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THE

BIRDS OF AUSTRALIA.

BY

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DROMAIUS NOVÆ-HOLLANDIÆ.

The Emu.

New Holland Cassowary, Phill. Bot. Bay, pl. in p. 271.—White's Journ., pl. in p. 129.—Lath. Gen. Syn. Supp., vol. ii. p. 290.—Ib. Gen. Hist., vol. viii. p. 383.
Southern Cassowary, Shaw, Nat. Misc., pl. 99.
Emu of New South Wales, Collin's Voy., vol. ii. pl. in p. 307.
Casuarius Novæ-Hollandiæ, Lath. Ind. Orn., vol. ii. p. 665.—Cuv. Règn. Anim., tom. i. p. 497.
Casoare de la Nouvelle Hollande, Péron, Voy. aux Terr. Aust., tom. i. p. 467. pls. 36 and 41.
Dromaius ater, Vieill. Gal. des Ois., tom. ii. pl. 226.—Less. Traité d'Orn., p. 9. Atlas, pl. 2. fig. 2.
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Van Diemen's Land Cassowary, Lath. Gen. Hist., vol. viii. p. 384. pl. cxxxviii.
Dromiceus Australis, Swains. Class. of Birds, vol. ii. p. 346.
——— *Emu*, Steph. Cont. of Shaw's Gen. Zool., vol. xi. p. 439, and vol. xiv. p. 307. pl. 39.
Dromaius Novæ-Hollandiæ, G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 82.—List of Birds in Brit. Mus. Coll., part iii. p. 54.

This fine bird, which is only exceeded in size by the Ostrich of Africa, was first described and figured under the name of the New Holland Cassowary in Governor Phillip's "Voyage to Botany Bay," published in 1789, and it has been included in all ornithological works of a general nature that have appeared since that date; but by far the most accurate figure and account of it that has yet been given are those published by the late Mr. Bennett in the "Gardens and Menagerie of the Zoological Society delineated." "In size and bulk," says Mr. Bennett, "the Emu is exceeded by the African Ostrich alone. Its average measurement may be estimated at between five and six feet in height. In form it closely resembles the Ostrich, but is lower on the legs, shorter in the neck, and of a more thick-set and clumsy make. At a distance its feathers have more the appearance of hair than of plumage, their barbs being all loose and separate. As in the Ostriches they take their origin by pairs from the same shaft. . . . . The wings are so extremely small as to be quite invisible when applied to the surface of the body. They are clothed with feathers exactly similar to those of the back, which divide from a middle line and fall gracefully over on either side. . . . . These birds appear to be widely spread over the southern part of the continent of New Holland and the neighbouring islands; but we are not aware that they have been hitherto observed in its tropical regions. They were formerly very abundant at Botany Bay and Port Jackson. On the south coast they have been met with in great numbers, at Port Phillip by Captain Flinders, and at King George's Sound by the same officer and the naturalists of the expedition under D'Entrecasteaux. They seem also to be extremely numerous in the adjacent islands, especially in Kangaroo and King's Islands, where they were found in the greatest abundance by both Flinders and Péron. According to the latest accounts from Swan River, they have also been observed on that part of the west coast on which the settlement is situated."

The researches that have been made in Australia since the above account was published prove that it is universally dispersed over the whole of the Australian continent, and that it is even more numerous in the northern or tropical regions than it would seem to have formerly been in the southern; on the other hand, from Van Diemen's Land, the islands in Bass's Straits and the colony of New South Wales it is almost extirpated; a few still range over the western part of Van Diemen's Land, and it may yet be met with on the Liverpool Plains, in New South Wales, and probably on some of the low islands at the mouth of the Hunter, where I observed its recent foot-marks. In South Australia it has suffered less from the encroachments of the white man than in New South Wales, and the same may be said of the colony of Swan River.

"In its manners," says Mr. Bennett, "the Emu bears a close resemblance to the Ostrich. . . . . Its food appears to be wholly vegetable, consisting chiefly of fruits, roots and herbage; and it is consequently, notwithstanding its great strength, perfectly inoffensive. The length of its legs and the muscularity of its thighs enable it to run with great swiftness; and as it is exceedingly shy, it is not easily overtaken or brought within gun-shot. Captain Currie states that it affords excellent coursing, equalling, if not surpassing, the same sport with the hare in England; but Mr. Cunningham says that dogs will seldom attack it, both on account of some peculiar odour in its flesh which they dislike, and because the injuries it inflicts upon them by striking out with its feet are frequently very severe. The settlers even assert that the Emu will break the small bone of a man's leg by this sort of kick; which to avoid, the well-trained dogs run up abreast and make a sudden spring at their neck, whereby they are quickly despatched."

Its flesh has been compared to coarse beef, which it resembles, according to Mr. Cunningham, "both in appearance and taste, and is good and sweet eating; nothing indeed can be more delicate than the flesh of the young ones. There is but little fit for culinary use upon any part of the Emu, except the hind-quarters, which are of such dimensions that the shouldering of two hind-legs homewards for a mile distance once proved to me as tiresome a task as I ever recollect to have encountered in the colony." I may remark that its flesh proved of the greatest service to Dr. Leichhardt and his intrepid companions during their overland

route from Moreton Bay to Port Essington, in the course of which, but more particularly between the head of the Gulf of Carpentaria and Port Essington, the sight and capture of the Emu was almost a daily occurrence; so abundant in fact was it, that he states that he saw in the short space of eight miles at least a hundred, in flocks of three, five, ten, and even more, at a time. Dr. Leichhardt mentions that the natives on killing an Emu invariably break the wings—why, he was at a loss to conceive, as they could but slightly assist the animal in making its escape, should it survive; some curious practices also exist with respect to this bird among the natives, the particulars of which I have not been able to learn, but I may mention that the young men and boys are not allowed to feed upon it.

The only vocal sound the Emu has been heard to utter is a low booming or pumping noise, which we know is produced in the female by means of the expansion and contraction of a large membranous bag, surrounding an oblong opening through the rings of the trachea; but whether this peculiarity of structure is also to be found in the male I am not aware. For the loan of some interesting drawings and a specimen in spirits of this very singular conformation I am indebted to my friend W. Yarrell, Esq.

The eggs are six or seven in number, of a beautiful dark green, resembling shagreen in appearance; five inches and three-quarters in length by three inches and three-quarters in breadth; they are held in much esteem by the natives, who feed upon them exclusively whenever they can be procured. They are merely placed in a cavity scooped in the earth, generally in a sandy soil.

They pair with tolerable constancy, and the male bird appears to take a large share in the task of incubation. In captivity they speedily become tame and domesticated, and have been bred without difficulty in various collections in this country.

Little or no difference of colour is observable in the sexes, which may be thus described:—

The entire plumage is of a dull brown, mottled, particularly on the under surface, with dirty grey; the feathers of the head and neck becoming gradually shorter, and so thinly placed that the purplish hue of the skin of the throat and round the ears is perfectly visible; irides brown; bill and legs dusky black.

The young on first quitting the shell have a very elegant appearance, the ground-colour being greyish white, with two longitudinal broad black stripes along the back, and two others on each side, each subdivided by a narrow middle line of white; these stripes being continued along the neck without subdivision and broken into irregular spots on the head; two other broken stripes pass down the fore-part of the neck and breast, and terminate in a broad band across the thighs.

The Plate represents a reduced figure of the adult and a brood of young ones.



Drawn from Nature and on Stone by Waterhouse Hawkins.

DROMAIUS NOVÆ-HOLLANDIÆ.

Hullmandel & Walton Imp.

APTERYX AUSTRALIS, *Shaw.*

Kiwi Kiwi.

Apteryx Australis, Shaw, Nat. Misc., vol. xxiv. Pls. 1057, 1058; and Gen. Zool. vol. xiii. p. 71.—Less. Traité d'Orn. p. 12.—Cuv. Règne Anim. t. i. p. 498, note.—Yarrell, in Trans. Zool. Soc. vol. i. p. 71. Pl. 10.—Owen, Art. Aves, Cycl. of Anat. and Phys., vol. i. 1836, p. 269,* and in Trans. Zool. Soc vol. ii. p. 257.

Apteryx, Temm. Man. d'Orn. 2nd. Edit. Anal. p. cxiv.

Apterous Penguin, Lath. Gen. Hist. vol. x. p. 394.

Dromiceius Novæ-Zelandiæ, Less. Man. t. ii. p. 210.

Kiwi-Kiwi, Aborigines of New Zealand.

For our first knowledge of this bird we are indebted to the late Dr. Shaw, to whom the specimen figured by him in the "Naturalists' Miscellany" was presented by Captain Barclay, of the ship Providence, who brought it from New Zealand about 1812. Dr. Shaw's figure was accompanied by a detailed drawing of the bill, foot, and rudimentary wing, of the natural size. After Dr. Shaw's death, his at that time unique specimen passed into the possession of the Earl of Derby, then Lord Stanley. His Lordship's being a private collection, and no other specimen having been seen either on the continent or in England, the existence of the species was doubted by naturalists generally for upwards of twenty years. M. Temminck, it is true, placed it with hesitation in an order to which he gave the title of *Inertes*, comprehending the present bird and the Dodo; but other naturalists were inclined to deny its existence altogether. The history of the bird remained in this state until June 1833, when my friend Mr. Yarrell published in the "Transactions of the Zoological Society" an interesting paper, detailing all that had been previously made known respecting it, and fully established it among accredited species: this paper was accompanied by a figure from the original specimen still in the possession of the Earl of Derby; I have since had the good fortune to become acquainted with five additional specimens, and to obtain some further information respecting the history of the species. Two of these, from which my figures are taken, were presented to the Zoological Society by the New Zealand Company: the Society also possesses a third, but imperfect specimen, which was presented by Alexander MacLeay, Esq., of Sydney; and two others have been recently added to the collection of the Earl of Derby, one of which having been liberally presented to me by his Lordship, my thanks are especially due for this interesting addition to my collections.

A mature consideration of the form and structure of this most remarkable bird, leads me to assign it with little hesitation to the family of *Struthionidæ*; and my reasons for doing so will, I think, be obvious to every one who will examine and compare the species with the members of that group. The essential characters in which it differs consist in the elongated form of the bill, in the shortness of the tarsi, and in the possession of a sharp spur, terminating a posterior rudimentary toe. Regarding the Ostrich as the species to which it is least nearly related, we find in the Emu and Rhea a much nearer approach, not only in the more lengthened form of the bill of the latter, but also in the situation of the nostrils, which in the Rhea are placed nearer the tip than in any other species of the group, the Apteryx excepted; in fact, when we compare the bills of these two birds, it is very evident that both are formed on one plan, that of the Apteryx being an elongated representative of the Rhea, with the nostrils placed at the extreme tip: in both these birds there is the same peculiar elevated horny cere or fold. The tarsi are much shorter, and the nails of the toes much more curved than in the Rhea; but the scaly covering of these parts in both birds is precisely the same; and it may be further observed that the number of toes increase as we pass on from the Ostrich, there being only two in that bird, three in the Rhea, Emu, etc., and three with a rudiment of a fourth in the Apteryx. The wing of the Apteryx, although scarcely more than rudimentary, agrees with that of the Rhea in having a strongly hooked claw at its extremity; while in the structure of its feather it approaches nearest to the Cassowary; but unlike what obtains in that bird, the feathers are entirely destitute of the accessory plume, in which latter respect it again agrees with the Rhea. The members of this group, although few in number, are remarkable for their structural peculiarities, each being modified for its own peculiar habits

* I was not aware of the existence of Professor Owen's paper at the time I published my first account of this bird, otherwise it would not have remained unnoticed.

and economy, and in none is this circumstance more remarkable than in the Apteryx, which, at the same time that it departs the farthest in form from the type of the group (the Ostrich), also departs the farthest in its mode of life and general economy; being in fact adapted to the peculiarities of its own country, and fitted for the particular kind of food there to be obtained.

The favourite localities of this bird are those covered with extensive and dense beds of fern, among which it conceals itself, and when hard pressed by dogs, the usual mode of chasing it, takes refuge in crevices of the rocks, hollow trees, and in the deep holes which it excavates in the ground, in the form of a chamber; in these latter situations it is said to construct its nest of dried fern and grasses, and to deposit its eggs, the number and colour of which have not been clearly ascertained.

While undisturbed, says Mr. Short, in a letter to Mr. Yarrell, the head is carried far back in the shoulders, with the bill pointing to the ground; but when pursued it runs with great swiftness, carrying the head elevated like the Ostrich. It is asserted to be almost exclusively nocturnal in its habits, and it is by torch-light that it is usually hunted by the natives, by whom it is sought after with the utmost avidity, the skins being highly prized for the dresses of the chiefs; indeed so much are they valued, that the natives can rarely be induced to part with them. The feathers are also employed to construct artificial flies for the capture of fish, precisely after the European manner. When attacked it defends itself very vigorously, striking rapid and dangerous blows with its powerful feet and sharp spur; with which it is also said to beat the ground in order to disturb the worms upon which it feeds, seizing them with its bill the instant they make their appearance; it also probably feeds upon snails, insects, etc.

A most careful and elaborate paper on the Anatomy of the Apteryx, by Professor Owen, is contained in the second volume of the "Transactions of the Zoological Society of London," quoted above, of which I have availed myself in my observations upon the genus.

It is said to be an inhabitant of all the islands of New Zealand, particularly the southern end of the middle island.

Face and throat greenish brown, all the remainder of the plumage consisting of long lanceolate hair-like feathers, of a chestnut-brown colour, margined on each side with blackish brown; on the lower part of the breast and belly the feathers are lighter than those of the upper surface, and become of a grey tint; bill yellowish horn-colour, its base beset with numerous long hairs; feet yellowish brown.

The Plate represents a male and a female, rather under the natural size.

APTERYX AUSTRALIS; (*Shaw*).

Drawn from Nature & on Stone by J. & E. Gould.

Printed by C. Hullmandel.

APTERYX OWENII, *Gould.*

Owen's Apteryx.

Apteryx Owenii, Gould in Proc. of Zool. Soc., Part XV. p. 94.

The acquisition of a second species of Apteryx is an evidence that our knowledge of the natural productions of New Zealand is far from complete; and as a farther proof that such is the case, I may mention that from information I have lately received, I have reason to believe that a third and much larger species of Apteryx is still living in the Southern or Middle Island; at least the sealers who annually visit those shores affirm that such a bird exists; it is known to them by the name of the Fireman, and is said to be about three feet in height. I have also been favoured by Mr. Wilson of Lydstip House with the loan of an enormous egg, larger than that of a swan, which is said to be that of the common species of Apteryx; and although it is possible that it may belong to that bird, its great size favours the belief that such is not the case, and that it is more likely to be the egg of some species with which we are unacquainted.

The single specimen from which my figure was taken was sent to me by Mr. F. Strange of Sydney; unfortunately it was unaccompanied by any information. It formed part of a small collection of New Zealand birds, but from which of the islands they had been procured was uncertain; I have some reason to believe that they were from the South Island.

It is rendered conspicuously different from the *A. Australis*, with which it accords in size, by the irregular transverse barring of the entire plumage, which, together with its extreme density and hair-like appearances, gives it more the resemblance of a mammal than of a bird; it has also a shorter, more slender and more curved bill; and the feathers also differ in structure, being broader throughout, especially at the tip, and of a loose decomposed and hair-like texture.

I have characterized this new species under the name of *Apteryx Owenii*, feeling assured that it can only be considered a just compliment to Professor Owen, who has so ably investigated the remains of the extinct birds of New Zealand.

Face, head and neck dull yellowish brown; throat somewhat paler; all the upper surface transversely rayed with blackish brown and fulvous, each individual feather being silvery brown at the base, darker brown in the middle, then crossed by a lunate mark of fulvous, to which succeeds an irregular mark of black, and terminated with fulvous; under surface paler than the upper, caused by each feather being crossed by three rays of fulvous instead of two, and more largely tipped with that colour; the feathers of the thighs resemble those of the back; bill dull yellowish horn-colour; feet and claws fleshy brown.

The figure is of the natural size.

APTERYX OWENII. *Gould*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.



OTIS AUSTRALASIANUS, *Gould.*

Australian Bustard.

Otis Australasianus, Gould in Proc. of Zool. Soc., Part VIII. p. 176.
Be-bil-ya, Aborigines of Western Australia.
Turkey, Colonists of New South Wales.
Native Turkey, Colonists of Swan River.

It is a remarkable circumstance, that the vast collections of birds that have been transmitted from Australia to Europe during the last fifty years should not have comprised examples of so noble and interesting a bird as the present, and that no account should have reached us respecting the existence of so fine a Bustard. A single specimen has, it is true, for a long time formed part of the collection of the Linnean Society, but nothing whatever was known of its history, and it was not until I personally visited the *terra Australis* that I ascertained that the present species was one of the most abundant, and one of the most widely and generally dispersed of the larger birds inhabiting that country. Extensive grassy plains and open wastes in all countries of the Old World afford a suitable asylum for Bustards; hence it might have been naturally concluded that members of this genus were not wanting in Australia; and it is I think somewhat surprising that other species of this family have not been discovered. Most probably, however, the interior, whenever it may be investigated, will afford additional examples.

In size this species exceeds the European Bustard (*Otis Tarda*), standing higher upon its legs and having a longer neck; and when seen at freedom slowly stalking over its native plains, no Australian bird, except the Emu, is so majestic, or assumes in its carriage so great an air of independence. The male, whose weight is from thirteen to sixteen pounds, considerably exceeds the female in size, and, from the greater length of the plumes of the neck and occiput, is much more stately in appearance.

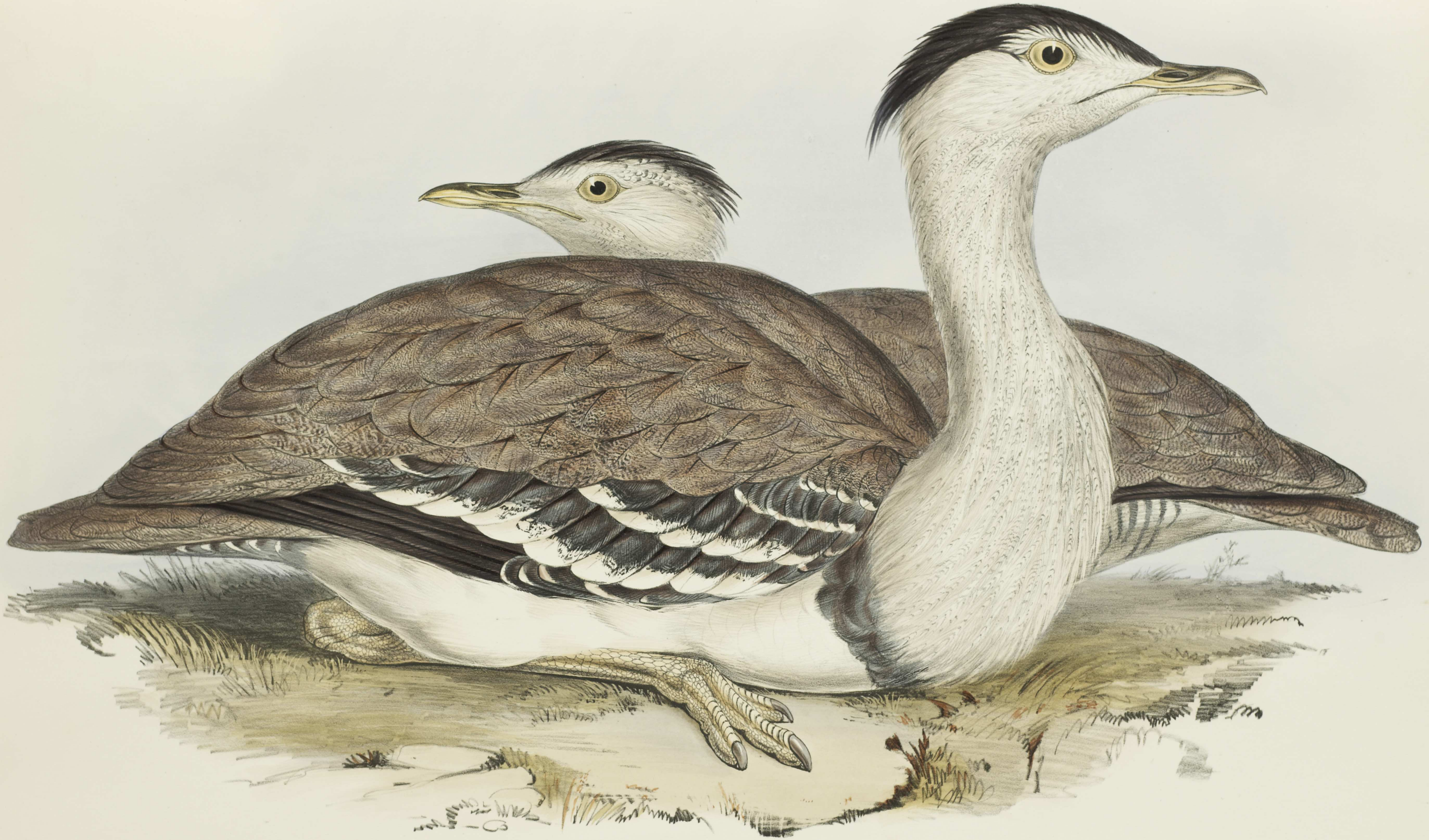
I am of opinion that it is merely a summer visitant to all the southern parts of Australia, but to determine this point requires a longer residence in the colony than the nature of my visit permitted. I frequently encountered and killed it both on the plains of the Lower Namoi and also in South Australia, and Mr. Gilbert met with it in Western Australia. Specimens from Swan River present no material differences from those from the east coast. Within the precincts of the colony of New South Wales, as might be expected, a bird of so large a size is much persecuted, and has consequently become very shy, but it is still abundant there: the two specimens from which my figures were taken were shot in a paddock adjoining Mr. Coxen's House at Yarrundi on the Upper Hunter; I also met with it upon several occasions on the downs near Scone, the flats in the neighbourhood of Aberdeen, and other similar situations. On the plains of the interior, on the contrary, where it is much more abundant, and, being free from the assaults of civilized man, much less wary, I have killed it with small shot from my double-barrelled gun. To succeed in getting sufficiently near, however, it is necesary to bring in the aid of a horse, and to approach in circles, gradually closing in upon it, before it takes wing, which it readily does by running quickly a few yards, thereby gaining an impetus which enables it to rise. It flies heavily, with its long neck stretched out to the utmost; but it is capable of sustaining flight for a considerable distance. As an article of food its flesh is delicate and well-flavoured, and in every respect equals that of its well-known prototype of Europe.

Its food consists of seeds, vegetables, grasses, insects, &c.

It breeds in the latter part of September; the situation chosen for the purpose being a clear spot in a valley, or on the side of a grassy hill: the eggs are usually deposited on the bare ground; occasionally, however, a few sticks are spread for them to lie upon. They are two in number, three inches long by two inches and two lines broad, and are of an olive colour, stained with longitudinal dashes of brown.

Crown of the head and occiput black; sides of the head, the neck and breast greyish white, each feather crossed by numerous fine zigzag bands of brown, giving those parts a freckled appearance; wing-coverts black, largely tipped with white; all the upper surface, wings and upper tail-coverts brown, very minutely freckled with reddish brown; some of the feathers towards the hinder parts of the body tinged with grey; tail grey, crossed near the centre by an interrupted band of white, minutely freckled with white, margined with brown, and slightly tipped with white; chest crossed by an irregular band of black, beyond which the under surface is white; under tail-coverts greyish black tipped with white; irides greenish white; eyelash pale olive-yellow; bill straw-white, with olive and black culmen; legs and feet straw-yellow.

The figures are about half the natural size.



OTIS AUSTRALASIANUS: *Gould.*

H.C. Richter del. et lithog. *C. Hullmandel Imp.*

ŒDICNEMUS GRALLARIUS.

Southern Stone Plover.

Charadrius grallarius, Lath. Ind. Orn. Supp., p. lxvi.
———— *frenatus*, Lath. Ind. Orn. Supp., p. lxvii.—Less. Man. d'Orn., tom. ii. p. 321.
High-legged Plover, Lath. Gen. Syn. Supp., vol. ii. p. 319.—Ib. Gen. Hist., vol. ix. p. 320.
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Bridled Plover, Lath. Gen. Syn. Supp., tom. ii. p. 320.—Ib. Gen. Hist., vol. ix. p. 342.
Œdicnemus grallarius, List of Birds in Brit. Mus. Coll., part iii. p. 59.
Charadrius longipes, Wagl. Syst. Avium, Charadrius, sp. 4.
———— *fuscus*, Lath. Ind. Orn. Supp., p. lxvi.?
Brown Plover, Lath. Gen. Syn. Supp., vol. ii. p. 320.?—Ib. Gen. Hist., vol. ix. p. 342.?
Charadrius griseus, Lath. Ind. Orn. Supp., p. lxvii.?
Grisled Plover, Lath. Gen. Syn. Supp., vol. ii. p. 320.?—Ib. Gen. Hist., vol. ix. p. 342.?
Weĕ-lo, Aborigines of Western Australia.

There are evidently two species of Stone Plover inhabiting Australia, one ranging all along the southern coast from east to west, and the other along the northern. At a hasty glance they appear very similar, but on comparison the northern bird is found to possess a much shorter wing and considerably longer tarsi than the bird here represented, which has been long known to us, having been described by Latham in his "Index Ornithologicus" under the name of *Charadrius grallarius*, and which inhabits all the open country to the southward of the 25th degree of south latitude. I have specimens now before me from Swan River, South Australia and New South Wales, in all of which countries it is equally common, wherever districts occur suitable to its habits and mode of life. Sandy plains, the crowns and sides of grassy hills and flats between the mountain ridges, particularly those that are of a rough and stony character, are the situations it usually frequents, and where it is mostly met with in pairs, but is occasionally seen in small companies of from eight to ten or more in number; it is at all times a shy bird, and it requires some degree of stratagem to approach it within gun-shot. It runs with great facility, and when not disposed to take wing squats on the ground by the side of a stone or a prostrate log of wood, and there remains so close as almost to admit of being trodden upon before it will rise. Upon an intruder approaching the vicinity of its young, it employs many enticing actions to attract his notice to itself, and if possible lead him away from the spot; at one moment assuming lameness to such an extent as to appear incapable of walking, at other times hanging down its wings as if escape by flight was impossible, yet withal is so wary that I never knew one captured by the hand, or obtained by any other means than by shooting it. While in a state of quiescence or walking about the plains, it is a stately and imposing bird; when driven to take wing it mounts in the air with a quick, rather laboured motion of the wings, does not fly to any great distance, but usually pitches again in some clear place among the trees, and seeks safety by running off and secreting itself among the brushes or squatting on the ground. On the approach of evening and during the early part of the night, its loud, harsh and peculiar cry, resembling the word *weĕ-lo* two or three times repeated, is often heard. It chiefly feeds at night upon insects of various kinds and berries.

The eggs are invariably two in number, and are deposited on the bare ground during September and the four following months. They vary considerably in colour, as well as in the form of their markings; their usual ground-colour is pale buff, thickly blotched all over with umber-brown; they are about two inches and a quarter long by one inch and five-eighths broad.

The markings and general appearance of the two sexes are so similar, that it is scarcely possible to distinguish the male from the female without the aid of dissection.

