

Janh. 1841

This species is common at the Falkland Islands, and it often occurs mingled in the same flock with the last one. I suspect, however, it more commonly frequents higher parts of the hills. These species have a very close general resemblance; but the marks about the head, which are white in the *C. melanodera*, are yellow in the *C. xanthogramma*, while the parts of the tail-feathers which are white in the latter, are yellow in the *C. melanodera*: this difference of colours does not hold in the females, but they may be at once distinguished by the greater length of wing, when folded, of the *C. xanthogramma*.

CHRYSOMITRIS MAGELLANICA. Bonap.

Fringilla Magellanica, *Viell. Ency. Meth.* 983; *Ois. Chant. de la Zone Torride*, pl. 30;

Audubon, *Birds of Am.* pl. 394, f. 2.

Gafarron, *Azara*, No. 134.

Fringilla ieterica, *Licht. Cat.* p. 26.

This bird was very abundant in large flocks during May, at Maldonado; I found it also at the Rio Negro.

SUB-FAMILY.—TANAGRINÆ.

PITYLUS SUPERCILIARIS.

Tanagra superciliaris, *Spir.* Av. Sp. Nov. 2, t. lvii. fig. 1. p. 44.

My specimen was procured from Santa Fé, in Lat. 31° S.

1. AGLAIA STRIATA. *D'Orb. & Lafr.*

PLATE XXXIV.

♂ *Tanagra striata*, *Gmel. Syst.* 1. 899; *Ency. Meth.* 776; *Licht. Cat.* p. 31. Sp. 347;

Proc. Zool. Soc. 1837, p. 121, pl. 34 of this work.

L'Onglet, *Buff.* iv. p. 256.

Le Lindoblen, dore et noir, *Azara*, No. 94.

♀ *Tanagra Darwinii*, *Bonap.*; *Proc. Zool. Soc.* 1837, p. 121.

I saw the only specimen, which I procured, feeding on the fruit of an opuntia at Maldonado.

Mr. G. R. Gray is induced to consider the species figured under the name of *T. Darwinii*, as the *T. striata*, *Gm.* and the *T. Darwinii* of the Zoological Society's Proceedings, as the female of the same species, while the young birds may be described as following:

Brown, with the margins of the dorsal feathers greenish-brown, those of the wings and tail margined brownish-white; head and neck greyish-green;

beneath the body pale dusky green, somewhat darker on the breast and sides; uropygium yellowish-green.

Three specimens of this species are contained in the British Museum, exhibiting male, female, and young.

2. *AGLAIA VITTATA.*

Tanagra vittata, Temm. Pl. col.

Maldonado; not common.

PIPILLO PERSONATA. Swains.

PLATE XXXV.

P. personata, Swains. Two cent. and a quart. p. 311.

Maldonado; not common. The stomach of one, which I shot, contained seeds.

EMBERIZOIDES POLIOCEPHALUS. G. R. Gray.

E. olivaceus, dorsi plumis medio nigro striatis; capite gulâque cinereis, priore plumis singulis, medio nigrostriatis; corpore infra rufescenti albo; hypochondriis tectricibus caudæ inferioribus obscurioribus; alarum margine latè flava, remigibus primariis secundariisque nigris; prioribus pallidè olivaceo, posterioribus olivascente flavo latè marginatis.

Long. tot. $7\frac{3}{4}$ unc.; *ala*, $3\frac{1}{2}$; *cauda*, 4; *tarsi*, $1\frac{1}{2}$; *rostri*, 8 lin.

Olivaceous, with the feathers of the back marked down the middle with black; the head and throat cinereous, with each feather of the former streaked down the middle with black; beneath the body rufous white, darker on the flanks and under tail coverts; the border of the wings bright yellow; the secondaries and primaries black, the former broadly margined with pale olive, the latter with bright olivaceous yellow; base of bill dusky orange.

Habitat, northern shore of the Plata. (*May and August.*)

This bird is common both near Monte Video and Maldonado, in swamps. Stomach full of seeds: it makes a shrill loud cry: its flight is clumsy, as if its tail were disjointed.

FAM.—*COCCOTHRAUSTINÆ.*

GENUS, *GEOSPIZA, Gould.*

Corporis figura brevissima et robusta.

Rostrum magnum, robustum, validum, altitudine longitudinem præstante; culmine arcuato et capitis verticem superante, apice sine denticulo, lateribus tumidis.

Naribus basalibus et semitectis plumis frontalibus.

Mandibulâ superiori tomii medium versus sinum exhibentibus, ad mandibulâ inferioris processum recipiendum. Mandibula inferior ad basin lata, hoc infra oculos tendente.

Alæ mediocres remige primo paulo brevioribus secundo, hoc longissimis.

Cauda brevissima et æqualis.

Tarsi magni et validi, digito postico, cum ungue robusto et digito intermedio brevioribus; digitis externis inter se æqualibus at digito postico brevioribus. Color in maribus niger, in fæm. fuscus.

This singular genus* appears to be confined to the islands of the Galapagos Archipelago. It is very numerous, both in individuals and in species, so that it forms the most striking feature in their ornithology. The characters of the species of *Geospiza*, as well as of the following allied subgenera, run closely into each other in a most remarkable manner.

In my Journal of Researches, p. 475, I have given my reasons for believing that in some cases the separate islands possess their own representatives of the different species, and this almost necessarily would cause a fine gradation in their characters. Unfortunately I did not suspect this fact until it was too late to distinguish the specimens from the different islands of the group; but from the collection made for Captain FitzRoy, I have been able in some small measure to rectify this omission.

In each species of these genera a perfect gradation in colouring might, I think, be formed from one jet black to another pale brown. My observations showed that the former were invariably the males; but Mr. Bynoe, the surgeon of the *Beagle*, who opened many specimens, assured me that he found two quite black specimens of one of the smaller species of *Geospiza*, which certainly were females: this, however, undoubtedly is an exception to the general fact; and is analogous to those cases, which Mr. Blyth* has recorded of female linnets and some other birds, in a state of high constitutional vigour, assuming the brighter plumage of the male. The jet black birds, in cases, where there could be no doubt in regard to the species, were in singularly few proportional numbers to the brown ones: I can only account for this by the supposition that the intense black colour is attained only by three-year-old birds. I may here mention, that the time of year (beginning of October) in which my collection was made, probably corresponds, as far as the purposes of incubation are concerned, with our autumn. The several species of *Geospiza* are undistinguishable from each other in habits; they often form, together with the species of the following subgenera, and likewise with doves, large irregular flocks. They frequent the rocky and extremely arid parts of the land sparingly covered with almost naked bushes, near the coasts;

* This genus, and the following sub-genera, were named by Mr. Gould at a meeting of the Zool. Soc. Jan. 10 1837, p. 4. of Proceedings.

† Remarks on the Plumage of Birds, Charlsworth's Mag. of Nat. History, vol. i. p. 480.

for here they find, by scratching in the cindery soil with their powerful beaks and claws, the seeds of grasses and other plants, which rapidly spring up during the short rainy season, and as rapidly disappear. They often eat small portions of the succulent leaves of the *Opuntia Galapageia*, probably for the sake of the moisture contained in them: in this dry climate the birds suffer much from the want of water, and these finches, as well as others, daily crowd round the small and scanty wells, which are found on some of the islands. I seldom, however, saw these birds in the upper and damp region, which supports a thriving vegetation; excepting on the cleared and cultivated fields near the houses in Charles Island, where, as I was informed by the colonists, they do much injury by digging up roots and seeds from a depth of even six inches.

1. *GEOSPIZA MAGNIROSTRIS.* Gould.

PLATE XXXVI.

G. fuliginosa, crisso cinerascenti-albo; rostro nigro-brunnescente lavato; pedibus nigris.

Long. tot. 6 unc.; ala, $3\frac{1}{2}$; cauda, 2; tarsi, 1; rostri, $\frac{1}{2}$; alt. rost. 1.

Fœm. vel Mas jun.; corpore intensè fusco singulis plumis olivaceo cinctis; abdomine pallidiore; crisso cinerascenti-albo; pedibus et rostro, ut in mare adulto.

Sooty black; with the vent cinereous white, the bill black, washed with brownish, and the feet black.

Female, or young male: Deep fuscous, with each feather margined with olive, the abdomen much paler, with the under tail-coverts cinereous white, the feet and bill like those of the male.

Habitat, Galapagos Archipelago. (Charles and Chatham Islands.)

I have strong reasons for believing this species is not found in James's Island. Mr. Gould considers the *G. magnirostris* as the type of the genus.

2. *GEOSPIZA STRENUA.* Gould.

PLATE XXXVII.

G. fuliginosa, crisso albo, rostro fusco et nigro tincto; pedibus nigris.

Long. tot. $5\frac{1}{2}$ unc.; ala, 3; cauda, $1\frac{3}{4}$; tarsi, $\frac{3}{4}$; rostri, $\frac{3}{8}$; alt. rost. $\frac{3}{8}$.

Fœm. Summo corpore fusco singulis plumis alarum caudæque plumis exceptis, pallidè cinerascenti-olivaceo cinctis; gulâ et pectore fuscis; abdomine lateribus et crisso pallidè cinerascenti-fuscis; rostro brunnescente.

Sooty black, with the under tail coverts white; the bill brown, tinged with black, and the feet black.

Female: Upper part of the body fuscous, with the margins of each feather, except those of the wings and tail, pale cinereous-olive; the throat and breast

fuscous: the abdomen, sides, and under tail-coverts pale cinereous-fuscous; the bill brownish.

Habitat, Galapagos Archipelago (James and Chatham Islands.)

GEOSPIZA FORTIS. *Gould.*

PLATE XXVIII.

G. intense fuliginosa, crisso albo; rostro rufescenti-brunneo, tincto nigro; pedibus nigris.

Fœm. (vel Mas jun.) *Corpore suprâ pectore et gutture intensè fuscis, singulis plumis cinerascenti-olivaceo marginatis; abdomine crissoque pallidè cinerascenti-brunneis; rostro rufescenti-fusco ad apicem flavescente; pedibus ut in mare.*

Long. tot. $4\frac{1}{2}$ unc.; ala, 3; cauda, $1\frac{1}{2}$; tarsi, $1\frac{1}{2}$; rostri, $\frac{1}{2}$.

Deep sooty black; with the under tail-coverts and the bill reddish brown tinged with black; the feet black.

Female (or young male): The body above, breast and throat, deep fuscous, with each feather margined with cinereous-olive: the abdomen, and under tail-coverts pale cinereous-brown; the bill reddish fuscous, with the apex yellowish, and the feet like those in the male.

Habitat, Galapagos Archipelago, (Charles and Chatham Islands.)

4. GEOSPIZA NEBULOSA. *Gould.*

G. summo capite et corpore nigrescenti-fuscis; singulis plumis cinerascenti-olivaceo marginatis; corpore subtus pallidiore, abdomine imo crissoque cinerascitibus; rostro et pedibus intensè fuscis.

Long. tot. 5 unc.; ala, $2\frac{3}{4}$; cauda, $1\frac{1}{4}$; tarsi, $\frac{3}{4}$; rostri, $\frac{3}{8}$; alt. rostr. $\frac{1}{2}$.

MALE.—Upper part of the head and body blackish fuscous, with each feather margined with cinereous olive; the body beneath paler, with the lowest part of the abdomen and under tail-coverts ashy; the bill and feet deep fuscous.

Habitat, Galapagos Archipelago, (Charles Island.)

5. GEOSPIZA FULIGINOSA. *Gould.*

G. intensè fuliginosa, crisso albo, rostro fusco; pedibus nigrescenti-fuscis.

Long. tot. $4\frac{1}{2}$ unc.; ala, $2\frac{1}{2}$; cauda, $1\frac{3}{8}$; tarsi, $\frac{1}{2}$; rostri, $1\frac{1}{2}$; alt. rostri, $\frac{3}{8}$.

Fœm. *Summo corpore, alis, caudâque intensè fuscis; singulis plumis cinerascenti-ferrugineo marginatis; corpore infra cinereo, singulis plumis medium versus obscurioribus; rostro brunneo; pedibus nigrescenti-brunneis.*

Deep sooty black, with the under tail coverts white; the bill fuscous, and the feet blackish fuscous.

Female: Upper part of the body; the wings and tail deep fuscous, with each feather margined with ashy ferrugineous; beneath the body cinereous, with each feather towards the middle darker; the bill brown, and the feet blackish brown.

Habitat, Galapagos Archipelago. (Chatham and James' Island.)

6. GEOSPIZA DENTIROSTRIS. Gould.

G. (Fœm. vel Mas jun.) *mandibulæ superioris margine in dentem producto, vertice corporeque supra fuscis; singulis plumis medium versus obscurioribus; secundariis tetricibusque alarum ad marginem stramineis; gutture et pectore pallidè brunneis, singulis plumis medium versus obscurioribus, imo abdomine crissoque cinerascenti-albis; rostro rufo-fusco; pedibus obscurè plumbeis.*

Long. tot. 4½ unc.; *alæ*, 2½; *caudæ*, 1½; *rostri*, ½; alt. *rost.*, ¾.

The margin of the upper mandible produced into a tooth; the vertex and above the body fuscous, with each feather towards the middle darker; the margins of the secondaries and wing coverts straw colour; the throat and breast pale brown, darker towards the middle of each feather; the sides and under tail-coverts cinereous white; the bill rufous fuscous, and the feet obscure lead colour.

Habitat, Galapagos Archipelago.

Mr. Gould considered this specimen a female, from the appearance of its plumage; but from dissection, I thought it was a male.

7. GEOSPIZA PARVULA. Gould.

PLATE XXXIX.

G. (Mas) *capite, gutture, et dorso fuliginosis; uropygio cinerascenti-olivaceo; caudæ et alis nigrescenti brunneis; singulis plumis caudæ et alarum, cinereo-marginatis; lateribus olivaceis, fusco guttatis; abdomine et crisso albis, rostro et pedibus nigrescenti-brunneis.*

Long. tot. 4 unc.; *alæ*, 2½; *caudæ*, 1½; *tarsi*, ¾; *rostri*, ¾; alt. *rost.*, ¾.

Fœm. *Summo capite et dorso cinerascenti-brunneis, gutture, pectore, abdomine crissoque pallidè cinereis, stramineo tinctis.*

The head, throat, and back, sooty black; the lower part of the back cinereous olive; the tail and wings blackish brown, margined with cinereous; the sides olive with fuscous spots; the abdomen and under tail-coverts white; the bill and feet blackish brown.

Female: The upper surface cinereous brown; the throat, breast, abdomen, and the under tail coverts, pale cinereous tinged with straw colour.

Habitat, Galapagos Archipelago. (James' Island.)

8. *GEOSPIZA DURIA*. Gould.

G. (Fœm. Mas ignot.) *summo capite et corpore suprâ fuscis, singulis plumis cinerascenti-olivaceo marginatis; strigâ superciliari, genis, gutture, corpore infrâ cinerascenti-olivaceis, singulis plumis notâ centrali fuscâ; alis caudâque brunneis singulis plumis olivaceo-cinereo marginatis; rostro sordidè albo, pedibus obscurè fuscis.*

Long. tot. $3\frac{3}{8}$ unc.; ala, $2\frac{3}{8}$; cauda, $1\frac{1}{2}$; tarsi, $\frac{3}{8}$; rostri, $\frac{1}{2}$; alt. rostri, $\frac{3}{8}$.

Upper surface fuscous, with each feather margined with cinereous olive; the streak above the eye, cheeks, throat, and beneath the body, cinereous olive, with the middle of each feather fuscous; the wings and tail brown, with each feather margined with cinereous ash; the bill white, and the feet obscure fuscous.

Habitat, Galapagos Archipelago, (Chatham Island.)

SUB-GENUS.—*CAMARHYNCHUS*. Gould.

CAMARHYNCHUS differt a genere *GEOSPIZA*, rostro debiliore, margine mandibulæ superioris minùs indentato; culmine minùs elevato in frontem et plus arcuato; lateribus timidioribus; mandibulâ inferiore minùs in genas tendente.

Camarhynchus psittaculus is the typical species.

1. *CAMARHYNCHUS PSITTACULUS*. Gould.

PLATE XL.

C. (Fœm.) *summo capite corporeque superiore fuscis; alis caudâque obscurioribus; gutture corporeque inferiore, cinerascenti-albis, stramineo tinctis; rostro pallidè flavescenti-fusco; pedibus fuscis.*

Long. tot. $4\frac{3}{8}$ unc.; ala, $2\frac{3}{8}$; cauda, $1\frac{3}{8}$; tarsi, $\frac{3}{8}$; rostri, $\frac{1}{2}$; alt. rostri, $\frac{1}{2}$.

The upper part of the head and body fuscous; the wing and tail darker; the throat, and beneath the body cinereous white, tinged with straw-colour; the bill pale yellowish fuscous, and the feet fuscous.

Habitat, Galapagos Archipelago, (James' Island.)

The species of *Camarhynchus* do not differ in habits from those of *Geospiza*; and the *C. psittaculus* might often be seen mingled in considerable numbers in the same flock with the latter. Mr. Bynoe procured a blackish specimen, which, doubtless, was an old male; I saw several somewhat dusky, especially about the head.

2. *CAMARHYNCHUS CRASSIROSTRIS*. Gould.

PLATE XLI.

