(3.) *Euphonia affinis*, Lesson, Rev. Zool. 1842, p. 175.

E. capitis dimidio, thorace, abdomine tectricibusque inferioribus aureis; sincipite, collo, gulâ, dorso, alis, caudâque cyaneis violaceo tinctis; alis totis nigerrimis; rostro nigro; pedibus rufis.

Habitat, Realejo, in Nicaragua.

Mr. Strickland has made some observations on this description, which, as he says, is probably intended for a species affine to *E. chlorotica*, but distinguished by its Nicaraguan habitat and red legs. Is it *Euphonia hirundinacea*, Bp.?? *Tanagra desmaresti*, *chlorocyanea*, *tephrocephala*, Vieill. Nov. Dict. d'H. N. vol. xxxii., I cannot make any thing of. Mr. Gray refers them to this genus. Are the types still existing in the museum of the Jardin des Plantes at Paris??

ORNITHOLOGICAL OBSERVATIONS

By PHILIP LUTLEY SCLATER.

I. REMARKS ON PRINCE CANINO'S NOTE, "SUR LES TANGARAS,"

In the Revue et Magazine de Zoologie, March and April 1851.

I HAVE just seen a copy of a paper, extracted from the *Revue de Zoologie*, for March of this year, which bears the title above given. Having paid much attention to the *Tanagers*, I have drawn up a few observations to correct what appear to me to be some of the chief errors in the synonymy of the paper, and to show how far the new species therein described are identical with those named by Mr. Strickland and myself in the last number of "Contributions." If the *Revue Zoologique*, No. III., for this year, was really published in March, or before the end of April, Prince Canino's names have undoubtedly the priority over Mr. Strickland's and my own, which were not published until April, in Part II. of the Contributions for this year. But certainly only one Number of the *Revue* has yet been received in this country, viz.—that for January last. I should mention, that in a box of *Tanagers*, sent lately by M. Verreaux of Paris to Mr. E. Wilson, are examples of several of Prince Canino's new species, and I have had thus, through Mr. Wilson's kindness, an opportunity of comparing them with my own specimens.

Oxford, May 12, 1851.

P. 3. As *Chlorochrysa* has been already published and adopted as a generic name (See *Compt. Rend.*, Jan. 20, 1851, p. 76) for

these two species, it cannot now be changed into *Calliparæa*. It is, moreover, an objectionable practice to change specific names into generic in this way, as it renders the use of the oldest specific name impossible. Figures of both species of *Chlorochrysa* are given in this year's Contributions, pl. lxxiii.

P. 8. *Tanagra melanota*. — This name is more correctly written *melanonota*, as it was originally published by Vieillot, Nov. Dict. d'Hist. Nat. xxxii. p. 407.

P. 10. *Euphonia rufiventris*. — Lately figured by Mr. Strickland as *E. bicolor*, Cont. Orn. 1850, pl. xlix. p. 10. *E. chrysogastra*, Cuv., is a synonyme of *E. nigricollis*, Vieill., and not of this species.

P. 10. *E. brevirostris*, Bp., is *E. xanthogastra*, Sund. Sv. Ac. 1833, t. x. fig. 1.

P. 10. *E. pumila* Bp. = *E. strictifrons*, Strickl. Cont. Orn. 1851, p. 72.

P. 11. *E. œnea*, "*chalybea*," Mikan, is the oldest synonyme of this bird.

P. $\frac{1}{2}$. *E. umbilicalis*, Less., is the female of *E. pectoralis* (Lath.)

P. 12. *Chlorophonia* had better have been written *Chloreuphonia*. The name *Euphonia* was originally a translation of Buffon's name, *L'Organiste*, and means "*beautiful-voiced*." It is rather absurd to call a bird "*green-voiced*," which *Chlorophonia* means. The same thing may be observed of *Cyanophonia*; but although *Chlorophonia* has a slightly different structure from *Euphonia*, there appears nothing of the sort as regards *Cyanophonia*, except that it has a blue head. Besides, if the groups were separated, the name *Euphonia* must be kept for the blue-headed group, since *E. musica* is the type of Desmarest's genus *Euphonia*.

P. 13. The third species of blue-headed *Euphonia*, *Pipra elegantissima*, Bp., is here omitted, and the bird described as *C. musica* ♀, is no other than *C. nigricollis* ♀.

P. 13. *Calliste* must be reserved for the group that contains *Tanagra tricolor*, Linn., that being the type given by Boié, when he established the genus. For those who consider this group, which I have called "*Callista flavæ*," to require a separate generic appellation, I propose the name *Euschemon*. 1. *Calliste vitriolina*, Bp., is my *C. ruficapilla*, No. 31, in the synopsis of the genus, Orn. Cont. p. 61. Lichtenstein never published this species as "*vitriolina*," and cannot therefore be the authority for the name. 4. *C. peru-*

viana—I believe *T. gyrola* of Prince Maximilian, to be distinct from Desmarest's *Tanagra peruviana*, and have named it *Calliste castanonota*, Orn. Cont. 1851, p. 63.

P. 16. *Tatao cæruleocephalus*, Bp. — This bird certainly belongs to the *Chalcothraupis* group; it is very nearly allied to *Calliste thalassina*, Strickland.

P. 17. *Chrysothraupis frugilegus* (Tsch.), I believe is merely the young of *Tanagra striata* (Gmel.)

P. 17. *Ixothraupis chryzogaster* is the same as *Calliste xanthogastra*, Orn. Cont. 1851, part i. p. 23. This name has, I suppose, the priority over the Prince Canino's, as he quotes the figure of *C. chrysophrys* in the Contributions, which was published along with it, under the head of the previous species.

P. 18. *Ixothraupis pusilla*, Bp. = *C. virescens* mihi loco suprâ citato. Is Spix's *Tanagra graminea*, pl. 53, fig. 2, intended for the female of this species?

P. 18. *Chalcothraupis* must sink into a synonyme of *Procnopis*, since it contains *P. argentea*, which is the type species of the genus *Procnopis*. *C. ruficervix*, Bp., is *Call. leucotis* mihi nec *Tanagra ruficervix*, Fl. Prev.

P. 19. *Callospiza* cannot be used in this sense, being coequal with *Calliste*. I propose in its place, for those who think the group worthy of a generic appellation, the term *Euprepiste*.

P. 20. *C. cayanensis*, Bp., is, I believe, merely the ♀ of the succeeding species.

I append a list of the nine genera (so-called) into which *Calliste* has now been divided—

1. *Tatao*, Bp., 1851 = *Aglaia* (Sw.) Reich.
T. paradisea (Sw.)
2. *Calliste*, Boié, 1826 = *Callospiza*, G. R. Gray.
C. tricolor (Gm.)
3. *Chrysothraupis*, Bp. 1851.
C. aurulenta, Bp.
4. *Ixothraupis*, Bp. 1851.
T. punctata, Linn.
5. *Procnopis*, Cab. 1850. *Chalcothraupis*, Bp. 1851.
P. atrocærulea, Cab.
6. *Euschemon*, Sclater (1851) = *Calliste*, Bp.
E. flava (Gmel.)

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7. *Gyrola*, Bp. 1851.
G. chrysoptera, Sw.
8. *Euprepiste*, Sclater (1851). *Callospiza*, Bp.
E. braziliensis (Linn.)
9. *Pipridea*, Sw. (1827). *Procnopis*, Bp. nec Cab.
P. melanonota (Vieill.)

In the last division, there is considerable difference in form, and I believe it to be a good genus. It was with much hesitation I previously included the type species in the genus *Calliste*. My *Calliste castaneoventris* will be a second species of the group. *C. vassori* goes better, I think, with *C. argentea*, *atricapilla*, &c.

P. 21. I will not now enter into the oft vexed and very difficult question as to the correct names of the three Bishop Tanagers, but it is a great error to suppose that *T. olivascens* of Licht. is the ♀ of *T. ornata*, Sparm., the yellow-shouldered species. Prince Maximilian, in his *Beitrag z. Nat.*, gives descriptions of the ♂s and ♀s of both species. *Tanagra palmarum*, Pr. Max. (1821) = *T. olivascens*, Licht. (1823), is a widely distributed species, rather variable. I have examples from Rio de Janeiro, Para, Cayenne, and Trinidad. The other, *T. ornata*, Sparm. (1787) = *T. archiepiscopus*, Desm. (1805), is from Brazil only.

P. 22. *Dubusia gigas*, that is *Tanagra montana* from Bogota, Bp., has been well figured and described by Sir W. Jardine, Ill. Orn. pl. xliiii. (1841) as *Tanagra cucullata*. A skin of M. Verreaux's, so marked, I can hardly distinguish from *Tanagra eximia*, Boiss, p. 25. *Comarophagus* is a synonymic genus to *Tachyphonus*, the type being *T. leucopterus*, and cannot be used in any other sense.

P. 29. *Tanagra dominica*, Gm., is the true type of the genus *Dubus*, Vieill., and not *Turdus palmarum*. See Mr. Strickland's observations on this subject in the present number of Contributions.

II. — ON THE GENUS *TANAGRELLA*, SWAINSON.

THE genus *Tanagrella* (changed by M. Cabanis into *Hypothypis*), contains, as far as I am aware of, only the three species hereafter mentioned, the two first of which have been much confounded together. The *Motacilla campestris* of Linnæus (= *Tanagra ruficollis*, Gmelin = *Tachyphonus rufigularis*, Laf. = *Neornis cærulea*, Hartlaub) has been lately added to the genus, but it seems to be more nearly allied to the genus *Loxigilla*, Lesson (= *Pyrhulagra*, Bp., Consp. Av. p. 492) of which the type is *Loxigilla noctis* = *Fringilla noctis*, Linn. *Tanagrella rufigula*, Bp., Compt. Rend. Ac. Sc. Paris, 1851, p. 76, I consider to be closely allied to *Calliste punctata* (Linn.), and to be more correctly placed in that genus.

1. *TANAGRELLA VELIA* (LINN.)

Motacilla velia, Linn. Syst. Nat. i. p. 336. — *Tanagra varia*, Steph. Zool. xiv. p. 7.
— *Tanagra iridina*, Hartlaub, Rev. Zool. 1841, p. 305. — *Tanagrella iridina*, Gray's Gen. p. 366. — *Tanagrella velia*, Bp. Consp. Av. p. 236.

TANAGRELLA suprâ nigra; fronte, gulâ lateribusque capitis cum alarum rectricumque marginibus cæruleis; dorso postico aureo-viridi; subtus purpureo-cærulea, ventre medio crissoque castaneis.

Long. tota, 4.8; alæ, 2.8.

Habitat, Cayenne and Demerara.

Figured, Edward's Pl. 22; Desm. Tan. pl. 2.

2. *TANAGRELLA CYANOMELAS* (Pr. Max.)

Sylvia surinamensis cærulea, Briss. Orn. iii. 536. — *Tanagra cyanomelas*, Pr. Max. Beit. z. Nat. ii. 453. — *Tanagra multicolor*, Sw. An. in Mem., p. 313. — *Tanagrella velia*, Gray's Gen. p. 366. — *Tanagrella cyanomelas*, Bp. Consp. Av. p. 236.

TANAGRELLA suprâ nigra; fronte, gulâ, et regione auriculari, cum tetricibus alarum minoribus et marginibus rectricum remigumque

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cæruleis; vittâ super-frontali dorsoque postico aureo-viridibus; subtus cano-cærulea; ventre medio crissoque castaneis.

Long. tota, 5.7; alæ, 3.0.

Habitat, Brazil, Bahia (Swains.); River Ilheos, near Rio de Janeiro (Pr. Max.)

Figured, Pl. Enl. 669, fig. 3.

This species may be immediately distinguished from the preceding, by its frontal spot of golden green and light azure colouring of the breast, which in *T. velia* is purple blue.

3. TANAGRELLA CALOPHRYS (Cabanis).

PLATE LXXIV.

Hypothypis calophrys, Cab. Schomb. Reise iii. p. 668. — *Tanagrella calophrys*, Bp. Compt. Rend. 1851, p. 76.

TANAGRELLA suprâ atra, primariis tertiarisque alarum rectricibusque cæruleo limbatis; tectricibus alarum minoribus omninò cæruleis; dorso inferiore et vittâ trans caput utrinque ad imam cervicem ductâ nitidè aureo-viridibus; infrâ cærulea; tectricibus caudæ inferioribus crissoque cum rostro pedibusque atris.

Long. tota, 5.6; alæ, 3.0.

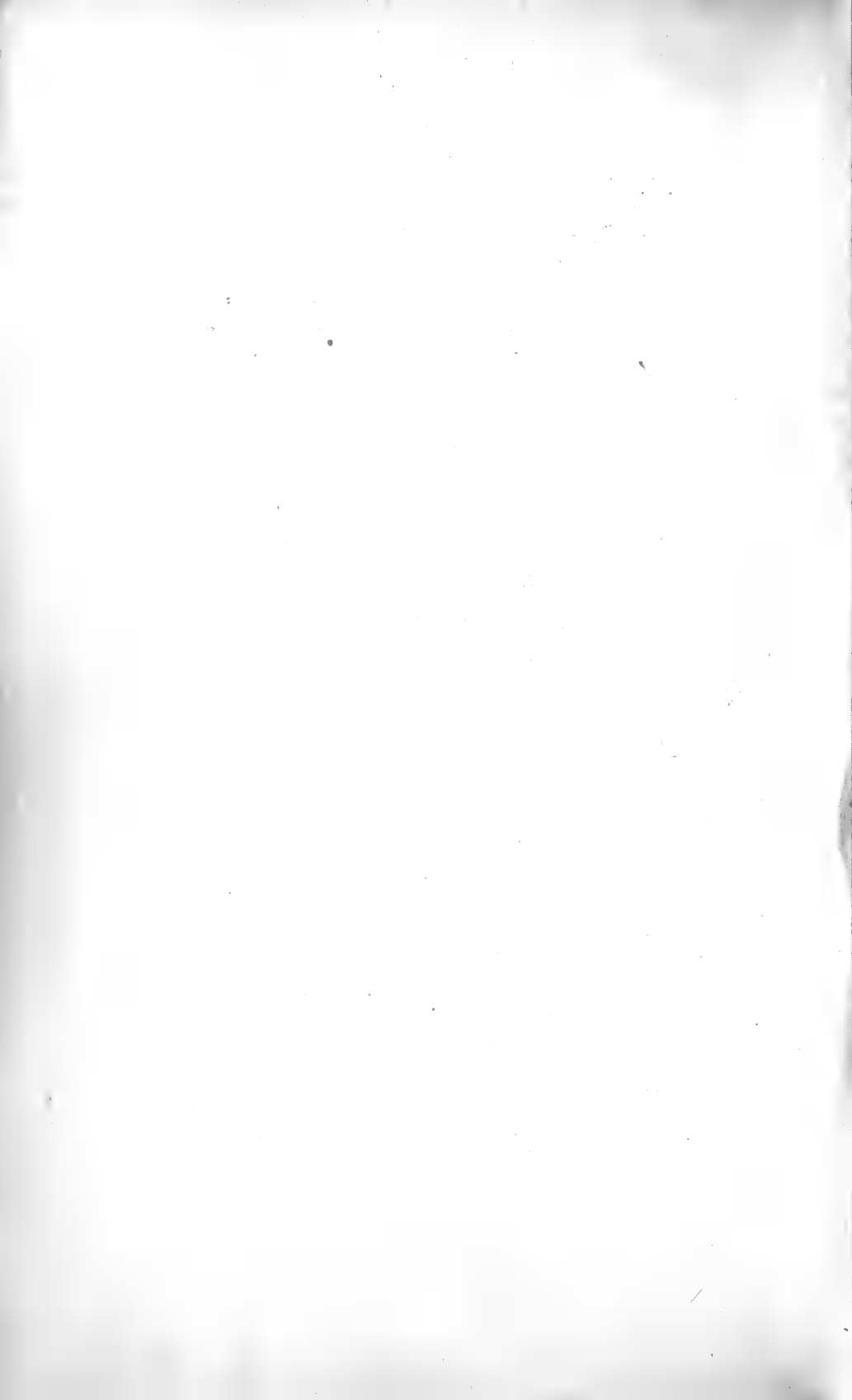
Habitat, Rio Negro and Rio Napo.

This species was first described by M. Cabanis, as above quoted in a note to Sir R. Schomburgk's *Reise nach Guiana*. The specimen here figured, was received by M. Verreaux from the Rio Negro, and is the property of Mr. Edward Wilson, to whom I am much obliged for the loan of it. M. Bourcier, on his recent return from Ecuador, brought a single skin of this bird, which he obtained from the Indians on the river Napo, an upper branch of the Amazon, where it was said to be rare. It may be distinguished from the two previous species, by the protracted superciliary stripe and absence of the chestnut red of the vent and stomach.



CSMS.
1851.

Tanayrella calophrys, Cubanis.



III.—ON THE GENUS *CHLOROCHRYSA*, Bp.

THIS genus was formed by the Prince of Canino in a paper in the *Comptes Rendus*, for Jan. 20 of the present year, for the reception of the two birds figured in the accompanying plate. They agree in the form of the beak with *Tanagrella*, but are slightly more tenuirostral (as a Quinarian would say) than even that form. The tail is much shorter than in *Tanagrella*; the lateral toes are equal as in that genus; the nostrils are almost entirely concealed by the frontal plumes, which is only partly the case in *Tanagrella*. The wings are rather long, the first four quills being nearly equal, the second or third rather the longest. The plumage is of the most brilliant glossy green that can be conceived, yet without metallic reflections, and must render them a rare ornament to those hot tropical valleys of the republics of Ecuador, New Granada, and Peru, where the only two species at present known have been found.

1. *CHLOROCHRYSA CALLIPARÆA* (Tschudi).

PLATE LXXIII. FIG. 1, Upper Figure.

Callospiza calliparæa, *Tschudi*, Wieg. Arch. 1844, p. 286., and Faun. Per. p. 202.
— *Calliste calliparæa*, *Gray's Gen. App.* p. 17. — *Calliste bourcierii*, *Bon.* in *Compt. Rend.* 1851, p. 76. — *Calliparæa bourcierii*, *Bp.* Note, s. 1. Tang. p. 3.

CHLOROCHRYSA lætissimè viridis; regione oculari, dorso inferiore, tectricibus caudæ ultimis, et ventre cærules-centibus; pennis caudâ-que nigris eodem viridi limbatis; vertice et tectricibus caudæ proximis croceis; regione auriculari castanea; gulâ, rostro pedibusque nigris.

Long. tota, 4.6.; alæ, 2.8.; caudæ, 2.

Bright green; round the eyes, lower back, distal tail-covers, and abdomen, tinged with blue; wings and tail black, margined with the same green; vertical spot and proximal tail-covers saffron; ear-coverts chestnut; throat, feet, and bill, black.

Whole length, 4.6; wing, 2.8; tail, 2.

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Habitat, Wood-region of North and Middle Peru (Tschudi); Valley of Baños near Tungaragua, Cisandean Ecuador (Bourcier); Anolaima, New Granada (Chapoul).

The present species was first described by Dr. Tschudi, who states that he found the species of the genus *Callospiza*, among which he included this, only in the hot Wood-region of North and Middle Peru, on the highest trees. M. Parzudaki sent specimens to London last year, which were brought from New Granada by a M. Chapoul, ticketed "*Aglaia chapoul*," one of which is the specimen here figured; being the property of Mr. Edward Wilson, who has kindly allowed me to examine and describe specimens of both the rare species of this genus, besides many others, preparatory to their again crossing the Atlantic to their final destination in the Philadelphia Museum. The Prince of Canino does not seem to have been aware of these facts, for he described a single skin of this species, brought home by M. Bourcier from Ecuador as new, and dedicated it to that gentleman as *Calliste bourcierii*, a compliment which I regret the stern laws of priority forbid me to continue.