Crown of the head, back of the neck and back grey, each feather with a line of brownish black down the centre; space surrounding the eye white, bounded in front and below with a narrow streak, which, as well as the ear-coverts and a broad stripe down each side of the neck, is dark brown; lores and chin white; scapularies blackish brown, margined at the base with grey; the upper rows of wing-coverts brown, the lower ones white tipped with brown, all with a broad stripe of black down the centre; primaries brownish black, crossed towards the extremities by a broad irregular band of white; tertiaries light brown, with a dark stripe down the centre, and margined with white; tail brown, crossed by several bands of white and dark brown, and largely tipped with black; breast and abdomen buffy white, with a broad stripe of brownish black down the centre of each feather; lower part of the abdomen white; bill black; irides yellow; eyelash black; legs sickly yellowish olive, gradually passing into the brown of the feet.

The Plate represents a male somewhat less than the natural size.



J. Gould and H. C. Richter del et lith.

ŒDICNEMUS GRALLARIUS.

Hullmandel & Walton Imp.

ESACUS MAGNIROSTRIS.

Large-billed Plover.

Œdicnemus magnirostris, Geoff.—Temm. Pl. Col. 387.—Vieill. Nouv. Dict. d'Hist. Nat., tom. xxiii. p. 251.—Ib. Ency. Méth. Orn., part i. p. 339. pl. 234. fig. 1.
Charadrius magnirostris, Lath. Ind. Orn. Supp., p. lxvi.—Wagl. Syst. Avium, Charadrius, sp. 3.
Burhinus magnirostris, Less. Man. d'Orn., tom. ii. p. 335.—Ib. Traité d'Orn., p. 547.
Great-billed Plover, Lath. Gen. Syn. Supp., vol. ii. p. 319.—Ib. Gen. Hist., vol. ix. p. 341.
Œdicnemus recurvirostris, Swains.
Carvanaca grisea, Hodgs.
Esacus magnirostris, G. R. Gray, List of Gen. of Birds, 2nd Edit. p. 83.
Weĕ-lo, Aborigines of Port Essington.

This fine species of Plover is tolerably abundant along the northern and north-western parts of Australia, where it gives a preference to the low flat shores of the sea, on which every receding tide leaves crabs, marine insects, worms and various kinds of mollusks, which form its natural food; hence we see a marked difference in the habits of this bird from those of the true *Œdicnemi*, with which it was formerly placed; the latter being entirely confined to inland districts, such as open plains and grassy hills, while the *Esacus magnirostris* is exclusively confined to the sea-beach, and only retires inland at the breeding-season to deposit its eggs and rear its young on some grassy hill or plain, where its feeble offspring may obtain shelter until they are able to traverse the mud flats and shingly beach. At night it is said to utter a loud scream or cry, resembling the word *Weĕ-lo*, whence its aboriginal name: it is somewhat singular that the same name is applied to the *Œdicnemus grallarius* by the natives of Western Australia, where the present bird has not as yet been seen; the cry of the two birds being similar is doubtless the cause of their both being known to the natives of those distant parts of the country by the same appellation, as it is not unusual for them to name birds after the sound they utter.

The sexes bear a general resemblance to each other, and the young of the first autumn is only distinguished by its feathers being margined with grey.

I have been favoured with an egg of this fine bird by Lieut. J. M. R. Ince, R.N., who obtained it at Port Essington, and as it was not procured by Mr. Gilbert or myself, it forms a valuable acquisition to my cabinet. Its ground-colour is cream-white, streaked and marked all over with dark olive-brown, some of the markings being large and bold without assuming any regular form, and others mere blotches about an eighth of an inch in diameter; while many of the streaks are as fine as a hair, and are of a crooked or zig-zag form: it is two inches and a half long by one inch and three quarters broad; judging from analogy, I may venture to assert that two are laid at a time.

Above and below the eye a broad mark of white, which is continued down the side of the head, the eye and the white marks being surrounded by a large patch of dark blackish brown; at the angle of the lower mandible is a small patch of blackish brown; throat and sides of the face dull white; head and all the upper surface light brown, the feathers of the head and neck with a narrow line of dark brown down the centre; lesser wing-coverts dark brown, the last row crossed with white near the tip, forming a line along the wing; remainder of the coverts grey, deepening into brown on the tertiaries; first three primaries dark brown at the base and tip, and white in the centre, the remainder white stained with brown near the tip; tail grey, crossed with white near the tip, which is dark brown; fore-part of the neck like the head, but paler; breast brownish grey; abdomen and under tail-coverts buffy white; irides pale yellow; eyelids primrose-yellow; base of the bill sulphur-yellow, which colour is continued along the sides of the upper mandible above the nostrils; remainder of the bill black; tibiæ lemon-yellow; tarsi and feet wine-yellow; the upper ridge of the scales of the toes lead-colour.

The young bird is similar, but has the markings of the body less defined, the whole of the upper surface being mottled brown and grey.

The Plate represents an adult male and a young bird of the year of the natural size.

ESACUS MAGNIROSTRIS.



HÆMATOPUS LONGIROSTRIS, *Vieill.*

White-breasted Oyster-catcher.

Hæmatopus longirostris, Vieill., 2nd Edit. du Nouv. Dict. d'Hist. Nat., tom. xv. p. 410.—Ib. Ency. Méth., Part I. p. 341.
——— *picatus*, Vig. App. to King's Voy. to Australia.
——— *Australasianus*, Gould in Proc. of Zool. Soc., Part V. p. 155.

This species is so generally dispersed over the southern coast of Australia, that to particularize localities where it may be found would be superfluous, but I may state that it is more abundant in Van Diemen's Land and the islands in Bass's Straits than elsewhere. As is the case with the European species, low muddy flats under the influence of the tide, sandy bays on the sea-shore, estuaries, the mouths of rivers and marshes, are its natural places of resort. During the greater part of the year it may be observed in small companies of from three to ten or more in number, together with the *Hæmatopus fuliginosus* and other shore birds, such as Curlews, Whimbrels, Stints, Sandpipers, &c., that seek their food on beaches and sand-banks, whereon each receding tide leaves numerous mollusks and other marine animals, which afford a plentiful repast to myriads of birds of the order of which the present species forms a part. In its appearance it is very handsome and attractive, the white feathers of the wings and breast showing very conspicuously as it nimbly trips over the sands. During the breeding-season, which lasts from September to January, it leaves the shores and resorts to small islands and rocky promontories for the purpose of rearing its young. The eggs, which are two or three in number, are usually deposited on the bare ground near the water's edge; they are of a buffy stone-colour, marked all over with large irregular blotches of dark chestnut-brown, approaching to black; two inches and a quarter long by one inch five-eighths broad. The young are soon capable of running, and in case of danger secrete themselves behind a stone or in a crevice of the rocks, while the adults keep flying backwards and forwards, uttering their loud and clamorous cries with the view of decoying away the intruder,—a stratagem often resorted to by other birds.

The sexes present no external difference whatever. The young, from the time they are half-grown to maturity, have the same kind of plumage, but differ from the adults in having each black feather of the back and wings strongly edged with brown, forming circular marks and bars on nearly the whole of the upper surface.

Head, neck, breast, back, wings, and tail-feathers for three parts of their length from the tip, deep greenish black; the tips of the wing-coverts, abdomen, rump, upper and under tail-coverts, and the bases of the tail-feathers pure white; irides crimson; bill and eyelash deep orange-scarlet; feet light brick-red.

The Plate represents the two sexes of the natural size.

HÆMATOPUS LONGIROSTRIS: *Gould.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

HÆMATOPUS FULIGINOSUS, *Gould.*

Sooty Oyster-catcher.

Hæmatopus fuliginosus, Gould in Proc. of Zool. Soc.
Mur-roo-wa-dă-ree, Aborigines of Port Essington.
Black Red-bill, Colonists of Western Australia.
Black Oyster-catcher, Colonists of New South Wales, Van Diemen's Land, and Port Essington.

After a careful examination and comparison of the Black Oyster-catchers of the Cape of Good Hope, Cape Horn and Australia, I find them to differ so much from each other, that I can come to no other conclusion than that they are so many distinct species, and hence I have been induced to characterize the Australian bird under the appellation of *fuliginosus*, from the sooty colouring of its plumage.

Van Diemen's Land, the islands in Bass's Straits, and the southern coast of the Australian continent generally, are the great strongholds of this species. Like its near ally it is equally abundant wherever situations occur suited to its habits and economy; low sandy beaches at the mouths of rivers, spits of land running into the sea and small islands being its favourite places of abode; and so universally is it dispersed, that, as I have stated with regard to the *H. longirostris*, it is quite unnecessary to point out particular localities where it may be found; in fact, every small island and every yard of the coasts of the countries I have mentioned are more or less visited by it. It is a strictly stationary species, breeding in the places of its usual resort; or if any change in this respect takes place, it is that, for the sake of safety and freedom from intrusion, the bird leaves the main shore and betakes itself to small rocky islands, such as those in Bass's Straits, where, exempt from annoyance of every kind, it may rear its brood in safety.

The present species is a stout-built and powerful bird, but from the sombre colouring of its plumage it is not so conspicuous and attractive as the White-breasted Oyster-catcher.

Its eggs are two in number; two inches and three quarters long by one and three quarters broad, of a light stone-colour, blotched all over with large irregular markings of dark brown, some of which appear as if beneath the surface and of a purplish hue.

It becomes exceedingly clamorous if its nest be intruded upon, frequently uttering a loud shrill call while flying backwards and forwards near its breeding-place.

The entire plumage of a uniform sooty black, slightly glossed on the neck and under surface with green; bill and eyelash extremely rich orange-yellow; irides red; legs and feet dull brick-red.

The Plate represents a male about the natural size.

HÆMATOPUS FULIGINOSUS: *Gould.*

J. Gould and H.C. Richter del et lith.

Hullmandel and Walton Imp.

LOBIVANELLUS LOBATUS.

Wattled Pewit.

Tringa lobata, Lath. Ind. Orn. Supp., p. lxv.—Vieill. 2nde Edit. du Dict. d'Hist. Nat., tom. xxxv. p. 209.
Wattled Sandpiper, Lath. Gen. Syn. Supp., vol. ii. p. 313; and Gen. Hist., vol. ix. p. 305.
Vanellus lobatus, Vieill. Ency. Méth., Part. III. p. 1075.
Charadrius lobatus, Wagl. Syst. Av., Sp. 51.
Vanellus Novæ-Hollandiæ, Steph. Cont. of Shaw's Gen. Zool., vol. xi. p. 516.
Vanellus gallinaceus, Jard. and Selb. Ill. Orn., vol. iii. pl. 84.
Kalloo-nagh, Aborigines of New South Wales.
Alarm-bird of the Colonists.

This species is common in most parts of New South Wales, and on some of the islands in Bass's Straits, particularly on Green Island, where it was breeding at the period of my visit in January 1839. I have never observed it in Van Diemen's Land, but it is not improbable that it will hereafter be found to be an inhabitant of that island as well as of those above mentioned. It has not yet been observed in Western Australia, neither have I heard of its occurrence on the northern coast of the continent. It is an attractive and showy bird, and when unmolested approaches sufficiently close to the dwellings of the settlers to permit its actions and manners to be minutely observed. Among other places where I noticed this species, I may mention that I saw it in flocks on the edge of the small ponds immediately adjoining the house of C. Throsby, Esq., at Bong Bong, on the fine estate of James Macarthur, Esq., at Camden, at Yarrundi on the Upper Hunter. Open flats and high dry grounds appeared to be equally suitable to its existence; for nothing could be more sterile and parched than the islands in Bass's Straits, when compared with the humid flats of the Upper Hunter, covered with grasses and rank vegetation; yet in both these situations I observed it at nearly the same season of the year: its food consists of insects and worms. While on the ground it has much of the carriage of the common European Pewit (*Vanellus cristatus*), but a decided difference is observable in its mode of running, and in its more bold and attractive manners. The more lengthened form of its wings also induces a considerable difference in its flight, which has less of the flapping laboured action so conspicuous in that of the Pewit.

In some parts of New South Wales this ornamental bird has been much persecuted, and it has consequently become as shy and distrustful there as it is tame and familiar in others; hence it has obtained the name of the Alarm Bird from its rising in the air, flying round and screaming at the approach of an intruder, causing not only all of its own species to follow its example, but every other animal in the district to be on the alert. This fact I had ample opportunities of verifying on the islands in Bass's Straits, where I had scarcely stepped from the boat before every creature was made acquainted with my presence; no small annoyance to me, whose object was to secure the wary cereopsis and eagle, which with thousands of petrels and many other kinds of water-birds tenant these dreary islands.

The sexes are scarcely to be distinguished from each other, either in size or plumage; and both possess the spur on the shoulder, but it is much more developed in the male than in the female; the beautiful primrose-coloured wattle, with which the colouring of the bill and the bold eye closely assimilate, the pinky vermilion legs, and the strongly contrasted colours of its plumage, render it one of the most beautiful of the Plovers yet discovered.

The eggs, which are placed on the bare ground, are two in number.

Head, back of the neck, and sides of the chest black; back, wing-coverts and scapularies dark greyish brown inclining to cinnamon; primaries black; tail white, crossed near the extremity by a broad band of black; sides of the face, throat and all the under surface white; eye rich primrose-yellow; wattles primrose-yellow; bill pale yellow, with a horn-coloured tip; tarsi purplish red; scales black; spur yellow.

The figures are those of a male and a female of the natural size.

LORIVANELLUS LOBATUS.



LOBIVANELLUS PERSONATUS, *Gould.*

Masked Pewit.

Lobivanellus personatus, Gould in Proc. of Zool. Soc., August 23, 1842.
Al-ga-ra-ra, Aborigines of Port Essington.
Wattled Plover, Residents of Port Essington.

This new Pewit, which is as abundant in the northern parts of Australia as the Wattled Pewit is in the eastern, is more elegantly formed than that species, being of the same size in the body, but with more lengthened legs; the fleshy wattles surrounding the eyes are also much more extensively developed; the crown of the head only in the present species is black, while in the Wattled Pewit the sides of the chest and upper part of the back are of the same colour. It is a very common bird in the Cobourg Peninsula, inhabiting swamps, the borders of lakes and open spots among the mangroves, and like its near ally, is mostly seen associated in small families. It is rather a noisy species, frequently uttering its note, which is not unlike the native name given above, both while on the wing and on the ground.

The stomach of this bird is very muscular, and its food while living in the marshes consists of aquatic coleoptera and small crustaceous animals, but when on the plains of the interior it readily accommodates itself to the kind of insect food it may find there.

The task of incubation is performed during the months of August and September; the eggs, which are two or three in number, being laid in a hollow on the bare ground at the edge of a flat adjoining a salt-marsh; they are of a dull olive-yellow, dashed all over with spots and markings of blackish brown and dark olive-brown, particularly at the larger end; they are one inch and five-eighths long by one inch and three-sixteenths broad, somewhat pointed at the smaller end.

Crown of the head and occiput jet-black; sides of the face, back of the neck, rump and all the under surface pure white; back and scapularies light brownish grey; wing-coverts grey; primaries deep black; secondaries white at the base on their inner webs, cinnamon-grey on their outer webs, and largely tipped with black; tail white at the base, largely tipped with black, the extreme ends of the feathers being cinnamon-grey, particularly the two centre ones; irides primrose-yellow; wattles lemon-yellow; bill lemon-yellow at the base, black at the tip; legs and feet carmine-red; the scales in front blackish green.

The figures are those of a male and a female of the natural size.


LOBIVANELLUS PERSONATUS, Gould
Lizard and W.C. Bickerdyke
C. Hullmandel Imp.

SARCIOPHORUS PECTORALIS.

Black-breasted Pewit.

Charadrius pectoralis, Cuv. in Mus. Par.—Wagl. Syst. Av., sp. 8.
——— *tricolor*, Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xxvii. p. 147.—Ibid. Ency. Méth. Orn., Part I. p. 337.

This species is known to inhabit Van Diemen's Land, South Australia and New South Wales, but over what other portions of the Australian continent its range is extended, has not yet been ascertained. I have never seen it in collections either from the western or northern shores. Its favourite localities are open sterile downs, thinly covered with grasses or other kinds of vegetation; but it is occasionally to be met with on the grassy flats in the neighbourhood of rivers. It is much more tame in its disposition than the Wattled Pewit, and permits a near approach before taking alarm; hence there was but little difficulty in obtaining specimens. It trips very quickly over the ground, much after the manner of the true Pewits, and when flushed generally flies off in a straight line, frequently very near the ground. I have never seen it mount in the air like the Common Lapwing, or perform during flight those sudden turns and dips so frequently exhibited by that species. So far as I have observed, it goes in pairs, or at most in companies of three. Nearly full-grown young were obtained in the month of November, from which we may infer that it is a very early breeder.

The eggs are two or three in number, and are deposited on the bare ground without any nest; they are one inch and a half long by one inch and an eighth broad; ground colour light olive-grey, very thickly blotched and stained with brown, so as nearly to cover the surface, particularly at the larger end. For the two eggs in my collection I am indebted to the kindness of Mr. Kermode of Van Diemen's Land, on whose estate they were taken.

The sexes are alike in colour, but the female has the lobe before the eye much smaller than in the male.

Crown of the head, line running from the angle of the mouth beneath the eye, and down the sides of the neck, and a broad crescent-shaped band across the breast jet-black; line from the eye to near the occiput, chin, throat, flanks, abdomen, upper and under tail-coverts white; back light brown; primaries brownish black; wing-coverts bronzy brown, passing into black towards the tip of each feather, and tipped with white; a few of the outer secondaries white, margined on the extremities of their outer webs with black, then a few entirely white, and the last two marked like the coverts, but largely margined with white; scapularies and lower part of the back bronzy brown; rump dark olive with bronzy reflexions; tail white, crossed near the tip by a broad irregular band of black; tip of the upper mandible horn-colour; the remainder of the bill beautiful primrose-yellow; naked parts of the thigh and knees dark pink; tarsi and toes blackish brown, the latter inclining to pink-red; irides yellow, surrounded by a rim of deep primrose extending in an oblique direction to the fleshy protuberance at the base of the upper mandible, which is blood-red in the male, much lighter or flesh-red in the female.

The figures represent both sexes of the natural size.



SARCIOPHORUS PECTORALIS.

J. Gould and H. C. Richter del.t

C. Hullmandel Imp.

SQUATAROLA HELVETICA.

Grey Plover.

Tringa Helvetica, Linn. Syst. Nat., vol. i. p. 250.—Gmel. Edit., vol. i. p. 676.
Vanellus Helveticus, Briss. Orn., vol. v. p. 106. tab. 10. fig. 1.—Id. 8vo, vol. ii. p. 239.
Charadrius hypomelas, Pall. Reise, vol. iii. p. 699.
Vanneau de Suisse, Buff. Pl. Enl., 853.—Ib. Hist. des Ois., tom. viii. p. 60.
Swiss Sandpiper, Lath. Gen. Syn., vol. v. p. 167.—Id. Supp., p. 248.—Ib. Gen. Hist., vol. ix. p. 270.
Tringa Squatarola, Linn. Faun. Suecica, No. 186.—Gmel. Edit. Linn. Syst. Nat., vol. i. p. 682.
Vanellus griseus, Briss. Orn., vol. v. p. 100. tab. 9. fig. 1.
——— *melanogaster*, Bechst.—Temm. Man. d'Orn., vol. ii. p. 345.—Id. 2nd Edit., vol. ii. p. 547.—Horsf. in Linn. Trans., vol. xiii. p. 186.
Vanneau Pluvier, Buff. Pl. Enl., 854.—Ib. Hist. des Ois., tom. viii. p. 68.
Grey Plover and *Grey Sandpiper* of British authors.
Squatarola helvetica, Cuv.—List of Birds in Brit. Mus. Coll., part iii. p. 62.

I HAVE compared specimens of this bird killed in Australia with others obtained in India, North America and Europe, and find the whole of them identical. I have never seen an Australian specimen with the rich black colouring of the under surface which renders Asiatic, American and European specimens so conspicuous in the summer or breeding-season, hence we may infer that it is only the young birds that migrate so far to the southward as Australia; I say migrate, because I do not believe that it breeds in that country, but that it is merely an occasional or accidental visitor. The specimens I possess are from distant parts of the country, one being from the eastern and the other from the western colonies.

Although it rather affects the low muddy shores of the sea-coast and the mouths of large rivers, and is seldom seen so far inland as the Golden Plover (*Charadrius pluvialis*), it has many habits in common with that species, and undergoes similar changes of plumage. Its food consists of worms, various kinds of insects and their larvæ.

Little is known respecting its nidification beyond the fact that the eggs are four in number, of a light olive blotched with black.

The two Australian specimens above referred to have :—

The crown of the head, upper surface and wings light olive, mottled with white; primaries blackish brown, with the basal portion of their inner webs and the apical half of their shafts white; rump white; tail white, crossed by broad bars of light olive; face and all the under surface white, with numerous brown striæ, and a wash of buff on the sides of the neck and across the breast; irides blackish brown; bill and feet blackish olive.

The figures represent the two birds of the natural size.



SQUATAROLA HELVETICA.

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

CHARADRIUS XANTHOCHEILUS, *Wagl.*

Australian Golden Plover.

Charadrius xanthocheilus, Wagl. Syst. Av. *Charadrius*, sp. 36.—Jard. and Selb. Ill. Orn., vol. ii. pl. 85.

This species of Golden Plover, which I have referred to the *Charadrius xanthocheilus* of Wagler, although nowhere very abundant, is generally dispersed over all the colonies from Van Diemen's Land to the extreme north of the continent of Australia, and I saw a specimen in the Museum at Sydney which had been procured on Melville Island; its range therefore is very extensive. I obtained several specimens on the banks of the Derwent in Van Diemen's Land, observed it in small numbers on the flats below Clarence Plains, and also killed examples on one of the islands opposite Flinders' Island.

Its habits, manners, and general economy so closely resemble those of the Golden Plover (*Charadrius pluvialis*) of Europe, that a description of one is equally characteristic of the other. Like that bird, it frequents open plains in the neighbourhood of marshy lands or the sea-beach, runs with amazing facility, and flies with equal rapidity.

Indications of the future black colouring of the breast or breeding plumage begin to appear early in the spring, and as the season advances, every variety of colouring occurs from the mottled yellow of winter to the uniform black under-surface of summer, which latter state however is but seldom seen; whence I am induced to doubt its remaining to breed in any of the southern parts of Australia.

The full summer plumage is as follows:—The whole of the upper surface and tail very dark brown, each feather with a series of oblong yellowish and whitish spots along their margins; primaries dark brown with white shafts; lores, sides of the face, breast and all the under surface jet-black, bounded by a broad mark of white, which crosses the forehead, passes over the eye, down the side of the neck and along the flanks, where it becomes broad and conspicuous; under wing-coverts and the lengthened feathers covering the insertion of the wing uniform pale silvery brown; irides dark brown; bill dark olive; legs and feet leaden-grey.

In the winter season the black and white markings of the under surface entirely disappear, and are replaced by a buffy tint mottled with brown, the mottled appearance being produced by a triangular spot of pale brown at the tip of each feather.

The Plate represents the bird in the summer and winter plumage, and of the natural size.

CHARADRIUS XANTHOCHEILUS: *Wagl.*

J. Gould and H.C. Richter del et lith.

Bellmand del. & Walton Imp.

CHARADRIUS VEREDUS, *Gould.*

Brown Plover.

Charadrius veredus, Gould in Proc. of Zool. Soc., February 22, 1848.

A specimen of this species was procured at Port Essington by Mr. Gilbert, and a second has been sent to me from Sydney by Mr. Strange; these, and one other example, are all that have come under my observation; we may consequently infer that it is a very rare bird in Australia. Judging from its structure and the character of its plumage, it would seem to be nearly allied to the restricted genus *Eudromias* or Dottrells: I have however placed it in the genus *Charadrius*, until a knowledge of its habits, whether or not it undergoes any periodical changes of plumage, and if the specimens from which I have taken my figures be perfectly adult, have been ascertained,

Crown of the head and all the upper surface brown, each feather narrowly fringed with buff; primaries blackish brown, the shaft of the first white; tail brown, narrowly edged with white, the brown colour gradually fading as the feathers recede from the centre; face, a broad stripe over the eye and the chin buffy white; sides and back of the neck and the breast buffy brown; abdomen and under surface white; irides very dark brown; legs and feet brownish flesh-colour; bill dark brown.

The figures are of the natural size.



CHARADRIUS VEREDUS; *Gould*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton imp.

EUDROMIAS AUSTRALIS, *Gould.*

Australian Dottrel.

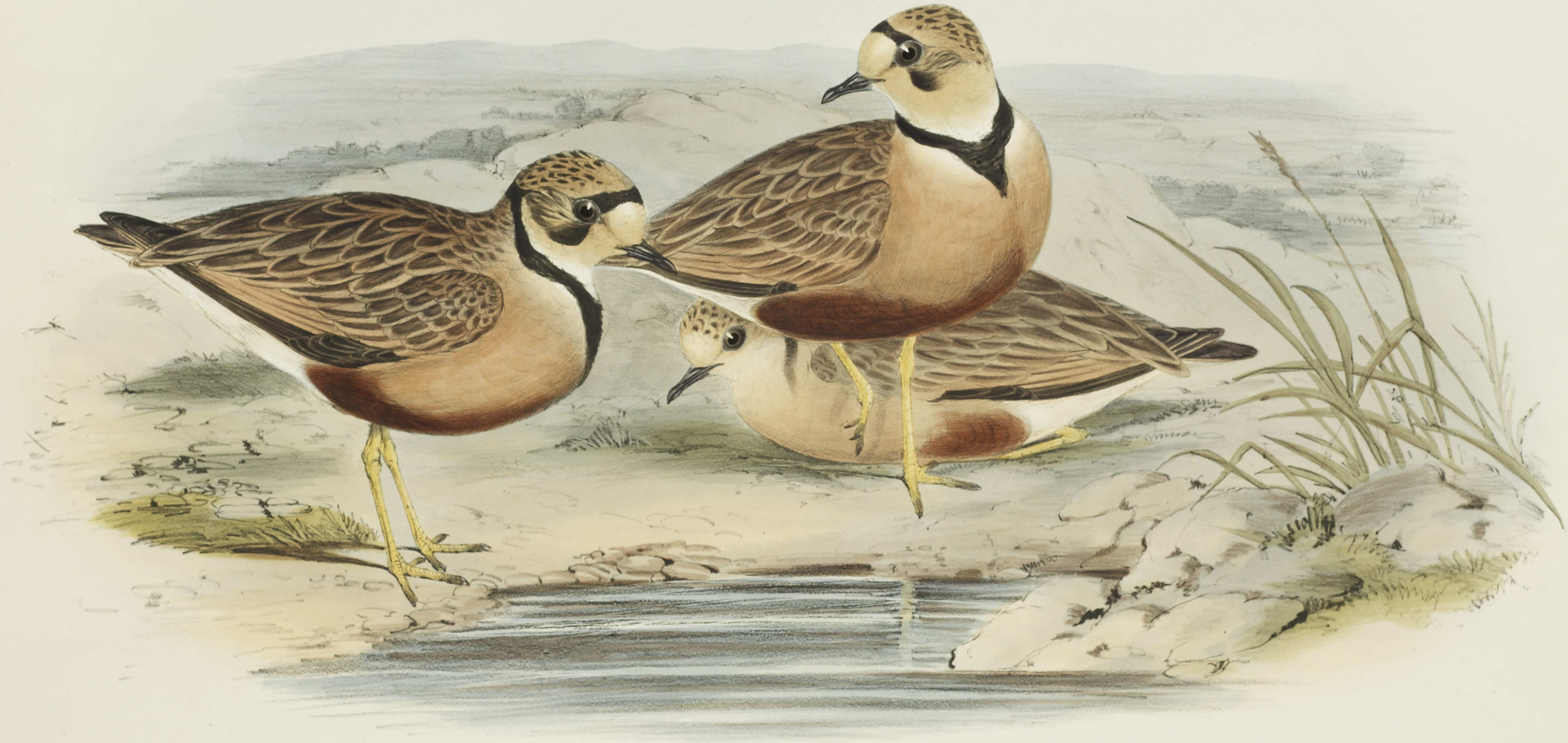
Eudromias Australis, Gould in Proc. of Zool. Soc., Part VIII. p. 174.