C. (Mas jun. et Fœm.) *corpore superiore intensè brunneo, singulis plumis cinerascenti-*

olivaceo marginatis; gutture pectoreque cinerascanti-olivaceis, singulis in medio plumis obscurioribus; abdomine, lateribus crissoque cinereis stramineo tinctis.

Long. tot. $5\frac{1}{2}$ unc.; ala, $3\frac{3}{4}$; cauda, 2; tarsi, $1\frac{1}{2}$; rostri, $\frac{1}{2}$; alt. rostri, $\frac{1}{2}$.

Upper part of the body deep brown, with each feather margined with cinereous olive; the throat and breast cinereous olive, with the middle of each feather darker; the abdomen, sides, and under tail coverts cinereous tinged with straw colour.

Habitat, Galapagos Archipelago, (Charles Island?)

I am nearly certain that this species is not found in James Island. I believe it came from Charles Island, and probably there replaces the *C. psittaculus* of James Island. I obtained three specimens, one male, and two females; from the analogy of so many species in this group, I do not doubt the old male would be black.

Sub-Genus.—CACTORNIS. Gould

CACTORNIS *differt a genere* GEOSPIZA *rostro elongato, acuto, compresso, longitudine altitudinem eccellente; mandibulae superioris margine vix indentato; naribus basalibus et vix tectis; tarsis brevioribus, unguibus majoribus et plus curvatis.*

Cactornis scandens is the typical species.

1. CACTORNIS SCANDENS. Gould.

PLATE XLIII.

C. intensè fuliginosa, crisso albo; rostro et pedibus nigrescenti-brunneis.

Long. tot. 5 unc.; rostri, $\frac{3}{4}$; ala, $2\frac{5}{8}$; cauda, $1\frac{3}{4}$; tarsi, $\frac{3}{4}$.

Fœm. *Corpore superiore, gutture pectoreque intensè brunneis, singulis plumis pallidiorè marginatis; abdomine crissoque cinereis, stramineo tinctis; rostro pallidè fusco; pedibus nigrescenti-fuscis.*

Deep sooty black, with the under tail-coverts white; the bill and feet blackish-brown.

Female: Upper surface of the body, throat and breast intensely brown, with the margins of each feather paler; the abdomen and the under tail coverts cinereous, tinged with straw-colour; the bill pale fuscous, and the feet blackish fuscous.

Habitat, Galapagos Archipelago, (James' Island.)

The species of this sub-genus alone can be distinguished in habits from the several foregoing ones belonging to *Geospiza* and *Camarhynchus*. Their most

frequent resort is the *Opuntia Galapageia*, about the fleshy leaves of which they hop and climb, even with their back downwards, whilst feeding with their sharp beaks, both on the fruit and flowers. Often, however, they alight on the ground, and mingled with the flock of the above mentioned species, they search for seeds in the parched volcanic soil. The extreme scarceness of the jet-black specimens, which I mentioned under the head of the genus *Geospiza*, is well exemplified in the case of the *C. scandens*, for although I daily saw many brown-coloured ones, (and two collectors were looking out for them), only one, besides that which is figured, was procured, and I did not see a second.

2. CACTORNIS ASSIMILIS. Gould.

PLATE XLIII.

TISSERIN DES GALLAPAGOS, (Île St. Charles,) *Nebouf*, Revue Zoologique, 1840, p. 291.

C. Mas (jun?) *corpore suprâ fuliginoso, (gutturæ abdomineque exceptis,) cinereo marginatis; rostro pallidè rufescenti-brunneo; pedibus nigrescenti-brunneis.*

Long. tot. 5½ unc.; rostri, ¾; alæ, 2¾; caudæ, 1¾; tarsi, ¾.

Upper surface of the body sooty black, margined with cinereous, as well as the throat and abdomen; the bill pale rufous brown; the feet blackish brown.

Habitat, Galapagos Archipelago.

I do not know from which island of the group this species was procured; almost certainly not from James Island. Analogy would in this case, as in that of *Camarhynchus crassirostris*, lead to the belief that the old male would be jet black. By a mistake this bird has been figured standing on the *Opuntia Darwinii*, a plant from Patagonia, instead of the *O. Galapageia*. I may here mention that a third and well characterized species of *Cactornis* has lately been sent by Captain Belcher, R.N. to the Zoological Society; as Capt. Belcher visited Cocos Island, which is the nearest land to the Galapagos Archipelago, being less than 400 miles distant, it is very probable that the species came thence.

SUB-GENUS.—CERTHIDEA. Gould.

CERTHIDEA differt a genere *GEOSPIZA* rostro graciliore et acutiore; naribus basalibus et non tectis; mandibulæ superioris margine recto; tarsis longioribus et gracilioribus.

Of the foregoing sub-genera, *Geospiza*, *Camarhynchus* and *Cactornis* belong to one type, but with regard to *Certhidea*, although Mr. Gould confidently believes it should also be referred to the same division, yet as in its slighter form and weaker bill, it has so much the appearance of a member of the *Sylviidae*, he would by no means insist upon the above view being adopted, until the matter shall have been more fully investigated.

belongs to *Phainopepla*
Lucas. P. N. S. Nov. Ann.
 xvii. pp. 309, 310 (1894)

CERTHIDEA OLIVACEA. *Gould.*

PLATE XLIV.

C. summo capite, corpore superiore, alis caudâque olivaceo-brunneis; gutture et corpore infra cinereis; rostro pedibusque pallidè brunneis.

Long. tot. 4 unc.; rostri, $\frac{1}{2}$; alæ, 2; caudæ, $1\frac{1}{2}$; tarsi, $\frac{3}{4}$.

Upper part of the head, body, wings and tail, olivaceous brown; the throat, and beneath the body, cinereous; the bill and feet pale brown.

Habitat, Galapagos Archipelago. (Chatham and James Island).

I believe my specimens, which include both sexes, were procured from Chatham and James Islands; it is certainly found at the latter.

PHYTOTOMA RARA. *Mol.*

P. Bloxami, *Children*, Jard. and Selby's Ill.

P. rutila, *Vieill.* Mag. de Zool. 1832, ii. pl. 5.

P. silens, *Kittl.* Mem. de l'Acad. des Sci. de St. Petersb.

This is not a very uncommon bird in Central Chile: the farmers complain that it is very destructive to the buds of fruit trees. It is quiet and solitary, and haunts hedge-rows or bushes; its manners are similar to those of our bullfinch, (*Loxia Pyrrhula*). Iris bright scarlet. Mr. Eyton has given an anatomical description of this bird in the Appendix.

DOLICHONYX ORYZIVORUS. *Swains.*

Dolichonyx oryzivorus, *Sicains*. Faun. Bor. Am. 2. 278.

Emberiza oryzivorus, *Linn.*

This one specimen only was seen at James Island, in the Galapagos Archipelago, during the beginning of October. It is remarkable that a bird migrating, according to Richardson, as far as 54° N. in North America, and generally inhabiting marshy grounds, should be found on these dry rocky islands under the equator. Mr. Gray and myself carefully compared this specimen with one from North America, and we could not perceive the slightest difference.

1. XANTHORUS CHRYSOPTERUS. *G. R. Gray.*

Oriolus cayennensis, *Linn.* Syst. 1. 168 ?

Agelaius chrysopterus, *Vieill.*

Psarocolius chrysopterus, *Wagl* Syst. Av. p.

This bird generally frequents marshy grounds. I procured specimens from La Plata and from Chile; in the latter country it extends at least as far north as the valley of Copiapo, in 27° 20': on the eastern plains it does not range, according to Azara, north of 28°. It builds in reeds. Molina says it is called by the Indians Thili, or Chile—hence he derives the name of the country.

2. XANTHORUS FLAVUS. *G. R. Gray.*

PLATE XLV.

*Oriolus flavus, Gmel.**Psarocolius flaviceps, Wagl. Syst. Avium.**Troupiale à tête jaune, Azara, No. 66.*

This species is common at Maldonado in large flocks.

LEISTES ANTICUS. *G. R. Gray.**Icterus anticus, Licht. Cat. p. 19.**Agelaius virescens, Vieill. Ency. Meth. 543.**Psarocolius anticus, Wagl.**Le Dragon, Azara, No. 65.*

This bird is exceedingly abundant in large flocks on the grassy plains of La Plata. It is noisy, and in its habits resembles our starling.

1. AGELAIUS FRINGILLARIUS. *G. R. Gray.**Icterus fringillarius, Spix, Av. Sp. No. 1. t. lxx. fig. 1 & 2. p. 68.**Psarocolius sericeus, juv., Wagl.*

This species is rare at Maldonado, but appears more common on the banks of Parana in Lat. 31° S. Spix says (vol. i. p. 68, Birds of Brazil), it is found in Minas Geraes.

2. AGELAIUS CHOPI. *Vieill.**Turdus cureus, Gmel.**Le Chopi, Azara, No. 62.**Icterus unicolor, Licht.**Icterus sulcirostris, Spix, Av. Br. pl. 64. f. 2.*

This species is common in flocks on the pasture grounds of Chile, and along the whole western shore of the southern part of the continent. In Chile it is called, according to Molina, "cureu." It is a noisy, chattering bird, and runs in the manner of our starlings. It can be taught to speak, and is sometimes kept in cages. It builds in bushes.

MOLOTHRUS NIGER. *Gould.**Tanagra bonariensis, Gmel.**Icterus niger, Dand.**Passerina discolor, Vieill.**Icterus maxillaris, D'Orb. & Lafr.**Icterus sericeus, Licht.**Psarocolius sericeus, Wagl.*

This Molothrus is common in large flocks on the grassy plains of La Plata, and is often mingled with the *Leistes anticus*, and other birds. In the same flock

with the usual black kind, there were generally a few dull brown coloured ones, (*Icterus sericeus* of *Licht.*) which I presume are the young. Azara states that the brown-coloured birds are smaller than the black glossy ones, and that they sometimes form one-tenth of the whole number in a flock. In the single specimen which I brought home, the size, with the exception of the length of the wing, is only a very little less. Sonnini, in his notes to Azara, considers the brown birds as the females; I can, however, scarcely believe that so obvious a solution of the difficulty could have escaped so accurate an observer as Azara. These birds in La Plata often may be seen standing on the back of a cow or horse. While perched on a hedge, and pluming themselves in the sun, they sometimes attempt to sing or rather to hiss: the noise is very peculiar; it resembles that of bubbles of air passing rapidly from a small orifice under water, so as to produce an acute sound. Azara states that this bird, like the cuckoo, deposits its eggs in other birds' nests. I was several times told by the country people, that there was some bird which had this habit; and my assistant in collecting, who is a very accurate person, found in the nest of the *Zonotrichia ruficollis* (a bird which occupies in the ornithology of S. America the place of the common sparrow of Europe), one egg larger than the others, and of a different colour and shape. This egg is rather less than that of the missel-thrush, being $\cdot93$ of an inch in length, and $\cdot78$ in breadth; it is of a bulky form, thick in the middle. The ground colour is a pale pinkish-white, with irregular spots and blotches of a bright reddish-brown, and others less distinct of a greyish hue. This species is evidently a very close analogue of the *M. pecoris* of North America, from which, however it may at once be distinguished by the absence of the glossy brown on the head, neck, and upper breast,—by the metallic blueness of its plumage in the place of a green tinge, and by its somewhat greater size in all its proportions. The young or brown-coloured specimens of these *Molothri* resemble each other more closely; that of the *M. pecoris* is of a lighter brown, especially under the throat, and the small feathers on its breast and abdomen have each an obscure dark central streak. The eggs of the *Molothri*, although having the same general character, differ considerably; that of the *M. pecoris* being smaller and less swollen in the middle; it is $\cdot85$ of an inch in length, and $\cdot78$ in breadth. Its colour cannot be better described than in the words of Dr. Richardson*—it is “of a greenish white, with rather small crowded and confluent irregular spots of pale liver-brown, intermixed with others of subdued purplish grey.” From this

* *Fauna Borealis, Birds*, p. 278. Dr. Richardson states that the egg is only seven lines and a half in length. I presume the measure of eight lines, instead of twelve to the inch, must in this case have been used. I am much indebted to the kindness of Mr. Yarrell for lending me an egg of the *Molothrus pecoris*, forming part of a collection of North American eggs in his possession.

description it is obvious that the egg of *M. niger* is larger and of a much redder tint; the more prominent spots also are larger, the subdued grey being quite similar in both.

If we were to judge from habits alone, the specific difference between these two species of *Molothrus* might well be doubted; they seem closely to resemble each other in general habits,—in manner of feeding,—in associating in the same flock with other birds, and even in such peculiarities as often alighting on the backs of cattle. The *M. pecoris*, like the *M. niger*, utters strange noises, which Wilson* describes “as a low spluttering note as if proceeding from the belly.” It appears to me very interesting thus to find so close an agreement in structure, and in habits, between allied species coming from opposite parts of a great continent. Mr. Swainson† has remarked that with the exception of the *Molothrus*, the cuckoos are the only birds which can be called truly parasitical; namely, such as “fasten themselves, as it were, on another living animal, whose animal heat brings their young into life, whose food they alone live upon, and whose death would cause theirs during the period of infancy.” It is very remarkable, that the cuckoos and the molothri, although opposed to each other in almost every habit, should agree in this strange one of their parasitical propagation: the habit moreover is not universal in the species of either tribe. The *Molothrus*, like our starling, is eminently sociable, and lives on the open plains without art or disguise:‡ the cuckoo, as every one knows, is a singularly shy bird; it frequents the most retired thickets, and feeds on fruit and caterpillars.§

AMBLYRAMPHUS RUBER. *G. R. Gray.*

Oriolus ruber, *Gmel.*

Amblyramphus bicolor, *Leach.*

Sturnus pyrrhocephalus, *Licht.*

Sturnella rubra, *Vieill.*

Leistes erythrocephala, *Sicains.* Class. Birds.

This bird frequented marshy places in the neighbourhood of Maldonado, but it was not common there. It is more solitary than the following allied species; I have, however, seen it in a flock. Seated on a twig, with its beak widely open, it often makes a shrill, but plaintive and agreeable cry, which is sometimes single

* Wilson's American Ornithology, vol. ii. p. 162.

† Magazine of Zoology and Botany, vol. i. p. 217.

‡ See Azara, vol. iii. p. 170.

§ It appears that the eggs in the same nest with that of the *Molothrus pecoris*, are turned out by the parent birds before they are hatched, owing to the egg of the *M. pecoris* being hatched in an unusually short time; in the case of the young cuckoo, as is well known, the young bird itself throws out its foster-brothers. Mr. C. Fox, however, (Silliman's American Journal, vol. xxix. p. 292), relates an instance of three young sparrows having been found alive with a *Molothrus*.

and sometimes reiterated. Its flight is heavy. The young have their heads and thighs merely mottled with scarlet.

STURNELLA MILITARIS. *Vicill.*

Sturnus militaris, Gmel.

Etourneau des terres Magellanique, Pl. enl. 113.

I met with specimens of this bird on the east coast of the continent from the Falkland Islands to 31° S., and on the western coast from the Strait of Magellan to Lima, a space of forty degrees of latitude.

FAMILY.—TROCHILIDÆ.

1. TROCHILUS FLAVIFRONS.

Monte Video.—November. Not abundant.

2. TROCHILUS FORFICATUS. *Lath.*

Edwards' Gleanings.

Vicill. Ois. dores, t. 1.

Ornismya Kingii, Less. Trochilidæes, pl. 38.

This species is found over a space of 2,500 miles on the west coast, from the hot dry country of Lima to the forests of Terra del Fuego, where it has been described by Captain King as flitting about in a snow-storm. In the wooded island of Chiloe, which has an extremely damp climate, this little bird, skipping from side to side amidst the humid foliage, and uttering its acute chirp, is perhaps more abundant than any other kind. It there very commonly frequents open marshy ground, where a kind of bromelia grows: hovering near the edge of the thick beds, it every now and then dashes in close to the ground; but I could not see whether it ever actually alighted. At that time of the year there were very few flowers, and none whatever near the beds of bromelia. Hence, I was quite sure that they did not live on honey; and on opening the stomach and upper intestine, by the aid of a lens, I could plainly distinguish in a yellow fluid, morsels of the wings of diptera,—probably Tipulidæ. It is evident that these birds search for minute insects in their winter quarters under the thick foliage. I opened the stomachs of several specimens which were shot in different parts of the continent, and in all remains of insects were numerous, forming a black comminuted mass. In one killed at Valparaiso, I found portions of an ant. Amongst the Chonos Islands, at a season when there were flowers in open places, yet the damp recesses of the forests appeared their favourite haunt. In central

Chile these birds are migratory; they make their appearance there in autumn; the first arrival which I observed was on the 14th of April (corresponding to our October) but by the 20th they were numerous. They stay throughout the winter, and begin to disappear in September: on October 12th, in the course of a long walk, I saw only one individual. During the period of their summer migration, nests were very common in Chiloe and the Chonos Island, countries south of Chile. When this species of *Trochilus* migrates southward, it is replaced in Chile by a larger kind, which will be presently described. The migration of the humming birds on both the east* and west coasts of North America, exactly corresponds to that which takes place in the southern half of the continent. In both they move towards the tropic during the colder parts of the year, and retreat poleward before the returning heat. Some, however, remain during the whole year in Tierra del Fuego; and in northern California,—which in the northern hemisphere, has this same relative position which Tierra del Fuego has in the southern,—some, according to Beechey, likewise remain. Near the south end of Chiloe, I found on the 8th of December, a nest with eggs nearly hatched. It was of the ordinary form of nests; rather more than an inch in internal diameter, and not deep, composed externally of coarse and fine moss, neatly woven together, and lined with dried confervæ, now forming a very fine reddish fibrous mass. I feel no doubt regarding the nature of this latter substance, as the transverse septa are yet quite distinct: hence this humming bird builds its nest entirely of cryptogamic plants. Egg perfectly white, elongated, or rather almost cylindrical, with rounded ends; length $\cdot 557$ of an inch, and transverse diameter $\cdot 352$ of an inch. In January, at the Chonos Islands, when there were young in the nest, a considerable number of old birds were shot; of these, however, few or scarcely any had the shining crest of the male. In the only specimen, which I carefully examined, the metallic tips of the young feathers of the crest, were just beginning to protrude. Several of these males without their crest, had a yellowish gorge; and I saw some with a few light brown feathers on their backs. I presume these appearances are connected with their state of moult.