2. CHLOROCHRYSA PHÆNICOTIS, Br.

PLATE LXXIII. FIG. 2, Under Figure.

Calliste phænicotis, *Bon. Compt. Rend.* 1851, p. 76.

CHLOROCHRYSA splendide viridis; alis caudâque nigris eodem viridi limbatis; tectricibus alarum minoribus, tibiis, et maculâ alterâ sub-oculo, alterâ pone oculum sericeo-argenteo-brunnâ; hâc corallino-rubro versûs nucham terminatâ; rostro pedibusque nigris.

Long. tota, 4.5; alæ, 2.9; caudæ, 1.7.

Splendid leek-green; wings and tail black, margined with the same; lesser wing-covers, thighs, subocular spot, and spot behind the eyes olive-brown, with a silvery gloss; this latter terminated towards the nape with a coral-red spot; feet and bill black.

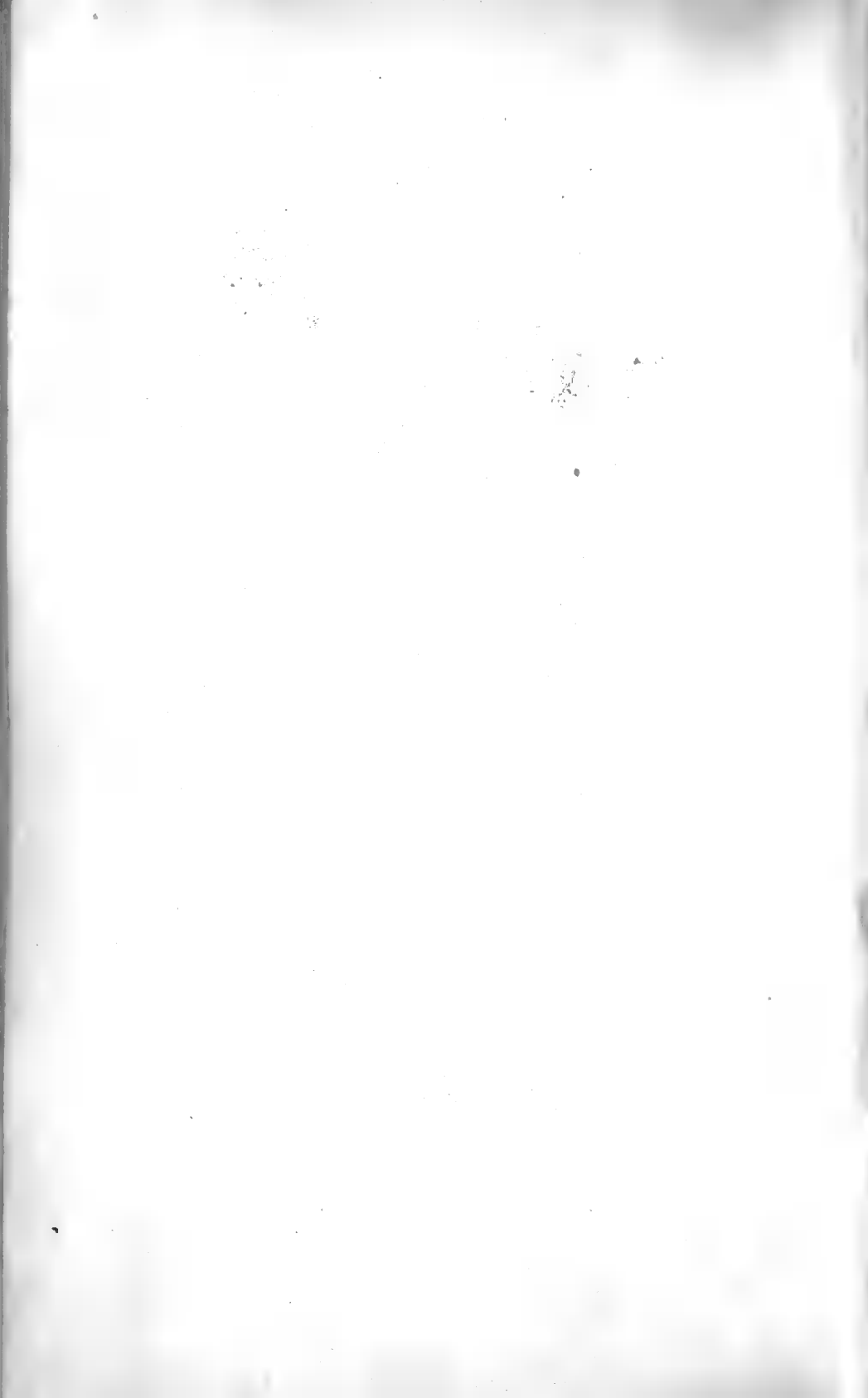
Whole length, 4.5; wing, 2.9; tail, 1.7.

Habitat, "La ville et bois chauds de Nanegan" (Bourcier), Idrisandean Ecuador, north of Quito.



C.D.M.S.
JAN 1851.

1. *Chlorochrysa calliparva* (Tschudi.)
2. *C. phoenicotis*, Bon.



BY PHILIP LUTLEY SCLATER.

This splendid species was one of the novelties brought by M. Bourcier from the republic of Ecuador. The Prince of Canino, in his description of it, does not allude to the very peculiar colour of the lesser wing-covers, thighs, and ocular spots, which it is very difficult to convey an idea of by description. Mr. Wilson's two specimens, and that in the Paris National collection, are, I believe, the only individuals of the species in Europe.

Faint, illegible text covering the majority of the page, possibly bleed-through from the reverse side.

ORNITHOLOGICAL NOTES

By H. E. STRICKLAND.

ON THE TYPE OF THE GENUS *DULUS*, Vieill.

Two very distinct forms have been hitherto confounded under the genus *Dulus* of Vieillot. Both are natives of the island of St. Domingo, whose Ornithology was far better known near a century ago, when Brisson wrote, than it has been of late years, when war and barbarism have expelled science from its shores. The difficulty of procuring specimens from that island, has been the cause of the confusion in question, and of the length of time that it has remained uncorrected. Some specimens, which Mr. G. R. Gray obligingly showed me at the British Museum, have however enabled me to clear up the matter.

Brisson, in his *Ornithologie*, described and figured a bird under the name of "Tangara de S. Dominique," which was also figured in Buffon's *Planches Euluminées*, pl. 156, f. 2, and which Linnæus denominated *Tanagra dominica*. Brisson informs us, that this bird was called in St. Domingo "Esclave" or Slave, a name which Buffon adopts in his *Histoire Naturelle des Oiseaux*. In 1816, Vieillot, in his *Analyse d'Une Nouvelle Ornithologie Élémentaire*, established his genus *Dulus*, defining the characters of the bird in question, and quoting it as the type of the genus, under the name of "*Tangara esclave*, Buff." Thus far there was no ambiguity in the matter. But Vieillot had himself been in St. Domingo, and had observed the bird frequenting the palm trees of that island. Hence, in an evil hour, he was induced to change the Linnæan specific name of *dominicus* to *palmarum*, and describes the bird as *Dulus palmarum* in the *Nouveau Dictionnaire d'Hist. Nat.* vol. x. p. 435. Now it happened, that there was already a Tanagrine bird, named "Le Palmiste" by Brisson, and *Turdus palmarum* by Linnæus, which had nothing whatever to do with the *Dulus dominicus*. The similarity of the specific names, however, induced some authors to unite the "*Turdus palmarum*" of Linnæus with the *Dulus palmarum* of Vieillot, and the mistake was the more readily adopted, as both these birds are found in St. Domingo. A moment's glance, however,

at the two birds (see their figures in Buff. Pl. Enl. 156, f. 2, and 539, f. 1.), will serve to show their completely generic distinctness.

Mr. G. R. Gray, in his Genera of Birds, Appendix 16, perceiving that the "*Turdus palmarum*" of Linnæus was a Tanagrine bird, closely allied to *Arremon*, and supposing it to be the type of *Dulus*, Vieill., merged the latter genus in *Arremon*, and quoted *Tanagra dominica*, Linn., as a synonyme of his *Arremon palmarum*. The Prince of Canino, though he is aware of the distinctness of these two birds, has fallen into the common error of regarding the "*Turdus palmarum*," Linn., as the type of *Dulus*. The arrival, however, of specimens of both birds from St. Domingo has now cleared up the matter, and restored *Dulus*, Vieillot, with the species *dominicus* (Linn.) as its type to its proper rank as a genus. The *Turdus guianensis*, Gm., founded on Buff. Pl. Enl. 398, f. 1., is perhaps referable to the same species, and certainly to the same genus.

One other species only of true *Dulus* is known, the *D. nuchalis* of Swainson, said to inhabit Brazil. It is closely allied to *D. dominicus*, but differs in having a transverse bar of white on the nape. Swainson's specimen is now at Cambridge, where I examined it some years ago.

We require farther information as to the structure and habits of *Dulus* before we can pronounce upon its true place in the system. Swainson placed it in the sub-family *Oriolinæ*, a position wholly untenable, as *Oriolinæ* is an old-world group and *Dulus* a tropical American one. It more probably belongs to the *Ampelidæ* or Chatterers, with which it agrees in the general form of the beak, wings, and feet.

The "*Turdus palmarum*," Linn., though nearly allied to *Arremon*, differs in having a longer beak, and will therefore no doubt be regarded by modern systematists as generically distinct. I therefore propose for it the name of *Phænicophilus*, and the type will stand thus:—

Phænicophilus palmarum (Linn.), Buff. Pl. Enl.

Arremon palmarum, Gray.

Dulus palmarum, Bon. (nec Viell.)

A second species, lately indicated by the Prince of Canino, is

Phænicophilus poliocephalus (Bon.)

Dulus poliocephalus, Bon., in Rev. et Mag. Zool., March 1851.
Habitat, St. Domingo.

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By PHILIP LUTLEY SCLATER.

IV.—ON THE GENUS *DACNIS*, CUVIER,

WITH DESCRIPTION OF A NEW SPECIES.

THE genus *Dacnis* forms a connecting link between *Cæreba* and *Conirostrum*, which with *Certhiola* are the only genera included by Mr. Gray in his sub-family *Cærebinae*. To these I think must be added the genus *Diglossa*, as it appears more naturally placed here than among the *Anabatinae*. M. De Lafresnaye observes, that these birds being furnished, like the *Cærebinae*, with a bifid filamentous tongue, and feet in all respects similar to them, and being in the habit, according to M. D'Orbigny's observations, of hanging about the twigs of trees to extract the insects from the pollen of the flowers, it appears indispensable to him to arrange them as true *Cærebinae*, and he expresses much astonishment at Mr. Gray's continuing to place them along with *Anabates* and the allied genera.

Of the ten species given under the head of *Cæreba* by Mr. Gray, I believe seven to be merely nominal, which will leave only three good species in this genus. These are *Cæreba cærulea* and *cyanea*, the two common universally known "black and blue creepers,"*

* From the following passage in Edwards' "Voyage up the river Amazon" (Murray's Home and Colonial Library), it would appear that the Linnæan writers who called these birds *Certhiæ* have some grounds to go upon.

"The tree-creepers were a more eagerly sought family, and two beautiful little species are quite common in the vicinity of Pará. One of these is of a deep indigo blue, with a black throat, *Certhia cærulea*; the other, *C. cayana*, is conspicuous for the brilliant ultramarine blue that caps his head; otherwise he is marked with blue and black and yellow. These little things are usually seen running up and down the tree trunks, or flitting hurriedly from branch to branch, busied in searching for insects upon the bark. They are extremely familiar and allow of near approach. At intervals they emit slight whispering notes, but their anxious haste leaves one with the impression that they might do themselves much more credit as songsters at their leisure. We never fell in with these species up the river, their place there being supplied by other varieties." Pp. 57-8.

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as they are generally called, and M. Hartlaub's *Cæreba nitida*, figured in last year's Contributions, pl. 66, fig. 1, which is the only other I am acquainted with. The species of *Dacnis* may be arranged as follows:—

1. DACNIS CAYANA (LINN.) STRICKLAND.

Motacilla cayana, *Linn. Syst. Nat.* i. 336. — *Motacilla cyanocephala*, *Gm. Syst. Nat.* i. 990. — *Fringilla cyanomelas*, *Gm. Syst. Nat.* i. 924. — *Certhia spiza* var. γ *Gm. Syst. Nat.* i. 476 (♀) — *Nectarinia bicolor*, *Becklemichev, Nouv. Mem. Soc. Mosc.* i. p. 378. — *Cæreba cærulea*, *Max. Beitr. z. Nat.* ii. 766. — *Dacnis cyanater*, *Lesson. Tr. d'Orn.* 458. — *Dacnis cayana*, *Strickl. Cont. Orn.* 1851, p. 15.

♂ *Thalassino-cyanea*; fronte, gutture, mento, dorso summo, alis caudâque nigris; alis thalassino-cæruleo marginatis; rostro nigro mandibulâ inferiore basi cum pedibus leviter brunneis.

Long. tota, 4 . 7̄; alæ, 2 . 4½.

♀ *Leviter viridis*; capite summo humerisque cærulescentibus, gutture cinereo-albescente.

Habitat, Trinidad, Cayenne, British Guiana (Schomb.); Brazil, Rio de Janeiro (Pr. Max.); Peru, east wood region (Tsch.); Bolivia, Chiquitos (D'Orb.)

Figured, *Pl. Enl.* 669, fig. 1 ♂, and 578, fig. 1 ♀; Edwards, t. 25, fig. 2 ♀; *Nouv. Mem. Soc. Mosc.*, 1828, pl. 23, ♂; *Zool. Ill.* ser. i. pl. 117, ♂.

2. DACNIS CÆREBICOLOR, SCLATER, SP. NOV.

♂ *Indigotino-cærulea*; loris, gutture, mento, dorso summo, alis caudâque nigris; tectricibus et secundariis strictè cæruleo marginatis; rostro nigro; mandibulâ inferiore basi cum pedibus carneis.

Long. tota, 4 . 7̄; alæ, 2 . 7̄.

Habitat, New Granada ?

This new species offers a striking resemblance to the last in the distribution of its colours, but the thalassine-blue is replaced by a dark indigo, the same as in the species of the genus *Cæreba*, whence I have named it *cærebicolor*. The straighter form of the beak and slightly lengthened tail, shows a decided approach to *Conirostrum*,

of which genus *M.* De Lafresnaye's *C. atro-cyanæum* seems to have much resemblance to it. But in that bird the whole under surface is black; and I think the present species can hardly be separated from the type of the genus *Dacnis*, to which it shows so much resemblance. My specimen was purchased of Mr. Argent, and I have seen similar ones in Mr. Warwick's collection.

3. DACNIS ANGELICA, DE FILIPPI.

Sylvia cayana, γ *Lath. Ind. Orn.* p. 546. — *Sylvia cayana*, *Vieill. Gal. Ois.* pl. 165.
Dacnis cayana, *D'Orb. and Lafr. Mag. de Zool.* 1837, p. 20; *Tschudi, Faun. Per.* p. 37; *Schomb. Reise n. Guian.* iii. 675; *Bp. Consp. Av.* p. 400, No. 1. —
Dacnis angelica, *De Filippi*, *cat. Mus. Mediol.*, 1844; *Bp. Consp.* p. 400, No. 3.
 — *Dacnis melanotis*, *Strickl. Cont. Orn.* 1851, p. 16.

♂ Turcoso-cærulea; fronte, lateribus capitis cervicisque, dorso summo, alis caudâque velutino-nigris; scapularibus margine cæruleis; abdomine medio crissoque niveis; rostro pedibusque nigris.

Long. tota, 4. 0; alæ, 2. 3.

♀ Suprà brunneo-cinerea, olivaceo parum tincta, alis caudâque obscurioribus; infra albescenti-cinerea.

Habitat, New Granada, Cayenne, Guiana (*Schomb.*); Yuracares, Bolivia (*D'Orb.*)

Figured, *Pl. Enl.* 669, fig. 2.; *Vieill. Gal. Ois.* pl. 165.

M. Lesson first clearly distinguished the present bird from the first species of the genus, with which it was confounded by the older writers, but he unfortunately considered this the true *cayana* of Linnæus, and named the other afresh "*Dacnis cyanater.*" The Prince of Canino quotes *De Filippi* as an authority for the name "*angelica*," under which this species is well described in the *Consp. Generum Avium*. I have never seen the work from which this description is copied, but I understand it is a Catalogue of the Milan Museum, published in 1844. He does not however seem to have been aware that it is identical with that figured in the *Pl. Enl.* 669, fig. 2.; and *Galerie des Oiseaux*, t. 165, to which he attaches the name "*cayana*." It may be distinguished from the two preceding by its white belly, and crissum and black car-coverts, as well as by the splendid turquoise blue of the plumage,

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which in the New Granadian specimens has a slightly brighter tinge than in those from Cayenne.

4. DACNIS ATRICAPILLA (VIEILL.)

?? *Certhia spiza*, *Linn. Syst. Nat. i. p. 186.* — *Certhia spiza* var. β . *Gm. Syst. Nat. i. 476* (δ) — *Certhia spiza* var. δ *Gm. Syst. Nat. i. 476* (♀) — *Cæreba atricapilla*, *Vieill. N. D. d'H. N. xiv. p. 50.* — *Nectarinia mitrata*, *Licht. Verz. d. Doubl. p. 15.* — *Cæreba melanocephala*, *Vieill. Max. Beit. z. Nat. p. 771.* — *Cæreba spiza*, *Max. Beit. z. Nat. p. 771.* — *Dacnis spiza*, *Tsch. Fauna Per. p. 37.* — *Dacnis atricapilla*, *Gray's Gen.*

δ D. splendide viridis; ventre in cærulescens trahente; remigibus rectricibusque nigris viridi limbatis; capite, nuchâ regioneque auriculari atris; mandibulâ inferiore flavâ, superiore pedibusque nigris.

Long. tota, 4.0; alæ, 2.8½.

♀ Omnino viridis; gulâ aliquot flavescente; alis caudâque fuscis viridi marginatis.

Habitat, Yuracares, Bolivia (D'Orb.); Brazil, Villa Viçoza on river Peruhype (Max.); British Guiana (Schomb.); Cayenne: Trinidad.

This is certainly Gmelins' *Certhia spiza*, var. β , and probably *Certhia spiza* of Linnæus, in which case it should stand as *Dacnis spiza* (Linn.) But Seba's figure (Thesaurus, ii. pl. 3, fig. 4), which is the origin of Linnæus' *Certhia spiza*, makes the throat black, and may be intended for some other bird, though from his worthlessness as an authority it is not unlikely to be meant for the present. In the lengthened and curved form of the beak, the present species approaches to the genus *Cæreba*.

5. DACNIS FLAVIVENTER, D'ORB. AND LAFR.

Dacnis flaviventris, *D'Orb. and Lafr. Mag. de Zool. 1837, p. 21.*

δ Lætè flava; fronte, gulâ, lateribus capitis, dorso superiore, alis caudâque nigris; capite summo nuchâque lætè viridibus.

Long. tota, 4.6; alæ, 2.5.