By the ornithologist, the bird forming the subject of the present memoir will be looked upon with the greatest interest, as an additional species of a genus of which hitherto only a single example was known, namely the Common Dottrel (*Eudromias morinella*) of the British Islands. Nothing can be more interesting than to observe how beautifully many of the species of the limited groups of the northern hemisphere are represented by others in Australia: for instance, the genera *Himantopus*, *Avocetta*, *Glareola*, &c., of which a single species only of each has yet been discovered in either country. For my first knowledge of this very rare bird I am indebted to the kindness of Captain Sturt, who forwarded me a young individual from the high lands near the river Murray in South Australia. A fine adult has since been transmitted to this country by His Excellency George Grey, Esq., Governor of South Australia, and is now in the British Museum, to which Institution it was presented by that gentleman, together with many other rare birds. It is most gratifying to know, that Mr. Grey, in addition to his arduous duties as Governor, is devoting as much of his attention as possible to natural history, the result of which will doubtless be, that many fine and interesting productions will be brought to light which would otherwise have remained buried in obscurity.

Many years must probably elapse before anything is known of the habits and economy of the Australian Dottrel; for even those of its European ally, *Eudromias morinella*, are but little understood, in consequence perhaps of its affecting localities far removed from the habitation of man; a trait in all probability equally characteristic of the habits of the Australian bird.

Forehead and all the upper surface light sandy buff, the centres of the feathers being brown; primaries brownish black with sandy buff shafts, and all but the first four broadly margined with the same; throat buffy white, below which a crescent-shaped mark of blackish brown; chest, flanks and under surface of the wing buff, passing into reddish chestnut on the abdomen, beyond which the vent and under tail-coverts are white; tail brownish black, the centre feather margined with buff, the outer ones with white; bill dark olive-brown; feet yellowish brown.

The figures, which are of the natural size, represent the adult in two different positions, and the young in the plumage of the first autumn.



EUDROMIAS AUSTRALIS: *Gould*

J. Gould and H. C. Richter del et lith.

C. Hullmandel Imp.

HIATICULA BICINCTA.

Double-banded Dottrel.

Charadrius bicinctus, Jard. and Selb. Ill. Orn., vol. i. pl. 28.
Chestnut-breasted Plover, Lath. Gen. Hist., vol. ix. p. 324.
Ægialitis bicinctus, Gould in Syn. Birds of Australia, Part II.

My friend Ronald C. Gunn, Esq., informs me that he has found this fine species plentifully dispersed along the northern shores of Van Diemen's Land, particularly at Circular Head and its neighbourhood. I never but once encountered it in a state of nature myself, and judging from the unfrequency of its occurrence in collections from Australia, its true habitat would seem to be but seldom visited. During my stay at George Town, flocks of considerable numbers visited the common in the vicinity, and appeared to be acting under some migratory impulse, for after remaining a day or two they departed to some other part of the country; not, however, before I had procured as many specimens as I required. This occurred about the 15th of May, the middle of the Australian winter. These flights consisted of birds of various ages and in different states of plumage, some having mere indications only of the bands on the breast, while others had these marks well defined, but none so strongly as in the principal figure in the accompanying Plate, which appears to be the full summer or breeding plumage. The circumstance of their assembling in large flocks, and evincing a partiality to the green sward rather than to the shingly beach, leads me to assign to this bird a different habit from the more typical members of the genus, and the dark colour and greater length of its tarsi and bill show an approach to the more typical Plovers. It would not surprise me if it should prove, that instead of breeding on the sandy shores, this species resorts for that purpose to inland districts; a point it would be most interesting to ascertain, and to which I beg to direct the attention of the highly esteemed friend to whom I have alluded above. Of the numerous specimens I killed at George Town, no two were alike; consequently I am uncertain whether the sexes when adult are similarly marked or not, but judging from other species I presume they are.

The Double-banded Dottrel runs over the ground with great swiftness; all in the flock take flight together, and mount high in the air, which they pass through very quickly, suddenly wheel about, and after flying a mile or two return, and pitch again within a hundred yards of the spot from whence they had arisen.

In the adult state a broad stripe of white crosses the forehead, above which the feathers are black, which colour gradually passes into the uniform pale brown which covers the whole of the upper surface; outer webs of the primaries blackish brown; inner webs paler; throat white, surrounded with a narrow line of black, which commences above the upper mandible and continues down the sides of the neck and forms a broad band across the breast; across and down the centre of the abdomen a broad band of bright chestnut; the rest of the under surface pure white; two centre tail-feathers greyish brown, those on each side paler, and the exterior ones white; irides blackish brown; eyelash scarlet; bill black, slightly tinged with olive; feet pale sickly yellowish white; joints of the knees and toes browner.

The Plate represents an adult male and a female, and an immature bird of the natural size.



HIATICULA BICINCTA.

J. Gould and H. C. Richter del et lith.

Hullmandel & Walton imp.

HIATICULA RUFICAPILLA.

Red-capped Dottrel.

Charadrius ruficapillus, Temm. Pl. Col., 47. fig. 2.—Wagl. Syst. Avium, Sp. 33.
——— *marginatus*, Geoff. in Mus. Paris.—Less. Traité d'Orn., p. 544.—Ib. Man. d'Orn., tom. ii. p. 318.—Bonn. et Vieill. Ency. Méth. Orn., part i. p. 335.—Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xxvii. p. 138.
Hiaticula ruficapilla, List of Birds in Brit. Mus. Coll., part iii. p. 71.
Sand-Lark and *Red-necked Plover*, Colonists of Swan River.

The Red-capped Dottrel is universally dispersed over every part of the sea-shores of Australia that I have visited, and everywhere evinces a greater preference for the shingly beach of the ocean, and especially for deep salt-water bays, than for the sides of rivers and inland waters; it is very numerous in Van Diemen's Land, on Flinders' Island, on the sand-banks at the mouth of the Hunter in New South Wales and at Port Adelaide in South Australia; and Mr. Gilbert states that it is equally abundant in Western Australia, where it is likewise so strictly a bird of the coast that he never saw it inland. It is usually met with in pairs, but may be occasionally observed associating in small companies.

I found many of its eggs on Flinders' Island, deposited in pairs in a slight depression of the sand among the shingle just above high-water mark; they were very difficult to detect, in consequence of their colouring very closely assimilating to that of the material among which they were placed; those procured by Mr. Gilbert in Western Australia were deposited on a small mound of sand and sea-weed on the sandy beach at a distance of from ten to twenty yards above high-water mark. The breeding-season comprises September and the three or four following months.

The stomach is very muscular, and the food consists of small mollusca of various kinds.

Like the *Tringæ* generally, this bird resorts to every possible device in order to lure an intruder from its nest: throwing itself down upon its chest and flapping its wings as if in the last agonies of death, it will so continue until he has approached almost near enough to place his hand upon it, when it moves along for several yards, dragging one of its legs behind it as if it were broken, and if still followed up attempts to fly, and so well imitates the motions of a bird wounded in the wing, that the intruder is easily misled, and the eggs remain undiscovered.

The eggs, which are an inch and a quarter in length by seven-eighths of an inch in breadth, are of a pale stone-colour, sprinkled all over with small irregular blotches of brownish black.

The male has the forehead crossed by a broad band of white, which gradually diminishes to a point at the posterior angle of the eye; above this is another band of black, which also diminishes to a point at the same place; from the angle of the mouth to the eye is a line of black, which is continued from the posterior angle of the eye in an indistinct form down the sides of the neck; crown of the head, nape and back of the neck rich rusty red; all the upper surface and wings pale brown, each feather margined with a still lighter tint; primaries blackish brown; the shafts and extreme edge of the inner webs white; four central tail-feathers dark brown, the remainder white; all the under surface white; irides very dark brown; bill dark reddish brown; naked part of the legs above the tarsi dark greenish grey; tarsi light grey; feet blackish brown.

In the female the distribution of colour is precisely the same, but the hues are all much paler, and the marks about the face are light brown instead of black.

The Plate represents the two sexes of the natural size.



J. Gould and H.C. Richter del. et lith.

HIATICULA RUFICAPILLA.

Hullmandel & Walton Imp.

HIATICULA MONACHA.

Hooded Dottrel.

Charadrius Monachus, Geoff. in Mus. Paris.—Wagl. Syst. Av., sp. 15.
———— *cucullatus*, Vieill., Nouv. Dict. d'Hist. Nat., p. 136.
Ægialitis Monachus, Gould in Syn. Birds of Australia, Part II.
Hiaticula Monacha, List of Birds in Brit. Mus. Coll., part iii. p. 70.

This elegant species of Dottrel is universally dispersed over the sea-coasts of the southern parts of Australia, but is perhaps more abundant in Van Diemen's Land and the islands in Bass's Straits than elsewhere; I never observed it far inland, not even on the low saline marshy ground contiguous to the coast, in which respect it differs from the habits of the Common Dottrel of Europe, to which it is so nearly allied. I frequently found its two eggs on the shingly beach in a slight depression hollowed out by the bird for their reception just above high-water mark: these are so similar in appearance to the material upon which they are deposited that they would readily escape the attention of a casual observer; those I collected were of a pale stone-colour, sprinkled over with numerous small irregularly-shaped marks of brownish black, and are one inch and a half long by one inch and an eighth broad.

While tripping over the sandy beach, which it does with much elegance of movement, the black head of the male shows very conspicuously.

The male has the head, fore-part of the neck, and a band across the upper part of the back sooty black; back of the neck and all the under surface white; back, shoulders and tertials greyish brown; centre of the wing and the basal portion of the internal webs of the primaries and secondaries white, the rest black; two middle tail-feathers black; the three next on each side white at the base and tip and black in the centre, the remaining feathers wholly white; irides yellowish or orange-brown; eyelash rich reddish orange or scarlet; bill rich orange at the base, passing into yellow and black at the tip; legs flesh-colour.

The female differs from the male in having the crown mottled with black and white, the face and throat white, and in having only a narrow line of black at the base of the neck behind.

Youthful birds may be known by their resembling the female, but having the feathers of the back and upper surface narrowly fringed with brownish black.

The figures represent the two sexes of the natural size.



Drawn from Nature & on Stone by J. & E. Gould.

HIATICULA MONACHA.

Printed by C. Hullmandel.

HIATICULA INORNATA, *Gould.*

Allied Dottrel.

Hiaticula inornata, Gould in Proc. of Zool. Soc., Part XIV.

I HAVE for some years had in my possession two examples of this species, the uniformity of whose colouring suggested the term of *inornata* as an appropriate appellation; lately, however, through the kindness of Lieut. Ince, R.N., I have received other examples with a brighter style of marking, which is doubtless characteristic of the summer or breeding-season; and which renders the above name only applicable to the bird when in the plumage of winter. It is nearly allied to the *Hiaticula Wilsonii* of North America, of which it forms a beautiful representative in the distant country of which it is a native.

I possess no information whatever as to the extent of the range of this new species; Mr. Gilbert found it abundant on most of the sandy points and bays in the neighbourhood of Port Essington, and I believe that it also inhabits the islands in Torres' Straits and New Guinea; Lieut. Ince's specimens were procured on Oomaga Island in Torres' Straits.

That an extraordinary difference exists in the relative size of the sexes is evident, some specimens being fully a third less than others, but I have not yet had sufficient opportunities to satisfy myself on the subject.

The stomachs of those dissected contain the remains of small crustaceous animals, and a large portion of sand.

The male in summer has the forehead white, above which is a stripe of black; all the upper surface pale greyish brown; crown of the head rufous, which colour is continued on the back and sides of the neck, and meeting on the centre of the breast forms a pectoral band; wings dark brown, the coverts and secondaries margined and tipped with white; the shafts of the primaries are also white; rump white; six central tail-feathers dark brown tipped with white; the lateral feathers white, tinged with brown in the centre; lores, line below the eye and ear-coverts black; chin, throat and all the under surface white; irides dark brown; bill blackish grey; tarsi light ash-grey; feet greenish grey.

The winter plumage differs in wanting the rufous tints about the head, neck and breast; in the ear-coverts being brown, and in having a brown patch like the commencement of a band on either side of the chest.

The figures are of the natural size.



HIATICULA ORNATA: *Gould*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

HIATICULA NIGRIFRONS.

Black-fronted Dottrel.

Charadrius nigrifrons, Cuv. in Mus. Paris.—Temm. Pl. Col., 47. fig. 1.—Wagl. Syst. Av., sp. 20.
——— *melanops*, Vieill., Nouv. Dict. d'Hist. Nat., tom. xxvii. p. 139.—Ib. Ency. Méth. Orn., Part I. p. 335. pl. 233. fig. 3.
Ægialitis nigrifrons, Gould in Syn. Birds of Australia, Part II.
Hiaticula nigrifrons, List of Birds in Brit. Mus. Coll., Part III. p. 71.

The temperate latitudes of Australia constitute the true habitat of this beautiful little Dottrel; for so far as I have been able to learn, it is never found in the northern part of that country, nor can Van Diemen's Land claim it as a part of its fauna; the climate of the latter country being less genial, and the seas which wash its shores being too rough and boisterous for the abode of so delicate a bird as the *Hiaticula nigrifrons*. Even in Australia the exposed sea-beaches seem to be avoided, and it is most frequently found in the interior of the country, on the margins of pools and lakes, and in the most retired situations. It also frequents the sides of rivers running into the heart of the country; I frequently encountered it while descending the Namoi, on the lowest part of which river I was so fortunate as to discover its eggs. They were deposited on the ground beside the stream; they now grace my cabinet, and are esteemed as one of my greatest rarities, and to which many pleasing associations are attached, connected with my visit to the distant region in which they were procured.

The colonies of Swan River, South Australia and New South Wales are equally visited by this bird; and its range appears to be general over those portions of Australia lying between the twenty-eighth and thirty-seventh degrees of south latitude.

No member of the genus is more tame than the present; for as it trips nimbly along the sides of the pools it will allow of a sufficiently near approach for the observer to see the colour of the eye, and the brilliant ring of scarlet which encircles it; and when forced to take wing it merely flies to the opposite bank or to a very short distance, and then alights again.

The two eggs above-mentioned so nearly resembled the surface of the sand-bank upon which they were deposited, that it was by the merest chance they were not passed by unnoticed. In form they nearly resemble the eggs of other Dottrels, being considerably pointed at the smaller end; they are one inch and three-sixteenths long by three-quarters of an inch broad; of a pale stone or dirty white colour, very numerously but minutely speckled with dark brown.

The sexes are precisely alike in the colouring of their plumage, and nearly so in size.

Forehead, a stripe commencing at the eye passing over the ear-coverts and round the back of the neck, and a broad band crossing the chest and advancing somewhat down the centre of the breast, black; a stripe of white passes over each eye and continues round the back of the neck, separating the black band from the crown, which with the back, the long tertials, and the middle of the wing, are brown; scapularies deep chestnut; tips of the greater coverts white, forming an obscure band across the wing; primaries black; throat, abdomen and under tail-coverts white; two middle tail-feathers brown at the base and black at the tip; the next three on each side white at the base, gradually passing into blackish brown, and largely tipped with white, the remainder entirely white; bill rich orange at the base and black at the tip; feet orange flesh-colour in some, in others pale flesh-colour; irides dark brown; eyelash bright red.

The young have a crescentic mark of a lighter colour on the feathers of the upper surface, and have the colouring of the plumage and soft parts less brilliant and well-defined than the adults.

The Plate represents a male and a female of the natural size.



HIATICULA NIGRIFRONS.

J. Gould and H. C. Richter del et lith.

Hullmandel & Walton Imp.

ERYTHROGONYS CINCTUS, *Gould.*

Banded Red-knee.

Erythrogonys cinctus, Gould in Proc. of Zool. Soc., Part V. p. 155.—Ib. Syn. Birds of Australia, Part IV.

Over what extent of country the Banded Red-knee may range is yet to be determined; the south-eastern portions of Australia are the only localities from which, if I recollect rightly, I have ever seen or received specimens.

It is a summer visitor to New South Wales, where it is esteemed a rare bird, and where its presence is probably altogether dependent upon the kind of season that may occur; its natural habits leading it to frequent the borders of lagoons, muddy flats and the banks of rivers, none but wet and humid seasons, which, it is to be regretted, are so unfrequent in Australia, are suitable to it: I believe it is seldom or ever seen either on, or even near the sea-coast, but that it is strictly an inhabitant of the interior. In October and November, 1839, I found it tolerably abundant on the flats near Aberdeen, and on the upper part of Dartbrook, a tributary of the River Hunter, and on visiting the Mokai and Namoi in the following month I observed it to be equally numerous on those rivers. I seldom saw more than two together, and these were almost always male and female: they appeared, as I have before stated, to prefer soft muddy banks to the stony or shingly margins of the rivers, which preference may be attributed to the circumstance of the former yielding a more abundant supply of food. It is a most showy and active little bird, and is so tame that I had not the slightest trouble in shooting as many as I pleased. Its actions and manners are very peculiar, and partake both of those of the Dottrell and the Sandpiper; having the stooping carriage of the former, and the quick bobbing motion of the head and tail of the latter: its olive-green plumage and long tertiaries also ally it to the Sandpipers, while in its large head and eye it approximates to the Dottrell.

The sexes present no variation in the colour or marking of their plumage, neither did I detect any difference in size by which they might be distinguished. Although they were probably breeding at the period of my visit to the above-mentioned localities, I could never discover their eggs, nor could the two intelligent natives accompanying me either aid or give me any information on the subject.

Its food consists of insects of various kinds.

Head, ear-coverts, back of the neck, and chest black; a small patch under the eye, throat, chest, sides of the neck, centre of the abdomen, and under tail-coverts white, the latter spotted with dark brown; back, centre of the wings, and tertiaries olive, tinged with bronzy brown; tips of the secondaries, and the inner webs of the tips of the six contiguous primaries white; rump and two middle tail-feathers olive, the remaining tail-feathers white; flanks chestnut; irides nearly black, with a narrow black eyelash; bill pulpy, pink-red at the base, black at the tip; thigh, knee, and for a quarter of an inch down the tarsus pink-red, the remainder of the tarsus and the toes lively bluish lead-colour.

The figures are those of a male and a female of the natural size.



ERYTHROGONYS CINCTUS: *Gould*

J & E. Gould del.t *C. Hullmandel Imp.*

GLAREOLA GRALLARIA, *Temm.*

Australian Pratincole.

Glareola grallaria, Temm. Man. d'Orn., tom. ii. p. 503.

——— *Isabella*, Vieill. Gal. des Ois., tom. ii. p. 159. pl. 263.—Less. Traité d'Orn., p. 541.—Ib. Man. d'Orn., tom. ii. p. 290.—Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xiii. p. 221.—Bonn. et Vieill. Ency. Méth. Orn., part iii. p. 1048.

——— *Australis*, Leach in Linn. Trans., vol. xiii. p. 132. pl. 14. fig. 1, 2.

Australasian Pratincole, Lath. Gen. Hist., vol. ix. p. 366.

This species of Pratincole possesses several remarkable specific distinctions, among which, as will be seen on reference to the figures in the accompanying Plate, are the great length of the tarsi and primaries, which, combined with the graceful contour of its body and the small size of its head, render it the most elegant species of the genus that has yet been discovered. The figure in Vieillot's "Galérie des Oiseaux" is far less accurate than the description. The bird is there portrayed with the primaries brown, whereas they should be black; the white of the throat is also much less defined in the bird than it is in the drawing; this mark, which is so conspicuous in the other members of the genus, being scarcely distinguishable in the present species from the surrounding reddish buff colouring of the head and neck.

While traversing the plains bordering the River Namoi in New South Wales, I once had a transient view of this interesting bird: it was on the wing, and so rapid and extended was its flight, and so close did it keep to the ground, that I had scarcely satisfied myself as to what kind of bird it was, before it was lost in the distant horizon. I possess however two specimens, both of which were collected within three hundred miles of the locality above-mentioned; and forming, as they did, part of a collection made in the Moreton Bay district, the eastern portion of the continent of Australia may be regarded as one of the localities in which it is found, but which, from its rare occurrence therein, can scarcely be considered its natural habitat: in all probability the vast interior of the country is its native home.

I have not been able to satisfy myself as to whether the birds whose wings and colouring resemble those of the middle figure in the Plate are adult females or immature males.

We may reasonably suppose that nature has destined this bird to the same offices in Australia that are performed by the *Glareola pratincola* in Europe, that insects of various kinds constitute its sole food, and that they are taken both on the wing and on the ground, as the great development of its wings and legs must give it peculiar facility for capturing them; future discovery, however, must determine this among numerous other points now unknown respecting the economy of the birds of that distant and comparatively unknown country, Australia.

The male has the head, all the upper surface, wings and breast light rufous, becoming nearly white on the throat; lores dark brown; primaries and under surface of the wing black; shaft of the outer primary white for three-fourths of its length from the base; abdomen rich chestnut; thighs, upper and under tail-coverts white; central tail-feathers black, tipped on their outer webs with brown and on their inner webs with white; lateral tail-feathers white, with an oval spot of brown near the tip of the inner web; the next on each side white, crossed by a band, the inner portion of which is black and the outer brown; bill red at the base, black at the tip; legs and feet brown.

The female or young male has all the upper surface light reddish brown; the feathers of the breast with a spot of brown in the centre; the band across the abdomen pale chestnut; in other respects the colouring is similar to the male.

The figures are of the natural size.

GLAREOLA GRALLARIA: *Temm:*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

GLAREOLA ORIENTALIS, *Leach.*

Oriental Pratincole.

Glareola Orientalis, Leach in Linn. Trans., vol. xiii. pp. 132, 187. tab. xiii. fig. 1. male, fig. 2. female.—Less. Traité d'Orn., p. 541.—List of Birds in Brit. Mus Coll., part iii. p. 62.
Oriental Pratincole, Lath. Gen. Hist., vol. ix. p. 365.

A small collection of birds presented to the Linnean Society in the early part of 1827 by Alexander MacLeay, Esq., of Sydney, comprised a pair of these birds; unfortunately the whole were unaccompanied by any information as to the part of Australia in which they had been procured, but as all the other species were peculiar to the eastern and northern parts of the continent, it is reasonable to infer that the present bird was also killed in one or other of those localities. The true habitat of the Oriental Pratincole is India and the neighbouring islands; it is most likely, therefore, that its visits to Australia are only occasional.

Crown and all the upper surface olive; primaries brownish black; secondaries black, glossed with green; tail-coverts and tail white, the apical portion of the latter black; throat white, encircled by a broken ring of black; chest greyish brown; upper part of the abdomen crossed by an indistinct band of buff, which gradually fades into the white of the vent and under tail-coverts; under surface of the wing rich deep rust-red; bill black; gape yellow; feet blackish brown.

The young of the year is similar in colour, but much paler, and has only an indication of the ring surrounding the throat.

The Plate represents a male and a female of the natural size.



GLAREOLA ORIENTALIS: *Leach*

J. Gould. and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

HIMANTOPUS LEUCOCEPHALUS, *Gould.*

White-headed Stilt.

Himantopus leucocephalus, Gould in Proc. of Zool. Soc., Part V. 1837, p. 26; and in Syn. Birds of Australia, Part II.

Djan-jar-uk, Aborigines of the lowland districts of Western Australia.

Although the extreme length of the legs of this bird, as compared with the small size of its body, would seem incompatible with easy carriage and graceful deportment, this is in reality not the case, for I never saw a bird which combined more grace of movement and elegance of appearance than the White-headed Stilt, which I for the first time observed in the month of December, near Mr. Edward Uhr's station on the banks of the river Mokai, where it was associated in small flocks of from six to twenty in number, and which, by their picturesque appearance as they ran along the margin and knee-deep in the shallows of the stream, added greatly to the beauty of the scene. This part of the Mokai was one of the most beautiful, and to me, one of the most interesting localities, I had visited in New South Wales, and I therefore encamped on its banks for some time, during which I experienced much hospitality from Mr. Uhr, and which I feel much pleasure in publicly acknowledging. I had no difficulty in obtaining as many specimens of this fine bird as I desired; for when shot at it would merely pass down the river and alight again at a short distance, or fly backwards and forwards in front of the camp. The flocks were composed of both sexes, in the finest state of plumage; and I ascertained by dissection of numerous specimens that the larger birds were the males, which circumstance indicates a greater alliance to the true Plovers than to the Sandpipers. In this locality the Stilts were feeding entirely on insects and small shelled snails, which food was procured on the margin of the stream, or by wading into the shallows: they ran about with great celerity, displaying many graceful, lively actions; their flight on the contrary was heavy and inelegant, and their long legs streaming out behind gave them a very grotesque appearance: while on the wing they continually uttered a plaintive piping cry, as if of distress, but which they seldom emitted when on the ground.

I was unable to obtain any information respecting the nidification of this bird, or to arrive at any conclusion as to its being a stationary or migratory species. It appears to possess an extensive range over the continent, as besides killing it myself in New South Wales, I have received specimens both from South and Western Australia. In the neighbourhood of Perth it is sometimes seen in company with the Avocet (*Recurvirostra rubricollis*), feeding upon freshwater shrimps and aquatic insects.

Back of the neck, back and wings glossy greenish black, the rest of the plumage pure white; irides pink, margined externally with a deep red ring; bill black; legs and feet deep pink flesh colour, becoming red after death.

The Plate represents a male and a female of the natural size.

HIMANTOPUS LEUCOCEPHALUS: *Gould*

J.E.T. Gould del. et lith. *C. Hullmandel Imp.*



HIMANTOPUS NOVÆ-ZELANDIÆ, *Gould.*

New Zealand Stilt.

Himantopus Novæ-Zelandiæ, Gould in Proc. of Zool. Soc. for January 26, 1841.

As might be expected, the colonization of New Zealand has brought to light many ornithological novelties peculiar to those islands, the natural productions of which are even at this time so imperfectly known. The species here represented is, perhaps, one of the most interesting of those forwarded to the New Zealand Company by Dr. Dieffenbach, and which that body have very liberally placed at my disposal, for the purpose of describing and figuring. I particularize this species as being interesting, not so much for its beauty, as for its forming another member of the very limited genus *Himantopus*, of which until lately only one species was known. I regret to say that no information as to its habits, changes of plumage, or the localities in which it is found, has been forwarded with the specimens; they were merely labeled—"Waders killed at Port Nicholson." The two specimens sent not only differ from every other known species, but are also very dissimilar from each other in plumage and in size, one being very much larger than the other; though the dissimilarity in size is not greater than I have observed to exist between the sexes of the White-headed Stilt. The least of the two, which I presume to be the female, has the whole of the plumage black or blackish brown; while the other has the forehead, the front of the neck and the breast white; the tail and all the remainder of the plumage being black, like the other. I am inclined to believe that the difference in colouring is either attributable to youth, or that it is a seasonal character; in all probability, the entirely black plumage is that of summer.

The whole of the plumage sooty black, with the exception of the back, wings and tail, which are glossed with green; bill black; feet pink-red: the other specimen has the forehead, lores, chin, front and sides of the neck, chest and under tail-coverts white.

The figures are of the natural size.



CLADORHYNCHUS PECTORALIS, *G. R. Gray.*

Banded Stilt.

Leptorhynchus pectoralis, Dubus, in Mem. Roy. Acad. Bruss. Aug. 1835.—Guérin, Mag. Zool. 1836, Pl. XLV.
Himantopus palmatus, Gould, Syn. Birds of Australia, Part II.
Cladorhynchus pectoralis, G. R. Gray, List of Gen. of Birds, p. 69.