3. TROCHILUS GIGAS, Vieill.

Orsimya tristis, Less., Oiseaux Mouches, pl. 3.

This species is common in central Chile. It is a large bird for the delicate family to which it belongs. At Valparaiso, in the year 1834, I saw several of these birds in the middle of August, and I was informed they had only lately arrived from the parched deserts of the north. Towards the middle of September

* Humboldt, Pers. Narr. vol. v. part 1. p. 352. Cook's Third Voyage, vol. ii. and Beechey's Voyage.

(the vernal equinox) their numbers were greatly increased. They breed in central Chile, and replace, as I have before said, the foregoing species, which migrates southward for the same purpose. The nest is deep in proportion to its width; externally three inches and a half deep; internal depth a little under one inch and three quarters; width within one inch and two-tenths; mouth slightly contracted. Externally it is formed of fine fibrous grass woven together, and attached by one side and bottom to some thin upright twigs; internally it is thickly lined with a felt, formed of the pappus of some composite flower. When on the wing, the appearance of this bird is singular. Like others of the genus, it moves from place to place, with a rapidity which may be compared to that of *Syrphus* amongst diptera, and *Sphinx* among moths; but whilst hovering over a flower, it flaps its wings with a very slow and powerful movement, totally different from that vibratory one common to most of the species, which produces the humming noise. I never saw any other bird, where the force of its wings appeared (as in a butterfly) so powerful in proportion to the weight of its body. When hovering by a flower, its tail is constantly expanded and shut like a fan, the body being kept in a nearly vertical position. This action appears to steady and support the bird, between the slow movements of its wings. Although flying from flower to flower in search of food, its stomach generally contained abundant remains of insects, which, I suspect, are much more the object of its search than honey is. The note of this species, like that of nearly the whole family, is extremely shrill.

In the Appendix an anatomical description of this bird by Mr. Eyton is given.

ORDER—SCANSORES.

1. CONURUS MURINUS, *Kuhl.*

Psittacus murinus, Gmel.

Perruche, Pernet, voy. 1. p. 312.

This parrot feeds in large flocks on the grassy plains of Banda Oriental, where not a tree can be seen. They are very destructive to the corn-fields. I was assured that in one year, near Colonia del Sacramento, on the north bank of the Plata, 2,500 were killed, a reward being given for each dozen heads. Many of these birds build their nests close together in trees, the whole composing a vast mass of sticks. I saw several of their compound nests on the islands in the river Parana.

2. CONURUS PATAGONICUS.

- Psittacara Patagonus, *Viell.* Ency. Meth. p.
 Psittacara Patagonica, *Less.* Voy. de la Coquille Zool. pl. 35 bis.
 Psittacara Patagonica, *Lear's* Ill. Psitt.
 Le Patagon, *Azara*, No. 277.
 Patagonian macaw, *Lath.* Hist. 11, 105.

I obtained specimens of this bird at Bahia Blanca in Northern Patagonia, where there is not a single tree, and the country is dry and very sterile. I did not meet with this species in the southern parts of Patagonia, but it is common near Concepcion in Chile, in nearly the same latitude. They build their nests in holes in cliffs of earth or gravel, together with the *Hirundo cyanoleuca*. In September, at Bahia Blanca, they were laying: their eggs are quite white, and small in proportion to the bird. Several usually rush forth from their holes at the same instant, and utter a noisy scream.

PICUS KINGII. *G. R. Gray.*

Picus melanocephalus, *King*, Proc. Zool. Soc. 1830, p. 14.

I procured specimens at Valparaiso, and at the Peninsula of Tres Montes (Lat. 46° S.) At the latter place, I killed in January a pair, male and female. Captain King's specimens were obtained from Chiloe. The male has its whole head scarlet with only the nape black, so that Captain King's specific name is unfortunately not applicable for the species; therefore Mr. G. R. Gray thinks it should be named after the first describer. The head of the female is black, with some short reddish-brown feathers over nostrils. There appears to be no other difference in the plumage of the sexes.

CHRYSOPTILUS CAMPESTRIS. *Swains.*

Picus campestris, *Licht.* Cat. p. *Spix*, Av. Br. pl. 116.
 Le charpentier des champs, *Azara*, No. 253.

My specimens were obtained from Banda Oriental and Buenos Ayres; I saw it no further southward. *Spix* says (Birds of Brazil. vol. i. p. 51.) it inhabits Minas Geraes. They frequent open plains and especially rocky ground. They are rather wild, and generally live three or four together. The tail of these ground woodpeckers seems but little used; their beaks, however, were generally muddy to the base: in the stomach of one I found only ants. Their flight is undulatory like that of the English woodpecker, and their loud cry is likewise similar, but

each note more separate. They alight on the branch of a tree, horizontally, in the manner of ordinary birds; but occasionally I have seen one clinging in an upright position to a post. They appear to feed exclusively on the ground.

COLAPTES CHILENSIS. Vigors.

Picus chilensis, Garnot, Voy. de la Coquille, Zool. pl. 52.

This bird frequents the dry stony hills of central Chile, on which only a few bushes and trees grow. It is closely related in habits and structure to the foregoing species, and appears to be its representative on the western side of the Cordillera; hence I cannot but think the institution of the above two genera unfortunate. It is the "*Pitui*" of Molina, which name, I imagine, it derives from its peculiar cry. Molina states, that it builds its nest in holes in banks.

1. *DIPLOPTERUS NÆVIUS. Boie.*

Cuculus nævius, Lath. Ind. 220.

Rio de Janeiro. April.

2. *DIPLOPTERUS GUIRA. G. R. Gray.*

Cuculus guira, Linn.

Crotophaga piririgua, Vieil. Gal. des Ois. pl. 44.

Ptiloleptus cristatus, Swain.

Buenos Ayres. In small flocks; a noisy, chattering bird.

CROTOPHAGA ANI. Linn.

Petit Bout-de-Petun, pl. enl. 102. f. 2.

Rio de Janeiro. May. The stomach of several specimens contained remains of numerous Orthopterous, and some Coleopterous insects.

ORDER GYRATONES. *Bonap.*

1. *COLUMBA FITZROYII. King.*

Columba Fitzroyii, King, in Proc. of Zool. Soc. part 1, 1830, p. 14.

Columba denisoni, Temm. pl. col. 502.

Columba araucana, Less. Voy. de Coqui. pl. 40.?

Peninsula of Tres Montes. Lat. 46° S. January. Captain King's specimens were obtained at Chiloe, three degrees northward. I procured other specimens near Valparaiso. This bird therefore frequents dry rocky land, and damp impervious forests.

2. COLUMBA LORICATA. *Licht. Vög. Verz.* s. 67.Columba gymnophthalmus, *Temm.*, Fig. i. 18.—— leucoptera, *Pr. Max. Reise*, 2, p. 242.—— picazuro, *Temm. Fig.* p. 111.Picazuro, *Azara, Voy.* No. 317.

Frequents in large flocks the fields of Indian corn in the neighbourhood of Maldonado. Legs dull "carmine red." This, probably, is the representative on the eastern side of the Andes of the foregoing or Chilian species.

1. ZENAIDA AURITA. *G. R. Gray.*Columba aurita, *Temm. Fig.* p. 60. *Wagl.* sp. 70.

I procured specimens of this bird at Maldonado (where it was very abundant) in La Plata, and at Valparaiso in Chile.

2. ZENAIDA GALAPAGOENSIS. *Gould.*

PLATE XLVI.

Z. vertice, cervice, dorso caudæque tegminibus obscure fuscis vinaceo-tinctis; dorso nigro-guttato; alarum tegminibus fuscis, plumâ singulâ pallidè vinaceo-fusco terminatâ, pogonii utriusque margine, maculâ oblongâ magnâ nigrâ, lineâ albâ separatâ; remigibus primariis et secundariis nigrescenti-fuscis, cinerascenti-albo angustè marginatis; caudâ fusciscenti cinereo ad apicem fasciâ latâ irregulari nigra; loris linedque angustâ supra et infra oculari nigris pallidè fusco mixtis; guld pectoreque vinaceis, colli lateribus ærato tinctis; crisso, caudæque tegminibus inferioribus cinerascentibus, rostro nigro, pedibus rufescenti aurantiacis.

Long. tot. 8½ unc.; ala, 5½; cauda, 3½; tarsi, ¾; rostri, 1.

Crown of the head and back of the neck, dark chocolate brown, with a vinous tinge; back and tail-coverts the same, the former spotted with black; wing-coverts brown, each feather having a large oblong spot of black on the margin of either web, separated by a line of white, and tipped with light vinous brown, the white predominating on the larger coverts, primaries and secondaries blackish-brown, finely edged with greyish-white; tail brownish-grey, crossed near the extremity with a broad irregular band of black; lores and a narrow line above and beneath the eye black, interrupted with light brown: throat and chest rich vinous, glossed on the sides of the neck with metallic bronze, and fading into greyish on the vent and under tail-coverts; bill black; feet reddish-orange.

Habitat, Galapagos Archipelago. (Sept. and Oct.)

This species may at once be distinguished from the *Z. aurita*, by the redder tint of its breast,—the greater number of black marks on the wing coverts and back—the outer half of some of the feathers on the wing coverts being white—the marks on the under side of the tail being grey (instead of white as in the *Z. aurita*) and by the larger size of its beak.

This dove is one of the most abundant birds in the Archipelago. It frequents the dry rocky soil of the low country, and often feeds in the same flock with the several species of *Geospiza*. It is exceedingly tame, and may be killed in numbers. Formerly it appears to have been much tamer than at present. Cowley,* in 1684, says that the "Turtle doves were so tame that they would often alight upon our hats and arms, so as that we could take them alive: they not fearing man, until such time as some of our company did fire at them, whereby they were rendered more shy." Dampier† (in the same year) also says that a man in a morning's walk might kill six or seven dozen of these birds. At the present time, although certainly very tame, they do not alight on people's arms; nor do they suffer themselves to be killed in such numbers. It is surprising that the change has not been greater;—for these islands during the last hundred and fifty years, have been frequented by buccaneers and whalers; and the sailors, wandering through the woods in search of tortoises, take delight in knocking down the little birds.

3. ZENAIWA BOLIVIANA. *G. R. Gray.*

Columba Boliviana, *D'Orb. & Lafre. Mag. de Zool.* 1836. Ois. p. 33. pl. 75.

My specimen was obtained (end of August) at Valparaiso.

1. COLUMBINA STREPITANS. *Spix.*

(Av. pl. 75, f. 1.)

I procured specimens at Maldonado (where it was not common), on the banks of the Plata, and at Rio Negro, in Northern Patagonia.

2. COLUMBINA TALPACOTI. *G. R. Gray.*

Columba Talpacoti, *Tenn. Fig.* p. 22. t. 12.

Columbina Cabocolo, *Spix*, Av. pl. 75a. f. 1.

Le Pigeon rougeatre, *Azara*, No. 323.

My specimens were obtained at Rio de Janeiro.

* Cowley's Voyage, p. 10, in Dampier's Collection of Voyages.

† Dampier's Voyage, vol. i. p. 103. For some further observations on the tameness of the birds on this and some other islands, see my Journal of Researches, p. 475.

1. *ATTAGIS FALKLANDICA*. *G. R. Gray.*

- Tetrao Falklandicus, *Gmelin*, Syst. 1. 762.
 La Caille des Isles Malouines, *Buff.* pl. enl. 222.
 Coturnix Falklandica, *Bonn.* Ency. Meth. Orn. 220.
 Perdix Falklandica, *Lath.* Ind. Orn. 11, 652.
 Ortyx Falklandica, *Steph.* Shaw's Zool. xi. 386.

This bird is not uncommon on the mountains in the extreme southern parts of Tierra del Fuego. It frequents, either in pairs or small coveys, the zone of alpine plants above the region of forest. It is not very wild, and lies very close on the bare ground.

2. *ATTAGIS GAYII*. *Less.*

Attagis Gayii, *Less.* Cent. Zool. pl. 47, p. 155.

A specimen was given me, which was shot on the lofty Cordillera of Coquimbo, only a little below the snow-line. At a similar height, on the Andes, behind Copiapo, which appear so entirely destitute of vegetation, that any one would have thought that no living creature could have found subsistence there, I saw a covey. Five birds rose together, and uttered noisy cries; they flew like grouse, and were very wild. I was told that this species never descends to the lower Cordillera. These two species, in their respective countries, occupy the place of the ptarmigan of the northern hemisphere.

TINOCHORUS RUMICIVORUS. *Eschsch.*

Tinocorus rumicivorus, *Eeschsch.* Zool. Atl. pl. 2.
Tinocorus Eschscholtzii, *Less.* Cent. Zool. pl. 50.

This very singular bird, which in its habits and appearance partakes of the character both of a wader and one of the gallinaceous order, is found wherever there are sterile plains, or open dry pasture land, in southern South America. We saw it as far south as the inland plains of Patagonia at Santa Cruz, in lat. 50°. On the western side of the Cordillera, near Concepcion, where the forest land changes into an open country, I saw this bird, but did not procure a specimen of it: from that point throughout Chile, as far as Copiapo, it frequents the most desolate places, where scarcely another living creature can exist: it thus ranges over at least twenty-three degrees of latitude. It is found either in pairs or in small flocks of five or six; but near the Sierra Ventana I saw as many as thirty and forty together. Upon being approached they lie close, and then are very difficult to be distinguished from the ground; so that they often rise quite unexpectedly. When feeding they walk rather slowly, with their legs wide apart. They dust themselves in roads and sandy places. They frequent particular spots, and may

be found there day after day. When a pair are together, if one is shot, the other seldom rises; for these birds, like partridges, only take wing in a flock. In all these respects, in the muscular gizzard adapted for vegetable food, in the arched beak and fleshy nostrils, short legs, and form of foot, the *Tinocorus* has a close affinity with quails. But directly the bird is seen flying, one's opinion is changed; the long pointed wings, so different from those in the gallinaceous order, the high irregular flight, and plaintive cry uttered at the moment of rising, recall the idea of a snipe. Occasionally they soar like partridges when on the wing in a flock. The sportsmen of the Beagle unanimously called it the short-billed snipe. To this genus, or rather to that of the sandpiper, it approaches, as Mr. Gould informs me, in the shape of its wing, the length of the scapulars, the form of the tail, which closely resembles that of *Tringa hypoleucos*, and in the general colour of the plumage. The male bird, however, has a black mark on its breast, in the form of a yoke, which may be compared to the red horseshoe on the breast of the English partridge. Its nest is said to be placed on the borders of lakes, although the bird itself is an inhabitant of the parched desert. I was told that the female lays five or six white eggs, spotted with red. I opened the stomachs of many specimens at Maldonado, and found only vegetable matter, which consisted of chopped pieces of a thick rushy grass, and leaves of some plant, mixed with grains of quartz. The contents of the intestine and the dung were of a very bright green colour. At another season of the year, and further south, I found the craw of one full of small seeds and a single ant. Those which I shot were exceedingly fat, and had a strong offensive game odour; but they are said to be very good eating, when cooked. Pointers will stand to them. In the Appendix Mr. Eyton has given an anatomical description of this bird, which partly confirms that affinity both to the *Grallatores* and *Razores*, which is so remarkable in its habits and external appearance.

CHIONIS ALBA. Forst.

Shaw's Nat. Miscel. pl. 481.

I opened the stomach of a specimen killed at the Falkland Islands, and found in it small shells, chiefly *Patellæ*, pieces of sea-weed, and several pebbles. The contents of the stomach and body smelt most offensively. Forster remarked this circumstance; but since his time, other observers, namely, Anderson, Quoy, Gaimard, and Lesson (*Manuel d'Ornithologie*, tom ii, p. 342) have found that this is not always the case, and they state that they have actually eaten the *Chionis*. I was not aware of these observations, but independently was much surprised at the extraordinary odour exhaled. We, like other voyagers in the Antarctic seas, were struck at the great distance from land, at which this bird is found in the

open ocean. Its feet are not webbed, its flight is not like that of other pelagic birds, and the contents of its stomach, and structure of legs, show that it is a coast-feeder. Does it frequent the floating icebergs of the Antarctic ocean, on which sea-weed and other refuse is sometimes cast?

1. *NOTHURA MAJOR.* *Wagl.*

Nothura major, *Wagl. Syst. Av.* p. 4.

Tinamus major, *Spic. Av.* pl. 80.