BY PHILIP LUTLEY SCLATER.

♀ Suprà obscure viridescens; infra griseo-brunneo variata; alis caudâque brunneis pallidiorè limbatis.

Hab. Bolivia, Yuracares (D'Orb.); Barra do Rio Negro (Wallace.)
Figured, Voy. de l'Amér. MÉR. pl. xiii. fig. 2.

The only specimens I have seen of this beautiful species, were sent by Messrs. Hawkshead and Wallace, from Barra on the Amazon.

6. DACNIS ANALIS, D'ORB. AND LAFR.

Dacnis analis, D'Orb. and Lafr. Mag. de Zool, 1837, p. 21.

Dacnis suprà obscure cærulescens, infra albicanti-grisea; ventre medio albido; ano tectricibusque caudæ inferioribus vividè rubris; remigibus rectricibusque nigris pallido cæruleo marginatis (D'Orb.)

Habitat, Bolivia, Chiquitos (D'Orb.)

Figura nulla! (*non vidi*).

A P P E N D I X.

Dacnis braziliانا, Gray, No. 3; Bp. No. 6, formed from *Certhia braziliانا*, Gm., which depends on Brisson's "*Certhia braziliensis violacea*," Orn. iii. p. 661, of which he gives the following description:—*Certhia nigra*; vertice viridi-aureo; gutture splendidè violaceo; pectore castaneo-purpurascete; dorso infimo et uropygio ex violaceo ad chalybis polito colorem vergentibus; rectricibus nigris oris exterioribus violaceo-chalybeis.—*Calendulam* crassitiè non excedit. The description was taken from a bird that was in the collection of M. de Reaumur, received from Brazil. I can make nothing of it!

Dacnis rufo-cinerea, Bp. Consp. Gen. Av. p. 401, seems to be identical with a bird described by M. De Lafresnaye in the Magasin de Zoologie for 1843, which he considers probably the female of his *Conirostrum sitticolor*. Should this however not be the case, he proposes the name "*rufum*," which will have long precedence over the Prince of Canino's appellation. I have specimens of

ORNITHOLOGICAL OBSERVATIONS.

this bird, and it is certainly a very close ally of the *C. sitticolor*, of which a figure is given in Gray's Genera, pl. 34, but still I think distinct from that species, and will therefore stand next to it as *Conirostrum rufum*, De Lafr., making a seventh of the genus, of which the other six species are correctly enumerated in the Prince of Canino's Conspectus, page 401.

Latham, Gen. Syn. Supp., p. 108, describes a bird afterwards named by him, Ind. Orn., p. 558, *Sylvia plumbea*, as follows:—

Size small; length $3\frac{3}{4}$; bill short, dusky brown; plumage above deep lead colour, nearly black, beneath pale ash colour; quills and tail dusky; legs deep brown; native place uncertain.

This has been identified by M. Cabanis with a bird found by M. Tschudi on the coast and wood-region of Peru, and formed into a "*Dacnis plumbea*," Faun. Per. pp. 37, 236. He gives the following description of it:—Head bluish-gray; back and upper wing-coverts bright gray-blue; remiges black-brown, on the outer barb, with an olive-green on the base of the inner barb with a broad white border; rectrices the same, without the white border on the inner barb; chin and breast bright whitish-gray; the under parts greenish-gray; middle of belly and crissum yellowish-white.

This bird I have never seen.

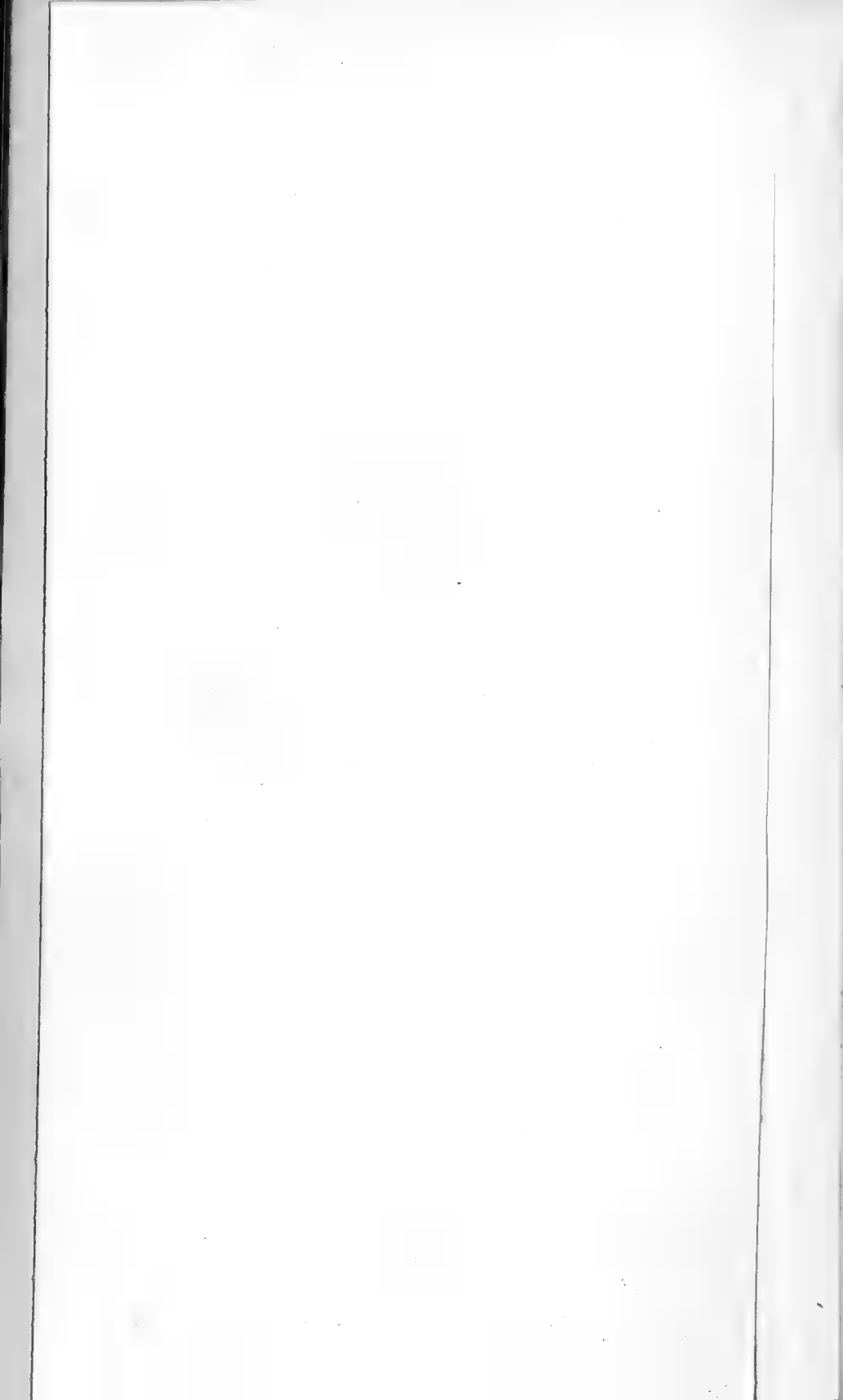
1st August, 1851.



F. Reeve, inc.

Trochilus melananthera, *Jard.*

1852.



TROCHILUS (SPATHURA) MELANANTHERA, JARDINE.

PLATE LXXX.

LAST post from Quito brought us some Humming-Birds which were of great interest; among them was one belonging to the sub-group, which has been called *Spathura*, and of which the beautiful species *S. underwoodii*, with its white boots and racket tail, has been considered typical. This species, last figured in the only number yet published of Mr. Gould's Monograph, is found in the neighbourhood of Santa Fé de Bogota, and in Galipan, between La Guayra and the Caracas, at an elevation of from 5000 to 9000 feet. Of the specimen lately received, Professor Jameson writes (considering it to be *T. underwoodii*),—"I am not aware of its being hitherto met with to the south of the equator." Along with a true *T. underwoodii* Mr. Gould had enclosed a ♀ of a *Spathura* with an unspotted breast, with an opinion, that the male of the latter would prove distinct; and on comparing the Quitian birds with these and the figure and description in the Monograph, there appears to be a considerable difference. The proportions and tints vary, and the large space of black on the chin and maxilla is very marked. We are not aware whether M. Bourcier has noticed it, and examination of more specimens must decide whether it is only a local variety, but meanwhile we have applied the above specific name, quite provisionally, until the point as to species is cleared up, and give a description from the specimens before us.

♂ *Above*, green, bronzed on upper tail-covers; wings purplish-black; tail bronzed green, the long exterior feathers black, the spatulate ends velvet black with rich green reflections. *Below*, chin and sides of maxilla velvet black; centre of the throat and stretching round below the auriculars, with the sides of the neck, emerald green, forming a brilliant gorget; belly and vent green; boots large and pure white.

Entire length, 4. 8; bill, 5; wing, 1. 8; outer tail-feathers, 2. 8.

ILLUSTRATIONS OF ORNITHOLOGY.

♀ *Above*, green, much bronzed on the whole crown; tail slightly forked; outer feather tipped with white, second with a slight indication. *Below*, pure white; on flanks green with a few spots on the side of the belly; under tail-covers pale sienna.

Length, 2. 9. to 3; bill, 6; wing, 1. 6.

1st August, 1851.

GNATHODON STRIGIROSTRIS.

SINCE the publication of our figure and description of *Gnathodon* in Taylor's Annals, we have anxiously looked for more information regarding it. Lieutenant J. Murray of H. M. S. Daphne, who visited Navigator's Islands in 1849-50, where he procured for us some very interesting species, was unable to learn any thing regarding it in Upolu; but Mr. Strickland writes us, that a missionary lately returned from these islands, informed him that they were still kept as pets, and that two were offered to him alive shortly before sailing, which he, ignorant of their value declined. The results of the United States exploring expedition, where this bird was said to be originally described, have also been waited for. A single copy without plates, has been obtained by the British Museum, from which Mr. G. R. Gray obligingly made the following extract; but the work itself we have been unable to procure from any London bookseller, though it has been under order for more than eight months. No definite answer is given; but the general opinion is, that the work for some reason or other has been suppressed, in which case being unattainable, the few volumes in circulation cannot be used as any authority for the species which have been described in them as new:—

“*Female*—smaller, more brown; plumage of the head and neck less metallic, but otherwise like the male.

“*Young*—covered with a sepia coloured down; bill yellow, and have a remarkably wide gape; the lower mandible being so much wider than the upper as to cover it, excepting the hook.

“This bird formerly abounded at the *Island of Upolu* one of the Samoan Islands, but now it is considered a rare species by the natives, and one which will be entirely destroyed in the course of a few years if the same causes exist which are now operating to their destruction. They build their nests and pass most of their time on the ground, and flush like Partridges or Grouse with a whirring sound produced by their wings. Their food is mostly fruit, including a species of fig, growing in the mountainous regions which they inhabit. The tree called Owa by the natives (*Ficus prolixa?* of botanists), producing the fig, is represented on our plate with the

bird. It forms a remarkable feature in the Samoan scenery; its broad and ample branches spreading like umbrellas above all the other forest trees, many of which are gigantic, although covered in a measure by these enormous canopies. The trunks of Owa trees are little forests in themselves; the one from which our sketch was made measured 102 feet in diameter, and about the same from the ground to the main branches.

“The natives of the Samoan Islands, who spend much of their time indolently, are fond of pets, which are mostly pigeons or doves, their islands not affording suitable quadrupeds. A few years since a passion arose for cats, and they were obtained by all possible means from the whale ships visiting the islands, were much esteemed for a while until the other pets were devoured by them; after which Pussy (a name generally adopted by the Polynesians for cats), not liking yams and taro, the principal food of the islanders, preferred *Manu-mea*, and took to the mountains in pursuit of them. There the cats have multiplied and become wild, and live upon our *Didunculus* or little Dodo, the *Manu-mea* of the natives, which it is believed will in a very few years cease to be known, excepting by the miserable fragments now deposited in the national museum in the city of Washington, unless some more lucky collectors get them better than we did. They are however more perfect than the remains of the Great Dodo (*Didus ineptus* of Linnæus), which are preserved in the Ashmolean and British Museums. We were enabled by great labour to obtain three specimens, one of which was lost by the wreck of our ship; the other two, deposited as stated, are male and female, but badly preserved. At Tahiti the Garnet-winged Pigeon (*Columba erythroptera* of Latham) was said to abound; they have in like manner been destroyed by cats, introduced by early navigators and since become wild, though retaining their varied colours like those domesticated.

“The pigeons or doves are now almost unknown, and the cats are driven to the necessity of feeding on lizards.”—*Wilkes' United States Explor. Exped.* Vol. viii. p. 211.

SCYTALOPUS, GOULD, 1836.

At a meeting of the Zoological Society in October, 1836, Mr. Gould proposed a new genus of Wrens: "The general contour of form," he remarks, "is that of *Troglodytes*, from which it differs in possessing a shorter stouter and less acutely pointed bill, with an upward inclination instead of being gently incurved as in *Troglodytes*; the tail is even shorter than in that genus, and consists of decomposed feathers, the whole has a rugged and disunited appearance; and lastly, the tarsi have their posterior aspect regularly banded with narrow scales, instead of having one or two continuous laminae on that part." Mr. Gould a short time afterwards furnished us with sketches taken from these specimens, from which and his notes we gave figures and descriptions in our "Illustrations of Ornithology" N. S., Plates XIX. and XX., as also the description of a third species from our own collection. The appearance of a figure and description of another species by Ménétries, in the Memoirs of the Academy of St. Petersburg, and the idea entertained that this was identical with one of Mr. Gould's species, has induced us to give impressions from the plates used in the "Illustrations," and to figure the bird described by us there as *S. undulatus*, as well as one which we consider to be the species of Ménétries, specimens of which we lately procured in Liverpool, and from these it will be seen, that the four are all quite distinct from each other. The reproduction of plates already published, we trust, will not be objected to, particularly as there are now no copies of the "Illustrations" for sale, unless such as may accidentally fall into the market, while the Memoirs of the Academy of St. Petersburg are not easily consulted.

Mr. Gould characterized his genus —

"*Bill* shorter than the head, compressed, rather blunt, and slightly recurved; nostrils basal, covered with a membrane. *Wings* very feeble, very concave, very short, rounded; first quill abbreviated, third, fourth, fifth, and sixth of equal length. Tail very short, very graduated (the outer feathers being extremely small), consisting of decomposed feathers. *Tarsi* long and stout, the fore part covered with large scutellæ; the hind part bound round with

ILLUSTRATIONS OF ORNITHOLOGY.

narrow scales, like the abdominal scales of snakes; hind toe long and rather stout, claw long; middle toe long and slender, and with the other two fore toes furnished with fine nails."

SCYTALOPUS FUSCUS, GOULD.

PLATE LXXVII.

Scytalopus fuscus, Gould, Proc. Zool. Soc. October, 1836, p. 89. — *Jard.* and *Selby*, Illust. of Ornith. N. S. pl. xix. — *Bonap.* Consp. Av. p. 206. — (Bonap. gives as a syn. *Malacorhynchus speluncæ*? *Ménét.*)

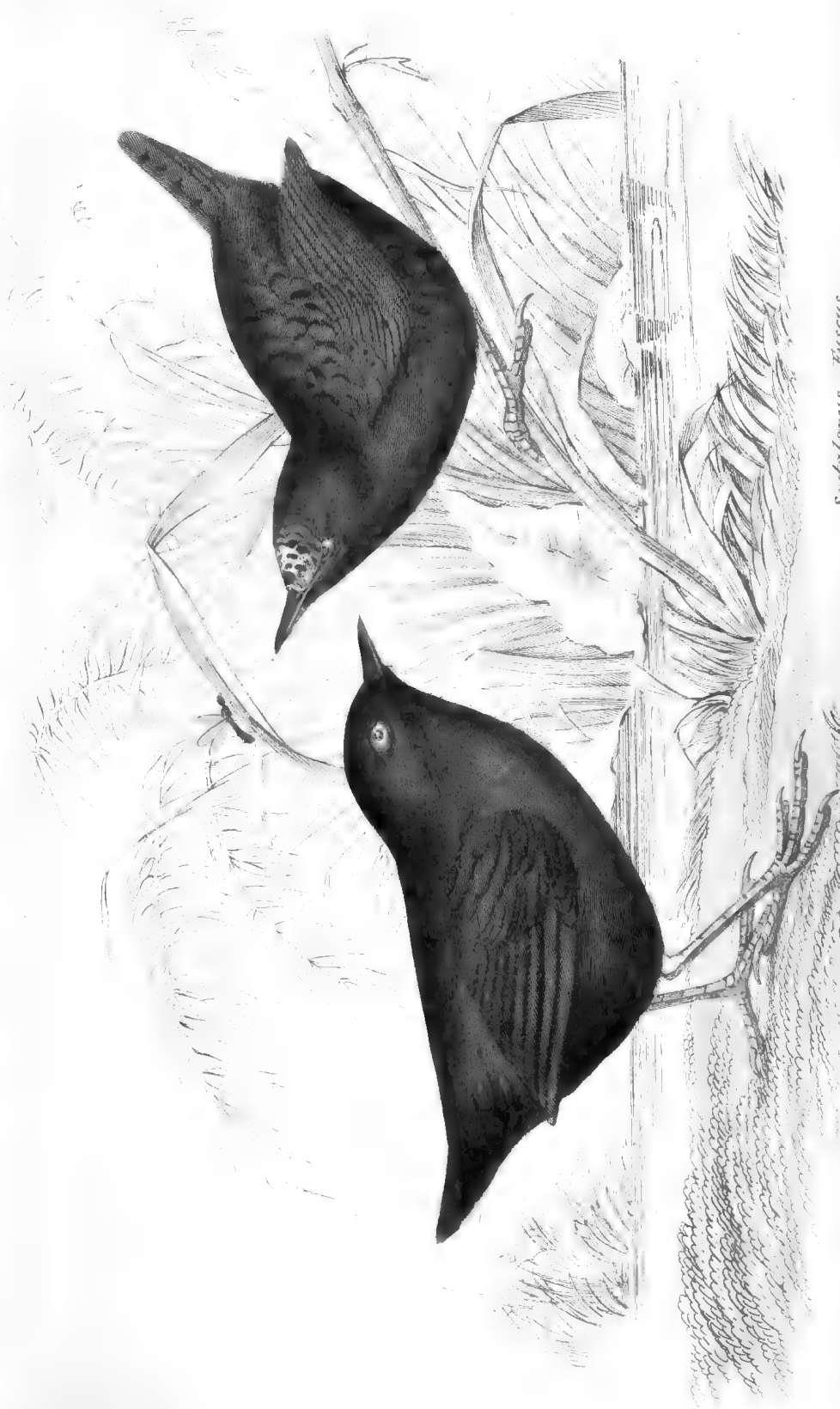
"ALL the plumage of a uniform sooty black, the head in some specimens having each feather margined with beautiful silvery gray; bill black; feet brown. Total length two inches and three quarters; bill half an inch; wing an inch and seven-eighths; tail an inch and a quarter; tarsi seven-eighths. Habitat, Straits of Magellan, Chili."

SCYTALOPUS ALBOGULARIS, GOULD.

PLATE LXXVIII.