Since the publication of the Second Part of my "Synopsis of the Birds of Australia," in which I gave a description and part figure of this species under the name of *Himantopus palmatus*, I have discovered that the bird had been previously characterized as *Leptorhynchus pectoralis* by the Chevalier B. Dubus, in a memoir presented to the Royal Academy of Brussels on the 17th of January, 1835. But the generic term *Leptorhynchus* having been already employed in Ornithology, both his name and my own must give place to that of *Cladorhynchus*, proposed in its stead by Mr. G. R. Gray in his recently published "Genera of Birds."

During the time that has elapsed since the appearance of my description of this bird, I have had an opportunity, through the kindness of Mr. Leadbeater, of examining two other examples, one of which was destitute of the pectoral band that forms so conspicuous a mark on the breast of the one figured in the accompanying Plate; whether this mark is merely assumed during summer, or is distinctive of the sexes, I regret to say, that not even my visit to Australia has enabled me satisfactorily to determine, never having had the good fortune to meet with it in a state of nature. The Banded Stilt is an inhabitant of the southern and western coast of Australia, where it lives much after the manner of, and frequently associates with, the Australian Avocet (*Recurvirostra rubricollis*). While at Adelaide I saw a specimen that had been shot in that neighbourhood; and Mr. John Gilbert, in his Notes from Western Australia, states that it is confined to Rottnest Island, that is to say, he saw it in no other part of the colony.

Body white; breast crossed by a broad band of chestnut, bordered anteriorly with black; wings and centre of the abdomen black; bill black; legs reddish yellow. In a specimen, which I presume may be a female, the band on the chest was greyish brown instead of chestnut, and there was no appearance of the black mark on the centre of the abdomen; and in another the pectoral band was apparently disappearing, from which I infer that this mark only exists during the breeding-season.

The Plate represents the bird of the natural size.



RECURVIROSTRA RUBRICOLLIS, *Temm.*

Red-necked Avocet.

Recurvirostra rubricollis, Temm. Man. d'Orn., Part II. p. 592.—Less. Traité d'Orn., p. 592.—Gould, Syn. Birds of Australia, Part II.

———— *Novæ-Hollandiæ*, Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. iii. p. 103? and Ency. Méth., Part I. p. 360?

Yă-jĭn-goŏ-rong, Aborigines of the lowland districts of Western Australia.

The western and southern portions of Australia appear to be inhabited by this beautiful Avocet in far greater numbers than any other. I did not myself meet with it during my rambles in New South Wales, but I have now and then seen it in collections from those parts. It is one of the few birds, the range of which extends on both sides of the equator, and which find an equally congenial habitat in the northern hemisphere as in the southern. I have seen numerous specimens from the provinces of India, which so closely accorded with the Australian bird, that I could not discover the slightest difference between them.

Like its European representative, the Red-necked Avocet frequents the shallow parts of lakes, inlets of the sea, and the muddy banks of rivers, often wading knee-deep in the water, and readily swimming when necessity requires it so to do.

Its food consists of minute marine mollusca and insects, which it gathers from the surface of the mud with its delicately organized bill, the structure of which is admirably adapted for the purpose: not less appropriate is the structure of its feet; which being partially webbed, enable the bird to pass over the soft surface of the ground with far greater ease than could be effected by any of the Sandpipers, whose toes are divided to their base. In Western Australia the favourite localities of this bird are the lakes in the neighbourhood of Perth and on Rottnest Island, where it is seen in small flocks in company with the *Himantopus leucocephalus*. In South Australia, the River Murray and the shores of Lake Alexandrina afford situations equally adapted for its existence.

Its flight is easy and capable of being long sustained.

The sexes are alike in plumage and differ but little in size.

Head and upper half of the neck chestnut, extending downwards on the front of the neck; middle of the wings, primaries and part of the scapularies black, the rest of the plumage white; irides bright red; bill black; legs greyish blue; tarsi and feet tinged with olive.

The figures represent both sexes of the natural size.

RECURVIROSTRA RUBRICOLLIS: *Temm.*

J. Gould and H.C. Richter del.t *C. Hullmandel Imp.*

LIMOSA MELANUROÏDES, *Gould.*

Black-tailed Godwit.

Limosa Melanuroïdes, Gould in Proc. of Zool. Soc., Part XIV.
Mun-doorĕ-git, Aborigines of Port Essington.

My collection contains two specimens, male and female, in winter plumage, of this species, which at the first glance might readily be mistaken for specimens of the European bird; on comparison however the Australian species is found to be of a much smaller size than the European, and to exhibit other differences, which although but slight, fully satisfy me that it is distinct: it is one of the many novelties which rewarded Mr. Gilbert's researches in the neighbourhood of Port Essington, and who states that it inhabits shallow muddy swamps and lakes, and that he usually met with it in tolerably large flocks; he also adds that its stomach was extremely muscular, and that its food consists of aquatic insects of various kinds.

In its habits, actions and general economy it doubtless closely resembles its European ally, and in all probability undergoes similar changes of plumage, the dull colouring of winter giving place to a rich rufous tint in summer.

The winter dress may be thus described:—

Head and all the upper surface greyish brown, with a small streak of black down the centre of the feathers; wings dark brown; shafts white; base of the primaries and secondaries and tips of the greater coverts white, forming a band when the wing is expanded; upper tail-coverts white, forming a conspicuous mark; tail black, with the exception of the two lateral feathers on each side, which are white at the base and black at the tip; neck, breast and flanks greyish brown; abdomen and under tail-coverts white; irides brown; bill greenish grey, becoming paler on the sides of the upper mandible; legs and feet greenish grey.

The figures are of the natural size.



LIMOSA MELANURÖIDES, *Gould.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

LIMOSA UROPYGIALIS, *Gould.*

Barred-rumped Godwit.

Limosa uropygialis, Gould in Proc. of Zool. Soc., February 22, 1848.

I saw this species in very great abundance, in company with Curlews, Oyster-catchers and Sandpipers, at Pitwater in Van Diemen's Land, feeding on the extensive flats left bare by the receding tide; I also observed it on the sandy flats in Spencer's Gulf and on the sand-banks at the mouth of the river Hunter in New South Wales; and in all probability it is dispersed over the whole of the Australian coasts.

Another instance of the law of representation, so frequently spoken of in the course of the present work, is here most conspicuously shown: to a common observer this bird would be considered identical with the Bar-tailed Godwit (*Limosa rufa*) of Europe; but on comparing the two birds, he will find that the Australian has at all times the lower part of the rump strongly barred with brown, while the same parts in the *Limosa rufa*, when in the light-coloured dress, are snow-white. The habits, manners and economy of the two birds are so precisely similar that I was unable to detect any difference; various kinds of marine insects and small-shelled mollusks are its principal food.

I have never yet seen a specimen of this bird in any other livery than the one represented in the accompanying Plate; Mr. McGillivray, however, informs me that one of the specimens sent home by him from Australia was clothed in a rufous dress very similar to the summer plumage of the European species.

All the upper surface brownish grey, becoming dark brown on the centre and nearly white on the edges of the feathers; primaries brown with white shafts; rump and upper tail-coverts conspicuously barred with brown and white; tail alternately barred with brown and white; throat and abdomen white; neck and breast brownish grey; under wing-coverts and flanks barred with brown and white; bill white at the base, becoming brown at the tip; irides dark brown; legs brownish black.

In the youthful state the feathers of the back are of a much darker hue, and the tertiaries are conspicuously toothed with white on their margins.

The figure is of the size of life.



J. Gould and H.C. Richter del. et lith.

LIMOSA UROPYGIALIS; *Gould.*

Hullmandel & Walton Imp.

SCHŒNICLUS AUSTRALIS.

Australian Tringa.

Tringa Australis, Jard. and Selb. Ill. Orn., vol. ii. pl. 91.
Schœniclus Australis, List of Birds in Brit. Mus. Coll., part iii. p. 105.

This pretty species of Sandpiper is distributed over all parts of Australia, including Van Diemen's Land. The sandy beaches of the sea-coast and the banks of the rivers in the interior of the country are equally visited by it; and in all such situations it is to be seen either in pairs or in small parties of from six to fifteen in number. It is very fearless, and will allow of the nearest approach before it will take wing. In its economy it appeared to me to hold an intermediate station between the Sandpipers and true Snipes. It is a bird especially fond of the grassy sides of lagoons and open wet marshy places, where it trips over the herbage which rests on the surface of the water, and sometimes wades up to its body in search of insects. Its flight resembles that of the true Snipes. Of the specimens killed, by far the greater number were birds of the year, at which period of their existence a rufous tint pervades the breast and flanks; the feathers of the back are also margined with the same hue, except where they are varied with greyish white, some of the feathers of the scapularies and back being edged with this colour; when fully adult, an almost uniform grey pervades the upper surface, the centre of the abdomen alone being white.

I dissected a number of specimens and found the larger ones to be males, a somewhat unusual circumstance in this group of birds; the Ruff however may be quoted as an instance of the contrary to the usual law; several of the males were weighed, and averaged two ounces and three-quarters.

The food consists of aquatic insects and their larvæ.

All the feathers of the upper surface very dark brown in the centre, gradually fading into grey on the margins; crown slightly washed with rufous; primaries brown, with white shafts; under surface white, washed on the breast with greyish brown, and where this tint appears, each feather has a small streak of brown down the centre; under tail-coverts with a conspicuous streak of dark brown down the centre; bill olive at the base, becoming dark brown at the tip; legs yellowish olive; irides black.

The above is the description of an adult in winter plumage; the young of the year are similarly marked, but have the greater portion of the feathers, and particularly those of the crown and the tertiaries, distinctly margined with sandy red and white, the breast washed with buff, and free from spots except on the sides.

The Plate represents an adult and a young bird of the size of life.



SCHŒNICLUS AUSTRALIS.

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

SCHŒNICLUS ALBESCENS.

Little Sandpiper.

Tringa albescens, Temm. Pl. Col., 41. fig. 2.
Calidris Australis, Cuv. Gal. de Paris.—Less. Traité d'Orn., p. 558.
Land Snipe and *Least Sandpiper*, of the Colonists of Western Australia.

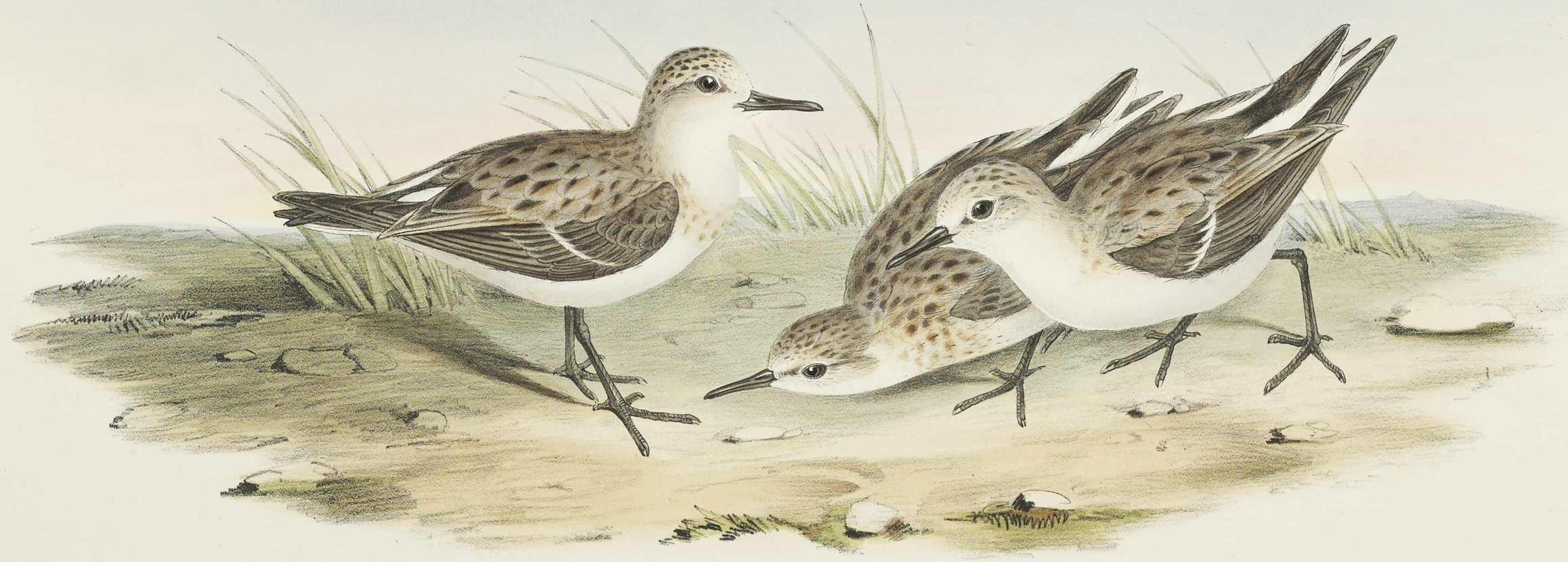
I have received specimens of this little Sandpiper from every one of the Australian colonies, the islands in Bass's Straits, the Houtmann's Abrolhos off the western coast, and Raine's Islet in Torres' Straits; no one, therefore, of the Australian species of the genus is more generally dispersed. To those who are acquainted with the Little Dunlin (*Schœniclus minutus*) of Europe, I may say that the habits of the two species so closely assimilate as to render a separate description unnecessary; low flat shingly beaches fringing deep bays and inlets of the sea, salt estuaries and spits of land at the extremities of small islands, are its usual places of resort. In Van Diemen's Land I observed it in hundreds at Ralph Bay Neck and the adjoining estuary near the mouth of the Derwent; and it was equally plentiful at Nepean Bay and other parts of the shores of Kangaroo Island, at the entrance of Spencer's Gulf in South Australia. Agile and elegant in its movements, it trips over the ground with astonishing celerity, following each receding tide in search of such small marine insects as form part of its diet. All the examples procured by myself were in the winter or light-coloured dress, and had I not recently received specimens from South Australia, which exhibit traces of red on the breast and dark feathers on the upper surface, I should have been led to suppose that it did not undergo the usual changes of the other members of the genus.

Mr. Gilbert found it breeding on the Houtmann's Abrolhos in December, its two eggs being deposited in a hollow, which it had formed in the ridge of black deposit and salt thrown up by the ripple of the water, and which, when the water receded, was left high and dry at about four or five yards from the water's edge. Mr. Gilbert also states that it assembles in large flocks on all the lakes around Perth and on Rottnest Island, that it utters a weak piping note when on the wing, that its stomach is muscular, and that its food consists of small land and aquatic insects and small mollusca. He further observes, that at Port Essington it congregates in flocks of several hundreds, and like the Greenshank and other members of the group, perches on the mangroves during the height of the flood-tide.

In summer the crown of the head and upper surface is greyish brown, with a patch of blackish brown in the centre of each feather, deepening into rusty red on the margins of the scapularies, with a slight wash of rufous; wing-coverts tipped with white; primaries blackish brown with white shafts; rump, upper tail-coverts and two centre tail-feathers blackish brown; tail pale brownish white with white shafts; forehead and under surface white; sides of the breast spotted with dark brown, and stained with rusty red in the centre; irides brownish black; bill blackish brown; tarsi and feet olive-brown.

The winter plumage is similar, but much paler, and entirely destitute of the red markings; the spottings of the sides of the breast are also much less extensive.

The figures are of the natural size; the lighter-coloured bird representing the plumage of winter, and the others changing from winter to summer.



SCHŒNICLUS ALBESCENS.

J. Gould and H. C. Richter del. et lith.

Hullmandel & Walton Imp.

SCHŒNICLUS SUBARQUATUS.

Curlew Sandpiper.

Scolopax subarquata, Gmel. Syst. Nat., vol. i. p. 658.
Tringa subarquata, Temm. Man. d'Orn., tom. ii. p. 609.
Pelidna subarquata, Steph. Cont. of Shaw's Gen. Zool., vol. xii. p. 96.
Pygmy Curlew, of British Ornithologists.
Schœniclus subarquatus, List of Birds in Brit. Mus. Coll., part iii. p. 105.

Some few species of Australian birds are precisely identical with those of India and Europe, and the present may be quoted as a case in point, for I find no difference between this bird and the Pygmy Curlew of England; its distribution over the shores of Australia appears to be universal, but at the same time it is very thinly dispersed; and there seem to be no localities in which it can be looked for and found with certainty at any stated time. Like the rest of the Sandpipers, it resorts to the shingly beach of the sea-shore and the banks of estuaries and rivers. The change from the grey to the red livery, which renders this bird so conspicuous in the summer season, takes place in Australia at precisely the opposite period of the year to that in which it occurs in Europe.

Of the three specimens in my collection, one was killed on Rottnest Island, another on the main-land of Western Australia, and the third at Port Macquarrie in New South Wales.

In summer the upper surface is adorned with a mottled plumage of black and deep rufous, arranged in the form of bars on the scapularies; wings dark greyish brown; upper tail-coverts white; tail grey, barred with black and rufous; head mottled black and white; all the under surface deep rufous; bill and legs black, slightly tinged with olive; irides dark brown.

In winter the rump is white, the remainder of the upper surface greyish brown; under surface white, except the chest, which is slightly tinged with grey.

Between these two states every variety of colouring occurs during the vernal and autumnal months.

Young birds differ from both in having the upper surface dark brown, each feather fringed with grey, and a wash of brown across the chest.

The figures represent the bird in the winter and summer plumage, of the natural size.

J. Gould and H.C. Richter del et lith.

SCHŒNICLUS STRAROIATUS.

Hullmandel & Walton Imp.



SCHŒNICLUS MAGNUS, *Gould.*

Great Sandpiper.

Schœniclus magnus, Gould in Proc. of Zool. Soc., February 22, 1848.

This is one of the few birds that I have not been able to obtain for my own collection; there are, however, two specimens in the country; one in the British Museum, which was obtained on the north coast of Australia; the other, which was procured at Swan River, is in the possession of the Hon. Charles Neville, a gentleman much attached to natural history. It is one of the most singular species of the *Tringæ*, being in size fully equal to the Ruff, while its form is precisely that of the Dunlin. On comparing it with a bird in the Museum of the East India Company, which has been named *Totanus tenuirostris* by my friend Dr. Horsfield, I find it to be very nearly allied to that species.

Its great size has suggested the term *magnus* which I have applied to it; and the following is an accurate description:—

Crown of the head and the neck brownish grey, each feather with a stripe of brown down the centre; back and wings brown, broadly margined with brownish grey; primaries blackish brown; rump white, each feather tipped with brown; tail brownish grey; feathers of the breast dark brown, with a crescent of white at the extremity; abdomen and under tail-coverts white; flanks mottled with brown; bill, feet and irides olive.

The figure is of the natural size.

SCHŒNICLUS MAGNUS: *Gould.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

TEREKIA CINEREA.

Terek Godwit.

Scolopax Terek, Lath. Ind. Orn., vol. ii. p. 724.
——— *cinerea*, Gmel. Linn., vol. i. p. 657.
Limosa recurvirostra, Pall. Zool. Rosso-Asiat., vol. ii. p. 181.
Terek Avoset, Penn. Arct. Zool., vol. ii. p. 502.
—— *Snipe*, Lath. Gen. Syn., vol. v. p. 155.—Ib. Gen. Hist., vol. ix. p. 241.
Limosa Terek, Temm. Man. d'Orn., tom. iv. p. 426.
Terek Godwit, Gould, Birds of Europe, vol. iv. pl. 307.
Totanus Javanicus, Horsf. Linn. Trans., vol. xiii. p. 193.
Terekia Javanica, Bonap. List of Eur. and Am. Birds, p. 52
——— *cinerea*, G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 88.
Xenus cinereus, Kaup.—List of Birds in Brit. Mus. Coll., p. 96.

I KILLED a single example of this species of Sandpiper on the river Mokai in New South Wales on the 12th of July 1839, and neither before nor since have I seen another Australian specimen; the individual in question was very shy, and it was with difficulty that I got sufficiently near to shoot it. On dissection it proved to be a male. It is a common bird in Java and Sumatra; its range also extends to India and Europe, but not, so far as is yet known, to Africa.

But little has been hitherto recorded respecting its habits: M. Temminck states that it occurs accidentally in Europe, lives in Russia, Siberia, the borders of the Caspian Sea, in Japan, Sumatra and Borneo, and that specimens from the latter island compared with others taken in Normandy and in the environs of Paris do not present the slightest differences; that it inhabits the borders of rivers, has a sonorous voice, and feeds on worms, insects and small-shelled mollusks.

The nest according to Pallas is formed of plants, and the eggs are four in number, of a pale olive-yellow marked with spots of reddish brown.

Head, all the upper surface, wings and tail pale brown, with a fine line of a darker tint down the centre of each feather; shoulders and primaries dark brown, with the shaft of the first quill white; secondaries white; base of the bill orange-brown, passing into blackish brown at the tip; irides black; legs brownish orange, the brown tint predominating on the joints.

The accompanying Plate represents the specimen shot by myself in two positions, of the size of life.



TEREKIA CINEREA.

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

ACTITIS EMPUSA, *Gould.*

Fairy Sandpiper.

Actitis empusa, Gould in Proc. of Zool. Soc., November 23, 1847.
Green Sandpiper, Colonists of Port Essington.

This species, which is much smaller than the *Actitis hypoleucus* of Europe, and differs moreover in having the brown of the upper surface washed with translucent bronze, is very thinly dispersed over the Australian continent. Although I have seen specimens from every colony, with the exception of that on the north coast, I am unable to say in which it is most plentiful, or in which it may be sought for at any given period with the certainty of finding it. I did not meet with it myself in any of my various wanderings, but Mr. Gilbert observed it both at Swan River and at Port Essington. When speaking of Swan River, he says, "I only saw this species once. When near the entrance of the Swan, I noticed it flitting from rock to rock, and every time it rested on its feet the tail was constantly moved up and down with a shaking motion." On referring to the Port Essington specimens, he remarks, "Although solitary in its habits, I have seen three or four together; they were mostly observed inhabiting the beds of mangroves, over the roots of which, just above the water, they were very actively engaged in searching for their food, the tail being in constant motion: occasionally I saw solitary individuals on the margins of the lakes inland."

The food consists of aquatic insects and very small shelled mollusks.

The sexes are precisely alike in the colour of their plumage, and but little difference exists in their size; the young on the contrary, which are met with in greater abundance than the adults, have the brown feathers of the upper surface, barred or freckled with darker brown.

The adults have all the upper surface pale glossy or bronzy brown, each feather crossed with irregular bars of dark brown, bounded on either side by a narrow line of pale brown; base and tips of the secondaries white; primaries very slightly tipped with white; centre tail feathers pale glossy or bronzy brown, with a row of irregular-shaped spots of dark brown along the margins; lateral feathers white, crossed by irregular blended bars of dark and pale brown; under surface white, with the exception of the sides of the chest, and the shafts of the feathers of the front of the chest, which are pale brown.

The Plate represents a male and a female of the natural size.



ACTITIS EMPUSA: *Gould.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

GLOTTIS GLOTTOÏDES.

Australian Greenshank.

Totanus Glottoïdes, Vig. in Proc. of Comm. Sci. and Corr. of Zool. Soc., Part I. p. 173.—Gould, Century of Birds, pl. 76.

This widely wandering species inhabits every country of the Old World from India to the most southern part of Australia. Although nowhere very abundant, it is so generally dispersed over Australia and Van Diemen's Land, that I have seen specimens from every settlement in that vast territory, or as it has with justice been termed, fifth portion of the globe; but although its distribution is so general, its presence is not, I believe, to be depended upon in any given locality; it is in fact a chance but not unfrequent visitor to all. A more elegant bird on the sands can scarcely be imagined, and it is as graceful in all its actions as it is in form, tripping over the beach with a lightness and ease peculiar to itself. It sometimes leaves the sea-side for estuaries and inland lakes; but these localities are not so favourable to its habits as sandy points and spits of land on the sea-shore, where it is frequently seen in company with the Whimbrel, Curlew and Oyster-catcher.

I have not been able to discover its breeding-place, nor have I succeeded in procuring its eggs either from Australia or any other country.

It is sometimes seen in small flocks, of from seven to ten in number, but more frequently in pairs.

Like many other members of the family to which it belongs, this bird is subject to considerable change in its plumage, being much darker and more blotched and spotted during the breeding-season than at any other.

Face, all the under surface, rump and tail pure white; the sides of the breast streaked with dark brown, and the tail barred on the margins, and freckled with dark blackish brown; crown of the head and back of the neck grey, streaked down the centre with dark brown; shoulders and primaries very dark brown, the outer quill with a pure white shaft; the remainder of the upper surface light brown, each feather margined with grey, with a streak of dark brown down the centre, and a series of oblong spots on the margins of the same hue; bill dark olive; irides black; feet and legs deep olive-green.

The above is the description of the plumage of summer; in winter the colouring is similar, but much paler.

The Plate represents three specimens in different states of plumage, rather less than the natural size.



GLOTTIS GLOTTOIDES.

J. Gould and H.C. Richter del. et lith.

C. Hullmandel Imp.

TOTANUS STAGNATILIS.

Marsh Sandpiper.

Totanus stagnatilis, Temm. Man. d'Orn., tom. iv. p. 414.—Gould, Birds of Europe, vol. iv. pl. 314.

I shot a specimen of this bird on the banks of the Lower Mokai on the 16th of December 1839: on comparing it with Indian and European specimens, I find the whole to be identical; the Australian bird is however somewhat lighter in colour. The individual above-mentioned was feeding on the bank close to the water's edge: from its being the only one I had ever seen alive, I was more desirous of procuring it than of watching its actions, and as no opportunity afterwards occurred of my so doing, I am unable to give any particulars respecting them.

Face, fore-part of the neck and all the under surface white.

Crown of the head and neck grey, streaked longitudinally with black; upper surface grey, each feather with a lighter margin; wings blackish brown; tail white, marked with diagonal bars of brown; forehead, rump and all the under surface white; bill dark greenish olive, tipped with brown; legs sickly olive-yellow; irides blackish brown.

The bird is figured of the natural size.



TOTANUS STAGNATILIS.

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

TOTANUS GRISEOPYGIUS, *Gould.*

Grey-rumped Sandpiper.

Totanus griseopygius, Gould in Proc. of Zool. Soc., February 22, 1848.
Mŭl-woo-ing-a-niñg-e, Aborigines of Port Essington.

Never having seen this Sandpiper in any collection but my own, nor a description of it in any of the ornithological works I have examined, I have deemed it necessary to give it a specific appellation, and have selected that of *griseopygius* from the uniform grey colouring of the rump and upper tail-coverts, a feature very uncommon in this tribe of birds. All the specimens I possess were killed near the harbour of Port Essington, where it frequents the sandy beaches and rocks just above high-water mark; the salt-water lakes and swamps near the settlement also afford it a natural asylum, and there, at some seasons of the year, it may be seen in vast flocks in company with Stints and Plovers.

The stomach is very muscular, and the food consists of aquatic insects and their larvæ and small-shelled mollusks.

But little difference exists in the colouring of the sexes.

The head, all the upper surface, rump and tail are greyish brown; primaries dark brown; line over the eye and all the under surface white, the neck, breast and flanks strongly freckled with brown; irides reddish brown; bill blackish brown, except the base of the under mandible, which is scarlet; legs and feet hyacinth-red.

In winter the upper surface is of a much lighter hue, and the under surface is of a greyish white and destitute of the freckles of brown.

The figures are of the natural size.