These birds are very common on the northern shores of the Plata. They do not rise in coveys, but generally by pairs. They do not conceal themselves nearly so closely as the English partridge, and hence great numbers may be seen in riding across the open grassy plains. Note, a shrill whistle. It appears a very silly bird: a man on horseback, by riding round and round in a circle, or rather in a spire, so as to approach closer each time, may knock on the head almost as many as he pleases. The more common method is to catch them with a running noose, or little lazo, made of the stem of an ostrich's feather, fastened to the end of a long stick.* A boy on a quiet old horse will frequently thus catch thirty or forty in a day. The flesh of this bird, when cooked, is most delicately white, but rather tasteless.

The egg of this species, I believe, closely resembles that of the two following.

2. *NOTHURA MINOR.* *Wagl.*

Nothura minor, *Wagl. Syst. Av.* p. 4.

Tinamus minor, *Spic. Av. Br.* pl. 82.

I procured a specimen of this bird at Bahia Blanca, in northern Patagonia, where it frequented the sand-dunes and the surrounding sterile plains. Its habits appear similar to those of the *N. major*, but it lies closer and does not so readily take to the wing. It is the smallest of the species mentioned in this work, and its plumage is less distinctly spotted. The egg of this bird is described below. Spix's specimens were obtained at Tijuco in Brazil. The figure in his work on the Birds of Brazil, differs slightly from mine, in being less marked on the breast.

3. *NOTHURA PERDICARIA* *G. R. Gray.*

Crypturus perdicarius, *Kittlitz, Vögel von Chili.*

This species closely resembles, in its general appearance and habits, the

* In Hearne's Travels in North America, (p. 383), it is stated that the Northern Indians shoot the varying hare, which will not bear to be approached in a straight line, in an analogous manner, by walking round it in a spire. The middle of the day is the best time, when the shadow of the hunter is not very long.

N. major, of which probably it is the analogue on the western side of the Cordillera. It is larger and has a considerably longer beak than the *N. major*; its breast is not spotted, and its abdomen has a less fulvous tinge. The *N. perdicarius* runs on the open ground, generally a pair together, in the same unconcealed manner, as its analogue, and does not readily lie close. Flight similar, but on rising it utters a shriller whistle, of a different tone. It does not appear to be so easily caught as the Plata species. It is tolerably abundant in all parts of Chile, as far north as the valley of Guasco; but I was assured, that it has never been seen in the valley of Copiapo, although only seventy miles north of Guasco, and of a similar character. The egg is very glossy and of a peculiar colour, which, according to Werner's nomenclature, is a palish chocolate red: length in longer axis 2·07 of an inch; shorter axis 1·495 of an inch. The egg of the *N. minor* is of a similar colour, but a shade paler, and rather smaller; its length being 1·815, and its transverse diameter 1·3 of an inch.

RHYNCHOTUS RUFESCENS. *Wagl.*

Rhynchotus rufescens. *Wagl.* Av. Syst.

Tinamus rufescens. *Temm.* Gall. iii. p. 552.

Rhynchotus fasciatus. *Spir.* Av. Br. pl. 76.

Cryptura Guaza. *Vieill.*

Crypturus rufescens. *Licht. Vög. Verz.* s. 67.

My specimens were procured at Maldonado, where it is a much rarer bird than the *Nothura major*; I met with it also in the sterile country near Bahia Blanca. At Maldonado it frequented swampy thickets on the borders of lakes. It lies very close, and is unwilling to rise, but often utters, whilst on the ground, a very shrill whistle. When on the wing, it flies to a considerable distance. Several are generally found together, but they do not rise at the same instant, like a covey of partridges. Flesh, when cooked, perfectly white. Spix's specimens were procured in the country between St. Paul's and Minas Geraes; so that this bird, as well as the *Nothura minor*, has a considerable range.

ORDER—CURSORES. *Temm.*

1. RHEA AMERICANA. *Lath.*

This bird is well known to abound on the plains of La Plata. To the north it is found, according to Azara, in Paraguay, where, however, it is not common; to the south its limit appears to be from 42° to 43°. It has not crossed the Cordillera; but

I have seen it within the first range of mountains on the Uspallata plain, elevated between six and seven thousand feet. The ordinary habits of the ostrich are well known. They feed on vegetable matter, such as roots and grass; but at Bahia Blanca, I have repeatedly seen three or four come down at low water to the extensive mud-banks which are then dry, for the sake, as the Gauchos say, of catching small fish. Although the ostrich in its habits is so shy, wary, and solitary, and although so fleet in its pace, it falls a prey, without much difficulty, to the Indian or Gaucho armed with the bolas. When several horsemen appear in a semicircle, it becomes confounded, and does not know which way to escape. They generally prefer running against the wind; yet at the first start they expand their wings, and like a vessel make all sail. On one fine hot day I saw several ostriches enter a bed of tall rushes, where they squatted concealed, till quite closely approached. It is not generally known that ostriches readily take to the water. Mr. King informs me that in Patagonia, at the Bay of San Blas and at Port Valdes, he saw these birds swimming several times from island to island. They ran into the water, both when driven down to a point, and likewise of their own accord, when not frightened: the distance crossed was about 200 yards. When swimming, very little of their bodies appear above water, and their necks are extended a little forward: their progress is slow. On two occasions, I saw some ostriches swimming across the Santa Cruz river, where it was about four hundred yards wide, and the stream rapid. Captain Sturt,* when descending the Murrumbidgee, in Australia, saw two emus in the act of swimming.

The inhabitants who live in the country readily distinguish, even at a distance, the male bird from the female. The former is larger and darker coloured,† and has a larger head. The ostrich, I believe the cock, emits a singular, deep-toned, hissing note. When first I heard it, standing in the midst of some sand-hillocks, I thought it was made by some wild beast, for it is a sound that one cannot tell whence it comes, or from how far distant. When we were at Bahia Blanca in the months of September and October, the eggs were found, in extraordinary numbers, all over the country. They either lie scattered single, in which case they are never hatched, and are called by the Spaniards, huachos, or they are collected together into a shallow excavation, which forms the nest. Out of the four nests which I saw, three contained twenty-two eggs each, and the fourth twenty-seven. In one day's hunting on horseback sixty-four eggs were found; forty-four of these were in two nests, and the remaining twenty scattered huachos. The Gauchos unanimously affirm, and there is no reason to doubt their statement, that the male

* Sturt's Travels, vol. ii. p. 74.

† A Gaucho assured me that he had once seen a snow-white, or Albino variety, and that it was a most beautiful bird.

bird alone hatches the eggs, and for some time afterwards accompanies the young. The cock when on the nest lies very close; I have myself almost ridden over one. It is asserted that at such times they are occasionally fierce, and even dangerous, and that they have been known to attack a man on horseback, trying to kick and leap on him. My informer pointed out to me an old man, whom he had seen much terrified by one chasing him. I observe, in Burchell's Travels in South Africa, that he remarks, "having killed a male ostrich, and the feathers being dirty, it was said by the Hottentots to be a nest bird." I understand that the male emu, in the Zoological Gardens, takes care of the nest: this habit therefore is common to the family.*

The Gauchos unanimously affirm that several females lay in one nest. I have been positively told, that four or five hen birds have been actually watched and seen to go, in the middle of the day, one after the other, to the same nest. I may add, also, that it is believed in Africa, that two or more females lay in one nest.† Although this habit at first appears very strange, I think the cause may be explained in a simple manner. The number of eggs in the nest varies from twenty to forty, and even to fifty; and according to Azara to seventy or eighty. Now although it is most probable, from the number of eggs found in one district being so extraordinarily great, in proportion to that of the parent birds, and likewise from the state of the ovarium of the hen, that she may in the course of the season lay a large number, yet the time required must be very long. Azara states,‡ that a female in a state of domestication laid seventeen eggs, each at the interval of three days one from another. If the hen were obliged to hatch her own eggs, before the last was laid, the first probably would be added; but if each laid a few eggs at successive periods, in different nests, and several hens, as is stated to be the case, combined together, then the eggs in one collection would be nearly of the same age. If the number of eggs in one of these nests is, as I believe, not greater on an average than the number laid by one female in the season, then there must be as many nests as females, and each cock bird will have its fair share of the labour of incubation; and this during a period when the females probably could not sit, on account of not having finished laying.§ I have before mentioned the great numbers of huachos, or scattered

* It appears, also, from Mr. Gould's late most interesting discoveries regarding the habits of the *Tallegalla Lathamii*, (an Australian bird, one of the Rasores,) that several females lay in one nest, and that the eggs are hatched by the heat engendered by a mass of decaying vegetable matter. It appears that the males assist the females in scratching together the leaves and earth, of which the great conical mound or nest is composed.

† Burchell's Travels, vol. i. p. 280.

‡ Azara, vol. iv. p. 173.

§ Lichtenstein, however, (Travels, vol. ii. p. 25.) states, that the hens begin to sit when ten or twelve eggs are laid, and that they afterwards continue laying. He affirms that by day the hens take turns in sitting, but that the cock sits all night.

eggs; so that in one day's hunting the third part found were in this state. It appears odd that so many should be wasted. Does it not arise from some difficulty in several females associating together, and in finding a male ready to undertake the office of incubation? It is evident that there must at first be some degree of association, between at least two females; otherwise the eggs would remain scattered at distances far too great to allow of the male collecting them into one nest. Some authors believe that the scattered eggs are deposited for the young birds to feed on. This can hardly be the case in America, because the huachos, although often found addled and putrid, are generally whole.

2. RHEA DARWINII. Gould.

PLATE XLVII.

Gould, in Proceedings of Zoological Soc. 1837, p. 35.

R. pallide fusca, plumâ singulâ distinctâ semilunari notâ candidâ terminatâ; capite collo, femoribusque pallidioribus: rostri culmine angusti, ad apicem latiore, frontes plumis parvis setosis anticè directis et supra nares extensis; tarsi lateribus in dimidiam partem plumis parvis mollibus tectis; tarso $\frac{2}{3}$ anticæ posticeque toto, squamis reticulatis tecto.

Long. tot. 52 unc.; ala, 30; tarsi, 11; rostri, 2.

The whole of the plumage light brown, each feather with a decided crescent-shaped mark of pure white at the extremity; head, neck, and thighs lighter; base of the neck blackish; culmen of the bill narrow, becoming a little broader towards apex; front with small bristly feathers, pointing forwards and reaching over the nostrils. Tarsus with small downy feathers on sides, extending half way downwards; upper two-thirds of front of tarsus, and whole hinder side, with reticulated scales.

Habitat, Eastern Patagonia (Lat. 40° S. to 54° S.)

This species, which Mr. Gould, in briefly characterizing it at a meeting of the Zoological Society, has done me the honour of calling after my name, differs in many respects from the *Rhea Americana*. It is smaller, and the general tinge of the plumage is a light brown in place of grey; each feather being conspicuously tipped with white. The bill is considerably smaller, and especially less broad at its base; the culmen is less than half as wide, and becomes slightly broader towards the apex, whereas in the *R. Americana* it becomes slightly narrower; the extremity, however, of both the upper and the lower mandible, is more tumid in the latter, than in the *R. Darwinii*.

	R. Darwinii. inches	R. Americani. inches
Length of beak, from edge of membrane at base to the apex	2	2 $\frac{1}{2}$
Length, from anterior margin of eye to apex	3 $\frac{1}{2}$	5 $\frac{1}{2}$
Width of upper mandible, measured across middle of nostrils	1 $\frac{1}{2}$	1 $\frac{1}{2}$

The skin round and in front of the eyes is less bare in *R. Darwinii*; and small bristly feathers, directed forwards, reach over the nostrils. The feet and tarsi are nearly of the same size in the two species. In the *R. Darwinii*, short plumose feathers extend downwards in a point on the sides of the tarsus, for about half its length. The upper two-thirds of the tarsus, in front, is covered with reticulated scales in place of the broad transverse band-like scales of the *R. Americana*; and the scales of the lower third are not so large as in the latter. In the *R. Darwinii* the entire length of the back of the tarsus is covered with reticulated scales, which increase in size from the heel upwards: in the common *Rhea*, the scales on the hinder side of the tarsus are reticulated only on the heel, and about an inch above it; all the upper part consisting of transverse bands, similar to those in front.

The first notice I received of this species was at the Rio Negro, in Northern Patagonia, where I repeatedly heard the Gauchos talking of a very rare bird, called *Avestruz Petise*. They described it as being less than the common ostrich (which is there abundant), but with a very close general resemblance. They said its colour was dark and mottled, and that its legs were shorter, and feathered lower down than those of the common ostrich. It is more easily caught by the bolas than the other species. The few inhabitants who had seen both kinds, affirmed that they could distinguish them apart, from a long distance. The eggs, however, of the small species appeared more generally known, and it was remarked with surprise, that they were very little less than those of the common *Rhea*, but of a slightly different form, and with a tinge of pale blue. Some eggs which I picked up on the plains of Patagonia, agree pretty well with this description; and I do not doubt are those of the Petise. This species occurs most rarely in the neighbourhood of the Rio Negro; but about a degree and a half further south they are tolerably abundant. One Gaucho, however, told me he distinctly recollected having seen one, many years before, near the mouth of the Rio Colorado, which is north of the Rio Negro. They are said to prefer the plains near the sea. When at Port Desire in Patagonia (Lat. 48°), Mr. Martens shot an ostrich; I looked at it, and from most unfortunately forgetting at the moment, the whole subject of the Petises, thought it was a two-third grown one of the common sort. The bird was skinned and cooked before my memory returned. But the head, neck, legs, wings, many of the larger feathers, and a large part of the skin, had been preserved. From these a very nearly perfect specimen has

been put together, and is now exhibited in the museum of the Zoological Society. M. A. D'Orbigny, a distinguished French naturalist, when at the Rio Negro, made great exertions to procure this bird, but had not the good fortune to succeed. He mentions it in his Travels (vol. ii. p. 76.) and proposes (in case, I presume, of his obtaining a specimen at some future time, and thus being able to characterize it,) to call it *Rhea pennata*. A notice of this species was given long since (A.D. 1749) by Dobrizhoffer, in his account of the Abipones (vol. i. Eng. Trans. p. 314). He says, "You must know, moreover, that Emus differ in size and habits in different tracts of land; for those that inhabit the plains of Buenos Ayres and Tucuman are larger, and have black, white, and grey feathers; those near to the Strait of Magellan are smaller, and more beautiful, for their white feathers are tipped with black at the extremity, and their black ones in like manner terminate in white."

Among the Patagonian Indians in the Strait of Magellan, we found a half-bred Indian, who had lived some years with this tribe, but had been born in the northern provinces. I asked him if he had ever heard of the Avestruz Petise? He answered by saying, "Why there are none others in these southern countries." He informed me that the number of eggs in the nest of the Petise is considerably less than with the other kind, namely, not more than fifteen on an average; but he asserted that more than one female deposited them. At Santa Cruz we saw several of these birds. They were excessively wary: I think they could see a person approaching, when he was so far off as not to distinguish the ostrich. In ascending the river few were seen; but in our quiet and rapid descent, many, in pairs and by fours or fives, were observed. It was remarked by some of the officers, and I think with truth, that this bird did not expand its wings, when first starting at full speed, after the manner of the northern kind. The fact of these ostriches swimming across the river has been mentioned. In conclusion, I may repeat that the *R. Americana* inhabits the eastern plains of S. America as far as a little south of the Rio Negro, in lat. 41°, and that the *R. Darwinii* takes its place in Southern Patagonia; the part about the Rio Negro being neutral territory. Wallis saw ostriches at Bachelor's river (lat 53° 54'), in the Strait of Magellan, which must be the extreme southern possible range of the Petise.

ORDER—GRALLATORES.

OREOPHILUS TOTANIROSTRIS. *Jard. & Selb.*

Oreophilus totanirostris, *Jard. & Selb.* Illustr. of Orn. iii. pl. 151.

My specimens were obtained at Maldonado and at Valparaiso. At the former, it was common, feeding on the open grassy plains in small flocks, mingled with the icteri and the thrush-like *Xolmis variegata*. When these birds

rise on the wing, they utter a plaintive cry. Legs "crimson red;" toes leaden colour, with their under surface remarkably soft and fleshy. Iris dark brown.

CHARADRIUS VIRGININUS. *Borkh.*

Charadrius virgininus, *Borkh.* Act. Acad. Cæs. Leop. Car. Nat. Cur. 1834. xvi. pl. 18.

Charadrius marmoratus, *Wagl.*

This representative of the golden plover of Europe and North America, is common on the banks of the Plata in large and small flocks. It is found also, according to Meyer, in Chile.

1. SQUATAROLA CINCTA. *Jard. & Selby.*

Tringa *Urvilli*, *Garnot*, Ann. Ic. Nat. Jan. 1826.

Vanellus cinctus, *Less.* Voy. de la Coq. Zool. p. 720. pl. xliii.

Squatarola cincta, *Jard. & Selby's* Illust. Orn. pl. 110.

Charadrius rubecola, *Vig.* Journ. iv. p. 96.

I obtained specimens of this bird in Tierra del Fuego, where it inhabited both the sea shore and the bare stony summits of the mountains; at the Falkland Islands, where it frequented the upland marshes; and at Chiloe, where I met with large flocks in the fields, not near the coast.