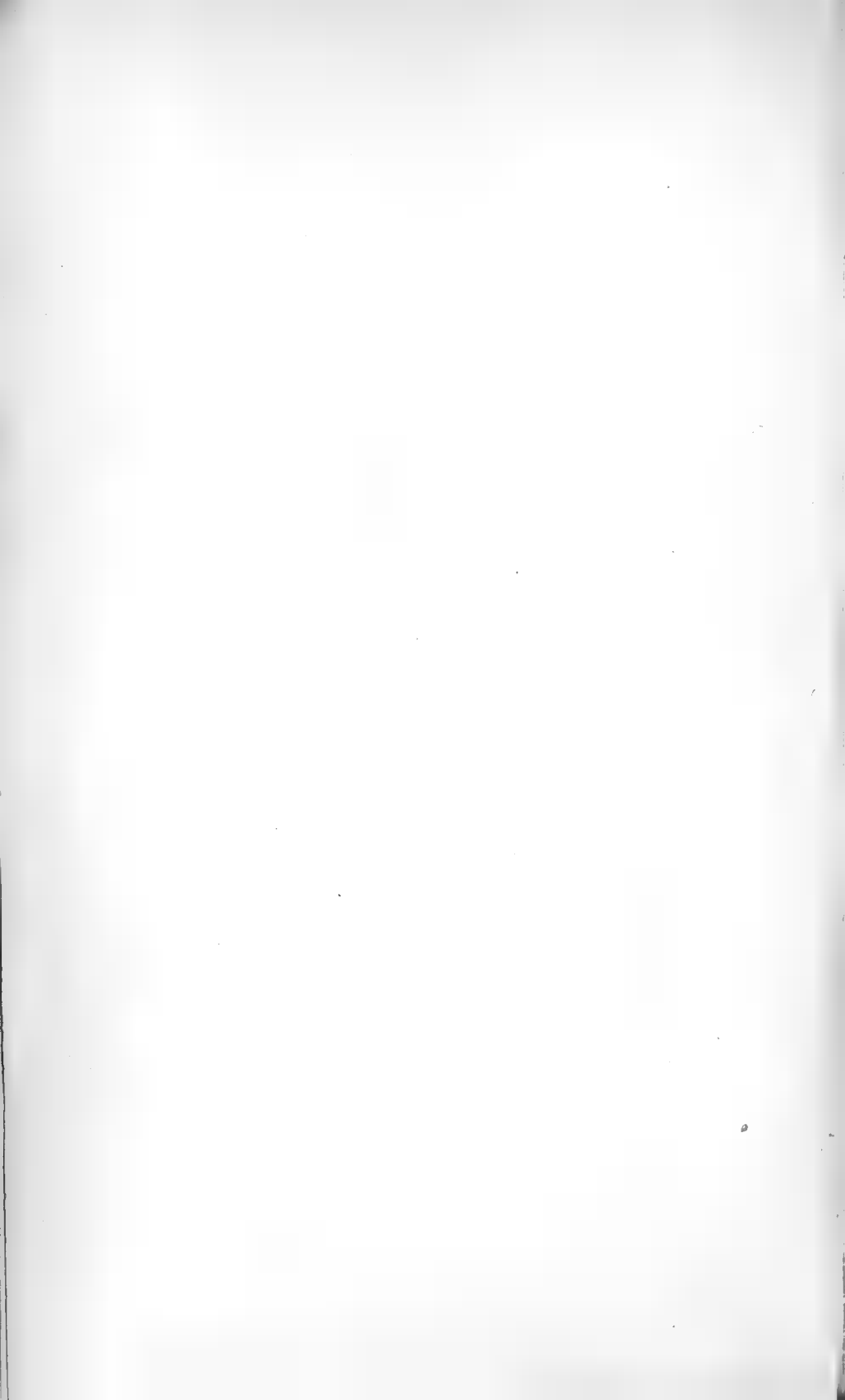
Scytalopus albogularis, Gould, Proc. Zool. Soc. October, 1836, p. 90. — *Jard.* and *Selby*, Illust. of Ornith. N. S. pl. xx.

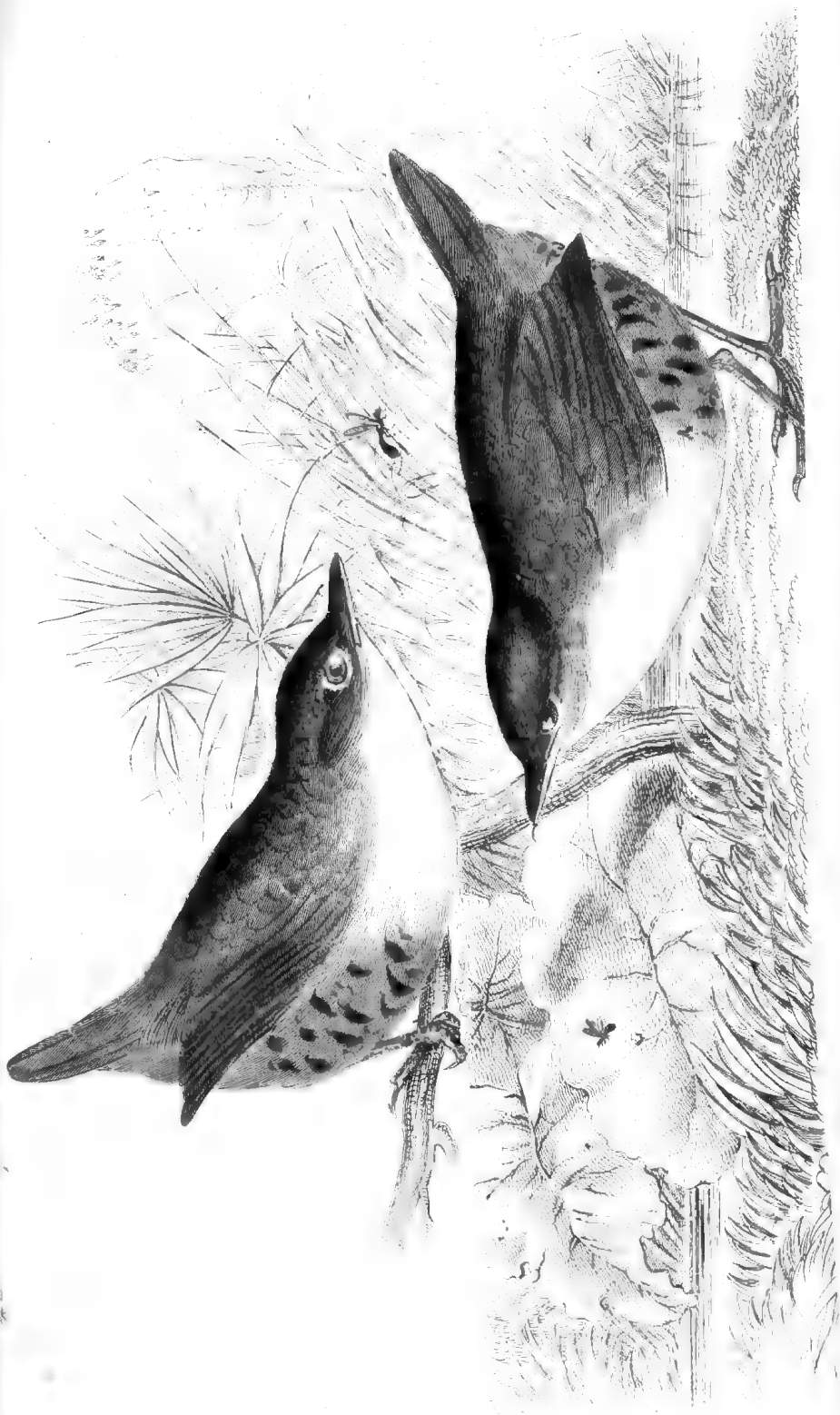
THE Prince of Canino, in his *Conspectus Generum Avium*, quotes as synonymous with this species, *Myothera indigotina*, Leichtenstein, which we have had no opportunity to verify, and also *Malacorhynchus albiventris* and *indigotinus*, Ménétries. On our next plate we have figured what we consider to be identical with the figure of Ménétries, and both these, we think, are different from the bird which served for our figure in the "Illustrations" of *S. albogularis*. We regret to say, that neither of the original specimens of *S. fuscus* and *albogularis*, which at the time of description formed part of Mr. Gould's private collection, are now accessible, nor can Mr. Gould inform us of their destination, and we cannot too much

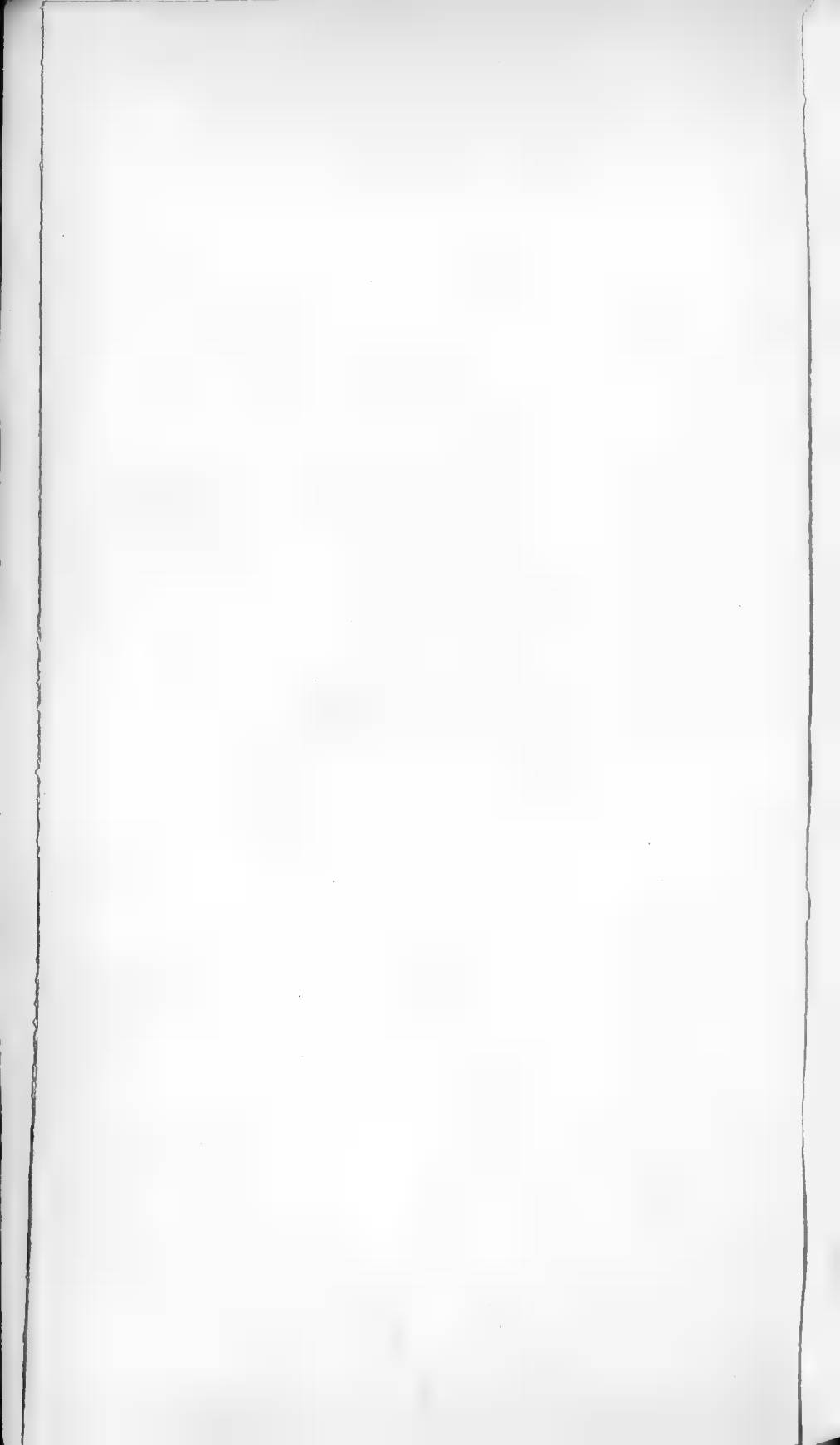


Seydilepus Fasciatus.
1850

W. H. B. G. 1850







ILLUSTRATIONS OF ORNITHOLOGY.

insist upon the importance it would be to science, if all persons who may figure or describe any species, would not only mark the specimen as typical of any figure or description, but if parting with it, would preserve some memorandum of its purchaser, or the collection to which it may find its way.

Mr. Gould's description of this species was —

“*Crown* of the head bluish-black; shoulders and back ferruginous brown, obscurely marked with narrow transverse lines of black, which bound the edges of each feather. *Tail* uniform pale rufous brown; throat, chest and middle of the belly white; sides of the chest, flanks and under tail-covers light ferruginous, barred with black; upper mandible dark umber brown; under mandible and feet brown. Total length, three inches and three quarters; bill five-eighths of an inch; wing an inch and three quarters; tail an inch and a half; tarsi three quarters of an inch. Habitat, Brazil.”

SCYTALOPUS UNDULATUS, JARD. & SELBY.

PLATE LXXVI. FIG. 1.

Scytalopus undulatus, *Jard. and Selby*, *Illustr. of Ornith. in Description of plates xix and xx.*

OF this species we gave no figure in the “Illustrations.” As there stated, it was procured from the late Mr. Carfrae, a dealer in Edinburgh, and we know nothing of the locality from which it was received. It is very wren-like in form and plumage. *Above*, umber brown, undulated particularly on the rump with black, and the tips of the feathers being paler; wings, with the greater and lesser coverts tipped with yellowish-umber before, a spot of black. *Below*, throat and breast pale indigo; belly, vent, flanks and thighs yellowish-umber; feathers broadly barred with black near the tips. Tarsi and feet pale yellowish-umber. Length, 3.7; bill to forehead, 4; wing to first quill, 1.9; tarsus, 8.

SCYTALOPUS ALBIVENTRIS, MÉNÉTRIES.

PLATE LXXVI. FIG. 2.

Malacorhynchus albiventris, *Ménét.* Mem. ac. Petersb.

OUR specimen of this bird we purchased in Liverpool, where we saw a good many examples. *Above*, uniform dark blackish-gray, on the rump and upper tail-covers umber brown, slightly undulated with black and pale tips to the feathers. *Below*, chin, throat, breast and belly white; auriculars and sides of breast gray; flanks and under tail-coverts yellowish-umber, irregularly barred with black; maxilla umber brown; mandible, tarsi, and feet, yellowish-umber.

Entire length, 4.7; bill to forehead, 4; wing to fifth quill, 2; tarsi, 8.

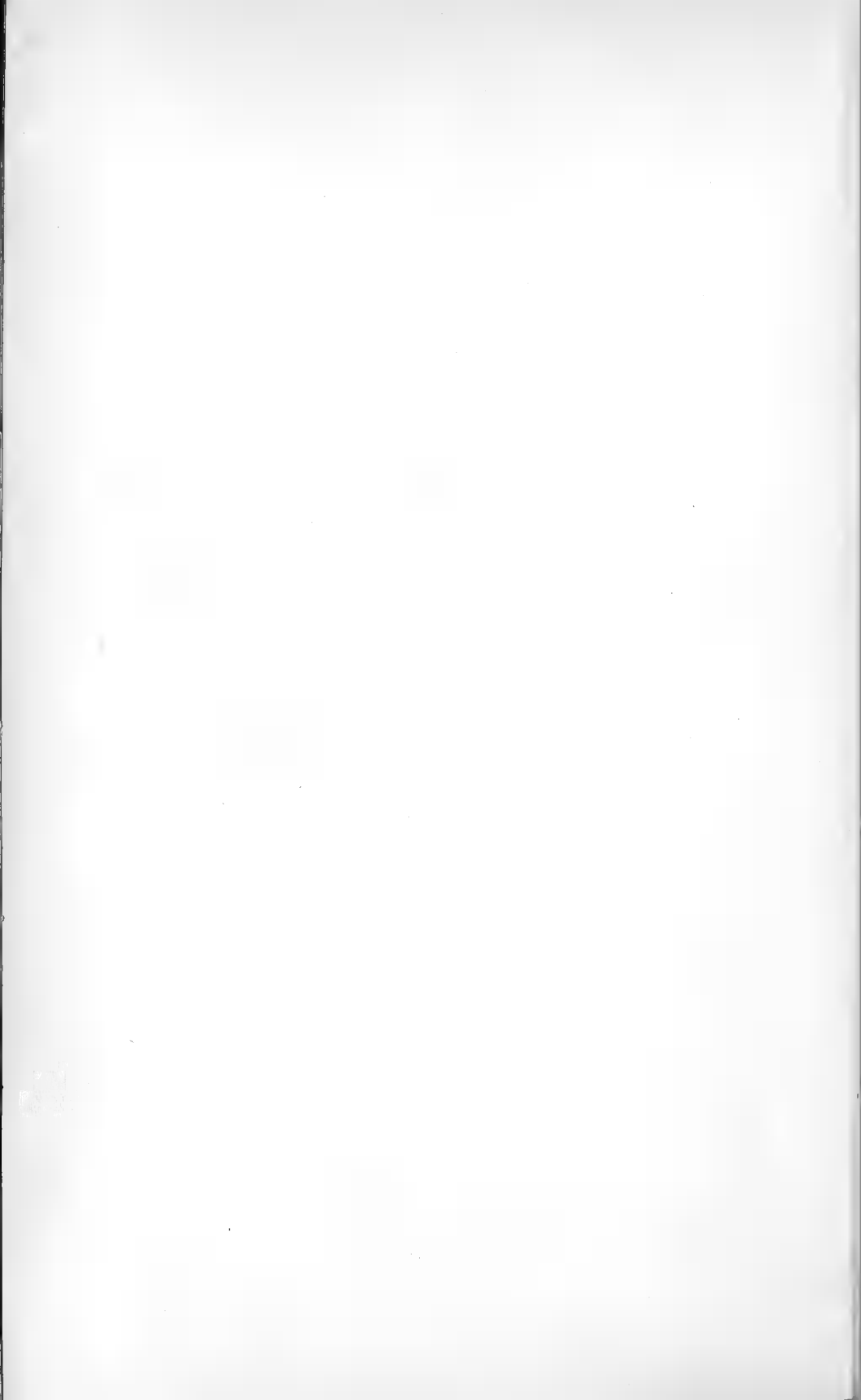
Inhabits North and South Brazil (auct. Bonap. Consp. G. Av.)

August 7, 1851.



1. *Scytalopus undulatus*, *Sard.*

2. *Scytalopus albiventris*, *Menestr.*



MONOGRAPH

OF

THE OWLS—*STRIGIDÆ*,

By DR. T. T. KAUP.

As all birds are formed on one and the same *scheme*, so that every one looking at the Humming-Bird and the Ostrich shall at the first view distinguish them as members of one and the same class, so the Owls are formed in a higher degree, on one and the same general typical model, and they make such a natural family, that every one recognises them as parts of one and the same section.

This agreement of the general form constitutes the reason that the Owls, in the suborder *Rapaces*, represent the whole class of birds, like the *Cuculidæ*, *Trochilidæ*, *Hirundinidæ*, *Sterninæ* et *Columbidæ*, in their orders or suborders.

This similarity makes all these families present a very difficult problem, as well for systematic as for descriptive Ornithology.

The bird, as the second class of the vertebrata, represents the *Ear*, *Respiration* and *Breast-Animals*, and in the same manner do the *Strigidæ* in their suborder, represent the same sense-organ, the same anatomical system, and the same body-region.