TOTANUS GRISEOPYGIUS: *Gould.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

STREPSILAS INTERPRES.

Turnstone.

Tringa Interpres, Linn. Syst. Nat., tom. i. p. 248.—Lath. Ind. Orn., vol. ii. p. 738.
Strepsilas Interpres, Leach in Cat. of Brit. Mus., p. 29.—Steph. Cont. of Shaw's Gen. Zool., vol. xi. p. 520. pl. 39.
Strepsilas collaris, Temm. Man. d'Orn., tom. ii. p. 553.

If any one bird be universally dispersed over the sea-shores of the globe, it is the Turnstone, for there are few of which it is not an inhabitant. I find no differences whatever between Australian and European specimens, nor do examples from America present sufficient variation to warrant any other conclusion than that the whole are one and the same species.

I could never detect the breeding-place of the Turnstone in any one of the Australian colonies, and I must not fail to add, that in the southern parts of that continent and Van Diemen's Land, examples in the adult livery are but seldom seen, while individuals in the immature dress are very abundant; on the contrary, most of the specimens from Raine's Islet and other parts of Torres' Straits are mature birds clothed in the full livery or breeding plumage. In all probability the northern parts of Australia will hereafter prove to be the part of the country in which it breeds, and that the young make an annual migration towards the south and disperse themselves over every part of the coasts of Southern Australia, the islands in Bass's Straits and Van Diemen's Land, all of which, as well as the Houtmann's Abrolhos off the western coast, are visited by it.

The habits, manners and economy of the bird in Australia differ not from those it exhibits in Europe; there, as here, it feeds on marine insects, as well as on small bivalve mollusca and crustacea, which it finds by turning over stones with its bill; whence its popular name.

The sexes when fully adult are alike, but the colours of the female are not so bright as those of the male; the young even when they have attained the size of the adult differ considerably.

The adult has the forehead, eyebrows, an oval spot before each eye, the centre of the throat, ear-coverts, nape of the neck, lower part of the back, abdomen and under tail-coverts white; from eye to eye across the forehead a band of black, which dips downwards in the centre to the bill; from the base of the lower mandible proceeds a mark of black, which passes upwards to the eye, dilates backwards towards the nape, covers the front of the chest, and bifurcates towards the insertion of the wing; mantle and scapularies reddish brown irregularly varied with black; rump black; wings black, the basal part of the inner webs and the shafts of the primaries white; secondaries broadly tipped with white, forming a conspicuous bar across the wings; bill black; irides black; legs and feet rich orange, darkest on the joints.

The young has the whole of the upper surface and the breast mottled brown and black, the white mark on the throat much larger, and only a trace of the white markings of the face and nape.

The figures represent the two sexes of the natural size.



STREPSILAS INTERPRES.

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

SCOLOPAX AUSTRALIS, *Lath.*

New Holland Snipe.

Scolopax Australis, Lath. Ind. Orn. Supp., p. lxiv.
New Holland Snipe, Lath. Gen. Syn. Supp., vol. ii. p. 310.—Ib. Gen. Hist., vol. ix. p. 242.
Scolopax Hardwickii, Gray, Zool. Misc., vol. i. p. 16.
Gallinago Australis, List of Birds in Brit. Mus., part iii. p. 111.
O-la̎rcg-a, Aborigines of Port Essington.

On comparing the Snipes killed at Port Essington with others obtained in Van Diemen's Land, some trivial differences are found to exist, and which it is necessary to point out, in order that future observers may be induced to ascertain if they be identical or if they constitute two distinct species: on a minute examination, the Port Essington bird is found to have a shorter tail, and the four lateral feathers narrower than in that from Van Diemen's Land; besides which, the tail of the former is composed of eighteen feathers in both sexes, while the specimens of the latter, contained in my collection, number but sixteen; it is true they were killed during a partial moult, which circumstance renders it somewhat doubtful whether sixteen be the right number or not. If the two birds should prove to be identical, then the range of the species will extend over the whole of Australia and Van Diemen's Land; still, like its prototype in Europe, its presence will depend much upon the occurrence of favourable localities; for in fact the same laws that regulate the movements of one species equally govern those of the other.

In Van Diemen's Land it is very abundant during the months of October, November, December and January, affords excellent sport to those fond of snipe-shooting, and is to be found in all low swampy grounds, lagoons, rivulets and similar situations. Its weight varies from five ounces to six ounces and a quarter; it is consequently a much larger species than the *Scolopax Gallinago* of Europe. It flies much heavier than that species, and thus affords a more easy mark for the sportsman; it is also more tame, sits closer, and when flushed flies but a short distance before it again alights. On rising it utters the same call of *scape-scape* as the *Scolopax Gallinago*. It is said to breed in Van Diemen's Land, but although many of the birds that I killed bore evident marks of youth, I could not satisfactorily ascertain that such was the case. Lieut. Breton, in his "Excursion to the Western Range, Tasmania," mentions that it always appears the last week in August or the first in September. I found it very abundant in many parts of New South Wales, in none more so than in the lagoons of the Upper Hunter, during the months of November and December; but it was only a transient visitor, the lagoons and swampy places then filled with water having attracted it.

Mr. Gilbert mentions that the Port Essington bird is only an occasional visitor to the Cobourg Peninsula, arriving about the middle of November, when the rainy season commences, and disappearing again in a few weeks; during its short stay it inhabits swampy but open grassy meadows: he adds, that he never saw more than six or eight at a time, and always found them very wild.

The stomachs of those examined were muscular, and contained small aquatic insects and sand.

The sexes are so similar in colour that a separate description is not requisite.

Crown of the head deep brownish black, divided down the centre by a line of buff; face and chin buffy white; sides of the neck, breast and flanks washed with pale reddish brown, and mottled with irregular spots of deep brown, which increase in size, until on the flanks they assume the form of irregular bars; back dark brownish black, the scapularies mottled with deep sandy buff, and broadly margined on their external webs with pale buff; wing-coverts dark brown, largely tipped with pale buff; wings dark brown, all the feathers slightly fringed with white at the extremity; lengthened flank-feathers regularly barred with brown and white; centre of the abdomen white; under tail-coverts buff, barred with dark brown; four central tail-feathers blackish brown, crossed near the tip by a broad band of rufous, beyond which is a narrow irregular line of brown, and the tip white; the lateral feathers alternately barred with dark and lighter brown, and tipped with white; irides dark brown; basal half of the bill yellowish olive, the remainder dark brown; legs yellowish white tinged with olive.

The figures represent a male and a female killed in Van Diemen's Land.



SCOLOPAX AUSTRALIS: *Lath.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

RHYNCHÆA AUSTRALIS, *Gould.*

Australian Rhynchæa.

Rhynchæa Australis, Gould in Proc. of Zool. Soc., Part V. p. 155; and in Syn. Birds of Australia, Part IV.

The Australian Rhynchæa is a summer visitant to New South Wales, where it arrives in August and September; but whether its visits are regular, or only occur in such wet seasons as fill the lagoons and cause a redundance of rushes and other herbage to spring forth, I know not; in all probability they are entirely influenced by the character of the season, as none but the most humid situations appear to suit its habits. During the fine season of 1839, when much rain had fallen and the whole face of the country was covered with the most luxuriant and varied verdure, and every hollow formed a shallow lagoon, this bird was tolerably plentiful in the district of the Upper Hunter, particularly in the flats of Segenho, Aberdeen, Scone, &c. Although I did not succeed in finding its nest, no doubt exists in my mind of its breeding in the immediate locality, as on dissecting a female an egg was found in the ovarium, nearly of the full size, and ready to receive its calcareous covering or shell. In its habits and disposition this bird partakes both of the true Snipe and Sandpiper; it neither lies so close nor has it the crouching manner of the true Snipes, but exposes itself to view like the Sandpipers, running about either among the rushes or on the bare ground at the edge of the water: on being disturbed, those I saw generally flew off toward the brush, seeking shelter among the low bushes, from which they were not easily driven or forced to take wing. It flies straighter, slower, more laboured and nearer to the ground than the true Snipes. Considerable confusion has always existed respecting the members of the group to which this bird belongs, the opposite sexes of the same species having been described as distinct; from actual dissection, however, of numerous examples, and from seeing these birds mated in a state of nature, I am enabled to affirm that the figures in the accompanying Plate are accurate representations of an adult male and female. This species will be found on comparison to possess among other characters much shorter toes than the Indian and Chinese species, to which it is most nearly allied. On dissection I also observed an anatomical peculiarity of a very extraordinary nature, the more so as it exists in the female alone; I allude to the great elongation of the trachea, which passes down between the skin and the muscles forming the breast for the whole length of the body, making four distinct convolutions before entering the lungs. On discovering this extraordinary formation I immediately placed the body in spirits, for the examination of my friend Mr. Yarrell, who, as is well known, has paid great attention to this part of the organization of birds, and who informs me that the position and form of the trachea in the *Rhynchæa Australis* is similar to that of the Semipalmated Goose, figured in the 15th volume of the Trans. Linn. Soc. Tab. 14. The Cranes, Swans, Guans, &c., present us with species having the trachea most singularly developed, several of them with extensive convolutions before entering the lungs; some with a receptacle for its folds within the cavity of the keel of the breast-bone; while in others it is situated outside the pectoral muscles, immediately beneath the outer skin of the breast; but in no instance is it more extensively or more curiously developed than in the present bird.

The use of this conformation so exclusively confined to one, and that the female sex, I could not in any way discover or surmise. No note whatever was heard to proceed from either sex, while on the wing or when flushed.

The female has a stripe from the bill down the centre of the head to the nape pale buff; circle surrounding and a short stripe behind each eye white; back of the neck chestnut, crossed with indistinct narrow bars of greenish brown; crown dark brown; sides of the face, and the sides and forepart of the neck chocolate; chin white; back olive-green tinged with grey, and marbled with dark brown; scapularies blotched on their external webs with deep buff; wing-coverts olive-green, crossed by numerous fine irregular bars of black; tertiaries olive-green tinged with grey, crossed by irregular bars and numerously sprinkled with black; three outer primaries dark brown, crossed on their outer webs with broad irregular patches of deep buff, and sprinkled with grey on the inner; the remainder of the primaries and the secondaries grey, crossed by numerous narrow irregular lines of black, and spotted with white surrounded with black; rump and tail grey like the secondaries, but spotted with both white and buff, each of which colours are bounded with black; breast and all the under surface white, with a large irregular patch of olive-green, narrowly barred with black, on each side of the chest; bill pale green at the base, passing into brownish horn-colour at the tip; irides rather dark hazel; legs pale green.

The male is much smaller than the female, and has the sides, back and front of the neck much lighter and mingled with patches of white; wings more olive, the coverts ornamented with numerous large irregular patches of buff, encircled with a narrow line of black; the buff bands on the primaries richer and more distinct; the scapularies speckled with white; the patch on each side of the chest dark olive, with large patches of white surrounded by a line of black.

The figures represent both sexes of the natural size.

RHYNCHÆA AUSTRALIS; *Gould.*

J. Gould and H.C. Richter del.

C. Hullmandel Imp.

NUMENIUS AUSTRALIS, *Gould.*

Australian Curlew.

Numenius Australis, Gould in Proc. of Zool. Soc., Part V. p. 155.
Wid̆-joo-oñ-ong, Aborigines of the Murray River, Western Australia.
Măn-do-weidt, Aborigines of Port Essington.
Curlew, of the Colonists.

In investigating the ornithology of any part of the world we find many instances of species so closely resembling others, known to be inhabitants of distant countries, that they at first sight appear to be identical, but on a more careful comparison and examination they prove to be merely representatives; in no case however is this law of representation, for such it must be called, so decidedly marked as in Australia, where not a few, but numerous, instances occur of birds so closely resembling others peculiar to Europe and Northern India, that they appear to be the same; and the present bird may be cited as a case in point, for a casual observer would at once pronounce it to be the Common Curlew of Europe; on comparison, however, it is found to differ from that species in having a longer bill, in the rump and upper tail-coverts being barred with brown instead of white, and in the under surface being washed with buff.

The range of this species over Australia appears to be universal, for I have received specimens from Port Essington, Swan River, South Australia, New South Wales, Van Diemen's Land, and all the islands in Bass's Straits; but in no one of these countries is it more abundant than in Van Diemen's Land, where it is to be met with in flocks in the neighbourhood of rivers and marshy situations, uttering a very similar call, and exhibiting the same actions and manners as the Common Curlew of Europe; like that bird, it is also especially fond of running over the flats left bare by the receding tide, to feed upon the various molluscous animals abounding in such situations.

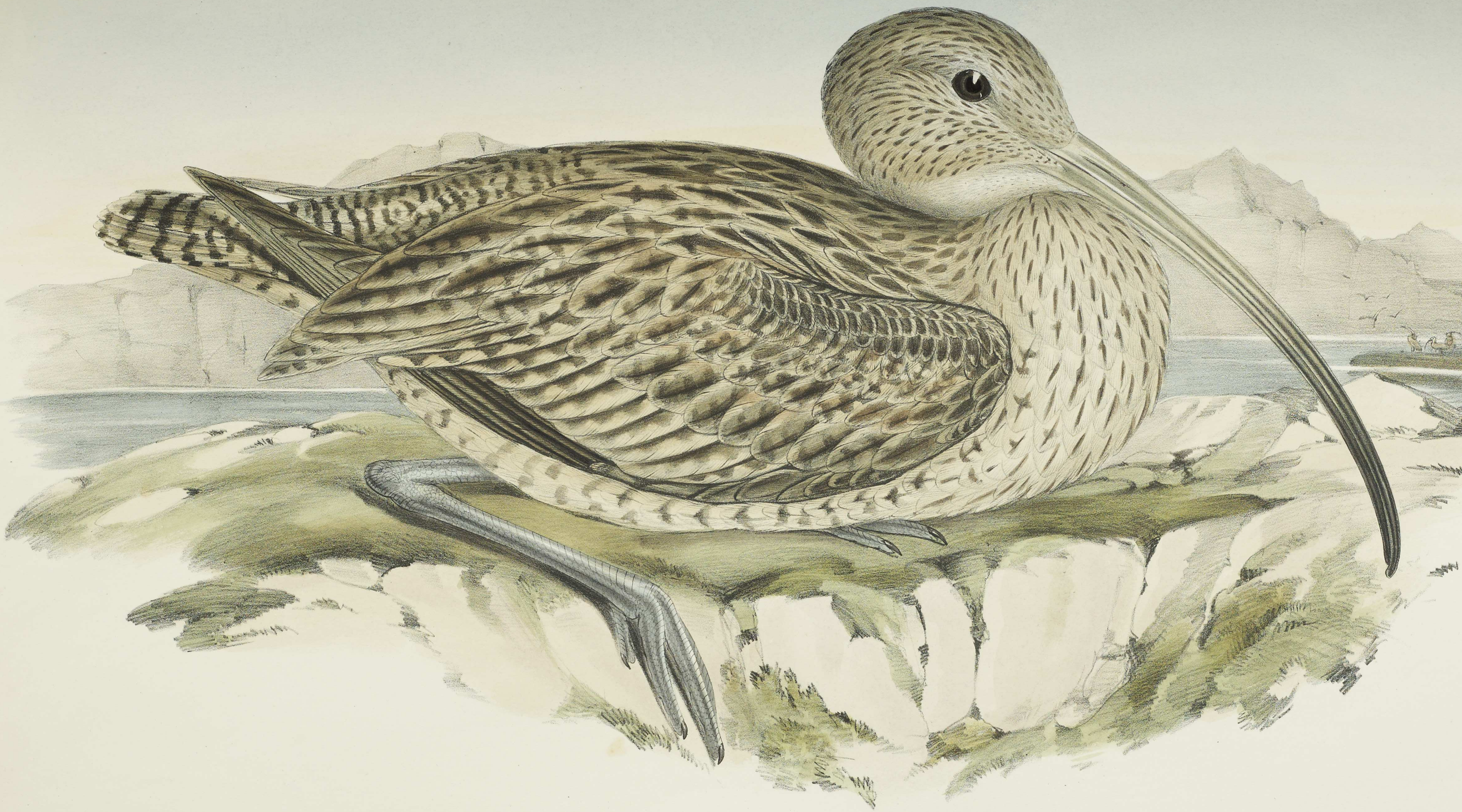
The weight of this bird is about two pounds: the stomachs of those dissected were found to be extremely muscular, and contained the remains of shelled mollusks, crabs, &c.

The breeding ground has not yet been discovered; the bird probably retires to the high lands of Van Diemen's Land or Australia Felix for that purpose.

A similarity of colouring pervades both sexes.

Crown of the head and back of the neck blackish brown, each feather margined with buff; back blackish brown, each feather irregularly blotched with reddish buff on the margins; wing-coverts blackish brown, margined with greyish white; tertiaries brown, irregularly blotched on the margins with lighter brown; rump and upper tail-coverts dark brown, barred across the margins with greyish buff; tail light brown, crossed with bars of dark brown; greater coverts blackish brown, slightly tipped with white; first five primaries dark brown with white stems, the remainder and the secondaries crossed by irregular interrupted bars of white; sides of the face, throat, and all the under surface pale buff, with a fine line of blackish brown down the centre of each feather; basal half of the bill flesh-colour tinged with olive; apical portion deep blackish brown; legs bluish lead-colour; irides dark brown.

The figure is of the natural size.



NUMENIUS AUSTRALIS: *Gould.*

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

NUMENIUS UROPYGIALIS, *Gould.*

Australian Whimbrel.

Numenius uropygialis, Gould in Proc. of Zool. Soc., Part VIII. p. 175.
Mañ-do-weidt, Aborigines of Port Essington.

This species is somewhat smaller than the *Numenius Phæopus* of Europe, and moreover differs in having the rump barred and mottled instead of a pure white as in that bird; in other respects they are so similar that a description of one would apply with nearly equal accuracy to the other; the Australian bird is however of a paler brown than its European ally.

It is distributed over the whole of Australia as well as Van Diemen's Land, wherever localities occur suitable to its habits, which are so precisely similar to those of the *Numenius Phæopus*, that a description of them is quite unnecessary.

It is generally met with in large flocks in swampy districts on the banks of rivers and all similar situations; I killed several specimens on the Hunter in New South Wales, but could never succeed in discovering its eggs, whence I infer that for the purposes of incubation it betakes itself to the interior of the country.

The sexes are so precisely alike, that by dissection alone can we distinguish the one from the other.

Crown of the head brown, with a narrow irregular stripe of buffy white down the centre; lores and line behind the eye brown; line over the eye, neck and breast buffy white, with a brown line down the centre of each feather, the brown colour predominating; centre of the back and scapulary feathers dark olive, spotted on their margins with light buff; wing-coverts the same, but lighter, and presenting a mottled appearance; primaries blackish brown with light shafts; rump and upper tail-coverts barred with brown and white; tail pale brown, barred with dark brown; chin, lower part of the abdomen and under tail-coverts white; bill blackish horn-colour, fleshy at the base; feet greyish black.

The Plate represents the two sexes of the natural size.



NUMENIUS UROPYGIALIS: *Gould.*

J. Gould and H. C. Richter del et lith

Hullmandel & Walton Imp

NUMENIUS MINUTUS, *Gould.*

Little Whimbrel.

Numenius minutus, Gould in Proc. of Zool. Soc., Part VIII. p. 176.

I KILLED a pair of this species out of a flock of about twenty in number which was flying over the race-course at Maitland in New South Wales, on the 4th of April 1839. The flock was constantly rising and flying round, sometimes to the distance of a mile, returning again, alighting, and running quickly over the ground much after the manner of the Plovers. The above was the only instance in which the bird came under my observation during my stay in the country, consequently I am unable to state anything respecting its habits or the extent of its range, but I may mention that I possess a specimen procured at Port Essington.

Forehead dark brown mottled with buff; lores and line behind the eye buff; back, sides and front of the neck buff, with a fine line of brown down the centre of each feather; all the upper surface blackish brown, with a series of triangular spots round the margins of the feathers of a sandy buff; shoulders, primaries and secondaries blackish brown, the latter with white shafts; rump and tail-coverts dark brown spotted with white on the margins; tail greyish brown barred with black; chin white; under surface light buff; flanks and under surface of the wing deep buff, regularly barred with arrow-shaped marks of brown; irides black; bill fleshy at the base, olive-brown at the tip; feet bluish flesh-colour.

The Plate represents the two sexes of the natural size.



NUMENIUS MINUTUS: *Gould.*

J. Gould and H. C. Richter del et lith.

Hullmandel & Walton Imp.

GERONTICUS SPINICOLLIS.

Straw-necked Ibis.

New Holland Ibis, Lath. Gen. Hist. of Birds, vol. ix. p. 167.
Ibis spinicollis, Jameson, Edinb. New Phil. Journ., No. xxxvii. p. 213.—Jard. and Selb. Ill. Orn., vol. iv. pl. xvii.
Ibis lamellicollis, LaFres. Mag. de Zool. 1836, Liv. 4me et 5me, pl. 57.

This beautiful Ibis has never yet been discovered out of Australia, over the whole of which immense country it is probably distributed, as it is more abundant in certain localities at one season than at another; its presence in fact appears to depend upon whether the season be or be not favourable to increase of the lower animals upon which the vast hordes of this bird feed. After the severe drought of 1839 it was in such abundance on the Liverpool Plains, and on those of the Lower Namoi, that to compute the number in a single flock was impossible. It was also very numerous on the sea side of the great Liverpool range, inhabiting the open down and flats, particularly such as were studded with shallow lagoons, through which it would wade knee-high in search of shelled mollusks, frogs, newts and insects: independently of the food I have mentioned, it feeds on grasshoppers and insects generally. The natives informed me that sometimes many seasons elapse without the bird being seen. Where then does it go? To what country does it pass? Does there not exist a vast oasis in the centre of Australia, to which the bird migrates when it is not found in the located parts of the country? We may reasonably suppose such to be the case.

The Straw-necked Ibis walks over the surface of the ground in a very stately manner; it perches readily on trees, and its flight is both singular and striking, particularly when large flocks are passing over the plains, at one moment showing their white breasts, and at the next, by a change in their position, exhibiting their dark-coloured backs and snow-white tails. During the large semicircular sweeps they take over the plains, and when performing a long flight, they rise tolerably high in the air; the whole flock then arrange themselves in the form of a figure or letter similar to that so frequently observed in flights of geese and ducks.

The note is a loud, hoarse, croaking sound, which may be heard at a considerable distance. When feeding in flocks they are closely packed, and from the constant movement of their bills and tails, the whole mass seems in perpetual motion. In disposition this bird is rather shy than otherwise; still, with a very little care, numerous successful shots may be made with an ordinary fowling-piece.

The sexes when fully adult exhibit the same beautiful metallic colouring of the plumage. The female is however smaller, and has the straw-like appendages on the neck less prolonged and less stout than in the male. Mature birds only have the whole of the head and back of the neck quite bare of feathers.

Head and forepart of the neck naked, and of a dull inky black; back and sides of the neck clothed with white down; on the front of the neck and breast the shafts of the feathers are produced into long lanceolate straw-like and straw-coloured processes, with merely a rudiment of the lateral webs at the base; sides and back of the neck, breast and all the upper surface rich shining bronzy green and purple, crossed, particularly on the wing-coverts, scapularies and outer webs of the secondaries, with numerous bars of dull black; primaries and inner webs of the secondaries dull greenish black; abdomen, flanks, under tail-coverts and tail white; bill dull black, crossed at the base by irregular transverse bars of yellowish brown; irides dark brown; thighs crimson; legs blackish brown, the two colours blending on the knee.

Immature birds have the head and neck clothed with white down, the straw-like appendages less in number, and less of the rich colouring on the breast.

The Plate represents an adult and immature bird, about two-thirds of the natural size.

GERONTICUS SPINICOLLIS.

J. Gould and H.C. Richter del. et lith.

C. Hullmandel Imp.

THRESKIORNIS STRICTIPENNIS.

White Ibis.

Ibis strictipennis, Gould in Proc. of Zool. Soc., Part V. p. 106.
Yam-bull-bull, Aborigines of Port Essington.
Black-necked Ibis, Colonists of Port Essington.
White Ibis of the Colonists of New South Wales.

The same cause that induced the Straw-necked Ibis (*Geronticus spinicollis*) to visit New South Wales in such abundance during the year 1839 acted equally on the present bird, which was not only observed at the same period, but the two species were frequently seen in company; one marked difference, however, was noticed, namely, that while the *Geronticus spinicollis* visited equally the lagoons and the plains, the *Threskiornis strictipennis* confined itself solely to the wet hollows of flats, the banks of rivers, lagoons, &c., wading knee-deep among the rushes and green herbage in search of frogs, newts and insects, upon which it feeds; when satiated it mounted upon the bare branches of the large gum-trees bordering the feeding-place, and then became so watchful that it could not be approached within gun-shot without the utmost caution. The natives as well as the colonists assured me that it was seldom so abundant as at the period of my visit, and I believe that many seasons sometimes elapse without its appearing there at all. I encountered this bird either in pairs or in small flocks of from five to twenty in number, but it was never a hundredth part so plentiful as the *Geronticus spinicollis*. Like that bird it must retire to some unknown part of Australia, doubtless towards the interior, a single skin from the north coast being all that I have ever seen from any other part of the country.

The *Threskiornis strictipennis* may at all times be distinguished from its near ally *T. Æthiopica*, inhabiting the banks of the Nile, as well as from the *T. melanocephala*, by the lengthened plumes which hang down from the front of the neck, and from which its specific appellation has been taken.

Dissection is necessary to distinguish the sexes, as they vary little, if at all, in size or colouring.

Head and upper half of the neck bare, and with the bill of a deep slaty black; back of the head and neck crossed by ten narrow distinct bands of rose-pink, and on the crown of the head a series of oval spots, arranged in the form of a star, of the same colour; the whole of the body and wings white, tinged with buff; the feathers on the fore-part of the neck long, narrow, lanceolate and stiff; primaries tipped with deep bluish green; webs of the tertiaries extremely prolonged and recurved, and of a deep blue-black mingled with white; thighs and knees deep purple; tarsi and feet light purple; irides dark brown.

The Plate represents two birds rather less than two-thirds of the natural size.



THRESKIORNIS STRICTIPENNIS.

J. Gould. and H.C. Richter del. et lith.

C. Hullmandel Imp.

FALCINELLUS IGNEUS.

Glossy Ibis.

Tantalus Falcinellus, Linn., vol. i. p. 241.—Lath. Ind. Orn., vol. ii. p. 707.—Gmel. Linn., vol. i. p. 648.—Penn. Brit. Zool., vol. ii. p. 30.

Ibis Falcinellus, Flem. Brit. Anim., p. 102.—Selby, Brit. Orn., vol. ii. p. 56.—Jenyns, Brit. Vert., p. 194.—Gould, Birds of Europe, vol. iv.—Temm. Man. d'Orn., tom. ii. p. 598.—Yarrell, Brit. Birds, vol. ii. p. 505.

Tantalus igneus, Gmel. Linn., vol. i. p. 649.—Lath. Ind. Orn., vol. ii. p. 708.—Lath. Gen. Hist., vol. ix. p. 154.

Falcinellus igneus, G. R. Gray, Gen. of Birds, 2nd edit., p. 87.

The present species is one of the few birds inhabiting both hemispheres; I believe that I have seen specimens from nearly every country of the Old World, and it has also been found in every part of the vast continent of Australia at present known to us. I have observed examples in the collection formed by Mr. Bynoe on the north coast, others in the collections lately transmitted to this country by the Governor of South Australia, and I possess others obtained in New South Wales. A careful comparison of all these specimens with others killed in Europe has satisfied me that they are identical. I never observed it in a state of nature myself, and from what I could learn from the colonists, its presence must be regarded as accidental; it is not a stationary species, nor are its migratory movements characterized by any degree of regularity.