2. SQUATAROLA FUSCA. *Gould.*

S. vertice corporeque supra fuscis, dorsi parapterique plumis pallidiore marginatis; remigibus primariis nigrescenti fuscis, pogoniis externis albo angustè marginatis rhachibus albis; uropygio caudique obscurè fuscis, remigibus externis albo latè marginatis et terminatis; fronte, genis, gulo, abdomine postico, caudæque tegminibus inferioribus flavescenti albis, colli pectorisque lateribus fuscis, colli plumis fusco pallido terminatis; pedibus nigris.

Long. tot. 8 unc. alæ, 5½; caudæ, 3; tarsi, 1½; rostri, ½.

Crown of the head, all the upper surface brown, the feathers of the back and the scapularies, margined with paler; primaries blackish brown, finely edged on their inner margins with white, and with white shafts; rump and tail dark brown, the outer feathers largely margined and tipped with white; forehead and sides of the face sandy white; throat, lower part of the abdomen, and under tail coverts, buffy white; sides of the neck and chest brown; the feathers of the latter tipped with still lighter brown; bill and feet black.

Habitat, Maldonado; inland glassy plains.

This species is most closely allied to the foregoing. I obtained only one specimen, which, on comparison with several of the *S. cincta*, appears a little larger in all its dimensions, especially in the length of the tarsi. Its back and scapu-

laries are of a more uniform brown, the feathers being less edged with pale brown. Its feet are black, whereas those of *S. cincta* are brown.

PHILOMACHUS CAYANUS. G. R. Gray.

Charadrius Cayanus, Lath. Ind. Orn. 11. 748.

I met with this bird from latitude 30° to 45° S. on both sides of S. America. In La Plata it is called "Teru-tero," in imitation of its cry; and in Chile, according to Molina, "Theghel." These birds, which in many respects resemble in habits our peewits (*Vanellus cristatus*), frequent, generally in pairs, open grassy land, and especially the neighbourhood of lakes. As the peewit takes its name from the sound of its voice, so does the teru-tero. While riding over the grassy plains, one is constantly pursued by these birds, which appear to hate mankind, and I am sure deserve to be hated, for their never-ceasing, unvaried, harsh screams. The stillness of the night is often disturbed by them. To the sportsman they are most annoying, by announcing to every other bird and animal his approach: to the traveller in the country, they may possibly, as Molina says, do good, by warning him of the midnight robber. During the breeding season, they attempt, like our peewits, by feigning to be wounded, to draw away from their nests dogs and other enemies. Their eggs are of a pointed oval form; of a brownish olive colour, thickly spotted with dark brown. Their eggs, like those of the peewit, are esteemed particularly good eating.

1. *HIATICULA AZARE. G. R. Gray.*

Charadrius Azare, Temm. pl. col. 184.

——— *collaris, Vieill.*

Albatutai à collier noir, Azara, No. 392.

My specimens were obtained on the banks of the Plata and at Valparaiso. The specimen from the latter country differs from those procured at the former, in the absence of the black collar on the breast, of the black streak running from the eye to the corner of the mouth; in the plumage of the back and back of head having a lesser tinge of red; and especially in the feet being black, and tarsi blackish, instead of both being orange, as is the case with those killed on the shores of the Plata. I have not, however, thought it desirable to make two species of these birds, not having a larger series of specimens for comparison.

2. *HIATICULA TRIFASCIATUS. G. R. Gray.*

Charadrius bifasciatus, Licht. Vog. Verz. p. 71.

——— *trifasciatus, Wagl. Syst. Av. sp. 31.*

I procured two specimens of this bird at Bahia Blanca, in Northern Patagonia.

3. *HIATICULA SEMIPALMATA*. *G. R. Gray.**Tringa semipalmata*, *Temm.**Charadrius semipalmatus*, *Camp. Isis*. 1825, p. 1375, t. 14. *Wagl. Syst. Av.* sp. 23.*Bonap. Am. Orn.* iv. pl. 25, f. 4.

Galapagos Archipelago.

HEMATOPUS PALLIATUS. *Temm.*

Rio Plata.

EGRETTA LEUCE. *Bonap.**Ardea Leuce*, *Ill.**Ardea Egretta*, *Wils. Am. Orn.* pl. 61, f. 4.

My specimen was procured at Maldonado. I saw it also in Patagonia.

ARDEA HERODIAS. *Linn.*

Galapagos Archipelago. Frequents the sea-coast and salt-lagoons. There are no fresh water pools in any of these islands.

1. *NYCTICORAX VIOLACEUS*. *Bonap.**Ardea violacea*, *Linn.**Ardea callocephala*, *Wagl. Syst. Av.*

Mr. G. R. Gray has thought it advisable to give the following description of this specimen, from the Gallapagos Archipelago. It appears to be a young bird, and is small in all its dimensions.

Upper part blackish-grey; each feather marked down the middle with a broad stripe of black, and tinged on the margins with shining bronze-brown; beneath the body blueish-grey, with the front of the neck, top of the head, and margins of the feathers on the thighs rufous; the sides of the head and throat deep black, the former divided in the middle on each side with a patch of white; the bill black, and feet of a pale reddish colour.

2. *NYCTICORAX AMERICANUS*. *Bonap.**Ardea nycticorax*, *Wils.* (young bird.)

Valparaiso, Chile.

THERISTICUS MELANOPS. *Wagl.**This melanops*, *Lath. Hist.* ix. pl. 150.

This bird frequents the desert gravelly plains of Patagonia, as far south as lat. 48°: in the British Museum there are specimens which Captain Clapperton brought from central Africa; so that this bird has an extraordinarily wide range. It generally lives in pairs, but during part of the year in small flocks. Its cry is very singular and loud: when it is heard at a distance it closely resembles the neighing of the guanaco. I opened the stomach of two specimens, and found in them remains of lizards, cicadæ, and scorpions. It builds in rocky cliffs on the

sea-shore: egg dirty white, freckled with pale reddish-brown; its circumference over longer axis is seven inches. The legs are carmine and scarlet-red: iris scarlet-red.

IBIS (FALCINELLUS) ORDI. Bonap.

Tantalus Mexicanus, *Ord. Journ. Acad. Phil.*

Tantalus chalconotus? *Temm.*

Ibis Falcinellus, *Bonap. Am. Orn. iii.*

My specimen was obtained at the Rio Negro: it is very numerous in large flocks on the vast swampy plains between Bahia Blanca and Buenos Ayres. Its flight when soaring is singularly graceful; the whole flock moving in precise concert.

1. NUMENIUS HUDSONICUS. Lath.

Numenius Hudsonicus, *Lath. Ind. Orn. ii. 712.*

This curlew is very abundant on the tidal mud-banks of Chiloe. When the flock rises, each bird utters a shrill note.

2. NUMENIUS BREVIROSTRIS. Licht.

Numenius brevirostris, *Licht. Cat. 75, sp. 774 a.*

Buenos Ayres.

LIMOSA HUDSONICA. Swains.

Scolopax Hudsonica, *Lath. Ind. Orn. ii. 720.*

My specimens were obtained from the Falkland Islands and from Chiloe, where it frequented the tidal mud-banks in flocks.

1. TOTANUS FLAVIPES. Vicill.

Totanus flavipes, *Vicill. Ency. Meth. 1106.*

Yellow shanks snipe, *Penn. Arct. Zool. ii. 468.*

— *Wills. Am. Orn. pl. 58. f. 4.*

Monte Video, Rio Plata.

2. TOTANUS MACROPTERUS. G. R. Gray.

Tringa macroptera, *Spix. Av. n. sp. pl. 92.*

Monte Video, Rio Plata.

3. TOTANUS MELANOLEUCUS. *Licht. et Vieill.*Scolopax melanoleuca, *Gmel.*Scolopax vociferus, *Wils. Am. Orn.* pl. 58, f. 5.Charlito à croupion blanc, *Azara*, No. 394.Totanus solitarius, *Vieill.*White-rumped snipe, *Lath.*

Maldonado, Rio Plata.

4. TOTANUS FULIGINOSUS. *Gould.*

T. corpore supra caudque fuliginoso-griseis; alis fuscis; gutture albo; pectore hypochondrisque plumbeo-griseis; abdomine medio, caudæ tegminibus inferioribus albis, illis obscure, his plane griseiscenti fusco fasciatis; rostri rubescenti fusco; pedibus obscure olivaceo fuscis.

Long. tot. 9½ unc. ala, 6½; cauda, 3; tarsi, 1½; rostri, ½.

The whole of the upper surface and tail sooty-grey; wings dull brown; throat white; chest and flanks leaden grey; centre of the abdomen and under tail coverts white, the former indistinctly, and the latter distinctly, barred with greyish brown; bill, reddish-brown; feet, dark olive-brown.

Habitat, Galapagos Archipelago (*October*).

This species appear quite distinct from any described one.

HIMANTOPUS NIGRICOLLIS. *Vieill.*Himantopus nigricollis, *Vieill. Ency. Meth.* 340.Recurvirostra himantopus, *Wils. Am. Orn.* pl. 58. f. 2.

My specimens were obtained from the provinces bordering the Plata. On the great swampy plains and fens which lie between Buenos Ayres and Bahia Blanca, it is very numerous in small, and occasionally, in large flocks. This plover, which appears as if mounted on stilts, has been wrongfully accused of inelegance; when wading about in shallow water, which is its favourite resort, its gait is far from awkward. In a flock it utters a noise, which singularly resembles the cry of a pack of small dogs in full chase: when I travelled across the above mentioned plains, I was more than once startled, when lying awake at night, at the distant sound, and thought the wild Indians were coming.

TRINGA RUFESCENS. *Vieill.*Tringa rufescens, *Vieill.*, *N. Diet. d'Hist. Nat.* 34. p. 470.— *Ency. Meth. Orn.* p. 1090.— *Gal. des Ois.* pl. 238.— *Yarrel*, *Lin. Trans.*— *Gould*; *Birds of Europe*, pl.

Monte Video, Rio Plata.

1. PELIDNA SCHINZII. *Bonap.*

Tringa Schinzii, *Brohm. Bonap. Am. Orn. iv. pl. 24. f. 2.*

Pelidna cinclus, var. *Soy.*

Flocks of this species were common on the shores of the inland bays in the southern parts of Tierra del Fuego.

2. PELIDNA MINUTILLA. *Gould.*

Tringa minutilla, *Vieill. Ency. Meth. 1089.*

Galapagos Archipelago. Both the specimens which I procured here are smaller than the ordinary size of this bird, but do not differ in other respects. Vieillot says it ranges from the Antilles to Canada.

RHYNCHÆA SEMICOLLARIS. *G. R. Gray.*

Totanus semicollaris, *Vieill. Ency. Meth. p. 1100.*

Rhynchœa Hilairea, *Valenc. Les. Ill. de Zool. pl. 18.*

Rhynchœa occidentalis, *King, Zool. Journ. iv. 94.*

Le chorlito a demi colliers blanc et noirâtre, *Azara, No. 409.*

Monte Video, Rio Plata. Frequents swamps; habits like the *Scolopax Gallinago*.

1. SCOLOPAX (TELMTIAS) PARAGUALE. *Vieill.*

Scolopax Paraguai, *Vieill. Ency. Meth. p. 1160.*

———*Brasiliensis*, *Scoina. Faun. Bor. Am. Birds, p. 400.*

Becassine 1st Espece, *Azara.*

Valparaiso and Maldonado, Rio Plata.

2. SCOLOPAX (TELMTIAS) MAGELLANICUS. *King.*

Scolopax Magellanicus, *King, Zool. Journ.*

My specimens were obtained from Maldonado and East Falkland Island. Flight a very little less irregular and rapid than the English snipe. I several times in May observed this, as well as the foregoing species, flying in lofty circles, and suddenly stooping downwards, at the same time that it uttered a peculiar drumming noise, similar to that made by the English snipe in summer, when breeding. This species is most closely allied to the foregoing, but I have no doubt it is distinct; because at the time when I procured specimens of both at Maldonado, I perceived a difference between them. This species is there more abundant than the *S. Paraguaia*. Its beak is nearly three-fourths of an inch shorter, and the culmen rather broader. The plumage of its back is of a decidedly less dark tint; each separate feather having much less black in it.

STREPSILAS INTERPRES. III.

Tringa Morinellus, L.

I obtained specimens from Iquique, on the coast of Peru, and from the Galapagos Archipelago.

CREX LATERALIS. Licht.

Crex lateralis, Licht., Cat. p.

Griff. An. King. Aves.

Maldonado, Rio Plata. On being disturbed readily takes wing. Base of the bill, especially of the lower mandible, bright green.

1. ZAPORNIA NOTATA. Gould.

PLATE XLVIII.

Z. corpore toto supra nigrescenti-fusco, plumâ singulâ medio albo-guttatâ et olivaceo-fusco latè marginatâ; remigibus fuscis, mento albo, corpore infra fusciscenti-nigro, gutture pectoreque albo-striatis; abdomine tegminibusque caudæ inferioribus albo irregulariter transversè strigato; rostro obscure corneo; pedibus olivaceo-viridibus.

Long. tot. $5\frac{1}{2}$ unc.; ala, $3\frac{1}{4}$; caudæ, $1\frac{1}{2}$; tarsi, $\frac{1}{2}$; rostri, $\frac{1}{2}$.

The whole of the upper surface blackish brown, each feather spotted with white down the centre, and largely margined with olive brown; quills plain brown; chin white; the remainder of the under surface brownish black, striated with white on the throat and chest, and crossed by irregular bars of the same on the abdomen and under tail coverts; bill dark horn colour; feet olive green.

Habitat, Rio Plata. (Shot on board the Beagle.)

2. ZAPORNIA SPILONOTA. Gould.

PLATE XLIX.

Z. capite corporeque infra, nigrescenti-griseis; corpore supra obscure rubrofusco, uropygio obscurè grisescenti-nigro; alis hypochondriis postice, tegminibusque caudæ inferioribus albo parçiter sparsis; rostro nigrofusco; pedibus rubescentibus; iridibus carmineis.

Long. tot. $5\frac{1}{4}$ unc.; ala, $2\frac{3}{4}$; caudæ, 1; tarsi, $\frac{1}{2}$; rostri, $\frac{3}{4}$.

Head and all the under surface blackish grey; all the upper surface dark reddish brown, fading off on the rump into deep greyish black; the wings, hinder part of the flanks, and under tail coverts slightly sprinkled with white; bill, blackish brown; feet, reddish; iris, bright scarlet.

Habitat, Galapagos Archipelago.

This bird frequents in large numbers the high and damp summits of the islands. It lives in the thick beds of carex and other plants, which, from the condensed vapour of the clouds, are constantly kept rather humid. It is tame, but lives concealed; it often utters a loud and peculiar cry. The female is said to lay from eight to twelve eggs. It is, I believe, the only bird in this archipelago which is exclusively confined to the upper parts of the islands. With respect to the specific description, I must observe, that in one of the specimens, the few and small white spots on the wings and abdomen are wanting. This is not a sexual distinction, but possibly may be owing to immaturity.

1. RALLUS PHILLIPENSIS. *Linn.*

Common on the low coral islets, forming the Keeling or Cocos Atoll in the Indian ocean. With the exception of a snipe, this was the only bird without web-foot which inhabited this group.

2. RALLUS YPECAHA. *Vieill.*

Rallus ypecaha, *Vieill. Ency. Meth.* p. 1071.
 Crex melampyga, *Licht. Cat. Sp.*
 LYpacaha, *Azara, No. 367.*

Buenos Ayres.

3. RALLUS SANGUIOLENTUS. *Swains.*

Rallus sanguinolentus, *Swains*, 2 cent. and a quart.

Valparaiso.

GALLINULA CRASSIROSTRIS. *J. E. Gray.*

Gallinula crassirostris, *J. E. Gray*, in *Griff. An. Kingd.*

I obtained specimens on the banks of the Plata and at Valparaiso.

FULICA GALEATA. *G. R. Gray.*

Crex galeata, *Licht, Cat. 80. sp. 826.*
 Yahana propremet dit, *Azara, No. 379.*
 Gallinula galeata, *Bonap.*

Concepcion, Chile.

PORPHYRIO SIMPLEX. *Gould.*

P. vertice, remigibus primariis obscure olivacco-viridibus, harum apicibus flavescens; albo anguste marginatis; corpore supra obscure olivacco-viridi, plumâ singulâ

obscurè fulvo late marginatâ; genis gutture, corporeque infra flavescens; rostro rubro; pedibus viridescenti-flavis.

Long. tot. 9 unc.; *ala*, 5½; *cauda*, 2½; *tarsi*, 1¾; *rostris*, ½.

Habitat, Ascension Island, Atlantic Ocean. (*July*.)

This specimen was killed with a stick near the summit of the Island. It was evidently a straggler, which had not long arrived. There is no aboriginal land bird at Ascension.

ORDER—PALMIPEDES.

ANSER MELANOPTERUS. *Eyton.*

Anas melanopterus, *Eyton*, Monog. Anatidæ, p. 93.

PLATE L.

Captain FitzRoy purchased a skin of this fine goose at Valparaiso, which he has presented to the British Museum. There is another specimen at the Zoological Society, which Mr. Pentland procured from the lake of Titicaca, in Bolivia.

CHLOEPHAGA MAGELLANICA. *Eyton.*

Anas Magellanica, *Gmel.* Syst. i. 505.

Chloephaga Magellanica, *Eyton*, Monog. Anatidæ, p. 82.

Bernicla leucoptera, *Less.* Trait d'Ornith. 627.