They are *Ear-Rapaces*, because we find in them the largest ear with a complete operculum; they are *Respiration-Rapaces*, because they have largely developed lungs and air-sacks, and a very great development of pneumaticity of the bones, especially of the head, and they have a far-sounding voice. They are *Breast-Rapaces*, because the breast is prominently developed in comparison with the belly region.

As the sense organ of the *Ear*, as the anatomical system of the *Respiration*, as the body region of the *Breast*, and as the class of birds take all the second rank, the *Owls* must have the second place as a family amongst the first suborder *Rapaces*, because they are the manifestations of these organs, or in other words, they are

the representants of the true bird type, because they represent the whole class in their suborder.

Their present place as a family, at the end of all the *Rapaces*, is one which it is not possible to justify. The best genera of the *Strigidæ* are formed by Savigny, Cuvier, Duméril, Boie, and Brehm. All the others, made by Wagler, Isidore Geoffroy, Ch. Bonaparte, Lesson, Blyth, Hodgson, want the necessary foundations. They are simple subgenera or nominal genera.

With regard to the subgeneric sections, I have gone further than all my predecessors. I give them particular names, because they have characters which distinguish them as sections of a genus.

I consider the genus *Utula*, Cuv., as a nominal genus, because the *Syrn. lapponicum* and *nebulosum*, are not different from the subgenus *Syrnium* of the genus *Syrnium*, in which *aluco* is the typical species.

In the same way I must suppress the genus *Ascalaphia*, because I could not find, after the most careful research, any generic or subgeneric characters by which I could distinguish *Bubo ascalaphus* from *B. bengalensis*, *maximus*, *virginianus*, and *africanus*, all of which form my subgenus *Bubo* of the genus *Bubo*.

The same is the case with the genus *Megapelia*, Ch. Bonap. I cannot separate the *M. peli* from the subgenus *Ketupa*, Less., and I mean that *Bubo peli* is the true typical species of the subgenus *Ketupa* and the whole genus *Bubo*.

I must also give the old name *Scops* the preference to the new name *Ephialtes*, because I cannot admit, as a sufficient reason, that Mæhring, in 1752, has given this old name to a genus of the *Gruideæ*, a name which the oldest authors have given to an Owl.

In the Owls, as a whole family, the ear is predominantly developed, as in all the animals which look for their food in the twilight or in the night. We see this fact in my second order of mammalia, which I have called *Mammalia ornithoidea* or *glires*, and which I have composed of the suborders, 1. *Noctugrada* (*lemur*, Linn.), 2. *Chiroptera*, 3. *Marsupialia*, 4. *Insectivora*, 5. *Rodentia*. All these mammalia are, with very few exceptions, twilight or night animals, with very fine hearing but with weak sight.

We see the same among the *Felidæ*, *Foxes*, and distinctly by *Otocyon (canis)*, *lalandi*, which has the longest ears but the weakest sight.

We can say with the greatest certainty, that all the animals which rove in the twilight or night for their food, have a better hearing than sight. This is the case with every night animal which has been discovered up to the present time. When some naturalists say that the Owls have a good sight, they are quite wrong. I mean that the Owls, particularly the Night Owls, make more use of their hearing for catching their prey than of their sight. The lively motions of the mice, their perpetual rustle on the dry leaves, must give the Owls the first notice of the presence of their prey. The eyes, however, may be used at the moment of seizing the prey.

Most of the Owls can be attracted by a good imitation of the voice of the mouse, and in some instances where the hunter was quite still in his position, the Owl has flown to his head. With foxes the case is the same; when the sportsman is placed in the night out of the wind, the fox will come to his very feet.

All the little birds attack the Owls for a longer or shorter time, when they find him out in daylight. Perhaps, however, it is more astonishment at such an unusual form than antipathy. A goat-sucker, thrown among a troop of hens will be attacked by them in the same manner. The antipathy can never depend upon experience, for if an Owl occasionally catches a bird by night, the poor bird expiates the first acquaintance with its life.

In the spring, when the little birds are employed in feeding their young, they come out only a very short time when they see an Owl, and fly away when they have satisfied their curiosity. In the Zoological Gardens in London we may see, in an aviary, some of the *Scops asio* among a great number of other birds, which are so accustomed to it that they never attack it, and in fact take not the least notice of it.

The demeanour of the Crows and Rapaces towards the Owls, is, in comparison with that of the little birds, more an innate antipathy, like that of cats and dogs, dogs and foxes.

All the Owls have a far-sounding voice, howling, jowling, or whizzing,* which they sound very industriously in the breeding season, and which fills the superstitious with anguish and terror.

* Nearly all the names of the Owls, as Owl, Eule, Uhu, Auf, Uf (Swed.), Ugu (Turk), Flibou, Flulotte, Ghouette, Chevêche, Strix, Pfynx, Bubo, Aluco, Ulula, &c., are imitations of the voice. This is quite natural, because man more frequently hears than sees these birds.

This is the case not only in civilized Europe but in every part of the world. Their appearance in the neighbourhood of houses is often considered as the prognostic of an early death. The human fancy is always more excited by twilight or night, and the life of all the night animals has always some portion of mysticism, on account of their slow motion and ghost-like flying, their dark colouring and gloomy appearance. It is on this account that men do not like the night animals. The savage and the superstitious kill them if they find them by day-light, and only the civilized man protects them, because the Owls like the *Chiropteres*, catch an immense number of insects and mice, which are enemies to the husbandman.

The family of Owls, as we have already said, is a very natural group, and the beginner in our science has only to see one and he can recognise all the others as members of one and the same family. Latham alone has committed the fault of mistaking a figure of the *Zeraglaux connivens* for a Hawk, which is corrected now by Lord Derby.

All the Owls have a more or less curved bill, always simple, overhanging the lower jaw, and without teeth. The lower jaw is cut off at the end with a tooth-like emargination on each side. The end is more or less ground away by the singular custom of smacking the bill, which some thrushes also do. The cere is never distinguished by its colour. The oval nostrils are mostly placed at the end in the cere, and are covered like the greatest part of the bill, with long bristle-feathers. This, the round head and the large eyes placed in front, give the face a peculiarity, reminding us of the face of the cats, which takes as a family in the suborder *Carnivora*, the same second rank as Ear, Respiration and Breast-Carnivora.

The plumage of the Owls is mostly soft and mostly dark coloured and speckled. The surface of the wings, especially in the true Night Owls, is covered with an extremely soft hairlike felt, so that it is sometimes impossible to recognise the rays. The anterior web of the first wing-feather, and very often the emarginations of the following ones have a comb-like dentilation. The twelve tail-feathers are very often short, and very often curved towards the centre. The tarsus is mostly feathered, very rarely naked or scaled, and

is of middle length. The toes are feathered or naked, covered with scales or bristle-feathers; they are very often short and more adapted for catching prey than for running on the ground. The exterior toe can be moved at will from the front to the back. The inner toe is generally as long as the middle toe, and longer than among the *Falconidæ*. The sole of the toes is broad and warty, and the claws are sharp pointed.

In their osteology, the Owls have among the *Rapaces* the peculiarity that the *ossa communicantia* have a third articulation, by which they are connected with a leaf-like protuberance of the *os basilare*. Such a third articulation we find also in the *Caprimulginae*, *Scolopacidae*, *Anatidae*, *Columbidae*, and in the genera *Ostralegus* and *Hemipodius*.

The bone-covers over the eyes, which we find in the most of the *Falconidae* are wanting in the Owls, because the cellular lachrymal bones are not so developed and go forwards like a thorn.

The eyes have in the sclerotica a chain with bone links, and one eye is divided from the other by a thick cellular wall, which is very thick in the genus *Strix*.

The soft parts of the Owls have not yet been very accurately compared with the other families of *Rapaces*, and we know only that they have long cæca.

As the representants of the respiration type, their whole respiratory organs ought to be compared with those of the other families of *Rapaces*.

The Owls are spread pretty equally over the whole world. The number in Europe is now 12-13, in Africa 17-18, in Asia near 40, in America 38-40, Australia 10-12.

Some of them, as the *Surnia nyctea* and *ulula* are spread over the northern parts of Europe, Asia and America. *Strix candida* is common to Asia and Africa, and Asia and Australia have the *Strix delicatula*. The *Otus brachyotus* has the most extended range, as we find it in every part of the world except Australia.

As regards the genera, Europe and Africa have the same number, 8.—(1.) *Nyctale*, (2.) *Athene*, (3.) *Surnia*, (4.) *Scops*, (5.) *Otus*, (6.) *Bubo*, (7.) *Strix*, and (8.) *Syrnium*. Asia, and perhaps America, has all these genera, and the two others, *Glauucidium* and *Zeraglaux*. Australia is the poorest country for genera, we have only *Zeraglaux*, *Scops*, and *Strix*.

This review however, like all human works, very much requires correction.

THE LAWS FOR SYSTEMATISING THE TEN GENERA OF OWLS.

WHEN we consider the ten genera of *Strigida*, we cannot find more than two subfamilies—*Day Owls* and *Night Owls*.

The *Day Owls*—*Surninæ*, have some analogies in their whole exterior form with the *Falconinæ* of the *Falconidæ*, Eye, Nerve and Head-Birds, and must be placed at the head of the whole family.

The *Night Owls*—*Striginæ*, as the true representants of the second family of *Strigida*, are the second subfamily, because they manifest, in a very clear way, the Ear, Respiration and Breast-Birds.

The classification of the Owls with and without ear-feathers is too superficial to require refutation. To classify them according to the form of the ears can give only an artificial system, because we find both small and large earholes in the *Surninæ* as well as in the *Striginæ*. When we classify the Owls in a true natural way, we must proceed as follows:—

The Owls as a family are the true representants of the class of birds in their suborder *Rapaces*, which consists of the families—(1.) *Falconidæ*, (2.) *Strigidæ*, (3.) *Gypogeranidæ*, (4.) *Gypaëtidæ* and *Vulturidæ*.

The *Day Owls*—*Surninæ*, like the *Falconinæ* of the *Falconidæ*, are the manifestations of the eye, nerve, and head, and must therefore have as a subfamily the first rank.

The *Night Owls*—*Striginæ* are the representants of the ear, respiration, and breast, and must have therefore as a subfamily the second rank. In the second subfamily *Striginæ* of the second family *Strigidæ*, we must find out the true representant of the whole subfamily and family. If we look which genus among the *Striginæ* has the most completely developed ear with a complete operculum; which has the bird character, the longest wings, the largest breast and a very inconsiderable weight, we shall find there is no other genus than *Otus*.

OTUS is therefore the second genus in the subfamily, and it is the type-genus of the whole family *Strigidæ*.

In this genus, which can be subdivided into five different little subgenera, we must find a subgenus, which has the longest wings and the lightest body, which is a true Night Owl, and which for the most part sleeps by day.

This is the subgenus OTUS with the following species:—*vulgaris*, *americanus*, *zonurus*.

In this subgenus OTUS I take the common Long-eared Owl, OTUS VULGARIS, for the typical species.

From this species we must abstract the characters to find out the second genus in the first subfamily *Surninæ*, and the second subgenera in all the other genera. The characters of this typical species are the following:—Beak feeble, and from the cere curved; enormously large and *asymmetric* ear with a large operculum, very developed feather-wreath in form of circle around the ear, long wings, only the first quill on the end of the inner web with an emargination; the surface of the webs covered with a very soft felt; the exterior web of the first quill very long and clearly dentilated like a comb, the body light as if filled with air, very soft flying, truly nocturnal, sleeping during the day. If we take these characters we cannot find another genus in the subfamily *Surninæ* than *Nyctale*, Brehm., as one which, by its habits and colouring can have any other place than near to *Athene* and *Glaucidium*.

Up to this point, however, we have only given two genera their true places in the two subfamilies, namely —

A. <i>Surninæ</i>	1	...	...	2. <i>Nyctale</i> .
B. <i>Striginæ</i>	1	...	...	2. OTUS.

Only an arbitrary system can give these two genera another rank.

We must now see which genus of the *Strigidæ* forms the first genus in the first subfamily *Surninæ*. Which is the true manifestation of the Eye, Nerve and Head-Bird? Which has the greatest number of analogies with the first genus *Zerax* of the first subfamily *Falconinæ* and the first family *Falconidæ* — a genus which has the most handsome skull, the largest brain, and the finest eyes?

It is the genus *Glaucidium*, Boie, which has the analogy with *Zerax*, that it contains the smallest Owls of the whole family, and that the round nostrils are bored in the middle of the pear

shaped and swollen cere. In this genus we find the first wing-feather shorter than the tenth, and the toes naked and not covered with a thick plumage.

When we compare these characters with those of other Owls, we give them the first rank as a genus or as a subgenus.

In the first subgenus *Pisorhina* (*Scops manadensis*) of the genus *Scops*, we find that the nostrils are bored in the middle of the pear shaped and swollen cere; and I draw the conclusion without having seen the species, that the first wing-feather is shorter than the tenth.

The genus *Scops* has this analogy with the genus *Glaucidium*, that it has, amongst all the true *Striginae* the finest formed round skull, with the largest brain and the least developed pneumaticity of the coronal bones. Like *Glaucidium*, *Scops* contains the smallest species of its whole subfamily *Striginae*.

My classification of the Owls begins now to grow in the following manner:—

- | | | |
|--------------|------------------------|---------------------|
| A. SURNINÆ. | 1. <i>Glaucidium</i> . | 2. <i>Nyctale</i> . |
| B. STRIGINÆ. | 1. <i>Scops</i> . | 2. OTUS. |

To find out the rank of the six other genera of the subfamilies, *Surninae* and *Striginae*, we must apply the characters which distinguish the type of the other order—III. *Grallæ*. IV. *Ichthyornithes* (*Rapaces et Palmipedes*); and V. *Gallinae*.

One of the most important characters of the *Grallatorial* type (*Brevipennes*) is short wings, but large development of the legs, short toes with a very heavy and large body, with great development of the bones. The birds of this type like the ground and are better runners than flyers.

With these characters we find in the genus *Athene* a subgenus, which has very long legs and short toes, which is a good runner and likes the ground, making its nest in holes or burrows. It is my third subgenus *Pholeoptynx* (*A. cunicularia*). This subgenus gives *Athene* as a genus also the third rank, because it represents the *Grallatorial* type among the *Surninae*.

With these characters, long feet, short toes, colossal body, great mass of bones, we give the subgenus *Ketupa* the third rank in its

genus *Bubo*. I consider in the subgenus *Ketupa*—*Bubo pelii** as the typical species of this subgenus and the whole genus *Bubo*. *Ketupa* gives the whole genus *Bubo* with the largest forms the third rank.

My arrangement now extends further.

- A. SURNINÆ. 1. *Glacidium*. 2. *Nyctale*. 3. *Athene*.
 B. STRIGINÆ. 1. *Scops*. 2. OTUS. 3. *Bubo*.

Enormous voracity, great development of the claws, often pectinated on the middle toe, is a sign of the *Rapaces* or *Pelicanidæ* type.

Immense voracity, very strong and curved claws, a rudimentary cere, like the fourth family *Gypætidæ* we see in the genus *Surnia*, and we give it the fourth rank. It shows some analogies with the true *Falco*, fourth genus of the *Falconinæ*.

Most enormous voracity, and a pectinated middle claw we find yet only in the genus *Strix*, and we give *Strix* in the second subfamily the fourth rank. It shows, like the fourth subfamily *Gypætidæ*, the longest and the most ugly skull.

My arrangement of the genera now approaches its close.

- A. SURNINÆ. 1. *Glaucidium*. 2. *Nyctale*. 3. *Athene*. 4. *Surnia*.
 B. STRIGINÆ. 1. *Scops*. 2. OTUS. 3. *Bubo*. 4. *Strix*.

Very developed plumage, with a great number of bands, long banded tail, and vegetable nourishment, is a sign of the *Gallinæ* type.

We find in the Australian species of my genus *Zeraglaux*, a great development of the plumage, very long banded tail; and in the last subgenus *Zeraglaux* (*Z. strenuus*), Mr. Gould mentions having found berries in the stomach. On this account I give *Zeraglaux* the fifth rank.

In the subfamily *Striginæ*, we find in the genus *Syrnium* a very developed banded plumage and a very long tail. It is possible that we may find, at some future time, vegetable nourishment also in the last subgenus of this genus.

* Ch. Bonaparte takes this species to be a proper genus *Megapelia*; but I am quite certain that it is only a species of the subgenus *Ketupa*, and that it is a true *Ketupa*, by a strong comparison of the wings, legs, and nails.

MONOGRAPH OF THE OWLS—STRIGIDÆ,

My arrangement is now closed so far as regards the genera.

- A. SURNINÆ. 1. *Glaucidium*. 2. *Nyctale*. 3. *Athene*. 4. *Surnia*. 5. *Zeraglaux*.
 B. STRIGINÆ. 1. *Scops*. 2. OTUS. 3. *Bubo*. 4. *Strix*. 5. *Syrnium*.

I think we have no more existing genera, because the tenth genus makes a circle, and *Glaucidium* and *Syrnium* exhibit the same character, that the first wing-feather is shorter than the tenth. The last genus *Ibicter* in the family *Falconidæ*, has also some characters in common with the first genus *Zerax*.

We see also in every subfamily the affinity of the alternates, and (1.) *Glaucidium*, (3.) *Athene*, (5.) *Zeraglaux*, are so very nearly connected, that all the Ornithologists have mixed these three genera together; (2.) *Nyctale*, and (4.) *Surnia*, show also a very near affinity.

The same is the case also with (1.) *Scops*, (3.) *Bubo*, and (5.) *Syrnium*. These genera are also so near, that some Ornithologists have brought a true *Bubo* (*Bubo cristatus*) into the neighbourhood of *Scops* and a true *Bubo* (*B. philippensis*) to *Syrnium*.

All the genera must be divided into subgenera, which must be arranged in the same way, as I have classified the true genera. I give a survey of all these subgenera:—

A. SURNINÆ.

I. GLAUCIDIUM.	II. NYCTALE.	III. ATHENE.	IV. SURNIA.	V. ZERAGLAUX.
a.	a. The species with naked toes	a. <i>Microglaux perlata</i> , &c.	a. <i>Microptynx S. passerina</i>	a.
b.	b. <i>Nyctale acadica</i> , &c.	b. <i>Athene noctua</i> , &c.	b. <i>Nyctea S. nyctea</i>	b. <i>Spiloglaux T. boobook</i> , &c.
c.	c.	c. <i>Pholeoptynx cunicularia</i> , &c.	c.	c. <i>Sceloglaux albifacies</i>
d. <i>Glaucidium nanum</i> , &c.	d.	d.	d. <i>Surnia ulula</i>	d. <i>Ctenoglaux scutellatus</i>
e. <i>Taenioptynx Brodiei</i> .	e.	e. <i>Taenioglaux castaneoptera</i> , &c.	e.	e. <i>Zeraglaux strenuus</i> , &c.

