

In conclusion, I might as well mention that I have just heard from M. Armand David, the Missionary at Peking. He tells me that he has returned from his zoological campaign with only a very few new species of birds. He says the western region is poor in species. From the Peking Province he has procured *Vultur monachus*, *Grus monachus*, *G. virgo*, and *Ibis nippon*. He several times saw *Gypaetus barbatus*, but did not succeed in killing it. He has noted no less than 296 species in the north of China. Dr. Giglioli, before leaving China, was kind enough to send me a list of all the birds that Prof. De Filippi and he had collected and observed. He said he would publish notes on them in 'The Ibis.' I will therefore not forestall him by alluding to his discoveries.

Amoy, 15th April, 1867.

XXIV.—*Illustrations of Australian Oology.*

By EDWARD P. RAMSAY, C.M.Z.S.

(Plates VIII. and IX.)

I. BIZIURA LOBATA (Shaw). (Plate VIII. fig. 1.)

This anomalous form of the *Anatidæ*, although by no means rare, is usually difficult to obtain, on account of its extreme wariness and great power of diving and remaining under water for an incredible space of time. The Musk-Duck frequents alike the lakes, lagoons, rivers, and even the creeks and water-holes—in fact, wherever it can find a sufficiency of food, which consists of *Uniones* and other freshwater mollusks, with the seeds of the water-lilies and other aquatic plants. These Ducks are, for the most part, met with in pairs only; and sometimes a single bird may be found taking possession of one particular water-hole, where it will remain, if unmolested, the whole year round. I have, however, in two instances, on the Murrumbidgee River, met with small flocks, one five and the other seven or ten in number. They seldom take wing; only upon a few occasions have I seen them do so, and these when they have been fired at and wounded mortally. One, which I had come upon suddenly with a charge of shot from behind a rock, seemed so surprised, that, instead of diving, it took wing and, after flapping along

the water for about a hundred yards, rose up to the height of ten or twenty feet, and then, skimming the surface of the water, again settled with a considerable splash. Such are the only instances in which I have seen them on the wing. Their chief mode of progression in the water is by diving and swimming with the head and part of the neck alone above the surface. I have frequently watched them coming in to land from the middle of the lake by long dives until near the edge, where they would search for food, and, as I afterwards found, swallow the *Uniones* whole without injuring the shell, though some of them were fully an inch in length. *Nyroca australis* has also the same habit of bolting live mussels in this most uncereemonious manner, and, like the *Biziura*, often swims with the body sunk in the water. When suddenly flushed, the Musk-Ducks not unfrequently dive with such force and quickness as to throw up the water with their stiff-quilled tails to the height of three or four feet, just as if a large stone had been thrown into the water without causing any noise.

The breeding-season begins in August, judging from the size of young birds shot in the month of December, and continues to the end of October and November.

I believe that the musky smell which the male bird emits during the summer months is confined to that sex, and in some individuals is retained throughout the whole year. I have never, even in the breeding-season, shot a female which had any smell of musk about the skin. The nest is placed among the rushes, reeds, and weeds on the banks of the small islands in the lakes and lagoons. It is composed of aquatic plants, leaves of the reeds, flags, and the like, and lined with a few feathers. The eggs are usually two in number, of a pale olive colour, 3.2 in. in length by 2.1 in. in breadth. The shell is minutely granulated, rough, and very strong.

2. *PITTA STREPITANS*, Temminck. (Plate VIII. fig. 2.)

This species is found plentifully in the dense "brushes" of the Clarence and Richmond Rivers; and that I believe is its nearest habitat to Sydney; while to the north its range extends to the Albert River, and doubtless further on along the coast,

wherever places suitable to its mode of life are to be found. It frequents the thickets and densest parts of the scrubs, and, were it not for its loud, liquid call, would seldom be found even when searched for. I know of no bird more elegant, and which trips over the fallen leaves and logs, or threads its way through the tangled masses of vegetation, with such grace and ease as *Pitta strepitans*.

By means of its note, which is easily imitated in trying to whistle the words "want-a-wat(ch)," the bird may be called up within a few feet of its pursuer. I have frequently called it to me and watched its graceful motions as it would hop on the dead logs, roots, and spurs of the trees, run along for a few yards, then stop and call, and appear greatly excited at not finding its supposed mate. The Pitta is seldom seen off the ground or logs; but sometimes an odd one may be seen perched ten or twenty feet high, calling loudly, as if for amusement. I never saw the Pittas take wing when flushed from the ground; but running noiselessly away with all possible speed, they are soon hidden from view.