This goose is found in Tierra del Fuego, and at the Falkland Islands; at the latter it is common. They live in pairs and in small flocks throughout the interior of the island, being rarely or never found on the sea-coast, and seldom even near fresh-water lakes. I believe this bird does not migrate from the Falkland Islands; it builds on the small outlying islets. This latter circumstance is supposed to be owing to the fear of the foxes; and it is perhaps from the same cause, that although very tame by day, they are much the contrary in the dusk of the evening. These geese live entirely on vegetable matter; they are called by the seamen, the "upland geese." Mr. Eyton, in his excellent Monograph on the Anatidæ, has described the trachea of this bird, which I brought home in spirits.

BERNICLA ANTARCTICA. *Steph.*

Bernicla antarctica, *Steph.* Sh. Zool. xii. 59.

Eyton, Monograph, p. 84.

Anas Antaretica, *Gmel.* Syst. i. 505.

This goose is common in Tierra del Fuego, the Falkland Islands, and on the western coast, as far north as Chiloe. It is called by the sailors the "rock goose," as it lives exclusively on the rocky parts of the sea-coast. In the deep and retired

channels of Tierra del Fuego, the snow-white male, invariably accompanied by his darker consort, and standing close by each other on some distant rocky point, is a common feature in the landscape. Mr. Eyton has described the trachea of this species, which I brought home.

PÆCILONITTA BAHAMENSIS. *Eyton.*

Pæcilonitta Bahamensis, *Eyton*, Monog. p. 116.

Anas Bahamensis, *Linn.* Syst. i. 199.

Marca Bahamensis, *Steph.* Gen. Zool. xii. p. 137.

A specimen was procured from a small salt-water lagoon in the Galapagos Archipelago (*October*.)

It was a male; bill, lead colour; base of superior mandible purple, with a black mark in the upper part.

DAFILA UROPHASIANUS. *Eyton.*

Dafila urophasianus, *Eyton*, Monog. Anatide. p. 112.

Anas urophasianus, *King*, Zool. Journ. iv. 351.

Bahia Blanca, Northern Patagonia.

RHYNCHASPIS MACULATUS. *Gould.*

Rhynchaspis maculatus, *Gould*, in *Jard. & Selby* Illust. Orn. p. 147. pl. 147.

Mr. Gould observes that, "A good figure of this beautiful shoveller may be found in the 3rd vol. of Messrs. Jardine and Selby's Illustrations of Ornithology. Their figure was taken from an example which I forwarded to those gentlemen with the name of *maculata* attached: my specimen was received from the Rio Plata, and this is also the locality whence (in October) Mr. Darwin's specimen was procured. The numerous and conspicuous spots distributed over the body, renders this species readily distinguishable from all the other members of the genus."

1. *QUERQUEDULA ERYTHORHYNCHA.* *Eyton.*

Querquedula erythrorhyncha, *Eyton*, Monog. Anatidas, p. 127.

Anas erythrorhyncha, *Spix*, Av. Nov. sp. pl.

My specimens were obtained from Buenos Ayres (*October*) and the Straits of Magellan (*February*.)

2. *QUERQUEDULA CRECCOÏDES.* *Eyton.*

Querquedula creccoïdes, *Eyton*, Monog. Anatidas, p. 128.

Anas creccoïdes, *King*, Zool. Journ. iv. 99.

Mr. Gould observes that, "This species was first described by Mr. Vigers,

from a specimen in the collection brought from the Straits of Magellan, by Capt. P. P. King. It is a true teal, and in size and form closely assimilates to the common teal of Europe, and to the species inhabiting North America (*Querquedula Carolinensis*, Bonap.) to both of which it is evidently an analogue, and doubtless represents those birds in the southern half of the American continent." My specimens were procured from the Rio Plata, and from the Straits of Magellan.

MICROPTERUS BRACHYPTERUS. *Eyton.*

Micropterus brachypterus, *Eyton*, Monog. Anat. p. 144.

Anas brachytera, *Lath.* Ind. Orn. ii. 834.

These great logger-headed ducks, which sometimes weigh as much as twenty-two pounds, were called by the old navigators, from their extraordinary manner of paddling and splashing over the water, race-horses, but now much more properly steamers. Their wings are too small and weak to allow of flight, but by their aid, partly swimming and partly flapping the surface of the water, they move very quickly. The manner is something like that by which the common house duck escapes, when pursued by a dog; but I am nearly sure that the steamer moves its wings alternately, instead of, as in other birds, both together. These clumsy birds make such a noise and splashing, that the effect is most curious. The steamer is able to dive but a very short distance. It feeds entirely on shell-fish from the floating kelp and tidal rocks; hence the beak and head are surprisingly heavy and strong, for the purpose of breaking them. So strong is the head, that I have sometimes scarcely been able to fracture it with my geological hammer; and all our sportsmen soon discovered how tenacious these birds were of life. When pluming themselves in the evening in a flock they make an odd mixture of sounds, somewhat like bull-frogs within the tropics.

I. PODICEPS KALIPAREUS. *Quoy & Gaim.*

My specimens were obtained from Bahía Blanca (September), Northern Patagonia, and the Falkland Islands. In the former place it lived in small flocks in the salt-water channels, extending between the great marshes at the head of the harbour. At the Falkland Islands I saw (March) very few individuals; and these only in one small fresh-water lake. Tarsi of the same colour as the plumage of the back; iris of a beautiful tint, between "scarlet and carmine red;" pupil black. Mr. Gould remarks that, "This beautiful species of *Podiceps* is equal in size, and has many of the characters of the *P. auritus*, but is at once distinguished from that species by the silvery colouring of the plumes that adorn the sides of the head; which in *P. auritus* are deep chestnut."

2. *PODICEPS ROLLANDII*. *Quoy et Gaim.*

Podiceps Rolland, Quoy et Gaim. Voy. de l'Uranie, pl. 36. p. 133.

I obtained specimens from the Falkland Islands (March), where it was common at the head of the tortuous bays which intersect those islands; from a fresh water lake near the Strait of Magellan (February); and from the eastern coast of Chiloe. The male and female have the same plumage. Iris of a fine red colour. Mr. Gould adds that, "this species appears to be as nearly related to the *Podiceps cornutus*, as the preceding species is to *P. auritus*, but is readily distinguishable from it, by the white spot in the centre of the tuft of feathers that spring from the sides of the face."

3. *PODICEPS CHILENSIS*. *Garnot.*

Le macas cornu, Azara, No. 443.

This specimen was procured in a fresh-water lake near Buenos Ayres. Capt. P. King brought home specimens from the salt-water channels in Tierra del Fuego, where it is excessively numerous. It often makes a very melancholy cry, which suits the gloomy climate of those desolate shores.

SPHENISCUS HUMBOLDTII. *Meyen.*

Spheniscus Humboldtii, Meyen. Nov. Act. Acad. Cæs. Leop. Car. Nat. Cur. 1834, 110. pl. 21.

My specimen was obtained near Valparaiso. Meyen, who first described this bird, procured it from the coast of Peru.

PUFFINUS CINEREUS. *Steph.*

Puffinus cinereus, Steph. Gen. Zool. xiii. p. 227.
Procellaria puffinus, Linn.

This bird frequents the seas on the whole coast of South America. I obtained specimens from Tierra del Fuego, Chiloe, the mouth of the Plata, and Callao Bay on the coast of Peru. It is likewise known to be common in the Northern Hemisphere; this species, therefore, has a most extensive range. It generally frequents the retired inland sounds in very large flocks; although, occasionally, two or three may be seen out at sea. I do not think I ever saw so many birds of any other sort together, as I once saw of these petrels, behind the Island of Chiloe. Hundreds of thousands flew in an irregular line, for several hours in one direction. When part of the flock settled on the water, the surface was blackened; and a cackling noise proceeded from them, as of human beings talking in the distance. At this time, the water was in parts coloured by clouds of small crustacea. The inhabitants of Chiloe told me that this petrel was very irregular

in its movements;—sometimes they appeared in vast numbers, and on the next day not one was to be seen. At Port Famine, every morning and evening, a long band of these birds continued to fly with extreme rapidity, up and down the central parts of the channel, close to the surface of the water. Their flight was direct and vigorous, and they seldom glided with extended wings in graceful curves, like most other members of this family. Occasionally, they settled for a short time on the water; and they thus remained at rest during nearly the whole of the middle of the day. When flying backwards and forwards, at a distance from the shore, they evidently were fishing: but it was rare to see them seize any prey. They are very wary, and seldom approach within gun-shot of a boat or of a ship;—a disposition strikingly different from that of most of the other species. The stomach of one, killed near Port Famine, was distended with seven prawn-like crabs, and a small fish. In another, killed off the Plata, there was the beak of a small cuttle-fish. I observed that these birds, when only slightly winged, were quite incapable of diving. There is no difference in the plumage of the sexes. The web between the inner toes, with the exception of the margin, is “reddish-lilac-purple;” the rest being blackish. Legs and half of the lower mandible blackish purple. From accounts which I have received, the individuals of this species, which live in the Northern Hemisphere, appear to have exactly the same habits as those above described.

1. PELECANOIDES BERARDI. *G. R. Gray.*

Puffinuria Berardi, *Less. Tr. d'Orn.* p. 614.

Procellaria Berardi, *Quoy et Gaim. Voy. de pl.* 31

This bird is common in the deep and quiet creeks and inland seas of Tierra del Fuego, and on the west coast of Patagonia, as far north as the Chonos Archipelago. I never saw but one in the open sea, and that was between Tierra del Fuego and the Falkland Islands. This bird is a complete auk in its habits, although from its structure it must be classed with the Petrels. To the latter Mr. Gould informs me, its affinity is clearly shewn by the form of its beak and nostrils, length of foot, and even by the general colouring of its plumage. To the auks it is related in the general form of its body, its short wings, shape of tail, and absence of hind-toe to the foot. When seen from a distance and undisturbed, it would almost certainly be mistaken, from its manner of swimming and frequent diving, for a grebe. When approached in a boat, it generally dives to a distance, and on coming to the surface, with the same movement takes flight: having flown some way, it drops like a stone on the water, as if struck dead, and instantaneously dives again. No one seeing this bird for the first time, thus diving

like a grebe and flying in a straight line by the rapid movement of its short wings like an auk, would be willing to believe that it was a member of the family of petrels;—the greater number of which are eminently pelagic in their habits, do not dive, and whose flight is usually most graceful and continuous. I observed at Port Famine, that these birds, in the evening, sometimes flew in straight lines from one part of the sound to another; but during the day, they scarcely ever, I believe, take wing, if undisturbed. They are not very wild: if they had been so, from their habit of diving and flying, it would have been extremely difficult to have procured a specimen. The legs of this bird are of a “flax-flower blue.”

2. PELECANOIDES GARNOTII. *G. R. Gray.*

Puffinaria Garnotii, *Less. Voy. de l'Coqu.* pl. 46.

Procellaria urinatrix, *Gm. ?*

My specimen was obtained at Iquique (lat. 20° 12'), on the coast of Peru. M. Lesson, who first described this species, says (*Manuel d'Ornithologie*, vol. ii. p. 394.), “*Le puffinure de Garnot habite par grandes troupes le long des côtes du Pérou. Il vole médiocrement bien, d'une manière précipitée et en rasant la mer; mais il préfère se tenir en repos sur la surface des eaux, et plonge très fréquemment à la manière des grèbes, sans doute pour saisir les petits poissons qui forment sa pâture.*” An anatomical description of this bird is there given.

1. PROCELLARIA GIGANTEA. *Gmel.*

This bird, which is called by the English, “Nelly,” and by the Spaniards, “Quebranta-huesos,” (properly an osprey,) is common in the southern latitudes of South America. It frequents both the inland sounds, and the open ocean far from the coast. It often settles and rests on the water. The Nelly, in its flight and general appearance on the wing, has many points of resemblance with the Albatross; but, as in the case of that bird, it is in vain to attempt observing on what it feeds; both seem to hunt the waters for days together, in sweeping circles, with no success. In the stomach, however, of one which I opened, there was the beak of a large cuttle-fish. The Nelly, moreover, is a bird of prey: it was observed at Port St. Antonio, by some of the officers of the *Beagle*, to kill a diver. The latter tried to escape, both by diving and flying, but was continually struck down, and at last was killed by a blow on its head. At Port St. Julian, also, these great petrels were seen killing and devouring young gulls. The Nelly breeds on several of the small islands off the coast of Patagonia; for instance, Sea-Lion Island, in the mouth of the Santa Cruz. Most other species of the family retire for the purpose of breeding to the Antarctic Islands.

I have often observed in the southern seas, a bird similar in every respect to the Nelly, excepting in its plumage, being of a much more intense black, and its bill rather whiter. I procured a specimen thus coloured, at Port Famine, and had concluded that it was a distinct species, until Mr. Low, (an excellent practical observer, long acquainted during his sealing voyages with the productions of these seas,) assured me that he positively knew, that these black varieties were the one-year-old birds of the common greyish black Nelly.

2. PROCELLARIA GLACIALOIDES. *A. Smith.*

Procellaria glacialis, *A. Smith*, *Illust. of Zool. of S. Africa, Aves*, pl. 51.

I saw this petrel on both sides of the Continent south of lat. 30° ; but seldom more than two or three together. I am informed that it arrives in Georgia in September for the purpose of breeding, and that it lays its eggs in holes in the precipices overhanging the sea. On the approach of winter it is said to retire from that island. My specimen was caught in the Bay of St. Mathias (lat. 43° S.) by a line and bent pin, baited with a small piece of pork; the same means by which the Pintado (*Dapt. Capensis*) is so easily caught. It is a tame, sociable, and silent bird; and often settles on the water: when thus resting it might from a distance be mistaken, owing to the general colour of its plumage, for a gull. One or two often approached close to the stern of the Beagle, and mingled with the Pintados, the constant attendants on vessels traversing these southern seas.

DAPTION CAPENSIS. *Steph.*

Procellaria Capensis, *Linn. Syst. i.* 213.

This petrel is extremely numerous over the whole southern ocean, south of the Tropic of Capricorn. On the coast, however, of Peru, I saw them in lat. from 16° to 17° S., which is considerably farther north than they are found on the shores of Brazil. Cook, in sailing south in the meridian of New Zealand, first met this bird in lat. $43^{\circ} 30'$. The Pintados slightly differ in some of their habits from the rest of their congeners, but, perhaps, approach in this respect nearest to *P. glacialis*. They are very tame and sociable, and follow vessels navigating these seas for many days together: when the ship is becalmed, or is moving slowly, they often alight on the surface of the water, and in doing this they expand their tails like a fan. I think they always take their food, when thus swimming. When offal is thrown overboard, they frequently dive to the depth of a foot or two. They are very apt to quarrel over their food, and they then utter many harsh but not loud cries. Their flight is not rapid, but extremely elegant; and as these prettily mottled birds skim the surface of the water in graceful curves, constantly following the vessel as she drives onward in her course, they afford a spectacle

which is beheld by every one with interest. Although often spending the whole day on the wing, yet on a fine moonlight night, I have repeatedly seen these birds following the wake of the vessel, with their usual graceful evolutions. I am informed that the Pintado arrives in Georgia for the purpose of breeding, and leaves it, at the same time with the *P. glacialisoides*. The sealers do not know any other island in the Antarctic ocean excepting Georgia, where these two birds (as well as the *Thalassidroma oceanica*) resort to breed.

THALASSIDROMA OCEANICA. Bonap.

Thalassidroma oceanica, Bonap. Journ. Acad. Nat. Scien., Philadelphia, vol. iii. p. 233.

Procellaria oceanica, Forster.

Pétrel échasse. Temm.

I obtained this bird at Maldonado, near the mouth of the Plata, where it was blown on shore by a gale of wind. These birds, although seeming to prefer on most occasions the open ocean, and to be most active, walking with their wings expanded on the crest of the waves, when the gale is heaviest, yet sometimes visit quiet harbours, in considerable numbers. At Bahia Blanca I saw many, when there was nothing in the weather to explain their appearance. I was informed by a sealer, that they build in holes on the sea cliffs of Georgia, where they arrive very regularly in the month of September. No other place is known to be frequented by them for the purpose of breeding.

PRION VITTATUS. Cuv.

Procellaria Vittata, Gmelin, Syst. i. 560.

I did not procure a specimen of this bird, although I saw numbers on both sides of the Continent from about lat. 35° S. to Cape Horn. It is a wild solitary bird, appears always to be on the wing; flight extremely rapid. Mr. Stokes (Assistant surveyor of the Beagle) informs me that they build in great numbers on Landfall Island, on the west coast of Tierra del Fuego. Their burrows are about a yard deep: they are excavated on the hill-sides, at a distance even of half a mile from the sea shore. If a person stamps on the ground over their nests, many fly out of the same hole. Mr. Stokes says the eggs are white, elongated, and of the size of those of a pigeon.

1. LARUS FULIGINOSUS. Gould.

L. Mas. corpore toto obscurè plumbeo-griseo, tegminibus caudæ superioribus inferioribusque pallidioribus; rostro basi rubro, apice nigro; pedibus nigris.

Long. tot. 16½ unc.; ala, 13½; cauda, 6; tarsi, 2½; rostri 2¾.

The whole of the plumage deep leaden-grey; the upper and under tail coverts being lightest; bill red at the base, black at the tip; feet black.

Habitat, Galapagos Archipelago (*October*).