B. STRIGINÆ.

I. SCOPE.	II. OTUS.	III. BUBO.	IV. STRIX.	V. SYRNIUM.
a. <i>Pisorhina manadensis</i>	a. <i>Pseudoscops grammicus</i>	a. <i>Lophotrix cristata</i>	a. <i>Phodilas badius</i>	a. <i>Ciccaba lahula</i> , &c.
b. <i>Scops ephialtes</i> , &c.	b. <i>Otus vulgaris</i> , &c.	b. <i>Bubo maximus</i> , &c.	b. <i>Strix flammea</i> , &c.	b. <i>Syrnium aluco</i> , &c.
c. <i>Aenemis gymnopus</i>	c. <i>Rhenoptynx mexicanus</i> , &c.	c. <i>Ketupa peli</i> , &c.	c. <i>Scelostrix candida</i>	c. <i>Bulaca indraneæ</i>
d. <i>Ptilopsis leucotis</i> , &c.	d. <i>Brachyotus brachyotus</i>	d. <i>Urrua coromander</i> , &c.	d. <i>Dactylostrix personata</i> , &c.	d. <i>Pulsatrix torquatum</i>
e. <i>Megascops asio</i> , &c.	e. <i>Phasmodoptynx capensis</i>	e. <i>Pseudoptynx philippensis</i>	e. <i>Megastrix tenebricosa</i>	e.

Up to the present time we have not found the first subgenus in the first genus *Glaucidium*.

The first subgenus in the second genus *Nyctale* will be found in the Museum of Leyden. The species was mentioned to me verbally by Prince Ch. Bonaparte.

The first subgenus *Microglaux* of *Athene*, and the first subgenus *Microptynx* of *Surnia*, are the smallest in their genera, and have the first wing-feather shorter than the tenth. The first subgenus in the genus *Zeraglaux*, with the same characters, is yet undiscovered. In the second subfamily *Striginæ*, *Pisorhina (manadensis)* has certainly the first wing-feather shorter than the tenth, because all the subgenera *Pseudoscops*, *Lophotrix*, *Phodilas*, and *Ciccaba* have the same characters, and also naked toes with scales.

The subgenera of the second rank have *asymmetric ears*, longer wings, only emarginated towards the end, and broad felted inner webs; they are nocturnal.

With these characters, I give the second rank to the subgenera *Nyctale (acadica, funerea)*; *Athene (noctua, meridionalis, brama)*; *Nyctea (S. nyctea)*; *Spiloglaux (boobook, maculatus, marmoratus; Nova zelandiæ)*; *Scops (ephialtes, senegalensis, pennata)*; *Otus (vulgaris, americanus, zonurus)*; *Bubo (bengalensis, maximus, ascalaphus, africanus, virginianus)*; *Strix (punctatissima, flammea, perlata, delicatula)*; *Syrnium (nivicolium, aluco, cinereum, nebulosum et wralense)*.

The characters of the subgenera of the third rank are—long,

MONOGRAPH OF THE OWLS—*STRIGIDÆ*.

straight bill, long legs, very often naked, short toes, short wings, live on the ground, good runners. Where we find this character we give the third rank.

These characters are exhibited by *Pholeoptynx* (*A. cunicularia*, *Sceloglaux* (*T. albifacies*), *Aenemis* (*Scops gymnopodus*), *Rhenoptynx* (*mexicanus* et *madagascariensis*), *Ketupa* (*B. ceylonensis*, *ketupa*, *peii flavipes*), *Scelostrix* (*str. candida*), et *Bulaca* (*syrrn. Indraneæ, sinense, pogadorum* et *leptogrammicum*).

Very developed bill, strong claws, long toes, and great voracity, give all the subgenera the fourth rank. On account of these characteristics, I give *Glaucidium* (*nanum, pumilum, infuscatum, ferrugineum*); *Surnia* (*ulula*), *Otenoglaux* (*scutellatus*), *Ptilopsis* (*scops leucotis*), *Urrua* (*Bubo coromander, orientalis, lacteus*); *Ductylostrix* (*Strix castanops* et *personata*) et *Pulsatrix* (*syrrn. torquatum*) the fourth rank.

Very developed banded plumage, long tail, and vegetable nourishment, are signs of the *Gallinæ* type. On this account I give *Taenioptynx* (*Gl. brodiei*); *Taenioglaux* (*Athene castaneoptera, erythroptera, cuculoides, capensis*), *Zeraglaux* (*strenuus, rufus, connivens*); *Megascops* (*Scops asio, atricapilla, brasiliensis, indica*); *Phasmaptynx* (*Otus capensis*), *Pseudoptynx* (*Bubo philippensis*), *Megastrix* (*str. tenebricosa*), the fifth and last rank.

NOTES

ON SOME

BIRDS FROM THE RIVER GABOON IN WEST AFRICA

BY

H. E. STRICKLAND.

A SMALL collection of birds from this new locality has lately been purchased from M. E. Verreaux of Paris, by E. Wilson, Esq., who has kindly submitted them to my examination before sending them to their destination in the Philadelphia Museum. The River Gaboon, or as the French write it, Gabon, is situated exactly under the Equator, and is considerably farther south than most of the localities where West African Birds have hitherto been collected. It has consequently afforded several new species, and in order to show the geographical distribution of others, I have thought it best to give a list of the whole collection. The specimens were labelled by M. Verreaux, whose MS. names I have retained in all cases where it was practicable.

The species which are *additional* to Dr. Hartlaub's list of West African Birds in the "Verzeichniss der Vorlesungen" of the Hamburg Gymnasium, 1850 (see Contributions to Ornithology, 1850, p. 129), are marked with an asterisk.

*1. *Hirundo melbina*, Verreaux MS. A curious little Swallow, combining the typical structure of *Hirundo* with the sombre colouring of *Chelidon* or *Cotyle*. Crown and sides of head, rump and upper tail-covers, fuscous brown; upper back and wings black, with

a steel blue gloss; tail blackish, deeply furcate, the external rectrices narrow, and $\bar{7}$ longer than the next; chin and lower parts white with a pale brownish tinge. Beak black, legs pale brown.

Total length, 5.6 ; beak to front, 2 ; wings, 3.9 ; medial rectrices, 1.6 ; external, 3 ; tarsus, $4\frac{1}{2}$.

2. *Platystira leucopygialis*, Fraser, Zoologia Typica, pl. 34. The *P. castanea* of Fraser is the ♀ of this bird.

* 3. *Hyliota violacea*. (*Muscicapa violacea*, Verreaux MS.). This bird is interesting as affording a second species of a genus of which one species only, the *H. flavigaster*, Swain., of Senegal, was hitherto known. It much resembles *H. flavigaster*, but differs in its broader beak and the less extent of white on the wing. Whole upper parts black with a steel blue gloss, of a rather more purple hue than in *flavigaster*. Three or four of the greater wing-covers next the body are white (in *flavigaster* the whole of the middle and the basal half of the greater covers are white). Lower parts pale cream colour; tibiæ black; beak and legs fuscous.

Total length, 5 ; beak to front, 5 ; to gape, 7 ; broad, $2\frac{1}{2}$; wing, 3 ; medial rectrices, 1.9 ; external, 2 ; tarsus, 7 .

*4. *Dicrurus coracinus*, Verreaux MS. Whole plumage deep velvety blue black. Quills internally black. Total length, $8\frac{1}{2}$; beak to front, 6 ; to gape, 1 ; high, $3\frac{1}{4}$; wide, 3 ; wing, 4.9 ; medial rectrices, 3.5 ; external, 4.3 ; tarsus, 7 .

5. *Chaunonotus sabinei*, Gray. (*Hapalophus melanoleucus*, Verreaux MS.).

*6. *Pycnonotus ashanteus*, Bon.? (*Ixos ashanteus*, Bon., Verreaux MS.). This bird differs from *Pycnonotus barbatus* (Desfont.) (*Turdus arsinoe*, Licht., *Ixos obscurus*, Temm., *Ixos inornatus*, Fraser, *Hæmatornis lugubris*, Less., all of which names belong, in my opinion, to one species, though Prince Bonaparte makes two of them), only in having a very slight wash of yellow on the lower tail-covers, which in *P. barbatus* are white. Though labelled *Ixos ashanteus*, I doubt its being the true *ashanteus* of Bonaparte, *Conspectus Generum Avium*, p. 266, as he says it only differs from his *I. obscurus* in being much less, whereas the present specimen agrees in size with *obscurus* (*P. barbatus*, Desfont.).

*7. *Ixonotus guttatus*, Verreaux MS. A curious form belonging to the subfamily *Pycnonotinae*. At first sight resembles in general appearance the genus *Chrysococcyx*. Beak longer than in *Pycnonotus*.

Rump-feathers very long and thick. This bird will be figured in the Illustrations to the Proceedings of the Zoological Society.

*8. *Pratincola olax*, Verreaux MS. Resembles *P. rubicola*, of Europe, and still more *P. pastor*, Strickland, of S. Africa, but the beak is wider, and the *breast* only is rufous, the *sides* being white.

*9. *Lamprocolins purpureiceps*, Verreaux. Whole head and throat glossy violet purple; whole back, breast and belly, glossy bluish-green; wings glossed with steel blue; the primaries externally with violet; tail black, slightly glossed with purple; beak and legs black.

Total length, 7.2; beak to front, 6; to gape, 8; wing, 4.8; medial rectrices, 2.8; external, 2.9; tarsus, 7.

10. *Nigríta canicapilla*, Strickland. This bird, hitherto found only in Fernando Po, is now shown to extend to the adjacent African continent.

*11. *Nigríta lutifrons*, Verreaux MS. A typical species of this very limited genus, resembling *N. canicapilla* in the general arrangement of colour, but smaller, and wants the black front and the white wing spots. It will be figured in the Illustrations of the Proceedings of the Zoological Society.

12. *Malimbus rubricollis* (Swainson). (*Euplectes rufovelatus*, Fraser).

*13. *Anthreptes aurantius*, Verreaux MS., closely allied by the stout straight form of beak to *A. longuemareii* of Senegal, though the arrangement of the colour, and especially the orange tufts on the sides of the breast, connect it with *Nectarinia*. It will be figured in the Illustrations of the Proceedings of the Zoological Society.

14. *Nectarinia chloropygia*, Jard.

15. *Nectarinia stangeri*, Jard.

16. *Nectarinia fuliginosa*, (Shaw)? Differs from *N. fuliginosa* as usually described, in having the upper tail-covers *purple* instead of *brown* like the rest of the upper parts. In this state it is described by Lesson in his "Description de Mammifères et d'Oiseaux récemment découverts," p. 271; but whether it be a peculiar state of plumage, or a distinct species, we have as yet no evidence.

17. *Nectarinia superba* (Vieill.)? This splendid bird is labelled by Verreaux, "*Cinnyris sanguineus*, Less. *C. superbus*, Vieill." It agrees with the descriptions of *N. superba* (Vieill.), except in wanting the golden green band which separates the violet purple of the throat from the dull red of the breast. The vent and lower

tail-covers are deep black. Crown metallic greenish-blue, a minute purple spot behind each supercilium; ear-covers, nape, back, lesser and middle covers, scapulars, rump and upper tail-covers, metallic green, with a golden gloss on the upper back and ear-covers. Rest of wings and tail black, with a faint purplish gloss. Total length, 5.6; beak to front, 1.2; wing, 3; medial rectrices, 2; external, 1.9.

I can find no reference to the "*Cinnyris sanguineus*, Less.," quoted by Verreaux, so I conclude that it is a MS. name.

*18. *Nectarinia johannæ* (Verreaux). The ♂ will be figured in the Proc. Zool. Soc. The ♀ is dark olive brown above, very pale yellow on throat and deeper yellow on breast, belly, and lower tail-covers; the whole lower parts with a brown streak down the middle of each feather.

19. *Alcedo leucogaster*, Fraser.

*20. *Alcedo quadribrachys*, Bonap., Consp. Gen. Av. p. 158. Plate lxxix. This beautiful Kingfisher presents a remarkable similarity to the well known *Alcyon azurea* of Australia, from which however it is at once distinguished, by having four toes, a character which places it in *Alcedo*. The whole upper parts, cheeks and sides of neck, are deep Prussian blue, barred with black on the crown; the lores, patch behind the ears and throat, are pale fulvous, lower parts deep ferruginous. Remiges blackish; rectrices black with a tinge of blue; beak black; legs red.

A young specimen differs in having a blue tinge spread over the breast.

Length, 6.5; beak to front, 1.7; wing, 3.1; tail, 1.5; tarsus, 3.

I have had a specimen of this bird in my collection since 1838, but from not knowing its locality, I have been unable to identify either its name or habitat till now.

21. *Halcyon cancropaga* (Lath.)? This bird was so named in a list sent me by Mr. Wilson, but Verreaux's label has been lost. It seems however to be different from *H. cancropaga* as described by Latham after Buffon.

Head, cheeks, upper back, scapulars, and lesser and middle wing-covers, deep chesnut; greater covers blackish. Lower back and upper tail-covers, azure; primaries black; secondaries azure, externally tipped black; tail deep blue, tipped black; chin and lower parts white; beak red; legs reddish.

Length, 7.5; beak to front, 1.1; wing, 3.7; tail, 1.5.

tail-covers are deep black. Crown metallic greenish-blue, a minute purple spot behind each supercilium; ear-covers, nape, back, lesser and middle covers, scapulars, rump and upper tail-covers, metallic green, with a golden gloss on the upper back and ear-covers. Rest of wings and tail black, with a faint purplish gloss. Total length, 5.6; beak to front, 1.2; wing, 3; medial rectrices, 2; external, 1.9.

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Length, 7.5; beak to front, 1.1; wing, 3.7; tail, 1.5.







Museophaea rossae, Coult.

NEW SPECIES OF *MUSOPHAGA*

By J. GOULD, Esq., F.R.S.

PLATE LXXXI.

MY DEAR SIR WILLIAM—I send you for insertion in your “Ornithological Contributions,” the description of a new species of *Musophaga*, which is larger and more beautiful in colouring than any other species with which we are acquainted. It has been for the last ten years, and is still living in St. Helena, in the possession of Lady Ross, widow of the late Sir Patrick Ross, governor of that island. Lady Ross, who is at present in England, has placed in my hands a drawing of the bird made by Lieutenant J. H. Stack, and also a number of the feathers shed from the wings and tail, from an examination of which I am satisfied that it is quite distinct from the other known members of the genus. Her ladyship informs me, that it is nearly the size of a common hen pheasant, and has a long, full, graduated blue tail, which colour pervades the neck and the whole of the body, and also the wings, except the primaries, which are arterial blood red, margined at the tips with a purplish-brown colour, similar to that observable in *Musophaga violacea*; the bill and the large denuded orbits are yellow; the irides are brown; the crown of the head is surmounted with a high rounded crest of hair-like blood red feathers.

At the meeting of the Zoological Society of London, held on the 11th of March, 1851, I brought my knowledge of this bird under the notice of the members then present, and proposed for it the name of “*Musophaga rossæ*,” in honour of its amiable owner, whose return to St. Helena is somewhat uncertain. In the event of her ladyship not proceeding thither, she has promised that the bird shall be brought to England, where its arrival cannot fail to be highly interesting to every lover of ornithological science. Lady

ON A NEW SPECIES OF *MUSOPHAGA*.

Ross informed me, that it was brought to the island from the Western Coast of Africa, but the precise locality is I believe unknown. The feathers represented in the accompanying sketch are two primaries and a portion of a tail-feather of the natural size, drawn by Mr. H. C. Richter.

20, Broad Street, Golden Square, London,
29th September, 1851.

DESCRIPTIONS

OF

THREE NEW SPECIES OF HUMMING-BIRDS

By JOHN GOULD, Esq., F. R. S., &c.

MY DEAR SIR WILLIAM—I send you herewith, descriptions of the three new Humming-Birds lately sent by our mutual correspondent, Professor Jameson of Quito, who will, I am sure, be much gratified to find that his researches have been rewarded with the discovery of several additional species of a group of birds, the beauty of which has attracted the attention of so many explorers, as to render the acquisition of even one novelty a source of gratulation.

Ever truly yours,

JOHN GOULD.

20, Broad Street, Golden Square, London,
1st October, 1851.

PHÆTHORNIS SYRMATOPHORA, GOULD.

CROWN of the head and back of the neck dark brown, most of the feathers narrowly fringed with buff; back and shoulders bronzy green, with crescentic bands of buff; rump and upper tail-coverts rich buff, forming a conspicuous mark; chin white; a buffy white mark surmounts the eye, and extends backwards down the sides of the neck; chest, abdomen, and under tail-coverts, rich buff; apical half of the two central tail-feathers, which extend that distance beyond the lateral ones, white; their basal half green with black edges; lateral tail-feathers greenish-black, largely tipped with buff; wings purplish-brown; upper mandible blackish-brown; under mandible orange red; feet brown.

Total length, $6\frac{1}{2}$ inches; bill, $1\frac{3}{4}$; wing, $2\frac{1}{4}$; tail, 3.

Habitat. Interior of Quito, in Ecuador.

Remark. Allied to *P. eurynome*, but much more richly coloured.

In the collection of John Gould.

SCHISTES ALBOGULARIS, GOULD.

CROWN of the head, upper surface and abdomen, bright grass green, with a band of luminous green on the forehead, and a small patch of white behind the eye; tail slightly cuneiform, and of a bright green, with a broad zone of greenish-blue near the tip, which shows conspicuously on the lateral feathers, but is scarcely perceptible on the central ones; the three outer feathers have also a slight fringe of white on each side, near the tip; throat, chest, and a tuft behind the insertion of the thighs, pure white; sides of the neck decorated with tufts of purplish-blue feathers; wings purplish-brown; bill and feet dark brown.

Total length, $3\frac{5}{8}$ inches; bill, $\frac{3}{4}$; wing, $1\frac{7}{8}$; tail, $1\frac{5}{8}$.

Habitat. Quito, in Ecuador.

Remark. This species is very nearly allied to the *Trochilus geoffroyi* of authors, which with the present bird I have deemed it requisite to raise to the rank of a genus.

In the collection of John Gould.

ERIOPUS LUGENS, GOULD.

CROWN of the head, back, shoulders, and upper tail-coverts, bronzy green, slightly tinged on the latter part with rufous; throat, abdomen, and under tail-coverts, hoary black, with a tinge of green on the flanks, and a narrow fringe of white on each of the feathers of the throat and chest; tail bluish-black; wings purplish-black; lengthened feathers, forming a ruff round the thighs, white; front of the tarsi and toes, purplish-black; behind yellowish; bill black, except the base of the lower mandible, which is yellowish.

Total length, $4\frac{1}{4}$ inches; bill, $\frac{3}{4}$; wing, $2\frac{5}{8}$; tail, $1\frac{5}{8}$.

Habitat. The neighbourhood of Quito, in Ecuador.

Remark. This species which is about the same size but somewhat more robust than *E. aurelia*, would appear, from its sombre colouring and thick but lax plumage, to be a frequenter of the colder regions of the country it inhabits.

In the collection of John Gould.

BIRDS OF WESTERN AFRICA.

HIRUNDO GORDONI, JARDINE.

WHEN describing the collection of birds procured on the Western Coast of Africa by Staff-Surgeon Gordon of the 57th Regiment, we introduced the *Hirundo melanocrissus* of Rüppell as part of the collection. On again examining the specimens we find that this was an error, and at present we cannot reconcile Dr. Gordon's specimens with any description. Two specimens were received, both apparently in complete plumage; but one may be considered as an adult male, having the tail very much developed.

Above, Deep indigo with bright reflexions; rump sienna; wings and tail black; tail much forked and having the four exterior feathers marked with white on inner webs. *Below*, Pale sienna.

Length, 8.8; fork of tail, 3; wing, 4.6.

A more slenderly formed bird than *H. senegalensis*, outer tail-feathers very long.

In another specimen, the tint of the lower parts varies in being considerably darker, particularly on vent and under tail-coverts.