Head dark chestnut; neck, breast, top of the back, upper edge of the wing and all the under surface rich reddish chestnut; lower part of the back, rump, quill- and tail-feathers of a dark green, with bronze and purple reflexions; orbits olive-green; irides brown; bill, legs and feet dull olive-brown.

As considerable difference exists between youth and maturity, I have figured the bird in both states of plumage, rather more than two-thirds of the natural size.



FALCINELLUS IGNEUS: *Bechst.*

J. Gould and H.C. Richter del et lith.

C. Hullmandel Imp.

GRUS AUSTRALASIANUS, *Gould.*

Australian Crane.

Grus Australasianus, Gould in Proc. of Zool. Soc., November 1847.
Native Companion, of the Colonists.

Having carefully compared the bird here represented with the *Grus Antigone* of India, with which it has hitherto been considered identical, I am satisfied that it is entirely distinct, and I have consequently assigned to it the specific term of *Australasianus*, which in this instance is more than ordinarily appropriate, since it is applied to the only species of the form inhabiting the country.

The *Grus Australasianus* is abundantly distributed over the greater portion of Australia from New South Wales on the south to Port Essington on the north; but although it is thus widely diffused, it has not yet been observed in the colony of Swan River, and it does not inhabit Van Diemen's Land. It was frequently observed by Dr. Leichardt during his overland expedition from Moreton Bay; Captain Sturt states that it was very abundant on the Macquarrie; and I found it very numerous in the neighbourhood of the Namoi and on the Brezi Plains in December 1839, as well as on the low flat islands at the mouth of the Hunter. In these localities it may be seen at almost every season of the year, sometimes singly or in pairs, and at others in flocks of from thirty to forty in number.

Like other members of the genus *Grus*, it is most stately and elegant in all its actions, and adds greatly to the interest of the scenery which is ornamented with its presence. It is not unfrequently captured, and is very easily tamed: when at Paramatta I saw a remarkably fine example walking about the streets in the midst of the inhabitants perfectly at its ease; and Mr. James McArthur informed me that a pair which he had kept in the immediate neighbourhood of his house at Camden, and which had become perfectly domesticated, so far attracted the notice of a pair of wild birds as to induce them to settle and feed near the house, make acquaintance with himself and the other members of his establishment, and becoming still tamer, to approach the yard, feed from his hand, and even to follow the domesticated birds into the kitchen, until unfortunately a servant imprudently seizing at one of the wild birds and tearing a handful of feathers from its back, the wildness of its disposition was roused, and darting forth followed by its companion it mounted in the air soaring higher and higher at every circle, at the same time uttering its hoarse call, which was responded to by the tame birds below; for several days did they return and perform the same evolutions without alighting, until the dormant impulses of the tame birds being aroused they also mounted high in the air, winged their way to some far-distant part of the country, and never returned to the home where they been had so long fostered.

It is a bird of powerful flight, and performs journeys of vast extent from one part of the country to another: when near the ground the action of the wings is very laboured; but when soaring in a series of circles at such a height in the air as to be almost imperceptible to human vision, it appears to be altogether as easy and graceful; it is while performing these gyrations that it frequently utters its hoarse croaking cry.

It breeds on the ground, usually depositing its two eggs in a slight depression on the bare plains; but occasionally the low swampy lands in the vicinity of the coast are resorted to for that purpose. The eggs are three inches and a half long by two inches and a quarter in breadth, and are of a cream-colour blotched all over, particularly at the larger end, with chestnut and purplish brown, the latter colour appearing as if beneath the surface of the shell.

Its food consists of insects, lizards, bulbous roots and various other vegetable substances, in search of which it tears up the earth with great facility with its powerful bill.

The sexes are alike in colouring, but may be distinguished by the smaller size of the female.

This fine bird, which stands about four feet high, may be thus described:—

The general plumage deep silvery grey; the feathers of the back dark brownish grey with silvery grey edges; lesser wing-coverts dark brown; primaries black; crown of the head and bill olive-green, the bill becoming lighter towards the tip; irides fine orange-yellow; raised fleshy papillæ surrounding the ears and the back of the head fine coral-red, passing into an orange tint above and below the eye, and becoming less brilliant on the sides of the face, which together with the gular pouch is covered with fine black hairs, so closely set on the latter as almost to conceal the red colouring of the skin; upper part of the pouch and the bare skin beneath the lower mandible olive-green; in old males the gular pouch is very pendulous, and forms a conspicuous appendage; legs and feet purplish black.

The figure is about one-fourth of the natural size.

J.Gould and H.C.Richter del et lith.

GRUS AUSTRALASIANUS: *Gould.*

Hullmandel & Walton Imp.

PLATALEA FLAVIPES, *Gould.*

Yellow-legged Spoonbill.

Platalea flavipes, Gould in Proc. of Zool. Soc., Part V. p. 106 ; and in Syn. Birds of Australia, Part IV.

This species differs in so many points from the typical members of the genus *Platalea*, and has so many characters in common with the white Ibises of India and Africa, as almost to warrant its separation into a distinct genus ; its whole habits and economy, however, so closely assimilate to those of the true Spoonbills, that I am induced to retain it in the genus to which I originally assigned it. The bill and legs, although approximating to those of the Ibises, are more slightly modified than some parts of its plumage ; and it must be admitted, that in the lengthened feathers of the chest, in the flowing black plumes which fall so gracefully over the extremities of the primaries, and in the total absence at any period of the occipital plumes, it approximates very closely to the Sacred Ibis and its near allies.

The rainy and luxuriant season which followed the drought experienced in New South Wales in 1839, attracted to that part of Australia, among many other rare birds, numerous flocks of the species forming the subject of the present Plate ; in fact, so plentiful was it, that there was scarcely a brook or lagoon from the Hunter to the Lower Namoi that was not tenanted by numbers of this bird ; in most instances accompanied by Straw-necked and White Ibises (*Ibis spinicollis* and *Ibis strictipennis*). The food suitable to one species was equally so to the other, all devouring with equal avidity the thousands of aquatic insects, small-shelled mollusks, &c., which the rains had apparently called into being.

I particularly mention its occurrence at this period, as I had not observed a single example during a previous visit to the same districts, when the whole face of the country presented as sad a spectacle of sterility as could well be imagined. Over what extent of Australia this fine bird will hereafter be found to range it is impossible to conjecture ; as yet I have never received a specimen from any other part than New South Wales.

In disposition I found it shy and distrustful, and it was not without a considerable degree of caution and manœuvring that I could ever approach sufficiently near to make a successful shot. I have occasionally met with it singly, but more frequently in pairs or in small companies of from six to eight. When not occupied in procuring food, which they do while skirting the edge of the lagoon, or by wading knee-deep among the grasses and rushes, they may be seen reposing on the dead branches of the highest trees growing near the water, frequently standing on one leg, with the head drawn back and the bill resting on the breast ; when thus situated, an approach sufficiently near to procure specimens is almost impossible.

The sexes exhibit no external differences, and are only to be distinguished by dissection ; the female is, however, rather smaller than her mate.

The whole of the plumage is pure white, with the exception of the outer webs of the tertiaries, which are black ; face white, entirely devoid of feathers, and bounded posteriorly by a narrow line of black ; bill primrose-yellow, passing into fleshy pink at the base ; irides straw-white ; legs and feet yellow ; nails black.

The figure is that of a male rather more than half the natural size.



PLATALEA FLAVIPES. *Gould.*

J. Gould and H.C. Richter del. *C. Hullmandel lith.*

PLATALEA REGIA, *Gould.*

Royal Spoonbill.

Platalea regia, Gould in Proc. of Zool. Soc., Part V. p. 106; and in Syn. Birds of Australia, Part IV.

This fine species of Spoonbill may be readily distinguished from the *Platalea leucorodia* of Europe by the nudity of its face, which even considerably beyond the eyes is entirely destitute of feathers, and is of the same black colour as the bill; in other respects—size and colouring of the plumage—little difference exists between the two species. The fine crest which adorns the principal figure in the accompanying Plate is, doubtless, only assumed during the pairing and breeding season, as I have seen adult specimens both with and without these feathers, and this is precisely the case with the European bird.

The Royal Spoonbill is tolerably common on the eastern and northern coast of Australia, and I have been informed that, although a rare visitant there, it has been killed within the colony of New South Wales. All my specimens were procured at Moreton Bay, and I have seen others from Port Essington. In its habits and disposition it as closely assimilates to the Spoonbill of Europe as in the general appearance; taking up its abode on the margin of those marshy inlets of the sea that run for a considerable distance into the interior, as well as those of rivers and lakes, feeding upon small-shelled mollusks, frogs, insects and the fry of fish, which are readily taken by its beautifully organized bill.

But little difference exists in the outward appearance of the sexes, both having the ornamental crest, which at the will of the bird is spread out on all sides, and droops gracefully over the back of the neck.

The whole of the plumage is white; bill, face, legs and feet black; on the crown of the head and over each eye a triangular mark of orange; eye red.

The figures are those of a male and a female, rather more than half the natural size.



PLATALEA REGIA: *Gould.*

Gould and H.C. Richter del.

MYCTERIA AUSTRALIS, *Lath.*

Australian Mycteria.

Mycteria Australis, Lath. Ind. Orn. Supp., p. lxiv.—Shaw in Linn. Trans., vol. v. p. 34.—Vieill. 2nde édit. du Nouv. Dict. d'Hist. Nat., tom. xvi. p. 440.—Ib. Ency. Méth., tom. iii. p. 1035.—List of Birds in Brit. Mus. Coll., part iii. p. 89.—Less. Traité d'Orn., p. 583.—Ib. Man. d'Orn., tom. ii. p. 249.—Swains. Class. of Birds, vol. ii. p. 355.

New Holland Jabiru, Lath. Gen. Syn. Supp., vol. ii. p. 294. pl. 138.—Shaw, Nat. Misc., pl. 601.—Lath. Gen. Hist., vol. ix. p. 16.—Steph. Cont. of Shaw's Gen. Zool., vol. xi. p. 627.

Ciconia leucoptera, Wagl. Syst. Av. *Ciconia*, sp. 6.

——— *Australis*, Temm.

Barri-enna, Aborigines of New South Wales.

I REGRET much that the economy of this fine bird is not at all known to me; I did not meet with it in a state of nature, but I learnt that it possesses a wide range over the continent of Australia; and that it is more abundant on the northern and eastern shores than elsewhere: when the country was first colonized it was found as near to Sydney as Botany Bay, and even now is sometimes seen on the small islands in the mouth of the river Hunter; as we proceed eastward to Moreton Bay it becomes more common, and in the neighbourhood of the Clarence and MacLeay it may be almost daily seen: both Mr. Gilbert and Mr. McGillivray met with it at Port Essington, but did not procure specimens; the former also encountered it in the lagoons of the interior, while in company with Dr. Leichardt. No bird is more shy in disposition or more difficult of approach, its feeding-ground and resting-place being always in the most exposed situation, such as spits of land running out into the sea, large morasses, &c., where it can survey all around.

Its food is said to be very varied, consisting of every kind of animal life inhabiting marshy situations, but more particularly fish and reptiles.

Head and neck rich deep glossy green, changing into purple and violet at the occiput; greater wing-coverts both above and beneath, scapularies, lower part of the back and tail rich glossy green, tinged with a golden lustre; the remainder of the plumage pure white; bill black; irides dark hazel; legs fine red.

The figure of this noble bird, which stands nearly four feet high, is necessarily very much reduced, and is scarcely one-fourth of the natural size.



MYCTERIA AUSTRALIS: *Lath*

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

ARDEA PACIFICA, *Lath.*

Pacific Heron.

Ardea pacifica, Lath. Ind. Orn. Supp., p. lxv.—Jard. and Selb. Ill. Orn., vol. ii. pl. 90.—Swains. Class. of Birds, vol. ii. p. 354.—List of Birds in Brit. Mus. Coll., Part III. p. 77.
Pacific Heron, Lath. Gen. Syn. Supp., vol. ii. p. 305.—Ib. Gen. Hist., vol. ix. p. 127.
Ardea Ballaragang, Wagl. Syst. Av. Gen. Ardea, sp. 5.
Jil̋-lee-mil-yun, Aborigines of the lowland, and
Koon̋-jere, Aborigines of the mountain districts of Western Australia.
White-necked Heron of the Colonists.

The *Ardea pacifica* appears to be a summer visitor to the whole of the southern coast of Australia. In New South Wales its occurrence depends in a great degree upon the nature of the season; that is, if much rain has fallen, the lagoons and rivers become filled, and abounding with frogs, newts, and aquatic insects: its presence may be looked for in all such situations, where it wades about in search of the animals enumerated, upon all of which it feeds with avidity, and partakes less of fish than other herons. No one of the *Ardeidæ* is more ornamental to the landscape than the present bird, its white neck offering a decided and pleasing contrast to the green colouring of the herbage with which it is surrounded; its walk too is characterized by a greater degree of stateliness and grace than that of most of the other members of the group.

In general it merely flies from district to district in search of a more abundant supply of food; but when necessity requires, it is capable of performing extensive journeys.

The stomach is capacious and membranous.

Considerable variation exists in the colouring of this species, some specimens having the neck wholly white, while others have the centre of that part spotted with black.

The sexes when fully adult are so nearly alike, that it is only by the smaller size of the female that they can be distinguished from each other.

Head, neck and elongated feathers of the breast white, tinged with purplish grey; on the forepart of the neck a series of irregularly placed black spots; upper surface, wings and tail bluish black, glossed with green on the back and wing-coverts; under surface chocolate-brown, each feather of the abdomen with a broad stripe of white down the centre; feathers of the breast and the elongated scapularies deep purplish red, the tips and outer webs of some of the latter dull green; shoulder and edge of the wing pure white; upper mandible black, lower part of the under mandible yellowish olive in some specimens and yellowish horn-colour in others; irides in some specimens rich primrose-yellow, and in others very dark brown; upper part of the tarsi yellowish olive; feet black; orbits greenish yellow, becoming more yellow immediately before and round the eye.

The figure represents a male about two-thirds of the natural size.



ARDEA PACIFICA; *Lath.*

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

ARDEA NOVÆ-HOLLANDIÆ, *Lath.*

White-fronted Heron.

Ardea Novæ-Hollandiæ, Lath. Ind. Orn., vol. ii. p. 701.—Steph. Cont. of Shaw's Gen. Zool., vol. xi. p. 561.
White-fronted Heron, Lath. Gen. Syn., Supp., vol. ii. p. 304.—Phill. Bot. Bay, pl. in p. 163.—Penn. Outlin., vol. iv. p. 128.—Lath. Gen. Hist., vol. ix. p. 127.
Ardea leucops, Wagl. Syst. Av., *Ardea*, sp. 17.
Herodias Novæ-Hollandiæ, List of Birds in Brit. Mus. Coll., part iii. p. 80.
Wy-an, Aborigines of the lowland districts of Western Australia.
Blue Crane of the Colonists.

The White-fronted Heron is abundantly dispersed over every part of Van Diemen's Land, the colonies of New South Wales, South Australia and Swan River; but I have never seen it from the north coast, and consequently infer that it is not found there. Low sandy beaches washed by the open ocean, arms of the sea, and the sides of rivers and lagoons, both in the interior of the country as well as near the coast, are equally tenanted by it, consequently it is one of the commonest species of the genus in all the countries above-mentioned; and may frequently be seen wading knee-deep in the water of the salt marshes in search of food, which consists of crabs, fish, and marine insects. Its flight is heavy and flapping like that of the other Herons, but it runs more quickly over the ground, and is continually moving about when searching for food, and never stands motionless in the water as the true Herons do; these active habits are in fact necessary to enable it to capture insects and crabs, upon which it mainly subsists.

Some nests I observed in the month of October 1838, on the banks of the Derwent, were placed on the tops of the smaller gum-trees, and most of them contained newly-hatched birds; Mr. Kermode informed me that it annually breeds in the neighbourhood of his estate, which is near the centre of Van Diemen's Land. The nest is of a moderate size, and is composed of sticks and leaves. The eggs are four in number, of a pale bluish green, one inch and seven-eighths long by one inch and a quarter broad.

The white colouring of the face and throat is much more extensive in some individuals than in others; and the base of the bill, the orbits and irides are deep lead-colour in some specimens, while in others those parts are pale grey, and the irides pale buff.

The stomach is very capacious, and the weight of the adult bird about one pound five ounces.

Little or no difference is observable in the sexes; but the female is somewhat smaller than her mate.

Face and throat white; crown of the head and back of the neck dark slate-colour; sides of the neck, all the upper surface and wings dark grey, tinged with brown on the wings; primaries and tail-feathers dark slate-colour; elongated feathers of the back grey, tinged with brown; elongated feathers of the breast cinnamon-brown; under surface grey, washed with rufous, which tint becomes gradually paler as it proceeds along the abdomen to the under tail-coverts; down the lower part of the neck a stripe of buff, gradually blending above with the white of the throat, and below with the cinnamon tint of the breast; irides in some lead-colour, in others yellow, and in others pale buff; orbits and base of the bill, in some pale grey, in others deep lead-colour; base of the lower mandible flesh-colour.

The figure is that of a male about four-fifths of the natural size.



ARDEA RECTIROSTRIS.

Great-billed Heron.

Ardea rectirostris, Gould in Proc. of Zool. Soc., Part XI. p. 22.
Oo-loo-mŭng-a, Aborigines of Port Essington, Gilbert.
Māitch, Aborigines of Port Essington, McGillivray.

The only part of Australia in which this bird has been seen is the Cobourg Peninsula on the north coast, where Mr. Gilbert found it breeding on the 5th of February. He states that it is solitary in its habits, and is only to be found in the most secluded creeks or in the open spaces among the mangroves. Mr. McGillivray observed it at Port Essington, but could not obtain any information respecting it. A fine adult specimen was procured by Dr. Sibbald, R.N., and Mr. McGillivray was so fortunate as to kill a young bird in a large mangrove swamp at the head of a bay called Wān-măn-mēma: it was exceedingly shy and watchful of his motions, and he had great difficulty in getting even a long shot at it.

The nest observed by Mr. Gilbert was built in an upright fork of a large and lofty *Melaleuca* at about eighty feet from the ground, and was formed of an outer layer of very strong sticks, with a few small twigs as a lining, and contained two eggs of a light ash-grey.

The bird when discovered appeared very reluctant to leave the nest, and instead of the harsh croak usually uttered by it, emitted on this occasion a note drawn out to a considerable length, and at times resembling distant thunder, which was suddenly changed to a sound very like the groan of a person in extreme agony.

Mr. Gilbert unfortunately failed in procuring the adults; and a young bird is all of this species contained in my collection: an adult male may be found in that of the British Museum.

The stomach is membranous, and the food consists of fish.

Head, neck and all the upper surface vinous brown, a few of the back feathers with a faint line of white down the centre, and the primaries and tail washed with grey; chin white; front of the neck and all the under surface greyish brown, the lengthened plumes on the lower part of the neck and chest with a stripe of white down the centre; irides yellow; bill blackish brown; basal half of the lower mandible yellowish white, apical half yellow; legs and feet dark greenish grey; hinder part of the tarsi and inside of the feet yellowish grey.

The figure represents the adult about half the natural size.

ARDEA RECTIROSTRIS; *Gould.*

Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

ARDEA LEUCOPHÆA, *Gould.*

Australian Heron.

Ardea leucophæa, Gould in Proc. of Zool. Soc., May 9, 1848.

During my journey into the interior of South Australia in 1839, I saw a fine adult example of this beautiful Heron, but although I resorted to every possible stratagem in my power to get within shot of it, I regret to say I was unsuccessful; I have since, however, received a skin direct from New South Wales, which enables me to include a figure of it in the present work, and I have also seen several examples from India, whence we may infer that it extends its range from that country throughout the islands to Australia.

Having carefully compared examples of this species with the Common Heron of Europe, I find it differs from that bird in being of a larger size in all its admeasurements, and that the line of the bill instead of being straight has an upward tendency; in other respects they are very similar.

Forehead and upper portion of the crest white; sides of the head and lower portion of the crest deep glossy black; neck white, washed with vinous and with a series of lanceolate marks of black disposed alternately down the front; all the upper surface, wings and tail dark grey, the lanceolate feathers of the back fading into white; edge of the wings buffy white; primaries and secondaries dark slate-colour; flanks and under surface of the wing grey; chest and abdomen white, separated from the grey of the flanks by a series of black feathers; under tail-coverts and thighs white; bill yellow; tarsi olive.

The young differs in having the whole of the crown of the head black; all the upper surface greyish brown; and the under surface striated with brown and white.

The Plate represents an old and a young bird about half the natural size.



ARDEA LEUCOPHÆA: *Gould*

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

HERODIAS SYRMATOPHORUS, *Gould.*

Australian Egret.

Herodias syrmatophorus, Gould in Proc. of Zool. Soc., Part XIV.

This noble species of Egret, the largest of the group inhabiting Australia, is very generally dispersed over all parts of that continent, and is equally to be met with along the rivers and lagoons of the interior as well as in the neighbourhood of the coast. I have often seen it near the mouth of the Hunter, but it is more frequently met with on the banks of the Clarence and other rivers little frequented by civilized man. I observed it also in Van Diemen's Land in the vicinity of George's River, and the other unfrequented streams to the northward of the island. The specimen from which my drawing is taken, the acquisition of which enabled me to figure the soft parts correctly, was killed on the 2nd of January 1840, on the banks of the Mokai near Mr. Uhr's station. It is of an extremely shy and distrustful disposition, and can only be approached within range by the exercise of the utmost care and caution. Its powers of wing are considerable, and like other Herons it occasionally performs long-continued flights at a great height in the air; its food is also of a similar character, consisting of fish, frogs, aquatic insects, &c. When on the ground its snowy plumage presents a strong and pleasing contrast to the green sedgy and other herbage clothing the banks of the rivers.

That it undergoes seasonal changes of plumage is evident, since I possess specimens, some of which are adorned with long ornamental plumes on the back, as represented in the Plate, while in others they are entirely wanting, from which I infer, that as they all appear to be old birds, they have been killed at different periods of the year, and that these ornamental plumes are only carried during the months of spring and the breeding-season.

The sexes are precisely alike in external appearance, and both possess the lengthened plumes during the vernal season.

The whole of the plumage pure white; irides rich straw-yellow; naked space before and behind the eye fine greenish yellow; bill beautiful orange; legs above the knee pale dull yellow, which colour is continued down the centre of the inner part of the tarsi; remainder of the tarsi and feet black.

The Plate represents a male about two-thirds of the natural size.



HERODIAS SYRMATOPHORUS: *Gould.*

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

HERODIAS PLUMIFERUS, *Gould.*

Plumed Egret.

Herodias plumiferus, Gould in Proc. of Zool. Soc., November 23, 1847.

No one of the members of the beautiful genus *Herodias* is more interesting than the present species, inasmuch as it is not only adorned with the redundance of graceful plumes springing from the back, common to the other species, but it has a mass of feathers of precisely the same structure depending from the lower part of the neck and the chest. In size it is directly intermediate between *H. syrmatophorus* and *H. immaculata*. I possess a specimen from the Namoi, in the southern part of Australia, and another from the north coast; and I have also a third from Torres Straits, which proves that its range is very extensive; the latter example is destitute of the lengthened plumes, which are probably only assumed during the breeding-season.

The entire plumage is pure white; bill and orbits yellow; feet and lower part of the tarsi black; upper part of the tarsi inclining to flesh-colour.

The figure is somewhat under the natural size.

HERODIAS PLUMIFERUS: Gould.

J. Gould and H. C. Richter del. et lith.

Hullmandel & Walton Imp.



HERODIAS IMMACULATA, *Gould.*

Spotless Egret.

Herodias immaculata, Gould in Proc. of Zool. Soc., 1846.
Yab-be-ruk, Aborigines of Port Essington.
White Crane of the Colonists.

This Spotless Egret, which is a beautiful representative of the *Herodias Garzetta* of Europe, is a native of the northern portion of Australia, and is extremely abundant in almost all parts of the Cobourg Peninsula, both on the open sea-beach and in the secluded parts of the harbour; it also occurs in all the neighbouring swamps and lakes. "On one occasion," says Mr. Gilbert, "while lying at anchor in Van Diemen's Gulf, about half a mile from an isolated rock, covered with a stunted plant growing from the crevices, I saw these birds repairing thither for the purpose of roosting in such numbers, that in a very short time the dark-coloured rock assumed an appearance of snowy whiteness, resembling in the distance, and particularly by moonlight, a pile of snow; at the same time I observed them in different parts of the harbour congregated in flocks, and when seen perched upon the branches overhanging the water, they greatly resembled a flock of Cockatoos; but although they are met with in such numbers it is by no means easy to procure specimens, for a more shy and wary bird is scarcely to be found.

"The stomach is membranous and the food consists of fish."

The sexes are precisely alike in plumage, and both are adorned with the long flowing plumes, which are thrown off in the winter season.

The entire plumage of a pure and snowy whiteness; irides yellow; upper mandible, half the lower mandible and apical dark purplish black; base of the latter dull yellowish grey; cere and orbits saffron-yellow; legs blackish grey; inner side and back of the tarsi, and the under surface of the feet siskin-green.

The Plate represents male and female in breeding plumage of the size of life.



HERODIAS IMMACULATA: *Gould.*

J. Gould. and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

HERODIAS PANNOSUS.

Sombre Egret.

Herodias pannosus, Gould in Proc. of Zool. Soc., November 1847.

The only example of this species that has come under my observation is the fine adult specimen which graces my collection, and which I received from the neighbourhood of Port Stephens in 1843. Unfortunately I am not able to give any information respecting it, as no note of any kind accompanied the specimen. Its dark colouring and very slender and elegant form distinguish it from every other species of the group to which it belongs.

The entire plumage is bluish or slaty black with the exception of the chin, which is pure white.

The figure is rather less than the natural size.



HERODIAS PANNOSUS: *Gould.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

HERODIAS JUGULARIS.

Blue Reef Heron.

Ardea jugularis, Forst. Icon. Ined., t. 114.
—— *cærulea*, var. Lath.
—— *Matook*, Vieill.
Herodias jugularis, List of Birds in Brit. Mus. Coll., part iii. p. 80.
Blue Crane, Colonists of Port Essington.

The Blue Reef Heron is universally distributed over the whole of the coasts of the great continent of Australia, and is also found in New Zealand: the sea-coast is evidently the place destined by nature for this bird to inhabit; it especially loves to dwell on shores of a rocky nature; and when disturbed merely takes short flights to seaward, and returns again to some prominent point, whence it can survey all around and feel itself in security. Its food appears to consist of crabs and shelled mollusks; the stomachs of those dissected were very muscular, and contained the remains of both those kinds of animals; hence the necessity for the powerful bill and peculiar structure of feet with which this bird is provided.