At times, when seated on a log to rest myself, one has come in sight, walking cautiously along, now running for a few yards, then stopping short, and picking up some unhappy *Helix* which it has discerned by the side of a log, then, with a sharp rap against the first hard substance it sees, breaking the shell and devouring the animal. Those who have traversed the brushes frequented by the Noisy Pitta must have noticed stones against which numbers of land-shells have been broken: these are the work of this Pitta; for when it has found a shell not easily broken it runs off with it to the nearest stone, and there, by holding it in its bill and rapping it against the stone, soon effects its purpose. I have found a considerable collection of broken shells upon several occasions, consisting of six or eight species, and among them the large *Helix fraseri*. The cracking-stones of the Pittas will give a collector a very good idea of what shells occur in the vicinity; and several new and rare species, not hitherto found on the Richmond River, were discovered through the industry of *Pitta strepitans*. The Regent-bird (*Sericulus melinus*), too, I have no doubt, frequently visits such stones, to obtain ornaments

for its bowers*. Stones are not common in many parts of the brushes, and when a *Pitta* finds one it seems to make the most of it. This species appears to live well in confinement. Mr. J. Macgillivray informs me that he kept one in a cage for some time—at first breaking open the snail-shells he gave it; but after a few days he furnished it with a supply of *Helices* and a stone, which it at once made use of to break them against.

Specimens of *Pitta strepitans*†, if it really be the same species, from Cape York, in North Australia, differ greatly in size from the New South Wales birds, being very much smaller and more slightly built, except in the bill; but the chief difference is in the *white spot on the primaries*, which in the North-Australian examples extends over two feathers only, while in the New South Wales birds it is conspicuous on three—the fourth, fifth, and sixth primaries. Mr. Macgillivray, who has made himself acquainted with the habits of the birds in both districts, informs me that they do not differ either in the mode of nidification, the colour of the eggs, or the call-note. I do not wish to argue in favour of making the North-Australian bird a distinct species; still it would be quite consistent to do so, if we admit the *Geopelia placida* of North Australia to be distinct from the *G. tranquilla* of New South Wales, solely because one is smaller than the other; for, as Mr. Gould himself says, the first “is so precisely the same in colouring” as the second “that a description of it is quite unnecessary” (Handb. B. Austral. ii. p. 145).

The nest of *Pitta strepitans* is a round dome-shaped structure, having a large opening at the side, composed of roots, sticks, and twigs, with a little moss, and lined with rootlets, mosses, and a few feathers. It is usually placed upon the ground, but sometimes a few inches from it, in the angle which the “spurs” make with the stems of the trees, or some other suitable place. The eggs are four in number; in length from 1·2 to 1·3 in. by ·9 to 1 inch in breadth. Their ground-colour is of a delicate white, in some specimens bluish-white, having elongated, irregularly-shaped spots of brown and blackish-brown evenly

* [See Mr. Ramsay’s letter on this species in the present number.—Ed.]

† I have lately been shown by Mr. Krefft, Curator of the Australian Museum, a specimen of *P. mackloti* from Cape York.

dispersed over the whole surface, with obsolete spots of bluish-grey, which are usually largest on the thicker end of the egg.

A second variety of the egg of this bird, one of which is usually found in a set, is much more elongated in form than the subject of the figure, and has the whole of the thick end freckled with minute dots of bluish-grey, without any other markings, save here and there a small blackish dot. Length 1.6 in.; breadth .9 in.

3. *PARRA GALLINACEA*, Temminck. (Pl. VIII. fig. 3.)