The length is only 6.8; fork of tail, 1.5; wing, 4.1.

These birds differ from—

H. melanocrissus, Rüpp., in having no sienna collar, in under tail-coverts being sienna not black, in four outer tail-feathers being marked with white on inner webs.

H. rufula, Temm. Man. iii. p. 298—in having no sienna collar, under parts not being striated, and in having white on tail.

H. daurica, Linn.—in having no dark sienna collar, under parts not being striated, under tail-coverts sienna not black, and in having white on tail.

We perceive that Dr. Hartlaub does not admit Rüppell's *H. melanocrissus* in his list of West African Birds.



ORNITHOLOGICAL OBSERVATIONS.

V.—ON A NEW SPECIES OF MANAKIN

By PHILIP LUTLEY SCLATER.

PIPRA FLAVICOLLIS.

Mr. WALLACE has lately sent home, from the Upper Amazon, several specimens of a Manakin, closely allied to *Pipra aureola* Linn., of Cayenne, but sufficiently different I think from that bird, to allow of their specific separation. Instead of the mere traces of yellowish colouring, found on the front and upper throat of the Cayenne species, the present bird has a broad frontal band, and the whole of the throat and neck of a pale lemon yellow, which extends back under the eyes some way round the sides of the neck. There is also a white spot on the middle of each of the external rectrices, which is not to be found in the Cayenne bird. In other respects, they resemble one another very closely. I propose to call this species

PIPRA FLAVICOLLIS, SCLATER.

P. atra: capite toto, cervice, pectore medioque ventre coccineis: fronte guttureque flavis: tectricibus subalaribus flaves centibus: remigibus intùs et maculâ mediali rectricis utrinque extimæ albis.

Long. tota, 4; alæ, 2.5.

Hab., Barra do Rio Negro.

Pipra fasciata of M. M. D'Orbigny and De la Fresnaye, has much resemblance to the two species above mentioned, but may at once be recognized by the yellow band all across the tail. See D'Orbigny's plate, Voy. dans l' Am. Mèrid. t. xxx. fig. 1. Specimen of all three species are in the British Museum.

Oxford, October 29, 1851.



OBSERVATIONS

ON THE

GENUS *SCYTALOPUS*

BY THE

BARON DE LA FRESNAYE.

WE have had the pleasure of receiving a letter from the Baron de la Fresnaye, containing some observations on the genus *Scytalopus* of Gould, and its allies, with some excellent critical remarks upon the synonymy of the species, chiefly suggested by the figures and descriptions published in our last part. We quite agree with the Baron in the priority of *Merulaxis*, Lesson, if this title is to be adopted for all the forms, but we cannot agree in placing the *M. ater* Less., the type of his genus, as congeneric with the small wren-like birds which we have figured under the title of *Scytalopus*.

Falaise (Calvados) France,
14th October, 1851.

DEAR SIR, — Being a subscriber to your charming Contributions to Ornithology, the reading of your interesting note on the genus *Scytalopus* in the last part I have received, has suggested to me the thought of requesting you to publish my subsequent observations on that genus.

After the law of priority has been now so generally adopted among all naturalists, I am surprised that this is not observed for this genus. You know that *Scytalopus* has for synonymes, *Merulaxis* of Lesson; *Platyurus*, Swainson; *Malacorhynchus*, Ménétriés. Now, *Merulaxis* was published and figured in 1830 by Lesson

in his Cent. Zool., pl. 30, and in his Tr. d' Orn., p. 397, in 1831; *Malacorhynchus*, by Ménétriés, in his Monogr. des Myothera, in 1834; *Scytalopus*, by Gould in the Proceedings, 1836, p. 90; and *Platyurus* by Swainson in 1837, as it is indicated by Mr. Gray in his Genera of Birds, vol. i., *Sub. fam. MENURINÆ*, gen. *Pteroptochus*, and as I had myself observed in the Revue Zool. of Guérin in 1840, p. 104; therefore it is not difficult to conclude, that *Merulaxis* being the most ancient is naturally to be adopted, and the *Merulaxis ater* of Lesson, the type of the genus, having for subsequent synonymes, *Platyurus corniculatus*, Swains., and *Malacorhynchus cristatellus*, Ménétriés.

We think that all the species of *Merulaxis* known by us to the number of sixteen or seventeen, present so great an analogy in the structure and form of their bill and nostrils, their wings and tail, and specially in the length of their toes, and the coloration and softness of their plumage, that it is more conformable to nature to place them in one genus only, than to divide them into three genera, as they are in the *Conspectus Avium*, p. 206.

We propose to adopt several sections in the genus *Merulaxis*, as *Galeati*, *Rhinolophi*, *Albiventres* et *Concolores*, which will facilitate the study of the species.

Gen. MERULAXIS, Less. — *Malacorhynchus*, Ménét. — *Scytalopus*, Gould. — *Platyurus*, Swains.

A. GALEATI (rostri culmine in spatio frontali, horizontali erecto limbo circumdato).

1. *Merulaxis paradoxus*.—*Troglodytes paradoxus*, Kittlitz über einige vogel von Chili, pl. 9. *Malacorhynchus chilensis*, Ménét., Monog. des Myothera, pl. 89 (ex Chili), *Triptorhinus paradoxus*, Caban. Bon. Consp. Avium, p. 204.

2. *M. orthonyx*, Lafr. Rev. Zool., 1843, p. 131, et Mag. de Zool. 1844, pl. 93. *Triptorhinus orthonyx*, Caban. Bon. Consp. Av. p. 206 (ex Columbia).

B. RHINOLOPHI (rostri culmine basi elevato, compresso, plumulis frontalibus longiusculis erectis).

3. *M. ater*, Less., Cent. Zool. tab. 30, et Tr. d' Orn. p. 397. *Malacorhynchus cristatellus*, Ménét., Mem. Ac. Petersb. 1834, t. 12. *Platyurus corniculatus*, Sw. Brazil Birds, t. 55, 56 (ex Brazil, Rio de Janeiro). *Sarochalinus ater*, Caban. Bon. Consp. p. 206.

4. *Myothera rhinolopha*, P. Max., Beitr. zur Naturgesch. von Bras. t. 3, p. 1051. *Malacorhynchus rhinolophus*, Ménét., Mon. des Myoth. p. 82. *Sarochalinus rhinolophus*, Caban. Bon. Consp. p. 206.

C. ALBIVENTRIS (gutturæ, collo antico pectoreque albis, rostro simplici.)

5. *Scytalopus albo-gularis*, Gould, Proceed. 1836, p. 90; Jard. Contr. to Ornit. 1851, part iv. *Scyt. indigoticus*, Licht. Bon. Consp. p. 206.

6. *Malacorhynchus albiventris*, Ménét., pl. 12, f. 2; Jard. Contr. to Ornit. 1851, part iv. *Scytalopus indigoticus*, Licht., Pr. Max. Beitr. zur Naturgesch. von Bras. t. 3, p. 1091; Bon. Conspectus, p. 206.

Note. — The specimen in our collection entirely similar in colour with the plates of Ménétriés and Jardine, presents nevertheless some difference, in the wing-covers being blackish-brown, tipped with pale rufous before a spot of black, as it is seen in the *S. undulatus* of Jardine; from thence I infer that our specimen is not entirely adult. Bonaparte in his Conspectus, does not admit as distinct species the *M. albiventris* of Ménét., and *Scytal. albogularis* of Gould, citing them as synonymes of *Scytalopus indigoticus*, Licht., Pr. Max. After having carefully compared the description of the *Myothera indigotica*, Pr. Max., with that and the figure of *M. albiventris* of Ménét. and Jardine, we have found so great a dissemblance between them, that we cannot agree with the opinion of the Prince Canino in that case; and as to the *Scytalopus albogularis* of Gould, equally cited by him as synonymous, it is easy in comparing the plates of Jardine to perceive the great distinctions between them.

7. *Myothera indigotica*, Licht., Pr. Max. Beitr. vol. iii. p. 1091. *Malac. indigoticus*, Ménét. p. 87. The French description of Ménétriés describes “ le cou pardevant est d’un brun grisâtre avec l’extrémité de chaque plume ondulée de gris-juanâtre; la poitrine est blanche avec des lignes ondulées d’un brun grisâtre . . . le milieu du ventre est d’un blanc sale avec des lignes ondulées d’un brun gris foncé, les côtés du ventre, l’abdomen, les cuisses et les couvertures inférieures de la queue sont d’un brun rougeâtre, &c.’ In this description, the breast and neck are undulated with a distinct colour, while the sides of the belly, the abdomen, wings, and the inferior coverts of the tail, are of a uniform reddish-brown. It is entirely different in the *M. albiventris*. It is found in the province of Bahia.

OBSERVATIONS ON THE GENUS *SCYTALOPUS*

8. *Scytalopus undulatus*, Jard. and Selby, Ill. of Orn.; Jard. Contr. to Ornithol. 1851, part iv.

D. CONCOLORES. Aut ferè concolores, collo antico pectoreque non albis sed dorso fere concolore.

9. *Malacorhynchus speluncea*, Ménét. pl. 13, f. 1. — *S. fuscus*, Gould, Bon. Consp. Av. p. 206, habit. in provinciâ Minas Geraës, Ménét.

Note. — The Prince Canino, in his Consp. Av. p. 206, cites this bird as synonymous with the *Scytalopus fuscus* of Gould, with an ? We cannot take part with this opinion, 1st, Because Ménétrés, in the diagnosis of his *M. speluncea*, writes, “Supra cœrulescente murinus; subtus pallidior; gutture, collo pectoreque albo cinereis; alis caudaque fusco-nigricantibus, long. toto. 4.5; tail, 2; tars. 9;” and he adds in his description, “la queue est alongée a pennes larges et molles. . . . la couleur gris bleuâtre du dos devient blanchâtre vers le milieu de la gorge et de la poitrine, &c.,” which is very well expressed on the plate 13, f. 1, of Ménétrés.

Now the *Scytalopus fuscus* of Gould, as it is described and figured on the plate in the Contr. to Ornithol., has all the plumage of a uniform sooty black, &c., “and presents a bird remarkable by the shortness of its tail and the uniformity of its coloration.” In comparing the two descriptions and plates, it is impossible to look upon them as the same bird. The *M. speluncea*, inhabits in the province of Minas Geraës, while the *Scytalopus fuscus* of Gould inhabits the Straits of Magellan and Chili.

10. *Scytalopus fuscus*, Gould, Proceedings, 1836, p. 90; Jard. Contr. to Ornithol. 1851, part iv. *Platyurus niger*, Swain. Anim. in Menag. sp. 128, Chili.

If we have quoted here the *Platyurus niger* of Swainson as synonymous with the *Scytalopus fuscus*, it is because no bird can be considered as agreeing so well with the description of the *Platyurus niger*, Swainson, “Entirely sooty black, tail short, inhabits Chili, size of a wren, total length, 4 in.; bill, gape, ½ in.; wings, 2 in.; tail short, almost hid by its covers, and about one inch from the base; feet pale, bill black;” the uniformity in the colouring, the shortness of the tail, the habitation of these two birds, seem to me a very strong proof of their synonymy.

11. *Megalonyx negre* (Hombron et Jacquinot), Voyage au Pole Sud, Ois. tab. 19, f. 1. Though this bird seems to have the great-

est analogy in the colouring and dimensions with the *Scytalopus fuscus*, nevertheless it appears to us to differ, in the tail being longer, in its feet blackish and not pale, and in its colouring appearing black and not sooty black.

12. *Mer. fuscoïdes*, Nob. (nov. spec.) "Supra et subtâs fusco-murinus, omnino talpæ concolor, alis tantummodo fumigato-brunnescentibus; caudâ medioeri, pedibus pallidis. Hab. Chili; total length, being stuffed, $4\frac{2}{8}$ in.; of the wing, $1\frac{7}{8}$; tail, $1\frac{5}{8}$."

Before we had seen the figure of the *Scytalopus fuscus* in the plate of Sir W. Jardine, we thought our bird identical with it; but since we possess this plate, we acknowledge that ours is larger, and that its tail, especially, is much longer.

13. *Mer. analis*, Nob.; *Mer. analis*, Lafr. Rev. Zool. 1840, p. 104.

"M. supra totus schistaceo-griseus, plumis uropygialibus tantummodo apice et vix conspicuè rufescentibus; subtâs pallidior, cinerascens, pectore imo ventreque médiis, cinerascenti-albidis; abdomine imo, ano et subcaudalibus rufis; pedibus pallidis, digitis polliceque præsertim valde elongatis cum unguis albedo flavescentibus. Long. tota (avis arte farcto) $5\frac{2}{8}$; unc. angl. alæ plicatæ, $2\frac{5}{8}$; caudæ, $2\frac{2}{8}$; pollicis, $\frac{6}{8}$; digiti medii (cum unguis) $\frac{7}{8}$. Habitat in Paraguay et Chili regionibus."

After the *Mer. orthonyx*, Nob., and the *Mer. ater*, Less., this species is the largest of our collection, it is a little smaller than the *Mer. ater*, and it differs principally from it, by the tail being much shorter, by the lower coloration paler, and by the frontal feathers not lengthened nor crested.

14. *Mer. senilis*, Nob.; *Mer. senilis*, Lafr. Rev. Zool. 1840, p. 103.

"M. totus cinereus, supra intensiùs, subtâs pallidiùs, fronte et aliquot alæ tectricibus albis, rostro supra corneo, subtâs pallide flavo; pedibus sordide flavis. Long. toto (arte farcto), $5\frac{2}{8}$; unc. angl. alæ, $2\frac{2}{8}$; caudæ, $2\frac{2}{8}$; pollicis cum unguâ, $\frac{6}{8}$; digiti medii, $\frac{7}{8}$. Habitat, Santa Fé de Bogota."

This, allied to the former species, differs specifically, by its less size, its uniform coloration, and its feet being dirty yellowish, not whitish.

15. *Mer. griseicollis*, Nob.; *M. griseicollis*, Lafr. Rev. Zool. 1840, p. 103.

"M. supra schistaceus, dorso imo alis caudâque fumigato-brunneis, pennis longis uropygialibus rufis; subtâs gulâ, collo pectoreque

OBSERVATIONS ON THE GENUS *SCYTALOPUS*.

cinereis, pectore imo ventreque mediis albescentibus, abdomine imo crissoque rufis; pedibus pallidis. Long. toto, $4\frac{5}{8}$; alæ, $2\frac{7}{8}$; caudæ, $1\frac{3}{8}$. Habitat, Santa Fé de Bogota."

A second example, employed for our description in 1840, differs from this, by the feathers of the wing and of the tail being irregularly streaked with black. We think it is a female, or a male not yet adult.

A third example differs again, by its gray tail, and by the under feathers of the tail, not being rufous, but a mixture of brown and gray.

16. *Megalonyx nanus*, Less. Rev. Zool. 1842, p. 135.

"M. corpore griseo suprâ; cinereo infrâ; abdomine lateribusque rufis; rostro corneo; pedibus luteis ♂.

"Corpore brunneo supra, et plumis rufo circumdati; collo antico griseo albente, rufo tenuiter striato ♀. Habitat, Chiloë." (Less. Rev. Zool. 1842, p. 135.)

After this description of Mr. Lesson, this species seems to have some relation with our *M. griseicollis*, but Lesson does not say that his *Meg. nanus* has the rump rufous; besides, his came from Chiloë, and ours from Bogota, certainly.

17. *Mer. squamiger*, Nob.; *M. squamiger*, Lafr. Rev. Zool. 1840, p. 103.

"M. suprâ totus brunneo rufus, plumis uropygialibus vividè rufis; plumis totis capitis, colli, dorsi, alæque tectricibus et remigibus tertiaris vittâ nigrâ squamæformi marginatis; caudæ tectricibus æqué nigro vittatis; gutture, collo antico et abdomine medio pallidè rufescentibus, pectore et hypochondriis nigro-fusco irregulariter striatis; rostrum pallidè corneum; pedibus pallidis. Long. toto, $3\frac{5}{8}$; alæ, 2; caudæ, $1\frac{1}{8}$."

This bird, whose plumage is all rufous, variegated and streaked with black, is probably a young one; it is remarkable by the slenderness and shortness of its bill and of its tail.

BIRDS OF WESTERN AFRICA.

COLLECTIONS OF L. FRASER, Esq.

Mr. LEWIS FRASER, well known to Naturalists as the Zoologist to the Niger Expedition, and as the author of the "*Zoologia Typica*," was lately appointed Her Majesty's British Consul at Whyddah, on the West Coast of Africa, and has already devoted part of the time he can spare from his official duties, to examine the zoology of that fatal coast and its islands; a small collection has reached his friend and agent, Hugh Cumming, Esq. of Gower Street, Bedford Square, London, while the last mail brought us a letter from Mr. Fraser himself, intimating its destination. Mr. Cumming has forwarded the greater portion of the collection for our examination, and after the numerous notices on West African Ornithology which have appeared in these "Contributions," we need scarcely say, that it has been received and examined with great interest. Although there are numerous specimens, between eighty and ninety in number, there are only about eighteen species. Of these, with the exception of *Nectarinie* nearly the whole are described, being from a comparatively well known locality, the vicinity of Clarence, in the island of Fernando Po.

The *Nectarinie* form the most numerous part of the collection. Five species occur among them. There are several specimens of *N. chloropygia*, Jard., which do not vary from those originally procured by Dr. Stanger and Mr. Fraser during the Niger expedition. Of *N. obscura* there is a single specimen.

Specimens of a small bird, allied to *N. collaris*, Vieill., require our attention. Mr. Edward Wilson, to whose kindness we have been so frequently indebted for interesting subjects of illustration, previous to the departure of Mon. Bourcier for Quito, purchased that gentleman's collection of *Nectarinie*.* Mon. Verreaux, the Parisian dealer,

* We regret to add, that the whole of this valuable collection, except one or two specimens we had retained, was lost on their passage to America.

added notes and observations to Mon. Bourcier's list which accompanied it; and Mr. Wilson intrusted the entire collection to our care, with a request that we would add to the catalogue any observation that might occur, previously to the whole being despatched to his brother in New York.

Both sexes of a bird, bearing the title of *N. collaris*, Vieill., but from Western Africa, formed part of this collection, and to this Mon. Verreaux added the following "note:"— "Indiqué sous le nom Proche ou *Metallicus*. C'est le *N. collaris*, de Vieill., figuré dans le Nat. Libraire, pl. 6. J'engage Sir W. Jardine a comparer les individus ♂, ♀, qui sont du W. Africa avec les individus du Sud de l'Afrique, car pour moi, ils forment deux espèces distinctes. Celle du Cap est figuré dans Le Vaillant, elle n' a' jamais le bec aussi fort, le plumage d'un vert aussi brillant, car les plumes vertes laissent toujours a découvert des teintes grisâtres qui colorent la base des plumes, ou pour mieux dire, la majeure partie de chacune d'elles. La jaune du ventre est également moins vif, et en dessous des Touffes Jaunes qui sont de chaque coté de thorax, l'est facile de voir une teinte olive qui colore les plumes des flancs. La queue paroît aussi plus court. Je le regarde comme une espèce distincte a laquelle l'engage Sir W. Jardine a donner le nom de *gamtocincis*, ayant été figuré per Le Vaillant Ois. d'Afrique, pl. 299 sous celui de *gamtocin*. C'est du reste, le nom qui se trouvait porté sur les observations Africaines perdues avec tout le reste dans mon naufrage au retour du Cap."