"This species of *Herodias*," says Mr. McGillivray, "inhabits the islands of the north-east coast of Australia and Torres' Straits, and is abundantly distributed from the Capricorn group in lat. 23° 30′ S., as far north as Darnley Island in lat. 9° 35′ S. It procures its food at low water on the coral reefs surrounding the low wooded islands it loves to frequent; although generally a wary bird even when little disturbed by man, yet on one occasion on Heron Island I knocked down several with a stick. The nest is usually placed on a tree, but on those islands where there are none, such as Raine's Islet and elsewhere, it breeds among the recesses of the rocks; where the trees are tall, as on Oomāga or Keat's Island, the nests are placed near the summit; on Dugong Island they were placed on the root of a tree, on a low stump, or half-way up a low bushy tree; they are shallow in form, eighteen inches in diameter, and constructed of small sticks and lined with twigs; the eggs are two in number, and of a pale bluish white, one inch and seven-eighths long by one inch and a quarter broad." Mr. Strange says, "I procured specimens about ten miles north of Sydney Heads; it appears to be strictly confined to the rocky cliffs and ledges of rocks, where it takes great delight in allowing the spray to beat over it. It is very shy and wary, and never stops long in one place." In his notes from Port Essington, Mr. Gilbert states that "it is abundant on all the small islands and rocks immediately adjacent to the main-land. It is gregarious in its habits the whole year round, for I remarked that it was congregated in as large numbers before as after the breeding-season, which is the month of August. The nest is built of sticks on the ground, and is perfectly round and from twelve to eighteen inches in height, with a considerable depression for the reception of the eggs; they are always placed in thickets or underwood, and as near the outer edge of the rock as possible. On one small rock I found at least fifty of these nests, some of which were so close as nearly to touch each other. The eggs were sometimes two, and at others three in number."

The sexes are so similar that dissection must be resorted to to determine the one from the other.

It will be observed that these statements are contradictory in some particulars, which may perhaps be accounted for by the habits of the bird being modified by circumstances, or the peculiar nature of the situations in which they happened to be observed.

Down the centre of the chin a line of buff in some, white in others; the whole of the remainder of the plumage dark slaty black, with a wash of grey on the lengthened scapularies, and the lanceolate feathers pendent from the chest; bill pale dirty yellowish green; lores dull oil-green; tarsi and tibiæ pale or apple-green; soles of the feet dirty yellow.

The figures represent a male and a female about three-fourths of the natural size.



HERODIAS? JUGULARIS.

Hullmandel & Walton Imp.

HERODIAS GREYI, *Gray*.

White Reef Heron.

Herodias Greyi, List of Birds in Brit. Mus. Coll., part iii. p. 80.

This species of Heron is abundantly dispersed over the whole of the northern and eastern coasts of Australia wherever low islands and reefs of coral running parallel to those coasts are found to exist. It presents so many points of similarity in size and in form to the *H. jugularis*, that I have long been of opinion that it is merely an albino variety of that species, an opinion which I find has been entertained by others as well as myself; and although Mr. McGillivray states that they are distinct, I have a latent suspicion that such is not the case. The bird did not come under my own observation, but was often seen by Mr. McGillivray while on the surveying voyage of H.M.S. Fly, and to him I am indebted for the following observations:—

"From the circumstance of my having always found this and the dark-coloured species" (*H. jugularis*) "in company, I considered them as the same bird in different states of plumage, their size and proportions being so similar, and was surprised that individuals exhibiting a change from blue to white or *vice versâ* never occurred. At length, while on Dugong Island, I was convinced they were specifically distinct by seeing that the half-grown young from the nest had assumed the distinctive colour of the parents. This was first pointed out to me by Dr. Muirhead, R.N., whose attention I had previously drawn to the subject. The habits of both species are similar; and they procure their food in the same manner at low water on the coral reefs surrounding the low islands they frequent. The nest and eggs are precisely similar, but the young of this bird is white from the nest."

The entire plumage snow-white; bill yellowish straw-colour, with a dusky tinge on the culmen and towards the point; irides primrose-yellow; eyelids bright yellow; lores and orbits dull greenish; legs and feet yellowish green; soles orange; claws pale horn-colour; hind one dark; anterior plates of the toes bluish black.

The figure is about three-fourths of the natural size.



HERODIAS? GREYI: *Gray.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

HERODIAS PICATA, *Gould.*

Pied Egret.

Ardea (Herodias) picata, Gould in Proc. of Zool. Soc., Part XIII. p. 62.
Oo-le-buk̈-o, Aborigines of Port Essington.

Examples of this species, not the least beautiful member of the tribe to which it belongs, have been sent to me by Mr. Gilbert and by Lieut. Ince; they were all procured in the neighbourhood of Port Essington, where Mr. Gilbert states that it inhabits the inland swamps, and is usually encountered in small families often in company with other species, but is not so abundant in the vicinity of the harbour as on the islands at the head of Van Diemen's Gulf, where it appeared to be very numerous.

The stomachs of those dissected were found to be capacious and membranous, and the food to consist of fish, aquatic insects and their larvæ.

I regret to say that nothing more is at present known respecting it.

Upper part of the head, occiput, occipital plumes, the whole of the plumage of the body, wings and tail bluish slaty black; chin, neck, chest, and some of the lanceolate feathers dependent therefrom, white; some few of the lanceolate feathers on the neck and breast have one web white and the other web bluish slaty black; the remainder of these lanceolate feathers are the same colour as the body; irides yellow; bill, legs and feet greenish yellow.

The young birds differ in having the whole of the under surface white.

The figures are about the natural size.



J. Gould and H.C. Richter del et lith.

HERODIAS PICATA: *Gould.*

Hullmandel & Walton Imp.

NYCTICORAX CALEDONICUS.

Nankeen Night Heron.

Ardea Caledonica, Lath. Ind. Orn., vol. ii. p. 679.—Gmel. Edit. Linn. Syst. Nat., vol. i. p. 626.
Caledonian Night Heron, Lath. Gen. Syn., vol. v. p. 55.—Cook's Voy., vol. ii. p. 111. pl. 50.—Lath. Gen. Hist., vol. ix. p. 59.
Nycticorax Caledonicus, Less. Traité d'Orn., p. 571.
Ardea Sparmannii, Wagl. Syst. Av., sp. 32.
New Holland Night Heron, Lath. Gen. Hist., vol. ix. p. 62. young.
Gnal-gañ-ning, Aborigines of the lowland districts of Western Australia
Quaker and *Nankeen-bird* of the Colonists.
Al-ŏr-woon, Aborigines of Port Essington.

This beautiful species is universally dispersed over the continent of Australia, but is far less abundant on the western than on the eastern coast. In the southern latitudes it is only a summer visitant, arriving in New South Wales and South Australia in August and September, and retiring again in February. As its name implies, it is nocturnal in its habits, and from its frequenting swamps, inlets of the sea, the sedgy banks of rivers, and other secluded situations, it is seldom seen. On the approach of morning it retires to the forests and perches among the branches of large trees, where, shrouded from the heat of the sun, it sleeps the whole day, and when once discovered is easily procured, as it seldom moves unless shot at or driven from its perch by some other means, and when forced to quit its perch it merely flies a short distance and again alights. Its flight is slow and flapping, and during its passage through the air the head is drawn back between the shoulders and the legs are stretched out backwards after the manner of the true Herons. When perched on the trees or resting on the ground, it exhibits none of the grace and elegance of those birds, its short neck resting on the shoulders, as shown in the smaller figure on the accompanying Plate. When impelled by hunger to search for a supply of food it naturally becomes more animated, and its actions more lively and prying; the varied nature of its food in fact demands some degree of activity—fishes, water-lizards, crabs, frogs, leeches and insects, being all partaken of with equal avidity.

It breeds in the months of November and December, and generally in companies like the true Herons; the favourite localities being the neighbourhood of swampy districts, where an abundant supply of food is to be procured; the branches of large trees, points of shelving rocks and caverns, are equally chosen as a site for the nest, which is rather large and flat, and generally composed of crooked sticks loosely interwoven. The eggs, which are usually three in number, are of a pale green colour, and average two inches and five-eighths in length by one inch and a half in breadth.

So little difference exists in the colouring of the sexes, that it is extremely difficult to distinguish the male from the female, and never with certainty unless dissection be resorted to; both have the three beautiful elongated occipital plumes, the use of which except for ornament is not easily imagined. The young, on the contrary, differ so greatly from the adult, that they might readily be regarded as a distinct species.

The following is a faithful description of a mature bird and a young one of the first year:—

The adult has the crown of the head and the nape black; occipital plumes white; back of the neck, all the upper surface, wings and tail rich cinnamon-brown; stripe over the eye, sides of the face, neck and all the under surface pure white, the white and cinnamon gradually blending on the sides of the neck; bare space surrounding the eye greenish yellow; irides orange; bill in some specimens black, slightly tipped with yellow, in others black with a streak of greenish yellow along the lower mandible, and a wash of the same hue along the lower edge of the upper one; legs and feet jonquil-yellow; claws black.

The young bird has the whole of the upper surface striated with buff and blackish brown,—narrow and lanceolate on the head and neck, broad and conspicuous on the back and wings; primaries and tail-feathers dark chestnut-red, deepening into black near the extremity and tipped with buffy white; all the under surface buffy white, with a stripe of brown down the centre of each feather; irides yellow.

The figures represent the old and young nearly the size of life.

NYCTICORAX CALEDONICUS.

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.



BOTAURUS AUSTRALIS, *Gould.*

Australian Bittern.

Botaurus Australis, Cuv. Gal. de Paris?—Less. Traité d'Orn., p. 572?
Buŕ-den-etch, Aborigines of the lowlands of Western Australia.

The Australian Bittern, although nowhere very abundant, is so generally diffused over the surface of the country wherever marshes and the sedgy banks of rivers occur, that there are few localities of this description in which its presence may not be detected: owing to the frequent occurrence of such districts in Van Diemen's Land, it is perhaps more numerous in that island than elsewhere. A fine specimen, which had been captured on the Torrens, was sent to me during my stay in Adelaide by Mr. Dark, the Surveyor; I killed another myself on the 1st of July 1839, above Gleeson's Station, while journeying towards the Murray, and I subsequently procured others at Illawarra and in Van Diemen's Land: Captain Sturt mentions that he found it abundant in the marshes of the interior, in the neighbourhood of the river Macquarrie, and Mr. Gilbert procured it in Western Australia.

In its actions, habits, manners and mode of flight it so closely resembles the *Botaurus stellaris* of Europe, as to render a description of them entirely unnecessary; like that bird also it feeds on fish, frogs, newts, aquatic animals of all kinds, and insects, and has a capacious and membranous stomach.

The sexes are alike in plumage, but the female is smaller than the male.

Head and back of the neck purplish brown; back and scapularies dark purplish brown; wings buff, conspicuously and largely freckled with brown; ear-coverts tawny; throat and all the under surface deep tawny buff, with irregular markings of deep brown down the centre, giving the whole a mottled appearance; the brown colour however prevails on the lower part of the throat; bill yellowish olive in some, greenish horn-colour in others; space round the eyes and the legs beautiful pale green; irides in some yellow, lilac-red in others.

The figures are about two-thirds of the natural size.

BOTAURUS AUSTRALIS; *Gould*

J.Gould. and H.C.Richter. del et lith. *Hullmandel & Walton Imp.*



ARDETTA? FLAVICOLLIS.

Yellow-necked Bittern.

Ardea flavicollis, Lath. Ind. Orn., vol. ii. p. 701.—Wagl. Syst. Nat., Ardea, sp. 16.
Ardea nigra, Vieill. 2nd Edit. du Nouv. Dict. d'Hist. Nat., tom. xiv. p. 417.—Ib. Ency. Méth. Orn., Part iii. p. 1118.
Yellow-necked Heron, Lath. Gen. Syn. Supp., p. 239.—Ib. Gen. Hist., vol. ix. p. 134.
Ardetta flavicollis, List of Birds in Brit. Mus. Coll., Part iii. p. 84.
Wŏr-gorl, Aborigines of Port Essington.
Little Brown Bittern of the Colonists.

I have received this beautiful species from New South Wales, Swan River and Port Essington; it was also obtained by Governor Grey on the north-west coast. Both Latham and Wagler assert that it inhabits Java and that it extends its range to the continent of India, and although I do not question the truth of this assertion, I must state that the specimens I have seen from those countries are smaller in all their admeasurements than those from Australia; much difference however occurs in the size and colouring of the sexes, and it may be that the few individuals which have come under my notice from India and Java were females.

The Yellow-necked Bittern is exclusively an inhabitant of the mangroves, from which it is not easily driven, but it readily eludes pursuit by the facility with which it runs over the mud beneath the roots of the mangroves, which it will do for a long time and distance, and it must be very closely followed up before it can be forced to take wing.

Eggs were taken on the 6th of January, in a nest formed of small sticks resting on a slender horizontal branch of a mangrove; they were two in number, very much paler bluish green and more rounded in form than those of any other species of the group, being one inch and a half long by one inch and an eighth broad.

The male has the crown of the head, back of the neck and all the upper surface bronzy black; primaries and tail bluish slate-colour; chin whitish; throat deep buff, the feathers down the centre of the chin and throat having their inner webs pale buff and their tips blackish brown, giving the whole a richly variegated appearance; elongated feathers of the breast pale brown, narrowly margined with buff; under surface greyish brown, stained with buff; irides yellow; bill dark horn-colour; feet olive-brown.

The female differs in having the colours of the throat less brilliant and contrasted, and the upper surface of a lighter brown than that of the male.

The Plate represents the two sexes rather less than the natural size.

ARDETTA? FLAVICOLLIS.

J. Gould and H^n. Richter del. et lith.

Hullmandel & Walton Imp.



ARDETTA MACRORHYNCHA, *Gould.*

Thick-billed Green Bittern.

Ardetta macrorhyncha, Gould in Proc. of Zool. Soc., February 22, 1848.

The more robust bill, larger head and greater size of this species will at all times distinguish it from *Ardetta stagnatilis* and *A. Javanica*. The only part of Australia from which it has yet been received is the east coast. I myself observed two individuals sitting close to their flat nest on the branch of a mangrove growing on Garden Island near the mouth of the Hunter. It inhabits the mangrove swamps, and assumes all the habits and actions of the *A. stagnatilis*, and like that species feeds upon the crabs and other crustaceans which there abound.

Crown of the head and occipital crest black, with green reflexions; neck, all the upper surface and wing-coverts greenish olive; wing-coverts narrowly margined with deep rufous; primaries and tail slate-grey; spurious wing, secondaries, and all but the three or four external primaries with an irregular triangular-shaped spot at the tip; down the centre of the throat a series of oblong marks of dark brown and white, forming a conspicuous mottled stripe continued on to the breast, where it is lost in the mingled grey and buffy brown of the abdomen; upper mandible dark reddish brown; basal portion of the lower one oil-green; tibiæ and hinder part of the tarsi bright yellow; remainder of the legs and feet yellowish brown.

The Plate represents the two sexes of the size of life.

ARDETTA MACRORHYNCHA: *Gould.*

J.Gould and H.C.Richter del et lith. *Hullmandel & Walton Imp.*

ARDETTA STAGNATILIS, *Gould.*

Little Grey Bittern.

Ardetta stagnatilis, Gould in Proc. of Zool. Soc., November 1847.
Wor̈-gorl, Aborigines of Port Essington.
Little Grey Bittern, of the Colonists.

This bird is tolerably abundant at Port Essington and other parts of the north coast of Australia, where its favourite haunts are small islets covered with mangroves and low swampy points of land running out into the sea; its chief place of resort, however, is the dense beds of mangroves, beneath the shade of which it runs about in search of food, of which there is a great variety, such as fish, crustaceans, and numerous marine worms and insects: when the tide rises and the muddy beds and roots of the mangroves are covered with water, the bird betakes itself to the higher branches, where it sits motionless until the tide retires and leaves behind a fresh supply of food.

Although generally speaking it is a solitary species, yet at times it congregates in considerable numbers. Mr. Gilbert found a colony breeding on two small islets in Coral Bay, near the entrance of the harbour of Port Essington. Their nests, about thirty in number, were built both on the mangroves and on the branches of the yellow-blossomed *Hibiscus*; they were very frail structures, consisting of a few small twigs placed across each other on the horizontal branches, and none of them were more than six feet from the ground; each contained either two young birds, or two eggs of a uniform very pale green, one inch and five-eighths long by one inch and a quarter broad.

Crown of the head, occipital crest and a small tuft beneath each eye black; neck and all the under surface grey, with a vinous tinge, which becomes much deeper on the abdomen and under tail-coverts; lengthened feathers of the back bluish grey with lighter shafts; wing-coverts dark slate-grey, narrowly margined with buff and white; remainder of the wings and tail dark grey; irides light yellow; orbits and eyelash gamboge-yellow; upper mandible and cutting edge of the lower mandible very dark reddish brown; remainder of the lower mandible oil-green; tibiæ and hinder part of the tarsi bright yellow; remainder of the legs and feet yellowish brown.

The young differ in having all the upper surface brown, with a triangular spot of white at the tip of all the wing-feathers, and the throat broadly and conspicuously striated with brown on a white ground.

The figures represent a male and a female of the natural size.



J. Gould and H. C. Richter del. et lith.

ARDETTA STAGNATILIS: *Gould.*

Hullmandel & Walton Imp.

ARDETTA PUSILLA.

Minute Bittern.

Ardea pusilla, Vieill. Nouv. Dict. d'Hist. Nat., tom. xiv. p. 432.—Ib. Ency. Méth. Orn., part iii. p. 1128.—Wagl. Syst. Av. Ardea, sp. 44.

—— *maculata*, Lath. Ind. Orn. Supp., p. lxiv.—Vieill. Nouv. Dict. d'Hist. Nat., tom. xiv. p. 432.—Ib. Ency. Méth. Orn., part iii. p. 1128, young ?

Spotted Heron, Lath. Gen. Syn. Supp., vol. ii. p. 305.—Ib. Gen. Hist., vol. ix. p. 73, young ?

Specimens of the Minute Bittern are contained in my own collection, and in that of the Linnean Society of London; it is however a very rare species, and at present nothing whatever is known respecting it. During my sojourn in the country I ascertained that the few individuals known had been procured between Sydney and Botany Bay. I have frequently had occasion to allude to the beautiful manner in which many birds peculiar to Europe are represented in Australia by other closely allied species, and the present bird forms another case in point, since it is clearly a representative of the Little Bittern (*Ardetta minuta*) of this part of the world, which it much resembles in the style of its plumage, but is of a still smaller size. This is another of the species, therefore, to which I would direct the attention of residents in its native country, with a view to their making known the result of their observations for the promotion of ornithological science.

The sexes, as is the case with the *Ardetta minuta* of Europe, differ considerably from each other, the female being mottled and of a smaller size than her mate.

The male has the crown of the head, back and tail bronzy greenish black; front of the neck buff, gradually passing into rich deep chestnut on the sides of the head and back of the neck; down the centre of the chin and neck in front a broad irregular stripe of reddish brown; on either side of the chest a patch of black feathers margined with deep buff; all the under surface pale buff; wing-coverts deep buff, with a patch of rich chestnut on the shoulder and a wash of the same colour along the edge of the wing; primaries slaty black; space round the eye, bill and feet yellow; culmen nearly black; irides orange.

The female has the head and back chestnut; wing-coverts very deep tawny, passing into chestnut on the tips of the coverts and secondaries; primaries grey, tipped with brown; tail black; sides of the neck pale chestnut; front of the throat and the under surface white, with a stripe of tawny down the middle, and a small streak of brown in the centre of each feather, the brown hue predominating and forming a conspicuous mark down the throat.

The Plate represents the two sexes of the size of life.



J. Gould and H. C. Richter del. et lith.

Hullmandel & Walton Imp.

ARDETTA PUSILLA.

PORPHYRIO MELANOTUS, *Temm.*

Black-backed Porphyrio.

Porphyrio melanotus, Temm. Man. d'Orn., 2nd Edit., tom. ii. p. 701.—Less. Traité d'Orn., p. 533.—Shaw, Gen. Zool., vol. xii. p. 259.
Black-backed Gallinule, Lath. Gen. Hist., vol. ix. p. 427.
Ar-ra-weid-bit, Aborigines of Port Essington.

This bird is universally distributed over Van Diemen's Land and the greater part of the continent of Australia wherever situations suitable to its habits occur, such as marshes, lagoons clothed with sedge and rushes, and the sides of rivers. On comparing specimens from Van Diemen's Land, South Australia and Port Essington, I find them to differ in size; those from the first- and last-mentioned localities being smaller than examples procured in South Australia and New South Wales: Mr. Gilbert's notes also indicate a difference in the habits of the Port Essington bird, but I am inclined to believe this to be merely the result of a difference in the nature of the locality and the kind of vegetation.

In Van Diemen's Land the *Porphyrio melanotus* is very abundant on the banks of the Derwent above Bridgewater, and on the Tamar for ten miles below Launceston; I also found it on the lagoons between Kangaroo Point and Clarence Plains, and in every part of the island wherever favourable localities occur. Early in the morning, and on the approach of evening, it sallies forth over the land in search of food, which consists of snails, insects, grain and various vegetable substances; it runs with great facility, and readily avails itself of this power on the approach of an intruder, making for the thickest covert and threading it with amazing quickness, much after the manner of the Moorhen (*Gallinula chloropus*) of Europe; its flight is also very similar to that of the Moorhen, and like that bird it resorts to this mode of progression only when hard-pressed. In New South Wales it inhabits precisely the same kind of situations as those described above, and is to be found in the lagoons at Illawarra and wherever the vegetation affords it a sufficient shelter. It soon becomes domesticated, and may be allowed to roam at large in the garden or inclosure without fear of its wandering away; I saw two belonging to the Hon. Henry Elliott, Aide-de-Camp to His Excellency Captain Sir John Franklin, R.N., the Governor, in the Government Garden at Hobart Town; and my friend George Bennett, Esq., of Sydney, informs me that one he had seen domesticated in a poultry-yard was in the habit of roosting upon the roofs of sheds, and was very fond of perching on some parrot-cages; he mentions also that the bird invariably seizes maize, or any vegetable it intends eating, in the palm of the foot, holding it in that manner until it be devoured; after watching it for some time he never saw it take food in any other manner, and the owner assured him that it never did.

Mr. Gilbert found this bird tolerably abundant at Port Essington, on a salt-water lake near Point Smith, in which some thick clumps of mangroves were growing; so far as his observation extended, this was the only part of the Peninsula in which it was to be found, and indeed, until he shot a specimen, it was unknown to the residents, who believed they had explored every part of the Peninsula adjacent to the shores of the harbour. He remarked that it appeared to confine itself to the mangroves, and to perch on their topmost branches, and that when disturbed it mounted above the tops of the trees and flew off for several hundred yards.

The sexes do not differ in colouring, but the female is somewhat smaller than her mate, and the young have the naked space on the crown less developed and not so bright as in the adult.

Cheeks, back of the head, centre of the abdomen and thighs sooty black; back of the neck, breast and flanks rich deep indigo-blue; back, wings and tail deep shining black, the primaries with a wash of indigo-blue on their outer webs; under tail-coverts pure white; irides bright orange-red; frontal plate, bill, legs and feet red.

The Plate represents the two sexes of the natural size.

PORPHYRIO MELANOTUS: *Temm.*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

PORPHYRIO BELLUS, *Gould.*

Azure-breasted Porphyrio.

Porphyrio bellus, Gould in Proc. of Zool. Soc., Part VIII. p. 176.
Swamp-Hen, Colonists of Western Australia.
Gooĭ-le-ma, Aborigines of the lowland districts of ditto.

This fine species of *Porphyrio* is a native of Western Australia, to which portion of the continent it would appear to be restricted; I did not observe it during my rambles in South Australia, nor has it yet been seen on the north coast. Of the two species found in Australia the present is by far the finest, exceeding the *Porphyrio melanotus* not only in size, but in the greater diversity and richness of its colouring, particularly in the azure-blue of the throat and chest, a character by which it is readily distinguished.

The Azure-breasted Porphyrio is abundant at Swan River, inhabiting the thick reed-beds and swampy districts of the lakes and rivers round Perth and Fremantle. Its habits and economy so nearly resemble those of the *Porphyrio*, so familiarly known in Van Diemen's Land and New South Wales, that a description of one equally applies to the other, and therefore need not be repeated here.

The only difference observable between the sexes is, that the male is rather brighter in colour and somewhat larger in size.

The gizzard is strong and muscular, and the food consists of vegetable substances, aquatic insects, and mollusca.

Occiput and crown of the head blackish brown, gradually passing into the light violet-purple which spreads over the nape, flanks and abdomen; throat, cheeks, fore-part of the neck and breast light azure-blue; all the upper surface from the nape downwards, including the tail, deep chocolate-brown; shoulders and spurious wing azure-blue; primaries blackish brown, their outer webs strongly tinged with green; irides bright red; bill red; knees, lower part of the tarsi, and inside of the feet dark greenish grey; remainder of the legs and feet grass-green.

The figure is of the natural size.



PORPHYRIO BELLUS: *Gould*

J. & E. Gould del. et lith. *C. Hullmandel Imp.*

TRIBONYX MORTIERI, *Du Bus.*

Mortier's Tribonyx.

Tribonyx Mortierii, Du Bus. Bull. Acad. Sci. Brux., tom. vii. p. 215. pl.—G. R. Gray, List of Gen. of Birds, 2nd Edit. p. 92.—List of Birds in Brit. Mus. Coll., Part III. p. 122.
Brachyptrallus ralloïdes, Lafres. ?
Native Hen, of the Colonists.

This bird is rather abundantly dispersed over Van Diemen's Land, but from the extreme shyness of its disposition, and the low swampy and almost inaccessible nature of the situations it frequents, it is seldom seen by ordinary observers. The localities it affects are marsh lands and the sedgy banks of rivers and ponds. It was daily seen by me during my stay on the Government demesne at New Norfolk, where it frequently left its sedgy retreats and walked about the paths and other parts of the garden, with tail erect like the Common Hen; even here, however, the greatest circumspection and quietude were necessary to obtain a sight of it, for the slightest noise or movement excited its suspicions, and in an instant it vanished in the most extraordinary manner into some thicket, from which it did not again emerge until all apparent cause for alarm was past.

The sternum and pectoral muscles of this bird are but feebly developed in proportion to its bulk, and it consequently rarely resorts to flight; on the other hand, the legs and thighs are extremely large, and hence its power of running is very great, and upon this power it mainly depends for security from molestation. Its habits and general manners are very similar to those of the Moorhen (*Gallinula chloropus*) of Europe, but it does not dive or swim so much as that bird. It is very easily captured with a common horsehair noose, by which means some of my specimens were procured.

The male is about three pounds in weight; and the stomachs of those I examined were extremely thick and muscular, and contained aquatic plants and insects, gravel, &c.

The nest, which is very similar to that of the Moorhen, is formed of a bundle of rushes placed on the border of the stream; the eggs, which are also similar to those of the Moorhen, are seven in number, two inches and an eighth long, one inch and a half broad, and of a stone colour marked all over with thinly dispersed, irregularly shaped, and variously sized spots and blotches of dark chestnut-brown.

The sexes are alike in appearance, but the female is somewhat smaller and less brilliant in colour than the male.

All the upper surface greyish olive, washed with chestnut-brown on the head, back of the neck, back, and the tips of the secondaries; primaries blackish brown; tail deep black; under surface bluish slate-colour, passing into black on the abdomen and under tail-coverts; flank-feathers largely tipped with white, forming a conspicuous mark on each side; thighs purplish grey; irides orange-red; bill greenish yellow; legs and feet leaden yellow.

The figures are of the natural size.


TRIBONYX MORTIERII: Du Bus.
Hullmandel & Walton Imp.
J. Gould and H.C. Richter del et lith.

TRIBONYX VENTRALIS, *Gould.*

Black-tailed Tribonyx.

Gallinula ventralis, Gould in Proc. of Zool. Soc., Part IV. p. 85.
Tribonyx ventralis, Gould in App. to Grey's Trav. in Australia, vol. ii. p. 420.—List of Birds in Brit. Mus. Coll., Part III. p. 122.
Bel-gar-bĕ-jal, Aborigines of the lowland, and
Nŏl-yang, Aborigines of the mountain districts of Western Australia.
Moor-hen of the Colonists.