The eggs of this species are among the most beautiful of any laid by our Australian birds. The curious labyrinthine markings which characterize them, however, are not altogether confined to the eggs of the Parra; and, while the eggs of at least three of our species of *Pomatostomus* are beautifully marbled and veined in the most delicate manner, we have those of an Australian grallatorial bird which surpass them all in the peculiarity of the markings. I know not whether I have anything further to communicate respecting the *Parra gallinacea* than has already appeared in my former notes upon the subject (Ibis, 1865, pp. 305, 306), wherein I described the eggs, one of which forms the subject of the accompanying figure (Plate VIII. fig. 3). I may mention, however, that the Parra, although usually a resident throughout the whole year in those parts of the country which it inhabits, sometimes disappears most marvellously, as I found to my cost during a recent trip to the north part of the Richmond River; for on searching the ponds, lakes, and lagoons in these districts, where during the previous year (1865) this species was extremely abundant, we did not succeed in finding a single specimen. Day after day we continued our search, until finally obliged to leave without effecting our purpose. This is the more remarkable as the Parra is a bird of very limited powers of flight. The eggs are four in number. Their shell appears to be very strong, and has the same smooth glossy feeling when handled that characterizes the eggs of *Excalfactoria australis* and *Perdix cinerea*.

4. *CHORIOTIS AUSTRALIS* (J. E. Gray). (Plate IX. fig. 1.)

The eggs of the Australian Bustard are still rarities in our

collections, although the birds themselves are by no means scarce. On the borders of Lake Bathurst and Lake George, on the Goulburn and Sass Plains, and other places suited to their habits, Bustards are still to be found, although they have long since become almost extinct within a hundred miles of Sydney. Always wary, these birds are difficult to approach, a great deal of manoeuvring and stalking being necessary to obtain a successful shot. On horseback, or in a light vehicle, they are more easily approached.

During August and the three following months the Bustards betake themselves in pairs to the thinly-wooded districts for the purpose of breeding, returning to the plains and more open land in December, when they associate in small flocks of from five to ten in number. On very hot days they may with more certainty be found on the edges of the plains, in the shade of the trees, returning again in the evenings to their favourite feeding-grounds on the slopes and hillsides.

During the winter, they are found more often on the slopes among the trees, sheltered from the wind and snow.

On the 8th of March, 1866, while at Lake George*, three young Bustards, about the size of a large domestic fowl, were seen together. Although on the same flat there were several old birds, they never accompanied them; and I have been informed by several residents in that district that the young always leave their parents when a few months old.

The Australian Bustard breeds during September, October, and November, and lays but two eggs, on the ground, without any nest—a small bare spot being selected among the trees on the hillside; a few small sticks and blades of grass are sometimes found gathered round the eggs. The eggs vary both in shape and size: some, like the figure (Plate IX. fig. 1), are thickest at an equal distance from the ends; others are more elongated, and widest an inch from the thicker end. In length they are from 3 to 3·3 in., and from 2·1 to 2·3 in. in breadth. The ground-colour varies from light olive-green to olive-brown, having longitudinal smears, spots, and dashes of olive-brown,

* [For some further remarks by Mr. Ramsay on this species in the district mentioned in the text, *vide antea*, pp. 134, 135.—ED.]

equally dispersed over the surface. In a valuable collection, for which I am indebted to my brother, Mr. J. Ramsay, of Nanama, there are seven Bustard's eggs; one particularly fine one measures 3·3 by 2·1 in.; it is of a light olive-green sparingly marked with reddish olive-brown.

The figure represents the most usual form of eggs found on the Lachlan River, while all those obtained by my brother are much more elongated. The smallest Bustard's egg in our collection measures 2·3 by 1·6 in., and is of an olive-brown, thickly spotted and dashed with dark olive-brown. I have seen small eggs of the same colour with very few and faint longitudinal markings, extending nearly the whole length of the egg: these I take to be the eggs of the younger birds. So far as I am aware, the Australian Bustard has but one brood in the season.

5. *LOBIVANELLUS LOBATUS* (Latham). (Pl. IX. fig. 2.)

This species has long since become scarce, if not quite extirpated, in the neighbourhood of Sydney, although plentiful some fifty miles inland. It shows a decided preference for the marshy parts of the country, on the borders of lakes, swamps, and lagoons, and the grassy margins of rivers. On the edge of Lakes Bathurst and George, and Hexham Swamps, they are particularly numerous.

During the daytime they are mostly found in flocks of from five to fifty in number, perhaps crowded together on the edges of a lagoon, basking in the sun, or on remarkably hot days under the shade of some tree. Night is the Plovers' time for feeding; they then become remarkably noisy, and their loud creaking choruses, sometimes carried on by two or three individuals, are more often heard. A sudden stop puts an end to the performance, when all is again quiet, and nothing heard save a melancholy call-note as they follow one another in twos and threes to some distant part of the fields. They are seldom heard in the daytime, except when disturbed.