In Mr. Fraser's present collection there are three specimens of this *Nectarinia*. M. Verreaux was right in his opinion, this bird being without doubt distinct from that of South Africa, as it also is from the *N. venusta* of Gambia and Sierra Leone; and the distinctions are accurately pointed out in the note quoted above. We regret, however, that the nomenclature proposed by M. Verreaux cannot be followed, *Le sucrier gamtocin*, Vaill., pl. 299, is the foundation of Vieillot's *N. collaris*, which must therefore be retained for the species of South Africa, and we cannot avoid applying some new title to its West African representative. Mr. Fraser's specimens all agree in the distinctions pointed out — a longer and much stronger bill, a much deeper green on the upper plumage and throat, tail nearly black. We have added characters and dimensions, of what we consider the two species, the one from Fraser's

Fernando Po specimens, the other from specimens procured from South Africa by Dr. Smith. In the Naturalist's Library Synopsis, p. 251, Fernando Po is given as a habitat for *N. collaris*, on the authority of Fraser. We do not now recal the circumstances, but suspect that the difference between the two birds was not then perceived. Dr. Hartlaub has not admitted this, nor *N. collaris* in his "Verzeichniss."

N. COLLARIS, VIEILL. (1823).

Cinnerys collaris, Vieill. Enc. Method. ii. p. 590 (1823). — Sucrier gamtocin, ou a cordon blue, *Le Vaill. Ois. d'Af.* pl. 299. — *Nectarinia collaris*, *Jard. Nat. Lib. Synop.* p. 251.

♂ *Above*, bright yellowish-green paler on rump; wings umber brown, edged with greenish-yellow; tail, greenish-black, broadly edged with deep green. — *Below*, chin, throat and upper breast, yellowish-green, shading into and terminating in a narrow band of blue glossed with violet; lower breast and flanks dull yellow, shading to clear yellow on the centre of vent and under tail-covers; axillary tufts pale yellow.

Length, 3.8 to 4.2; bill slender, length to forehead, 5; wing, 2 to 2.1.

Habitat, Gamtoos, South Africa, *Vaillant*.

N. HYPODILUS, JARD. & FRAS. (Nov. 1851).

♂ *Above*, bright bluish-green more yellow on the rump; wings umber brown, edged with greenish-yellow; tail bluish-black. *Below*, chin, throat and upper breast, bluish-green, shading into and terminating in a narrow band of blue glossed with violet; lower breast and flanks dull yellow, shading to yellow on the centre; axillary tufts yellow, conspicuous.

Length, 3.8 to 4; bill strong, length to forehead, 6½; wing, 2.3.

Habitat, vicinity of Clarence, Island of Fernando Po, *L. Fraser*.

Another *Nectarinia* in the collection, which we have not previously observed, has the form and distribution of colours of *N. cyanocephala*, Vieill. Mr. Swainson, in his birds of Western Africa, hints at a suspicion, that the "*Soui-mangu a tête bleu*," pl. vii., and the

BIRDS OF WESTERN AFRICA.

Soui-manga Vert et Gris, pl. xxv. of the Ois d'or., may not be the same species. They are from different localities, and the blue of the head is described as of different shades. Plate xxv. does not agree with Mr. Fraser's birds, in wanting entirely any trace of a gular patch, but it may have been partially immature. It is certain however, that the two birds before us are quite distinct, and the present one does not seem to have been noticed previously. It differs in having coronal and gular patches only of deep shining blue, instead as in *N. cynocephala*, of that colour covering the whole head and breast, which besides in the latter is more violet tinted; in the upper plumage, instead of yellowish-green, being all of a dull grayish-black, and in the under parts being of a much paler tint.

N. CYANOLÆMUS, JARD. & FRAS. (Nov. 1851).

♂ *Above*, dark grayish-black; crown and forehead, indigo with metallic lustre.—*Below*, brownish-gray, palest on vent and under tail-covers; chin and throat indigo with metallic lustre, forming an oval patch terminating upon the breast; axillary tufts very pale yellow.

Length, 5.5; bill to forehead, 9; wing, 2.9.

♀ *Above*, yellowish-green, more yellow on the rump; wings and tail umber brown, feathers edged with yellowish-green.—*Below*, grayish-brown; flanks, vent and under tail-covers greenish-yellow; gular patch indistinctly defined by a darker and browner tint.

Length, 5.3; bill to forehead, 8; wing, 2.6.

Habitat, vicinity of Clarence, Fernando Po, *L. Fraser*.

A third very beautiful *Nectarinia* we have not before seen. The bill is straighter than in general, and the bird somewhat *Anthreptes* like, still we consider it as strictly a *Nectarinia*.

N. TEPHROLÆMUS, JARD. & FRAS. (Nov. 1851).

♂ *Above*, head, back and cheeks, bright bluish-green, with metallic lustre; rump and upper tail-covers dull yellowish-green; wings and tail deep brown, feathers edged with greenish-yellow.—*Below*, chin

gray; throat and upper breast, bright green with metallic lustre, bounded beneath with an orange pectoral band; belly gray; flanks, vent and under tail-covers, greenish-yellow.

Length, 4.2; bill to forehead, 3; wing, 2.3 to 4.

♀ *Above*, yellowish-green, paler on rump.—*Below*, yellowish-gray, inclining to pale yellow on vent and under tail-covers.

Length, 4 to 4.2; wing, 2.3 to 4.

Habitat, vicinity of Clarence, Fernando Po, *L. Fraser*.

Psittacula pullaria, not yet recorded as occurring in Fernando Po, forms part of the collection.

There are three specimens of the *Bucco*, of which Mr. Fraser gave the characters in *Proceed. Zool. Soc.* 1843, p. 4, note. No specific name was then given to it; and as it appears not to have been noticed elsewhere, it may hereafter stand as —

BUCCO STELLATUS, JARD. & FRAS. (1843) Nov. 1851.

Above, brownish-black, feathers tipped with yellow; wings and tail brown, feathers edged with dull yellow.—*Below*, yellowish-white, belly and vent dashed with yellow; bill black.

Length, 4.8; bill to forehead, 6; wing, 2.4.

Habitat, vicinity of Clarence, Fernando Po, *L. Fraser*.

We have once or twice received from Western Africa mutilated specimens of a small *Estrela* which we set down as the *E. astrild* (Linn.) In Mr. Fraser's collection, however, we find two good and perfect specimens of a small species, which at first sight appeared like the South African bird, but upon comparison it showed some differences, and appears to be one of those western representatives which we have seen so largely running through the Ornithology of the two sides of that great continent. Nothing resembling this is mentioned in Dr. Hartlaub's list.

ESTRELLDA OCCIDENTALIS, JARD. & FRAS. (Nov. 1851).

Above, pale umber with very fine darker undulations; rump tinted with sienna; quills and tail umber; lores and region of the eyes vermillion.—*Below*, chin yellowish-white, shading to pale umber on vent and flanks—latter with fine darker undulations; under tail-covers black.

Length, 3.7 to 4; wing, 1.8 to 2.

Habitat, vicinity of Clarence, Fernando Po, *L. Fraser*.

CYPSELUS AFFINIS, GRAY.

IN a letter to Mr. Strickland, of 8th November, 1851, Dr. Hartlaub makes the following observations:—

“Have you ever compared specimens of Gordon’s West African *Cypselus* with the Indian *C. affinis*? and do you finally regard them as one and the same species? I have now before me a fine adult specimen of the latter from the Himalaya, and several specimens of *C. abyssinicus*, Ehrenb. (Streubel in Isis, 1848) from St. Thomas’s Island and the Gold Coast—which latter is certainly identical with Gordon’s bird—and cannot but take them for two very nearly allied but *distinct* species. The differential points are these—the African bird has the beak broader and in general a little larger; the African bird is itself decidedly larger than *C. affinis*; the colour of the forehead is much *paler* in *C. affinis* than in *C. abyssinicus*, and the same is the case with the *tail*, which is lighter coloured in *affinis* than in *abyssinicus*. Pray communicate to me your opinion on this point. If both birds prove to be identical, then this instance of geographical distribution would be quite exceptional and extraordinary.”

Upon receiving the above, we again carefully compared the Swift from Western Africa, which was procured by Dr. Gordon and referred by us to the Indian species in “Contributions” 1849, p. 5, with specimens of true *C. affinis* sent from different localities by Jerdon, Blyth, Hodgson, and Cleghorn. In the first and third of Dr. Hartlaub’s differential points—the size of the bill, and different colour or shades of the forehead and tail, we can detect *no difference*. In the second point—the larger size of the African bird—the entire length of four Indian specimens is from 4.5 to 5.3; fork of the tail when slightly opened 2; wing 5 to 5.2. The entire length of the African bird is 5.4; fork of the tail when slightly opened 1½; wing 5 or 5.1. The length of any skin is so dependent on preparation, that the very slight differences as above cannot be considered as important; and looking at the whole specimens placed together, there is more discrepancy in strength or robustness between those of India than between any of them and the

CYPSELUS AFFINIS.

African bird, and we cannot alter our opinion of their identity. We have never seen the bird known as *C. abyssinicus*, to which however Dr. Hartlaub refers Gordon's birds. It is possible *C. abyssinicus* may be distinct, and Gordon's specimen a straggling *C. affinis*. The common Quail is found over all the Old World. The common Wheatear and Skylark of Europe have lately been shot in Bermuda. We are inclined to the opinion, that the Indian bird extends to the African continent.

DESCRIPTIONS

OF

TWO NEW SPECIES OF *SYNALLAXIS*

BY

T. C. EYTON, Esq., F.L.S. &c.

SYNALLAXIS OLIVACENS, EYTON.

S. dorso subtusque olivaceis, vertice nuchâque tectricibus alarum caudaque læté castaneis; reatricibus alarum pogoniis externis castaneis brunneo præpillatis, lineâ peroculari atrâ, gula jugulo pectoreque superiore cinereis singulis pennis albo marginatis.

Long. corp 6 in.; ros. fron. $\frac{1}{2}$ in.; tarsi 10 lin.

Both the specimens I possess of this beautiful species of *Synallaxis* were received from South America, but I am not aware of the exact locality.

SYNALLAXIS MODESTUS, EYTON.

S. corpore toto alisque brunneis, gulâ maculâ castaneo-aurantiacâ, caudâ reatricibus quatuoribus externis pogoniis exterioribus castaneis.

Long. corp $6\frac{1}{2}$ in.; ros. fron. $\frac{1}{2}$ in.; tarsi 11 lin.

I am not certain from whence the above bird came into my hands, but believe it was from Bolivia. In one specimen the spot on the throat is much lighter than in the other; there is also a slight tinge of castaneous on the under tail-coverts of the specimen, with the darkest throat, which is probably the male.



FURTHER NOTES

ON

BIRDS FROM THE RIVER GABOON IN WEST AFRICA

BY

H. E. STRICKLAND.

SOON after my former notice of some birds from the River Gaboon, at p. 131 *supra*, was printed, I received the "Revue et Magazin de Zoologie" for June and July, 1851, which contains the commencement of a paper by MM. J. and E. Verreaux, relating to the same collection of birds. Having fortunately adopted M. Verreaux's MS. names in my former paper, this double publication of the same species will produce little or no confusion of synonymy. I have, however, thought it desirable to publish, without loss of time, any annotations which may occur to me in collating these two independent and nearly simultaneous notices of the same objects.

"Revue et Magazin de Zoologie," 1851, p. 257.—M. Verreaux announces, as a recent discovery of the Prince of Canino, that two species of *Turacus* have been hitherto confounded under the Linnæan specific name of *persa*—the one with a green crest margined with red, and the other with the crest wholly green; and that the former is the true *Cuculus persa* of Linnæus. The fact is, however, that not *two* but *three* species have been thus confounded; and the rectification of this error is not so new as M. Verreaux supposes, for it is just ten years since I pointed out, in the Annals of Natural History, vol. vii. p. 33, that the species with a red-margined crest is the true *T. persa*, and that the green-crested one will stand as *T. buffoni*, Vieill. (1819), while to the

FURTHER NOTES ON BIRDS

third, or white-margined species, I gave the name of *T. albocristatus*. I will further remark, that I do not see why Prince Bonaparte has adopted the specific name, *purpureus*, attached in manuscript by Cuvier, to the specimen of the green-crested species in the Paris Museum, in preference to the name *buffoni*, long ago published by Vieillot. No MS. name, however venerable a one, can ever claim any authority over a name which has once been defined in a published work.

P. 259.—From the descriptions of *Chrysococcyx smaragdineus*, given by M. Verreaux, it appears that the specimen described at p. 135 *supra*, is a female. M. Verreaux states, that the Gaboon specimens differ from Senegal ones, only in having a shorter tail. He adds, that they arrive at the Gaboon in spring and disappear before the winter; but as that river is exactly under the equator, it would have been well if M. Verreaux had informed us what months of the year are here referred to, there being two summers and two winters annually in equatorial regions.

P. 262.—*Barbatula flavimentum*, Verreaux, is here described as new, the authors not being aware that it is synonymous with *B. subsulphurea*, Fraser.

P. 264.—*Halcyon badius*, Verreaux. This is the species described at p. 134 *supra*, as "*Halcyon cancropaga* (Lath.)?". It is certainly distinct from the true *H. cancropaga* (Lath.), which, however, seems to be only known from Buffon's Planches Enluminees, 334.

P. 269.—*Melittophagus cyanipectus*, Verreaux. The authors admit the resemblance of this species to *M. lefebvrei*, Desmurs, which I had identified with it at p. 135 *supra*, but assert its distinction on account of its smaller size and paler tint below. Be this as it may, the *M. cyanipectus* of M. Verreaux is certainly the same as *M. variegatus* of Vieillot, described in the Nouv. Dict. Hist. Nat., vol. xiv. p. 25, as found at Malimbe on the west coast of Africa.

P. 271.—M. Verreaux remarks of his *Ixos ashanteus* (*Pycnonotus ashanteus*, *supra* p. 132), that it differs from *T. arsince* (*Pycnonotus barbatus*, Desfontaines, *mihi*), not only in the yellowish under tail-covers, but in the lighter tint of the head, a character which I had not noticed when I had an opportunity of comparing these two birds.

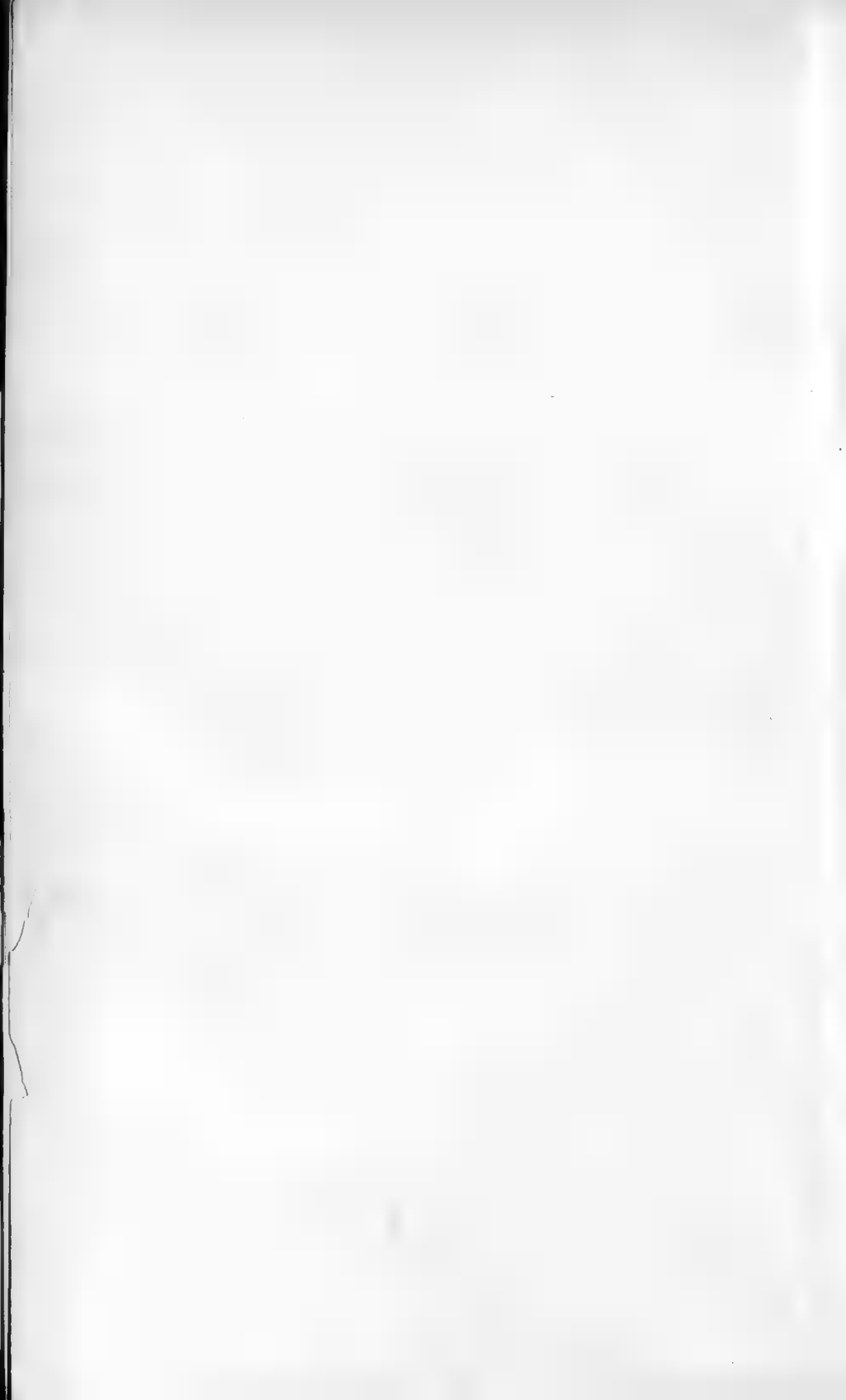
P. 306.—*Ixonotus guttatus*, Verreaux (see p. 132 *supra*). The genus *Ixonotus* is thus defined by the authors: “Plumæ uropygii rhachide robustissimâ. Alæ rotundatæ remigum primâ robustissimâ; secundâ longitudine, nonæ; tertiâ sextam æquante; quartâ et quintâ omnium longissimis. Cauda æqualis. Pedes brevissimi. Rostrum breve, gracile, compressum, subincurvum.

P. 307.—*Pratincola salax*, Verreaux. This is the species termed *P. olax*, at p. 133 *supra*, an error into which I was led by the obscurity of the writing on M. Verreaux’s label.

P. 308.—*Hyliota violacea*, Verreaux. The authors have correctly referred this bird, which they originally designated *Muscicapa violacea*, to the genus *Hyliota* (see p. 132 *supra*).

P. 309.—*Platystira leucopygialis*. The authors state, that the *P. leucopygialis* of Fraser is the adult ♀, and his *P. castanea* the young ♀; and that the adult male differs in having a white semi-collar at the back of the neck. It is however evident, on comparing their own descriptions with Fraser’s figures in the “*Zoologia Typica*,” that his *leucopygialis* is a male, though possibly an immature bird; and that his *P. castanea* is the adult ♀.

P. 310.—*Atticora melbina*, Verreaux. *Hirundo melbina*, *supra* p. 131. This bird may perhaps be regarded as correctly placed in *Atticora*, though that genus seems to be little more than an artificial receptacle for several stray *Hirundinidæ* from all quarters of the globe, possessing the form but not the coloration of *Hirundo*.



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