Since my attention has been directed to the ornithology of Australia, I have received this species from every part of the country southward of the 25th degree of south latitude, but I have not yet seen it from any part of Van Diemen's Land, that country being in all probability too cold and ungenial for its habits.

Although in outward contour and general appearance this bird bears a great resemblance to the Gallinules or Water-hens, it will be found on comparison to possess a very different structure, particularly in the form of the tarsi and toes, and of the tail, and in its economy it differs from them quite as much as it does in form. Its migratory movements are very uncertain, great numbers occasionally visiting parts of the country where it had seldom before been seen, and retiring again to some distant unknown locality as suddenly as it appeared. We are naturally led to inquire whence they came, and anxiously to desire a more intimate knowledge of that great *terra incognita* the interior of the country, by which means alone can the mystery be solved.

John Hutt, Esq., Governor of Western Australia, informs me that in the neighbourhood of Perth the *Tribonyx ventralis* "makes its appearance suddenly in large flocks at a time," and asks, "Is this not a proof of there being an oasis of good land in the interior? This bird invaded the settlers' fields and gardens in the month of May 1833 in amazing numbers; it had not been seen before, and has hardly been seen since."

Mr. Gilbert states, "that upon this occasion it visited the Swan River colony in myriads, treading down and destroying whole fields of corn in a single night. The natives not having seen them before attributed their appearance to the settlers, and for a long time termed them the 'White-men's birds': after the harvest was over they nearly all disappeared as suddenly as they arrived. The natives of the banks of the Upper Swan, on making inquiries respecting these birds of some of the tribes of the interior, were told they came from the north."

I frequently met with the bird myself during my journey into the interior of New South Wales; it was tolerably abundant on the banks of the Mokai in the month of December 1839, but not in such numbers as particularly to attract my attention. When I first saw it I was much struck with its grotesque appearance, as it strutted along the bank of the river with its tail quite erect like that of a domestic fowl. Although the herbage on the river-sides was very scanty, and the plains were so parched that scarcely a blade of grass was to be seen, it readily eluded pursuit by its amazing powers of running, and secreting itself beneath the roots of the large trees or the shelving of the bank. I never saw it take wing, and I believe that it rarely resorts to flight for security.

It breeds in November; the nest, which is formed of dead soft grasses and rushes, being placed on the ground among the long grass-like rushes of the river-side. The eggs are seven in number, of a cream-colour, thinly sprinkled with irregularly-shaped spots of chestnut-red, some of which appear as if beneath the surface of the shell; they are an inch and a half long by one inch and an eighth broad.

The stomach is extremely thick and muscular; and the food consists of grain, seeds, and other vegetable substances, shelled mollusks, insects, &c.

Throat, breast and under surface dark bluish grey; flank-feathers black, with an oblong mark of white near their extremities; lower part of the abdomen and under tail-coverts black; all the upper surface brownish olive; primaries brown, the outer one margined externally with white; tail black; irides fine orange; upper mandible beautiful pea-green, becoming rather paler at the tip; base of the lower mandible light reddish orange, the tip like that of the upper; legs and feet deep brick-red.

The Plate represents the two sexes of the natural size.



J. Gould and H^C. Richter del. et lith.

TRIBONYX VENTRALIS.

Hullmandel & Walton Imp.

GALLINULA TENEBROSA, *Gould.*

Sombre Gallinule.

Gallinula tenebrosa, Gould in Proc. of Zool. Soc., Feb. 24, 1846.

This species of Gallinule inhabits the sedgy banks of rivers, creeks and water-holes. I frequently encountered it in New South Wales, particularly in the neighbourhood of the Upper Hunter; and I also possess specimens collected on the banks of the Murray in South Australia. The total absence of any white marks on the flanks forms a good specific character, and at once distinguishes this Gallinule from most of the other members of the genus. In size it considerably exceeds the *Gallinula chloropus* of Europe; and that gartered above the knee is still more brilliant, coloured with red and yellow. Both on the open muddy banks and among the tangled herbage of the water's edge, it readily eludes pursuit by running with great swiftness into a place of safety. It swims with considerable ease and buoyancy, and while gliding over the quiet surface of the water, seeks its food, which consists of various aquatic insects and small-shelled mollusks, among the floating herbage.

On comparing the sexes, I find, that, like the European species, they differ in size, and that although the female is smaller than her mate, the colours of her bill are often brighter than in the male.

So completely do the habits and economy of this species resemble those of the other members of the genus, that a repetition of what has been so frequently described is quite unnecessary.

The whole of the plumage greyish black, with the exception of the back and scapularies, which are deep brown, and the primaries and tail, which are nearly a pure black; under tail-coverts black in the centre and white on the sides; frontal plate orange; base of the bill blood-red, tip greenish yellow; above the knee a garter of yellow and scarlet; joints of the legs and feet green; under surface of the legs and feet olive; sides of the tarsi and frontal plates of the toes yellow; frontal plates of the tarsi yellow, those nearest the knee stained with scarlet; irides olive.

The figure in the accompanying Plate is a trifle smaller than the natural size, and was taken from a female.



J. Gould and H.C. Richter del. et lith.

GALLINULA TENEBROSA: *Gould*

Hullmandel & Walton Imp.

FULICA AUSTRALIS, *Gould.*

Australian Coot.

Fulica Australis, Gould in Proc. of Zool. Soc., Part XIII. p. 2.
Mool̋-ya-wiñ-doo (Ugly Nose), and
Gid̋-jee-broon, of the Aborigines of the lowland districts of Western Australia.

That a true Coot should be found to inhabit Australia need not be a matter of surprise, when we have seen how many of the forms hitherto considered to be peculiar to the northern hemisphere are represented in that country; and in no instance is this law more interestingly carried out than in the present, since the two birds are not only identical in form, but are so precisely alike in their habits and general economy, that the admirable accounts of Messrs. Selby, Yarrell, &c., of those of the European bird are equally descriptive of those of the Australian. Its favourite places of resort are the inland waters of the country, which it seldom quits unless to seek for a more abundant supply of food, consisting of aquatic insects, small shelled mollusks, &c. Like our own Coot it constructs a floating nest of decayed aquatic plants, upon which it deposits its eggs and rears its young.

It has often struck me that there are two species of Coot inhabiting Australia, for I possess specimens in my collection exhibiting differences which appear to me to warrant their being considered as distinct, the propriety of which must, however, be confirmed or refuted by future observation: should they ultimately prove to be two species, then the range of the bird here represented will extend over Western and Southern Australia and Van Diemen's Land, and that of the other over New South Wales.

Head and neck black; all the upper surface greyish black; under surface sooty black; irides bright red; bill light bluish grey; crown of the head greenish white; legs and feet french grey.

The figure is of the natural size.


FULICA AUSTRALIS: Gould.
J. Gould and H.C. Richter del. et lith.
Hullmandel & Walton Imp.

PARRA GALLINACEA, *Temm.*

Gallinaceous Parra.

Parra gallinacea, Temm. Pl. Col. 464.—Less. Traité d'Orn., p. 539.
Mur-re-mă-rang-geit, Aborigines of Port Essington.

This bird may be regarded as one of the most interesting of the additions lately made to the Australian Fauna, since, independently of its beauty, the existence of a true Parra in Australia was hitherto unknown.

The *Parra gallinacea* is one of the most typical members of the genus, its hind toe and claw being more largely developed than those of any other species; hence it is beautifully and expressly adapted for traversing those floating leaves and herbage that merely rise to the level of the water.

The specimens in my collection were obtained at Port Essington, where this bird was tolerably numerous, but always affecting such localities as rendered it very difficult to procure. Having never seen this species in a state of nature, I cannot do better than transcribe Mr. Gilbert's notes respecting it; previous to which I may mention that this species is also a native of New Guinea, and that M. Temminck has lately published a figure of it in his "Planches Coloriées," as quoted above.

"I did not meet with this bird," says Mr. Gilbert, "until the latter part of my stay in the country, just before the wet season set in, when I observed it on the large lake near Point Smith, which at this time (the month of December) contained so little water that I could wade over every part of it; and it was fortunate that this was the case, for this bird confines itself so much to the muddy parts of the middle of the lake, that it might be looked for in vain from the shores. It would seem to be a very local species, for I did not meet with it in any other part of the Peninsula. In the following January, after a succession of heavy rains, the lake became so far filled as to be too deep for a person to attempt to cross any part of it, consequently no second opportunity of observing the Parra occurred before my departure. Those observed by me were distributed in four or five small families in different parts of the lake, and were usually occupied in feeding from the floating aquatic plants, over which the great length of their toes and nails enables them to run with great facility: at the slightest alarm they dive down at once or take to flight. Their powers of diving and of remaining under water are equal to those of any bird I have ever met with: on the other hand, their powers of flight are very weak; they will, however, often mount up fifteen or twenty yards, and fly from one end of the lake to the other, a distance of half or three-quarters of a mile, but generally they merely rise above the surface of the water and fly off for about a hundred yards; during flight their long legs are thrown out horizontally to their full length; while feeding they utter a slowly-repeated *cluck cluck*. The stomach is extremely muscular, and the food consists of aquatic insects and some kind of vegetable matter."

Although the nest and eggs were not found, it evidently breeds in the locality above-mentioned, for among the specimens procured were two young ones.

Back of the head, line down the back of the neck, tips of the shoulders, under surface of the wing, flanks, and a broad band crossing the chest and abdomen deep bluish black; chin and throat white; orbits, ear-coverts, sides of the neck and breast pale glossy orange, the white and the orange gradually blending into each other; back and scapularies bronzy olive-green, becoming nearly black at the base of the neck and on the rump; wing-coverts olive-brown; the remainder of the wing and tail greenish black; vent and under tail-coverts buffy white; irides light sulphur-yellow; eyelash light ash-grey; bill greenish grey at the extreme tip, then black to near the nostrils; the basal portion of the upper mandible and the helmet aurora-red; base of the lower mandible light primrose-yellow; forepart of the tibia red, with a mixture in patches of yellow and greenish grey; hinder part of the tibia, tarsi and toes dark greenish grey.

The young differs in having all the under surface white, crown of the head and occiput reddish chestnut, the line down the back of the neck brown, and the back reddish brown, each feather margined with a still redder hue; only an indication of the helmet; irides light brown, and the bill aurora-red, with the exception of the base of the lower mandible, which is light yellowish white.

The figures are those of a male, a female, and a young bird, of the natural size.



PARRA GALLINACEA: *Temm.*

J. Gould and H.C. Richter del. et lith. *C. Hullmandel Imp.*

RALLUS PECTORALIS, *Cuv.*

Pectoral Rail.

Rallus pectoralis, Cuv. in Mus. Paris.—Less. Traité d'Orn., p. 536.
Kůl-lee of the Aborigines of the lowland districts of Western Australia.
Land Rail of the Colonists.

The Pectoral Rail is a summer visitant to New South Wales, but if we regard the Rails from Southern and Western Australia, which are rather smaller and have somewhat more attenuated bills, as mere local varieties, the above remark will extend to the southern portion of the continent generally; in fact it may then be said to be dispersed over the whole of this part of the country, in all situations suitable to its habits. It usually makes its appearance in New South Wales in the month of August, and retires again in February; the extent of its range northwards, however, I have not satisfactorily ascertained; for although I have specimens from the north coast and Raine's Islet, they present sufficient differences in their form and markings to warrant the supposition of their being a distinct species.

In habits, actions and general economy the *Rallus pectoralis* closely assimilates to the Land Rail (*Ortyometra Crex*) of Europe; grassy flats between the hills and humid places covered with dense herbage being the localities favourable to its mode of life. It has the same indisposition for exposing itself to view, the same manner of eluding pursuit by running through the grasses, and when forced to quit its retreat flies low, straight, and with the same flapping motion of the wing.

The eggs, which are placed on the ground, are four or six in number, of a cream-colour, with numerous large irregular blotches of dark chestnut-red at the larger end, and a few smaller ones distributed over the remainder of their surface; they are one inch and three-eighths long by one inch broad. It breeds in September, October and November.

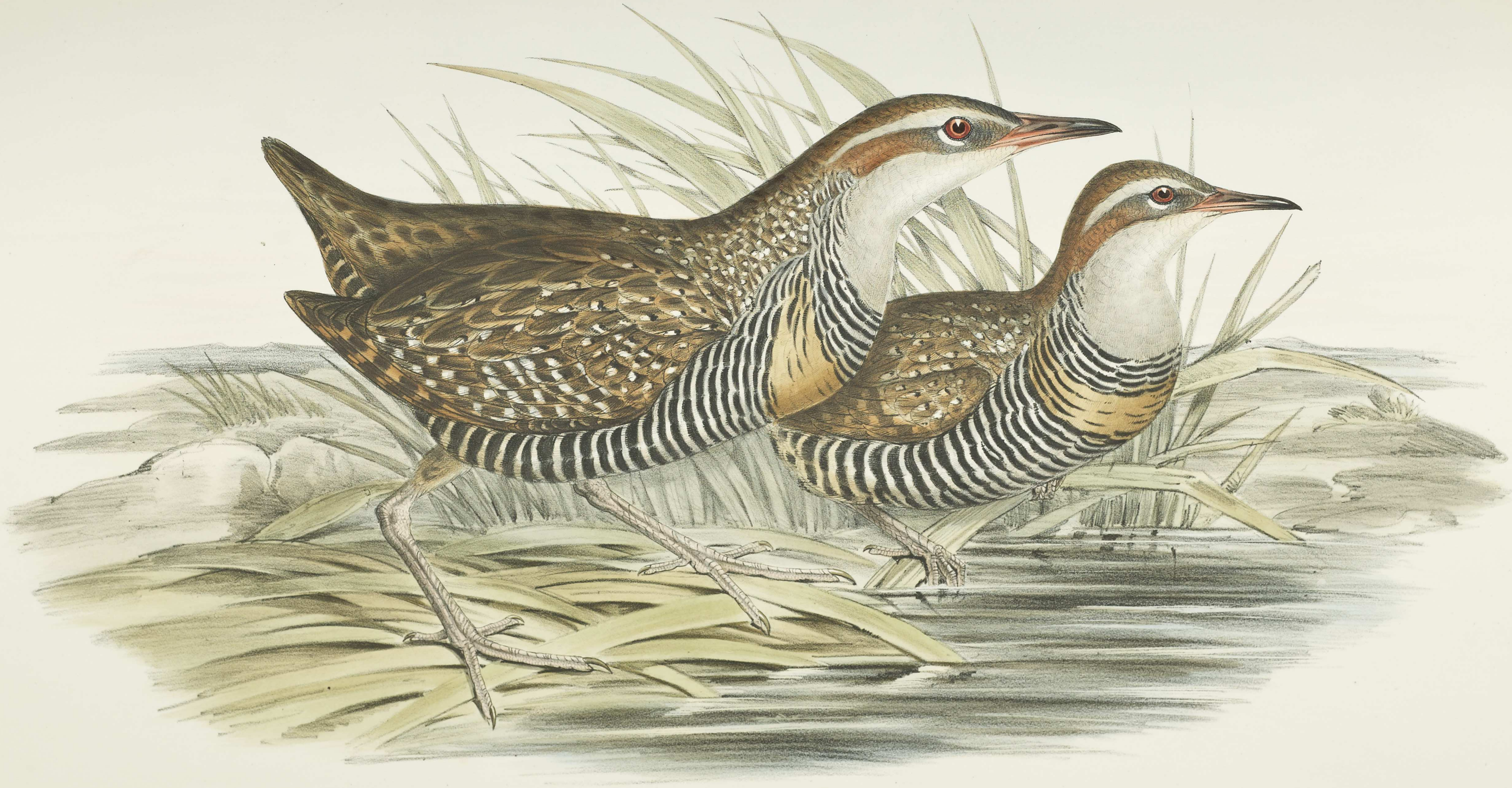
The stomach is very muscular, and is usually found to contain portions of grasses, seeds, and a quantity of sand. Its flesh forms an excellent article for the table, and the bird itself affords considerable amusement to the sportsman, as pointers will stand to it as to the Land Rail of Europe.

The sexes are so similar in colour and markings that they are not easily distinguishable from each other, and the young at an early age assume the plumage of the adult.

Crown of the head and all the upper surface olive; each feather of the back and scapularies blackish brown in the centre; the feathers at the back of the neck with a double spot of black and white near the edge of each web; a broad stripe of chestnut-red commences at the base of the bill, passes through the eye and unites at the occiput; wing-coverts olive, spotted on the margins with black and white; primaries dark brown, the two outer ones crossed by narrow bars of white, and the remainder with broad bars of dull chestnut-red; stripe over the eye and the chin greyish white, deepening into dark grey on the lower part of the throat; under surface brownish black, crossed by numerous narrow well-defined bars of greyish white; across the breast a broad band of deep sandy buff; thigh and vent buff; under tail-coverts black, barred with white and tipped with buff; bill red at the base, passing into brown at the tip; irides reddish hazel; feet brown.

In some specimens the white spottings of the upper surface are much brighter than in others.

The Plate represents the two sexes of the natural size.



RALLUS PECTORALIS: *Cuv.*

J. Gould. and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

RALLUS LEWINII, *Swains.*

Lewin's Water Rail.

Rallus brachipus, Swains. An. in Menag., p. 336.
—— *Lewinii*, Swains., Ibid. p. 336.
—— *brachipus*, List of Birds in Brit. Mus. Coll., part iii. p. 115.

In Van Diemen's Land this species is very abundant in all low marshy situations, lagoons, and the rushy banks of rivers; it occurs on most of the small islands in D'Entrecasteaux' Channel; I have also seen specimens from Southern and Western Australia which are precisely similar in their markings, and only differ in being somewhat larger.

Mr. Swainson has evidently described this bird under two names, those of *brachipus* and *Lewinii*, and I am induced to adopt the latter, which, as he observes, is a just memorial of the first author of a work on the Birds of Australia, in preference to the former, because I find the shortness of the nails and consequent apparent shortness of the toes, which must have suggested the appellation, to be common only to those birds which inhabit the small islands, where, from the hard and stony nature of the ground they have to traverse, the nails become much worn and blunted, while those of the birds inhabiting the main-land and resorting more exclusively to the soft sedgy banks of rivers remain intact.

It is very closely allied to the Water Rail (*Rallus aquaticus*) of Europe, and its habits, manners and mode of life closely resemble those of that bird.

The stomach is rather muscular and the food consists of aquatic insects, small mollusks, &c.

A nest I found in a lagoon near the river Derwent in Van Diemen's Land was formed of flags and other aquatic vegetables, placed in a low tuft of rushes, and contained two eggs one inch and a quarter in length by seven-eighths of an inch in breadth, and of a pale olive-colour blotched all over, but particularly at the larger end, with reddish and dark brown.

The male has the head and sides of the neck rufous, striated with black on the crown and down the nape; all the upper surface and tail black striped with olive; wings, flanks and abdomen banded broadly with black and narrowly with white; chin white; centre of the throat, breast and abdomen slate-grey; vent buff; bill brownish red; irides hazel; feet flesh-colour, becoming darker about the toes.

The female is similar, but not so bright in colour.

The young is destitute of the red hue on the neck, has only a trace of the barring on the flanks and abdomen, and the barring of the wings much less distinct than in the male.

The Plate represents the two sexes of the size of life.



RALLUS LEWINII: *Swains:*

J. Gould. and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

EULABEORNIS CASTANEOVENTRIS, *Gould.*

Chestnut-bellied Rail.

Eulabeornis castaneoventris, Gould in Proc. of Zool. Soc., March 26, 1844.
Mor-dug-e-ra, Aborigines of Port Essington.

This large and fine species of Rail, of which a single specimen only has as yet come under my notice, inhabits the low muddy shores and mangrove swamps of the north coast of Australia. The specimen above alluded to, which is in my own collection, was killed in the Gulf of Carpentaria by Captain Stokes, R.N., late Commander of H.M.S. the Beagle; to this gentleman I am also indebted for many acts of kindness and liberality, while science in more than one branch has been enriched by the discoveries made by himself and his officers during their late survey. I had some time before received the eggs of this species from Port Essington, but from its extreme shyness the bird could never be obtained; in fact, the wariness of its disposition is such, that even to catch a glimpse of it among the dense herbage and mangroves is an extremely rare occurrence. It runs with extraordinary fleetness, and takes alarm the instant the vicinity of its habitat is intruded upon.

The eggs are rather lengthened in form, of a pale pinky white, dotted all over with reddish chestnut, the spots being thinly dispersed, and some of them appearing as if beneath the surface of the shell, giving them a darker tint, two inches and one-eighth long, one inch and five-eighths broad.

Head and neck ash-grey; all the upper surface, wings and tail olive; breast and all the under surface greyish chestnut; bill yellow at the base, horn-colour at the tip; legs and feet brown.

Both sexes will doubtless be hereafter found to possess a similar kind of plumage.

The Plate represents the bird of the natural size.



J. Gould and H. C. Richter del. et lith.

EULABEORNIS CASTANEOVENTRIS: *Gould.*

C. Hullmandel Imp.

PORZANA FLUMINEA, *Gould.*

Spotted Water Crake.

Porzana fluminea, Gould in Proc. of Zool. Soc., Part X. p. 139.

This species, like its representative in the British Islands (*Rallus porzana*, Linn.), inhabits morasses, reed-beds, and the neighbourhood of rivers clothed with dense herbage; hence it is seldom to be seen unless the greatest trouble and labour be taken to hunt it out from its hiding-place. The uniform grey tint of its breast and under surface, and its smaller size, are characters by which it may at once be distinguished from the European species.

The Spotted Water Crake is an inhabitant of Van Diemen's Land, South Australia and New South Wales, to which portions of Australia it would seem to be confined. My stay in Australia was too short to afford me opportunities of thoroughly investigating its habits, or of gaining any precise information respecting its nidification; but it is natural to suppose that in these respects it as closely assimilates to its European ally as it does in its structure and outward appearance.

The sexes present so little difference in colour, that they are only to be distinguished by dissection.

All the upper surface olive, with a broad stripe of blackish brown down the centre and two oval spots of white, bounded above and below with black on the margin of each web of every feather; primaries and secondaries brown; tail dark brown, margined with lighter brown and with an indication of white spots on the extreme edge; face, throat, chest and upper part of the abdomen dark slate-grey; lower part of the abdomen and flanks greyish black, crossed by narrow irregular bars of white; under tail-coverts white; bill orange-red at the base, and dark olive-green for the remainder of its length; feet dark olive-green.

The figures are of the natural size.



PORZANA FLUMINEA: *Gould.*

J. Gould and H.C. Richter del et lith.

C. Hullmandel Imp.

PORZANA PALUSTRIS, *Gould.*

Water Crake.

Porzana palustris, Gould in Proc. of Zool. Soc., Part X. p. 139.

This little Water Crake would appear to be more abundant in Van Diemen's Land than on the continent of Australia, for although I clearly ascertained that it inhabits New South Wales, it is not so numerous there, in consequence, probably, of the country being much less fluviatile, and therefore much less suitable to its habits; for, like the *Porzana fluminea*, the present bird finds a natural abode in morasses covered with reeds and luxuriant herbage, to the more dense parts of which it is exclusively confined. Like all the other members of the genus, the present species swims with great facility, and displays the same power of diving, to which it equally resorts in time of need, and thus often successfully eludes the attacks of its natural enemies; in addition, few birds are more agile or thread the reeds with greater activity; hence, like the last species, it is seldom to be caught sight of unless the greatest vigilance be exerted in search of it.

I am indebted to the Rev. T. J. Ewing of Van Diemen's Land for the nest and eggs of this bird; the former is a flat structure formed of various kinds of grasses, and the latter are four or five in number, of a nearly uniform brownish olive, about one inch in length by three quarters of an inch in breadth.

Head and back of the neck rusty brown, with a stripe of blackish brown down the centre of each feather; feathers of the back, scapularies and secondaries brownish black margined with rusty brown, and with an oblong stripe or mark of white, interrupted in the middle with black; wing-coverts rusty brown, a few of them marked on their inner webs like the scapularies; primaries brown, two or three of the innermost with a mark or marks of white at the tip; tail dark brown, fringed with rusty brown; face, throat, chest and upper part of the abdomen grey; lower part of the abdomen and flanks blackish grey, crossed by broad irregular bands of grey; bill and feet olive-brown.

The figures are of the natural size.



PORZANA PALUSTRIS: *Gould.*

J. Gould and H.C. Richter del. et lith. *C. Hullmandel Imp.*

PORZANA LEUCOPHRYS, *Gould.*

White-eyebrowed Water Crake.

Porzana leucophrys, Gould in Proc. of Zool. Soc., March 23, 1847.
Al-man-dŭ-ar-ga, Aborigines of Port Essington.

This species is an inhabitant of the northern parts of Australia, where it frequents the thick clumps of mangrove roots bordering the lakes. It is a somewhat familiar bird, and is but little disturbed by the approach of an intruder; on the contrary, it will frequently run up a branch, turn round, gaze at him, and utter its very singular loud and chattering *cutche*, *cutche*, with but little apparent alarm. Occasionally several are heard in chorus, as if attempting to excel each other in noise. It is by no means difficult to obtain specimens, except when the water is too deep to admit of wading round the roots of the mangroves. As yet it has only been observed on one lake near Port Essington, but as the natives are perfectly acquainted with it, it is doubtless abundant on some other part of the Cobourg Peninsula.

The stomachs of those dissected were muscular, and contained the remains of insects of various kinds, and a large proportion of sand.

The young differ from the adult in having only an indication of the marks on the face, in having the crown of the head brown instead of brownish black, and the sides of the neck and flanks deep buff instead of dark grey.

From the base of the upper mandible to the posterior angle of the eye a streak of greyish white; from the eye to the gape a broad patch of deep black; crown of the head brownish black; back of the neck, upper surface and tail brownish black, each feather margined with pale reddish, the latter colour becoming very conspicuous on the wing-coverts and scapularies; wings pale brown; sides of the head, neck and breast grey; chin and centre of the abdomen white; flanks and under tail-coverts rufous; upper mandible reddish brown; tomia of both mandibles tile-red; legs and feet oil-green, blotched with light ash-colour.

The figures represent an adult and a young bird of the natural size.



PORZANA LEUCOPHRYS: *Gould*

J. Gould and H. C. Richter del. et lith.

Hullmandel & Walter Imp.

PORZANA? IMMACULATA.

Spotless Gallinule.

Gallinula immaculata, Swains. An. in Menag., p. 337.—Ib. Class. of Birds, vol. ii. p. 358.
Waŕ-ra-jah, Aborigines of the lowland districts of Western Australia.
Little Swamp Hen of the Colonists.

I BELIEVE I am correct in stating that this species is universally distributed over the whole of Australia, Van Diemen's Land, and the islands in Bass's Straits. My collection contains specimens from every one of the colonies, all of which so closely resemble each other, that they scarcely exhibit sufficient difference to constitute local varieties. Like the other members of the group this bird is very recluse in its habits, and seldom to be seen, although it is tolerably abundant in all districts of a wet and swampy character, where thick reed-beds, and the sedgy banks of rivers or lagoons constitute its most favourite places of abode. When urged by necessity it swims with grace and elegance, and sports about with ease among the floating leaves of aquatic plants in search of snails and other mollusks, of which, with insects, seeds, and the tender blades of grasses and other vegetables, its food consists. It rarely takes wing, scarcely ever indeed unless forced to do so.

The sexes, which are precisely alike, may be thus described:—

Head and all the under surface dark slate-grey, becoming nearly white on the chin; back, wing-coverts and tertiaries rich deep reddish brown; bill black; irides and eyelash bright red; feet and legs dull brick-red.

The figures are of the natural size.



PORZANA? IMMACULATA.

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton imp.

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BIRDS
OF
AUSTRALIA

GOULD.

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