This species of gull has many characters in common with the *Larus hæmatorhynchus* of King, from the continent of S. America; but may at once be distinguished from it by the general extreme duskiess of its plumage, feet, tarsi, and bill; and by the more elongated form of the latter. My specimen was killed at James Island. I observed nothing particular in its habits. It is the only species of gull frequenting this Archipelago.

2. *LARUS HÆMATORHYNCHUS*. *King*.

Larus hæmatorhynchus, *King*, Zool. Journ. iv. 103.

—*Jard. & Selb*, Ill. Orn. p. 106.

This bird was killed at Port St. Julian on the coast of Patagonia. Beak (when fresh killed) of a pale "arterial blood red," legs "vermilion red."

3. *LARUS DOMINICANUS*. *Licht*.

Larus dominicanus, *Licht*, Cat. 82. sp. 846.

Grande Mouette, *Azara*, No. 409.

This gull abounds in flocks on the Pampas, sometimes even as much as fifty and sixty miles inland. Near Buenos Ayres, and at Bahía Blanca, it attends the slaughtering-houses, and feeds, together with the Polybori and Cathartes, on the garbage and offal. The noise which it utters is very like that of the common English gull (*Larus canus*, Linn.)

XEMA (CHROICOCEPHALUS) CIRROCEPHALUM. *G. R. Gray*.

Larus cirrocephalus, *Vieill*, Nov. Diet. d'Histoire, 21. p. 502.

Larus maculipennis, *Licht*, Cat. 83. sp. 855.

Larus glaucodes, *Meyen*, Nov. Act. 1839, p. 115. pl. 24.

Mouette cendrée, *Azara*, No. 410.

This species so closely resembles the *Xema ridibundum*, Boiè, that Mr. Gould observes, he should have hardly ventured to have characterized it as distinct; but as M. Vieillot and Meyen have deemed this necessary, he adopts their view. I have compared a suite of specimens, which I procured from the Río Plata, the coast of Patagonia, and the Straits of Magellan, with several specimens of the *Xema ridibundum*; the only difference which appears to me constant, is that the primaries of the *X. cirrocephalum*, in the adult winter plumage, both of male and female, are tipped with a white spot (a character common to some other species), whereas in the *X. ridibundum* the points are black. The beak of the latter species,

especially the lower mandible, is also a little less strong, or high in proportion to its length. In the immature stage, I could perceive no difference whatever in the plumage of these birds. The proportional quantity of black and white in the primaries, given by Meyen as the essential character, varies in the different states of plumage. The specimens described by this author were procured from Chile.* The soles of the feet of my specimens were coloured, deep "reddish orange," and the bill dull "arterial blood-red" of Werner's nomenclature.

In the plains south of Buenos Ayres I saw some of these birds far inland, and I was told that they bred in the marshes. It is well known that the black-headed gull (*Xema ridibundum*), which we have seen comes so near the *X. cirrocephalum*, frequents the inland marshes to breed. It appears to me a very interesting circumstance thus to find birds of two closely allied species preserving the same peculiarities of habits in Europe and in the wide plains of S. America. Near Buenos Ayres this gull as well as the *L. dominicanus* sometimes attends the slaughter-houses to pick up bits of meat.

RHYNCHOPS NIGRA. Linn.

I saw this bird both on the East and West coast of South America, between latitudes 30° and 45°. It frequents either fresh or salt water. Near Maldonado (in May), on the borders of a lake, which had been nearly drained, and which in consequence swarmed with small fry, I watched many of these birds flying backwards and forwards for hours together, close to its surface. They kept their bills wide open, and with the lower mandible half buried in the water. Thus skimming the surface, generally in small flocks, they ploughed it in their course; the water was quite smooth, and it formed a most curious spectacle, to behold a flock, each bird leaving its narrow wake on the mirror-like surface. In their flight they often twisted about with extreme rapidity, and so dexterously managed, that they ploughed up small fish with their projecting lower mandibles, and secured them with the upper half of their scissor-like bills. This fact I repeatedly witnessed, as, like swallows, they continued to fly backwards and forwards, close before me. Occasionally, when leaving the surface of the water, their flight was wild, irregular, and rapid; they then also uttered loud harsh cries. When these birds were seen fishing, it was obvious that the length of the primary feathers was quite necessary in order to keep their wings dry. When thus employed, their forms resembled the symbol, by which many artists represent marine birds. The tail is much used in steering their irregular course.

These birds are common far inland, along the course of the Rio Parana; and

* The naturalists in Lutke's voyage, vol. iii. p. 255, seem to consider a gull, which they obtained at Concepcion, as the *Larus Franklinii* of North America.

it is said they remain there during the whole year, and that they breed in the marshes. During the day they rest in flocks on the grassy plains, at some distance from the water. Being at anchor in a small vessel, in one of the deep creeks between the islands in the Parana, as the evening drew to a close, one of these scissor-beaks suddenly appeared. The water was quite still, and many little fish were rising. The bird continued for a long time to skim the surface; flying in its wild and irregular manner up and down the narrow canal, now dark with the growing night and the shadows of the overhanging trees. At Monte Video, I observed that large flocks remained during the day on the mud banks, at the head of the harbour; in the same manner as those which I observed on the grassy plains near the Parana. Every evening they took flight in a straight line seaward. From these facts, I suspect, that the Rhynchops frequently fishes by night, at which time, many of the lower animals come more abundantly to the surface than during the day. I was led by these facts to speculate on the possibility of the bill of the Rhynchops, which is so pliable, being a delicate organ of touch. But Mr. Owen, who was kind enough to examine the head of one, which I brought home in spirits, writes to me, (August 7, 1837.) that—

“The result of the dissection of the head of the *Rhynchops*, comparatively with that of the head of the duck, is not what you anticipated. The facial, or sensitive branches of the fifth pair of nerves, are very small; the third division in particular, is filamentary, and I have not been able to trace it beyond the soft integument at the angles of the mouth. After removing with care, the thin horny covering of the beak, I cannot perceive any trace of those nervous expansions which are so remarkable in the lamelli-rostral aquatic birds; and which in them supply the tooth-like process, and soft marginal covering of the mandibles. Nevertheless, when we remember how sensitive a hair is, through the nerve situated at its base, though without any in its substance, it would not be safe to deny altogether, a sensitive faculty in the beak of the *Rhynchops*.”

M. Lesson (Manuel d'Ornithologie, vol. ii. p. 365.) has stated, that he has seen these birds opening the shells of the *Maetra*, buried in the sandbanks on the coast of Chile. From their weak bills, with the lower mandible so much produced, their short legs and long wings, it seems very improbable that this can be a general habit, although it may sometimes be resorted to. Wilson, who was well acquainted with this bird, does not believe “the report of its frequenting oyster beds, and feeding on these fish.” The existence, however, of this same report in the United States, makes the question, whether the *Rhynchops* does not sometimes turn the peculiar structure of its beak to this purpose, worthy of further investigation.

*VIRALVA ARANEA. G. R. Gray.**Sterna aranea, Wilz. Am. Orn. pl. 72. f. 6.*

My specimen was procured at Bahia Blanca, in Northern Patagonia. I may here observe, that many navigators have supposed that terns, when met with out at sea, are a sure indication of land. But these birds seem not unfrequently to be lost in the open ocean; thus one (*Megalopterus stolidus*) flew on board the Beagle in the Pacific, when several hundred miles from the Galapagos Archipelago. No doubt, the remark made by navigators, with respect to the proximity of land where terns are seen, refers to birds in a flock, fishing, or otherwise showing that they are familiar with that part of the sea. I, therefore, more particularly mention, that off the mouth of the Rio Negro, on the Patagonian shore, I saw a flock (probably the *Viralva aranea*) fishing seventy miles from land: and off the coast of Brazil a flock of another species, 120 from the nearest part of the coast. The latter birds were in numbers, and were busily engaged in dashing at their prey.

*MEGALOPTERUS STOLIDUS. Boiè.**Sterna stolidus, Linn. Syst. i. 227.*

My specimens were procured from the Galapagos Archipelago. It is well known to be an inhabitant of the seas in the warmer latitudes over the whole world. The Rocks of St. Paul's, nearly under the equator, in the Atlantic ocean, were almost covered with the rude and simple nests of this bird, made with a few pieces of sea-weed. The females were sitting upon their eggs (in February), and by the side of many of their nests, parts of flying-fish were placed, I suppose, by the male bird for his partner to feed on during the labour of incubation.

*PHALACROCORAX CARUNCULATUS. Stephens.**Phalacrocorax carunculatus, Steph. Gen. Zool.**Pelecanus carunculatus, Gm. Syst. i. 576.**Phalacrocorax imperialis, King, Zool. Proc. vol. i. pt. 1. 30.*

I procured a specimen of this bird at Port St. Julian, on the coast of Patagonia, where, during January, many were building. I merely mention it here, for the purpose of describing the singularly bright colours of the naked skin about its head. Skin round the eyes "campanula blue;" cockles at the base of the upper mandible, "saffron mixed with gamboge-yellow." Marks between the eye and the corner of the mouth, "orpiment orange;" tarsi scarlet.

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FREGATA AQUILA. *Cuv.*Pelecanus Aquilus, *Linn.*

I had an opportunity, at the Galapagos Archipelago, of watching, on several occasions, the habits of this bird, which are very interesting in relation to its peculiar structure. The Frigate bird, when it sees any object on the surface of the water, descends from a great height, in an inclined plane, head foremost, with the swiftness of an arrow; and at the instant of seizing with its long beak and outstretched neck, the floating morsel, it turns upwards, with extraordinary dexterity, by the aid of its forked tail, and long, powerful wings. It never touches the water with its wings, or even with its feet; indeed I have never heard of one having been seen on the surface of the sea; and it appears that the deeply indented web between its toes is of no more use to it, than are the shrivelled wings beneath the wing-cases of some coleopterous beetles. The Frigate bird has a noble appearance when seen soaring in a flock at a stupendous height (at which time it merits the name of the Condor of the ocean), or when many together are dashing, in complicated evolutions, but with the most admirable skill, at the same floating object. They seem to scorn to take their food quietly, for between each descent they raise themselves on high, and descend again with a swift and true aim. If the object (such as offal thrown overboard) sink more than six or eight inches beneath the surface, it is lost to the Frigate bird. I was informed at Ascension, that when the little turtles break through their shells, and run to the water's edge, these birds attend in numbers, and pick up the little animals (being thus very injurious to the turtle fishery) off the sand, in the same manner as they would from the sea.

APPENDIX.

Anatomical description of *Serpophaga albocoronata*, *Furnarius cunicularius*, *Uppucerthia dumetoria*, *Opetiorhynchus vulgaris*, *O. antarcticus*, *O. Patagonicus*, *Pterotochos Tarnii*, *P. albicollis*, *Synallaxis mahuroides*, *Phytotoma rara*, *Trochilus gigas*, *Tinochorus rumicivorus*.*

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

SERPOPHAGA ALBOCORONATA. Gould. (Male.)

Tongue pointed, furnished with a few short bristles at the sides near the base. Trachea with the same muscles as among the warblers generally. Œsophagus slightly funnel-shaped; proventriculus much expanded at its entrance into the gizzard, which is rounded, not very muscular, inner coat slightly hardened, smooth. Intestine of moderate size, furnished with two rudimentary cæca.

	inches		inches
Length of œsophagus, including proventriculus.....	1	Length of intestine from gizzard to cloaca.....	3½
of gizzard	½	from cæca to cloaca.....	3¼
Breadth of ditto	¼		

The skeleton of this bird is precisely that of the smaller and weaker species of Laniadæ.

	lines		lines
Length of sternum.....	5	No of cervical vertebrae.....	11
Breadth anteriorly.....	3	dorsal ditto.....	7
posteriorly.....	4½	sacral ditto.....	9
Width of fissures.....	1	caudal ditto.....	6
Depth of ditto.....	1½	Total.....	33
Depth of keel.....	2		
Length of pelvis.....	5½	No. of false ribs.....	11?
Width anteriorly.....	2½	true ditto.....	5
posteriorly.....	5½	Total.....	7
Length from occiput to point of bill.....	12		
Breadth of head.....	5½		
Length of coracoids.....	4½		

* I am much indebted to Mr. Eyton for these observations, which greatly add to the value of the previous descriptions

FURNARIUS CUNICULARIUS. *G. R. Gray.* (Male.)

Tongue, trachea, and œsophagus, as in *Uppucerthia*. Proventriculus longer, and slightly contracted at its entrance into the gizzard, which is large, flattened, and muscular, more rounded than in *Opetiorhynchus*, lined with a rugose hardened coat, and filled with small seeds, and the remains of insects; intestines of small diameter, and furnished with two rudimentary caeca.

inches	inches
Length of œsophagus, including proventriculus 1½	Length from gizzard to œca 5
of gizzard ½	œca to cloaca ¼
Breadth of ditto ½	

Sternum of nearly equal breadth, both posteriorly and anteriorly, but much narrowed in the middle, the portion to which the ribs are attached much elongated beyond their junction; posterior margin furnished with two deep fissures, slightly narrowed at their exit; keel deep, slightly rounded on its inferior edge, and much scolloped out anteriorly; pelvis broad and short, the os pubis projecting far backwards; the ischium terminating anteriorly in an acute process. Os furcatum thin, much arched, furnished with a flattened reflexed process at its junction with the sternum; the points of the rami bent forwards at their junction with the coracoids.

Coracoids of moderate size and length, inserted deeply into the sternum; scapula of moderate size, broader near the extremity.

lines	lines
Length of sternum 11	No. of cervical vertebrae 12
Breadth anteriorly 6½	dorsal ditto 7
posteriorly 8½	sacral ditto 10
Depth of keel 4½	caudal ditto 7
Length of pelvis 12	Total 36
Width anteriorly 4½	
posteriorly 11	No. of true ribs 5
Length from occiput to point of bill 10	false ditto 2-1
Breadth of cranium 7½	Total 8
Length of coracoids 8	

UPPUCERTHIA DUMETORIA. *Geoff. & D'Orb.* (Female.)

Tongue short, compared with the length of the bill, pointed, armed with a few spines at the base; trachea of moderate size, acted upon by one pair of sterno-tracheal muscles, which go off to the sternum, about ¼ of an inch above the inferior larynx; from the upper ring of the bronchie on each side, a process proceeds upwards to the point from which the muscles diverge, to which point only the rings of the trachea are continued, two spaces therefore, one on the anterior, the other on the posterior side of the trachea, immediately above the bronchie, are left devoid of osseous matter, being bounded laterally by the process above mentioned, inferiorly by the upper rings of the bronchie, and superiorly by the lower ring of the trachea, which is slightly enlarged; œsophagus small, slightly dilated a little above the proventriculus, which is of moderate size, and not contracted before entering the gizzard; gizzard large, oval, very muscular, inner coat hardened, deeply furrowed longitudinally, and filled with the remains of insects; intestinal canal of moderate size, without caeca; rectum very slightly enlarged; liver bilobed.

inches	inches
Length of œsophagus, including proventriculus 2	Breadth of ditto ½
of gizzard ½	Length of intestinal canal 10

With the exception of being larger than *Furnarius cunicularius*, and in having the bill more bent and longer, the skeleton presents no material difference from that of the above-named bird.

	lines		
Length of sternum	13	No. of cervical vertebrae	11
Breadth anteriorly	6	dorsal ditto	7
posteriorly	7½	sacral ditto	11
Depth of keel	4	caudal ditto	6
of fissures	4	Total	35
Breadth of ditto	1		
Length of pelvis	14½	No. of true ribs	5
Breadth anteriorly	4	false ditto	2-1
posteriorly	9½	Total	8
Length from occiput to point of bill	27		
Breadth of cranium	8		
Length of coracoids	11		

OPETIORHYNCHUS VULGARIS. *Gray.* (Male.)

The structure of the soft parts, both in this species of *Opetiorhynchus*, and the two following ones, so closely resemble that of *Furnarius* and *Uppucerthia*, that one description will almost serve for the whole; those differences that do exist being not more than are generally found in species of the same genus; the external characters also being slight, I cannot but doubt the propriety of separating them; the cæca are slightly developed in this species, measuring ¼ inch in length.

	inches		inches
Length of oesophagus, proventriculus included	2½	Length of intestinal canal from gizzard to the cloaca ..	7½
of gizzard	½	from cæca to cloaca	¼
Breadth of ditto	½		

Skeleton similar in form to that of *Furnarius cunicularius*.

	lines		
Length of sternum	11½	No. of cervical vertebrae	11
Breadth anteriorly	5½	dorsal ditto	7
posteriorly	7½	sacral ditto	11
Depth of keel	3½	caudal ditto	7
of fissures	5	Total	36
Breadth of ditto	1½		
Length of pelvis	12½	No. of true ribs	5
Breadth anteriorly	4	false ditto	2-1
posteriorly	9½	Total	8
Length from occiput to point of bill	17		
Breadth of cranium	7		
Length of coracoids	8½		

OPETIORHYNCHUS ANTARCTICUS. *G. R. Gray.* (Male.)