The Spur-winged Plover breeds during September and the two following months, in some localities a month earlier or later. The eggs, which are four in number, are placed with the thin ends inwards, and laid upon the ground by the side of some tuft

of grass or rushes, in a slight hollow made for their reception, with occasionally a few blades of grass placed under and around them, but as often as not without any sign of a nest.

The ground-colour of the eggs varies from yellowish- and olive-brown to bright deep olive-green, strongly marked with spots, dots, and irregularly shaped blotches of dark blackish brown, and yellowish brown, which latter appear beneath the surface of the shell, the majority of the markings being towards the larger end. They vary from 1·9 to 2 inches in length, and from 1·3 to 1·4 in. in breadth. My brother has given me a most beautiful set of the eggs of this species, in which the ground-colour is of a bright deep olive-green, evenly spotted with deep blackish-brown. The Spur-winged Plover shows great anxiety for its eggs and young, fluttering off as you approach and using all the enticing actions in its power to draw you away from the spot; should a horse, a cow, or any other quadruped approach, it uses quite different means to save its treasures; and by flying up in the beast's face, and flapping it with its wings it quickly produces the desired effect.

6. *SARCIOPHORUS PECTORALIS* (Cuvier). (Pl. IX. fig. 3.)

The habits and actions of this pretty species closely resemble those of the Spur-winged Plover; it breeds during August and the three following months, laying its eggs on the bare ground in places similar to those chosen by the last-mentioned bird, but is more local, and frequents drier tracts of country. I have frequently met with flocks in the ploughed fields, where they would be found sitting down and basking in the sun, or in a long string in the shade of a fence. In their flight they differ greatly from their ally, and are seldom heard except when flushed or separated. At night they separate and spread about over the fields in search of food.

The eggs of this species are four in number, 1·7 in. in length by 1·2 in. in breadth. Some specimens vary to the extent of a tenth either way. The ground-colour is a light olive-brown, tinged with yellowish- or greenish-olive, spotted with brown and grey, which latter appears beneath the surface of the shell. In some the spots incline to reddish brown, and are equally dispersed

over the whole surface; in others the markings are crowded on the larger end.

- The note of *Sarciophorus pectoralis* is a shrill cry of "kěry kěry," repeated several times in quick succession.

XXV.—*Notes on the Birds of Tangier and Eastern Morocco.*

By C. F. TYRWHITT DRAKE.

THE following few notes, on the birds which I observed in the neighbourhood of Tangier during my stay there from January to the beginning of April last, may not be without interest, as that part of Africa has not received much attention from ornithologists. The country immediately around Tangier is not so good for a collector as that near Tetuan, which lies at the foot of a northern spur of the Atlas, rising there abruptly from the plain to an elevation seemingly of six or seven thousand feet, though unfortunately I had not any instruments with me to ascertain its real height. These mountains are in many parts well wooded; and the Andalusian Quail, Woodpeckers, and Owls are abundant, while on the rocky cliffs Eagles, Vultures, and Hawks breed in numbers. Nearer the town, orange-groves extend almost without interruption for two or three miles, watered by a stream abounding in trout; and here the Dusky Ixus literally swarms, while the gardens are the chief haunts of the various Warblers, which delight in the shelter afforded by the cane-hedges. Wild-fowl are plentiful in the marshes at Martine, the port of Tetuan, about eight miles distant, as well as Crakes, Egrets, and other marsh-fowl.

Of the Eagles and Vultures, few remain in Morocco during the winter, but most come in flights from the south-east and south between the 15th and 20th of March, almost invariably during an easterly wind. Alpine Swifts make their appearance at the same time; but the Bee-eaters and Rollers do not generally come till the middle of April. Most of the Hawks and Buzzards remain during the winter, and are very plentifully scattered over the whole country; yet notwithstanding these, as well as other two-legged and four-footed foes, there is an abundance of game, consisting of Barbary Partridges, Snipes,



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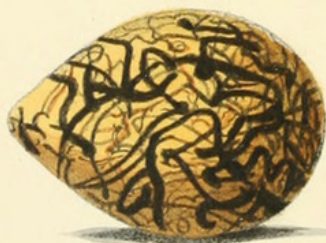
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