Structure of the soft parts as in *O. vulgaris*, but with the rectum of rather larger diameter, and the cæca very minute; gizzard filled with the remains of insects.

	inches		inches
Length of oesophagus, including proventriculus	2½	Breadth of gizzard	½
gizzard	½	Length of intestinal canal from gizzard to cloaca	7

Skeleton similar in form to *Furnarius cunicularius*, and the other species of this genus.

	lines		
Length of sternum	11	No. of cervical vertebrae	11
Breadth anteriorly	6	dorsal ditto	7
posteriorly	7½	sacral ditto	12
Depth of keel	4½	caudal ditto	7
of fissures	4		Total
Breadth of ditto	1½		37
Length of pelvis	12	No. of true ribs	5
Breadth anteriorly	3½	false ditto	2-1
posteriorly	10½		Total
Length from occiput to point of bill	18		8
Breadth of cranium	7½		
Length of coracoids	9		

OPETIORHYNCHUS PATAGONICUS. *G. R. Gray.* (Male.)

No difference in the structure of the soft parts from the other species of the genus before spoken of. The trachea, however, does not differ from the ordinary simple form found in most birds, but differs from *O. vulgaris* and *O. antarcticus*, in having the lower rings continued to the bronchia; it is acted upon by one pair of muscles; no caeca are apparent.

	inches		inches
Length of oesophagus, including proventriculus	2½	Breadth of gizzard	¾
gizzard	¼	Length of cutis from gizzard to cloaca	5¼

Skeleton in form similar to that of *Furnarius cunicularius*, and the other species of this genus.

	lines		
Length of sternum	13	No. of cervical vertebrae	11
Breadth anteriorly	6½	dorsal ditto	7
posteriorly	8½	sacral ditto	9
Depth of keel	5	caudal ditto	6
fissures	4		Total
Breadth of ditto	1½		33
Length of pelvis	13½	No. of true ribs	5
Breadth anteriorly	5	false ditto	2-1
posteriorly	10½		Total
Length from occiput to point of bill	19		8
Breadth of cranium	8		
Length of coracoids	10		

Remarks:—the last five species approach so nearly, that I doubt the propriety of separating them generically. The skeletons are only distinguishable with the exception of the form of the bill, by the proportions between the different admeasurements.

PTEROPTOCHOS TARNII. *G. R. Gray.* (Female.)

Tongue pointed, armed with two strong lateral spines, and a few intermediate smaller ones at the base; oesophagus largest at the upper extremity, and gradually becoming smaller towards the proventriculus; no vestige of a craw; proventriculus of moderate size, not much contracted towards the gizzard, which is also of moderate size, and much flattened; not very muscular, and lined with a hardened coat, rugose longitudinally; the gizzard was filled with small

pebbles, and a coarse black powder, probably the remains of insects; intestinal canal small; caeca rudimental; rectum large, becoming more expanded towards the cloaca, which is also large; trachea of equal diameter throughout, furnished with one pair of sterno-tracheal muscles, a portion of each of which is continued downwards to the upper rings of the bronchia, on which it expands; liver two-lobed.

	Inches		Inches
Length of oesophagus, including proventriculus	3½	Diameter of gizzard	½
of intestinal canal, from gizzard to cloaca	18	Length of ditto	1
of rectum	2½		

The pelvis and ribs of this bird were much damaged; sternum of equal breadth posteriorly and anteriorly, slightly contracted on its lateral edge, near the middle indented on its posterior margin with four deep fissures, the outer ones largest; a large triangular process projecting forwards between the junctions of the coracoids, bifid at the apex; the coracoids themselves very strongly articulated to the sternum, the sides of the sternum to which the ribs are articulated projecting in the form of a process far beyond the junction of the coracoids; the sternal keel is narrow, and has its edge straight; the coracoids are long, thin, with very slight external lateral processes at their junction with the sternum; os furcatum very thin, roundish, a very slight process on the point at which it approaches nearest to the sternum, very slightly arched.

Scapula broad, flattened, much widened at about one-third of its length from the hinder extremity; wing bones short, and weak; leg bones long, and strong; the fibula much developed.

	Lines		Lines
Length of sternum	15	Length from occiput to point of bill	22½
Greatest breadth of sternum	9½	Breadth of cranium	10½
Breadth at the narrowest part	7	Length of coracoids	11
Width of external fissure	1½	Breadth of scapula in the broadest part	2
Depth of ditto	6	Cervical vertebra	12
Width of internal ditto	1½	Dorsal ditto	6
Depth of ditto	6½	Sacral, damaged.	
Depth of keel	3	Caudal, damaged.	

PTEROTOCHOS ALBICOLLIS. Kittl. (Male.)

Trachea, tongue, oesophagus, gizzard, and liver of the same form as in *Pterotochos Tarnii*. The contents of the gizzard also did not differ.

	Inches		Inches
Length of intestinal canal	14½	Length of gizzard	½
from caeca to cloaca	2½	Breadth of ditto	¼

Only the body, after skinning, of the species, was brought home by Mr. Darwin.

The skeleton of this species does not differ in anything but admeasurements from that of *Pterotochos Tarnii*; the pelvis, however, being so much damaged in that species, that I was not able to make many notes upon it, I shall give a description of that part in the present one.

Pelvis of moderate size; the ossa pubis and ischium much expanded, and elongated posteriorly, and placed nearly perpendicular to the plane of the ilium, ischiatic foramina large; two large processes arise on the ilium on each side of the junction of the caudal vertebrae for the attachment of the levator muscles of the tail.

	lines	
Length of pelvis	14	No. of cervical vertebrae, wanting.
Breadth posteriorly	8½	dorsal ditto, wanting.
anteriorly	4	sacral ditto
Length of sternum	9½	caudal ditto, wanting. 9
Breadth of ditto	7	
in the narrowest part	5½	
Depth of keel	2½	
Length of coracoids	7½	
Breadth of scapula in the widest part	1	

Remarks:—Both this and the foregoing bird are most curious; it is difficult to say in what order they ought to be placed, the external form being equally ambiguous with the internal structure.

The digestive organs nearly agree with that of many insectorial birds; the pelvis also approaches nearly in form to that of the thrush; the sternum, however, differs altogether from any form found in that order, and is precisely that of a *Picus*. The coracoids are lengthened; the os furcatum is furnished with only a slight process where it approaches the sternum, in which particulars, also in the form of the ribs, it agrees with the *Picida*.

Having found the internal structure so curious, and so contrary to what I expected, I was led to examine the external more minutely than I had before done. The same form of claw is found in several species among the cuckoos, in the genus *Pelophilus*, for instance; the two outer toes are zygodactyle, being united together as far as the first joint; the bill, at first sight, might be taken for that of a gallinaceous bird; but in searching among the order *Scansores*, for some resemblance, I find the same structure in several of the cuckoo family, with the exception of the nostrils being nearer to the apex of the bill in *Pterotochos*. The Australian genus *Menura* is, probably, allied to this, but differs in the structure of the nostrils.*

SYNALLAXIS MALUIROIDES. D'Orb. (Female.)

Tongue pointed, furnished at the base with two strong spines, the sides of which are armed with smaller ones; trachea, œsophagus, and proventriculus as in *Furnarius* and *Uppucerthia*; gizzard rounded, not very muscular, lined with a slightly hardened smooth coat, and filled with the remains of insects; intestinal canal of moderate size and length, furnished with two rudimentary cæca.

	inches		inches
Length of œsophagus and proventriculus	1½	Length of intestinal canal from gizzard to cloaca	4½
gizzard	½	from cæca to cloaca	½
Breadth of ditto	¼		

The parts of the skeleton of this bird which I was able to preserve, were more closely allied to the corresponding ones of Troglydytes than to those of any other genus in my possession, but differ in the following particulars: the lateral processes of the sternum bounding the posterior fissures are not so much expanded, consequently the fissures themselves are smaller; the keel is rather deeper; the portion to which the ribs are attached does not project so far forwards, but the

* Since the above was in type, I have had, through the kindness of Mr. Gould, an opportunity of examining *Menura lyra*, and find my former supposition to be correct; but neither of these genera can be placed among the gallinaceous birds where the latter bird has been arranged by some authors.

process between the coracoids is rather longer; the interocular portion of the cranium is also rather broader than in the above-mentioned genus; the pelvis, coracoids, and scapula agree both in shape and size with *Troglodytes*.

	lines		lines
Length of sternum	6½	Breadth of cranium	5½
Breadth anteriorly	4	Length of pelvis	9
posteriorly	4½	Breadth of ditto posteriorly	5
Greatest width of fissures	1	anteriorly	1½
Depth of ditto	2½		
Length of occiput to point of bill	14½	No. of cervical vertebrae	12

PHYTOTOMA RARA. *Molina*.

This bird being injured about the sexual organs, I could not ascertain the sex. Tongue pointed, armed at the base on each side with a flattened tricuspid spine; trachea small, of uniform diameter throughout its whole length, acted upon by one pair of sterno-tracheal muscles; oesophagus funnel-shaped at the upper extremity, when distended capable of containing a common pencil, at its junction with the proventriculus much smaller; proventriculus scarcely perceptible; gizzard small, consisting of little more than a thick skin, inner coat hardened; the entrance of the oesophagus, and the exit of the intestine placed very near together at the upper extremity of it; intestinal canal very short, and of large diameter, entirely devoid of caeca; the whole length with the gizzard and oesophagus distended with a stringy substance, resembling coarse spun cotton cut into short lengths.

	inches		inches
Length of oesophagus, including proventriculus	3	Length of gizzard	½
of intestinal canal	7½	Breadth of ditto	¼

Sternum of nearly equal breadth, both posteriorly and anteriorly, much narrowed near the middle; posterior margin nearly straight, indented with two large fissures, narrowed at their exit between the junctions of the coracoids furnished with a bifid process; the portion of the sternum to which the ribs are attached, continued anteriorly beyond the junction of the coracoids; keel of moderate size; coracoids long, not very strong; os furcatum long, slightly arched, furnished with a flattened process, turned inwards at the point it approaches the sternum.

Pelvis broad, and short, narrowest anteriorly, the os pubis and ischium continued far backwards, beyond the junction of the caudal vertebrae; ribs strong, and flattened; posterior process large; scapula long, broadest near the extremity; legs of moderate strength, the internal processes of the tibia large, and flattened; bones of the cranium strong.

	lines		lines
Length of sternum	13½	No. of cervical vertebrae	11
Breadth anteriorly	6½	dorsal ditto	7
posteriorly	9½	sacral ditto	10
Width of fissures	1½	caudal ditto	7
Depth of ditto	4		
keel	4½	Total	35
Length of pelvis	13½		
Width anteriorly	5	No. of true ribs	5
posteriorly	11	false ribs	2-1
Length from occiput to point of bill	16	Total	8
Breadth of head	8		
Length of coracoids	9		

Remarks:—The skeleton and soft parts of this bird very nearly resemble those of the genus *Loxia*, but differ in their superior size, in having the fissures on the posterior margin of the sternum not so deep, and in the margin itself being straighter, the coracoids larger, and in having the process at the end of the os furcatum approaching the sternum smaller than in that genus. The ribs also are stronger.

TROCHILUS GIGAS. Vieill. (Male.)

Tongue bifid, each division pointed; hyoids very long, in their position resembling those in the *Picida*; trachea of uniform diameter; destitute of muscles of voice; bronchia very long; œsophagus funnel-shaped, slightly contracted on approaching the proventriculus, which is small, and scarcely perceptible; gizzard small, moderately muscular, the inner coat slightly hardened, and filled with the remains of insects; intestine largest near the gizzard; I could not perceive a vestige of cæca.

	Inches		Inches
Length of œsophagus, including proventriculus.....	1½	Length of gizzard	½
Intestinal canal	3½	Breadth of ditto	½

Sternum with the keel very deep, its edge rounded, and projecting anteriorly; posterior margin rounded, and destitute of indentation or fissure; the ridges to which the pectoral muscles have their attachment, large and prominent, the horizontal portion much narrowed anteriorly, consequently the junctions of the coracoids are very near together.

Pelvis short, very broad; os pubis long, curved upwards at the extremities, projecting far downwards, and posteriorly beyond the termination of the caudal vertebræ; the ischiatic foramen small, and linear; femora placed far backwards; coracoids short, very strong, their extremities much diverging; os furcatum short, slightly arched near the extremities of the rami, which are far apart, furnished with only a small process on its approach to the sternum; scapula flattened, long, broadest near the extremity; humerus, radius, and ulna short, the metacarpal bones longer than either; the former furnished with ridges much elevated for the attachment of the pectoral muscles; caudal and dorsal vertebræ with the transverse processes long, and expanded; cranium of moderate strength, the occipital portion indented with two furrows, which pass over the vertex, and in which the hyoids lie; orbits large, divided by a complete bony septum; the lachrymal bones large, causing an expansion of the bill near the nostrils.

	Lines		
Length of sternum.....	13½	No. of cervical vertebræ	10
Breadth anteriorly.....	4	dorsal ditto	6
posteriorly	7½	sacral ditto	9
Depth of keel	6½	caudal ditto.....	5
Length of pelvis.....	6½	Total.....	30
Width anteriorly	2½		
posteriorly	7		
Length from occiput to point of bill	27½	No. of true ribs	5
Breadth of cranium	6½	false ditto.....	13
Length of coracoids	6	Total.....	9

Remarks:—The skeleton of this bird does not differ in form from that of *Trochilus pella*, figured at page 270 of the Cyclopædia of Anatomy and Physiology. The whole of the group are more nearly allied to fissirostral birds than any other.

TINOCHORUS RUMICIVORUS. Eschsch. (Male.)

Trachea of uniform diameter, furnished with one pair of sterno-tracheal muscles, from which a few fibres descend on each side to the upper rings of the bronchiæ; œsophagus of large diameter to about half its length, where it is furnished with a craw, and afterwards contracted to the proventriculus; the craw where it is connected with the œsophagus is much contracted, afterwards it expands into a large sac; proventriculus small; gizzard large, and very muscular; the grinding surfaces hard, concave in the middle, and furnished with longitudinal grooves in the concave part; the intestinal canal is of moderate length, small next the gizzard, largest at the entrance of the caeca, from whence it slightly tapers to the cloaca, which is small; caeca long, of greatest diameter at the opposite extremity to their entrance into the rectum; the gizzard and œsophagus were filled with reeds, mixed with very small pebbles; liver bilobed.

Length of œsophagus from glottis to gizzard	3 inch.	Diameter parallel to the grinding surfaces	inches
from œsophagus to outer extremity of craw	$\frac{1}{2}$ inch.	Length of intestine from gizzard to cloaca	13
Perpendicular diameter of craw	7 lines	from caeca to cloaca	1 $\frac{1}{2}$
Greatest diameter of gizzard obliquely to the grinding surfaces	1 inch.	of caeca	3

A second specimen, a female, did not differ, except in sex. Skeleton light; bones in general thin. Sternum broadest posteriorly, and indented on its posterior margin with two large fissures; keel deep, its inferior edge rounded, much scolloped out anteriorly; a moderate-size bifid manubrial process between the junction of the coracoids.

Pelvis broad, of moderate length, similar to that found among the genus *Strepsilas*.

Ossification much arched, furnished with a small flattened process, where the ligament unites it to the sternum; coracoid of moderate length, strong, furnished with a large process externally near their junction with the sternum; ribs flattened, posterior process long, slightly curved, and narrow.

Length of sternum	lines	No. of cervical vertebrae	14
Breadth anteriorly	7	dorsal	6
posteriorly	11	sacral	12
Width of fissures	4	caudal	7
Depth of ditto	6	Total	30
keel	7		
Length of pelvis	16 $\frac{1}{2}$	No. of true ribs	6
Width anteriorly	6	false ditto	2
posteriorly	12	Total	8
Length from occiput to point of bill	10		
Breadth of head	6 $\frac{1}{2}$		
Length of coracoids	7 $\frac{1}{2}$		

Remarks. The bill of this curious bird much resembles that of the genus *Glareola*, but the soft skin covering the nostrils is more developed, in which respect it resembles the quails, and other gallinaceous birds. The structure of the tarsi, feet, and nails approach near to that of *Strepsilas*, but differ in the latter being sharper, and in the scales on the feet and tarsi being more apparent, which may, perhaps, have been caused to a certain degree by the bird having been for a long while in spirits.

The wing has precisely the same structure as in *Glareola*, and some of the plovers.

The tail is more lengthened than among the plovers, but not more so than in *Glareola praticola*, which species has, however, the tail forked, but some of the same genus, as the last named bird, although it is not so long in them, have it in the same shape as in *Tinochorus*,—as *Glarecola Australis*.

The structure of the digestive organs is altogether that of a gallinaceous bird; the skeleton, however, agrees scarcely in any particular with that order, approaching closely to that of the waders. The sternum differs from any gallinaceous bird with which I am acquainted, in wanting entirely the strong lateral process, and in the fissures on the posterior margin being much smaller; the nearest approach in form which I have been able to find, is that of *Machetes*, from which, if it were not for the superior size of the latter, it could scarcely be distinguished.

The pelvis agrees so perfectly with that of *Strepsilas interpres*, and the *Charadriidae* in general, as not to require farther remark.

The remainder of the skeleton resembles both the plovers and sandpipers.

I much regret that I have never had an opportunity of dissecting a specimen of *Glareola*, to which the genus, *Tinochorus*, appears closely allied, and I believe that they will form a connecting link between the orders *Grallatores* and *Razores*.



Canarhynchus crysirestris.



Cactornis scandens



Cactornis afsimilis





Xanthornis flaviceps



Zenaida Galapagoensis



Rhea Darwinii



Zapornia notata



Zapornia sphenota



Anser melanopterus.