

least resistance, while more than one voyager has remarked the slowness with which it sails past. The Petrels I have mentioned sail very nearly in proportion to their size and weight. The Stormy Petrel never sails; the Cape-Pigeon only for a very short time, perhaps a minute; the "Night-Hawk" much longer, often between five and ten minutes; while the Albatros, as I have before mentioned, sails sometimes for an hour, "rising and falling," says Dr. Bennett, "as if some concealed power guided its various motions, without any muscular exertion of its own," but which we must only look upon as another illustration of the small resistance offered by the air to the passage of a properly-shaped heavy body moving through it with a low velocity.

XXVI.—*Notes on Birds breeding in the Neighbourhood of Sydney.*

By EDWARD P. RAMSAY.

[Continued from 'The Ibis' for 1864, p. 245.]

7. *PARDALOTUS STRIATUS* (Gould, *Birds of Australia*, vol. ii. pl. 38)*.

During my first visit to Cardington, on the Bell River, in the Molong district, I was much surprised and delighted at finding this beautiful species of Pardalote in that neighbourhood. My

* I at first thought that this species had been *P. affinis*. I was led into the mistake by the rarity of *P. striatus* about Sydney, and also by receiving from the southern colonies specimens of *P. affinis*, which may be easily distinguished from *P. striatus* by having the tip of the spurious wing yellow, and the third primary only being white on the outer web. *P. punctatus* is the most common species found near Sydney. There is a variety (?) which sometimes, though not very commonly, occurs about Sydney. This has the tip of the spurious wing deep orange, and the lines on the head are more even and more backwardly placed than in the common form. Mr. Gould informs us, he believes these to be young birds; but I have, however, found them breeding in September and October, and have met with them in flocks of considerable numbers, from which I procured no specimens with the orange tip to the spurious wing, although I have shot over a dozen from the same party. *Pardalotus affinis* arrives here during the months of August and September, and may be found in company with *P. punctatus*, searching for insects and their larvæ among the tops of the young *Eucalypti*, from the torn edges of the leaves of which

brother, Mr. James Ramsay, informed me at the time that this bird arrived every year about the beginning of October, and would shortly begin to breed. This I found to be the case. In the course of a few weeks they took possession of their usual breeding-places, a batch of old nests of the Fairy-Martin (*Chelidon ariel*). These they lined with grass and stringy-bark, making a nest similar to that of *Pardalotus punctatus*. The eggs varied from three to five in number. They are very ovate, and of a glossy white; in length $7\frac{1}{2}$ to 8 lines by $6\frac{1}{2}$ to 7 lines in breadth. About three weeks after the Pardalotes had taken possession of these nests, the rightful owners returned; but, finding the usurpers unwilling to turn out, the Martins contented themselves by building new nests, and repairing those that had been broken down.

8. CHELIDON ARBOREA (Gould, vol. ii. pl. 14).

About the end of November in the same year, 1860, I discovered a large batch of nests of this species fastened under an overhanging rock upon the banks of the Bell River. I counted upwards of one hundred nests, all built up together so closely that of many the entrances were alone visible, the nest itself being built round by others.

No Pardalotes were here to disturb them; and the Martins were flying to and from the nests in great numbers, some carrying in grass for the linings, others busily employed in repairing the old and building new nests with the mud from the river's bank. Many also I found were brooding their eggs, and this gave me a good opportunity of procuring some specimens, which I did not fail to seize. There were usually from three to five eggs, but some nests contained seven. Many of the eggs were altogether white, others were spotted with light brownish-yellow, occasionally all over, in other instances only at the

they get a kind of "manna" that they seem particularly fond of. This also forms a great part of the food of the young birds of all three species.

[*Pardalotus affinis* has hitherto been thought to be peculiar to Tasmania. If we are not mistaken, this is the first record of its occurrence in Australia. —ED.]

larger end. They vary in length from 7 to $8\frac{1}{2}$ lines, and from 6 to $6\frac{1}{2}$ lines in breadth.

9. CHELIDON ARIEL (Gould, vol. ii. pl. 15).

The Fairy-Martins arrive about Sydney early in August, and begin to build towards the end of September. They invariably return to the same old building-places, under the eaves of some out-house or shed.

Upon referring to my note-book I see that on the 17th October, 1860, while riding along a watercourse near the Lachlan River, we came across a batch of about two hundred and fifty nests of this species, built closely together under the bank of the watercourse. The birds had not far to go for the mud they used, as there was a little pool of water just below their nests. When they had got as much as they needed in their bills, they took two or three sweeps backwards and forwards before flying to the nests. Several birds were helping to build one nest. Sometimes two or three would come with their bills full of mud to add to the same nest.

10. GYMNOTHINA TIBICEN (Gould, vol. ii. pl. 46).

None of the Australian birds I have hitherto met with lay eggs that are subject to greater variety than the present species does. Out of twenty specimens now before me, there are twelve very distinctly marked varieties; and I will endeavour to describe those of them which are from the neighbourhood of Sydney.

Var. α. In this, which is perhaps the most common variety, the ground-colour is of a very pale sky-blue or bluish white, with spots of lilac and numerous irregular markings of light brown equally distributed over the whole surface of the egg. Length, from 16 to 20 lines; breadth, from 13 to 15 lines.

Var. β. Ground-colour pale bluish or greenish white, with long curved markings, smears, and dashes of reddish brown. Length, 18 lines; breadth, 13 lines.

Var. γ. When first emptied of the contents, the ground-colour of this variety is a beautiful light green, with deep rust-red blotches over the whole surface, but run together so as to form one large patch on the thicker end. Length, 19 lines; breadth, 15 lines. This variety is usually seen in a very long egg.

Var. δ. Ground-colour bright light green or sky-blue when first taken, but fading when kept, having irregular markings of light wood-brown very sparingly dispersed over the whole surface. Length, 18 lines; breadth, 14 lines.

Var. ε. Ground-colour very pale sky-blue, with distinct oval spots of reddish brown and obsolete spots of lilac. In some specimens the spots are of a dark deep lilac, having a penumbra. Length, from 18 to 20 lines; breadth, from 13 to 15 lines.

Var. ζ. The ground-colour a uniform dull dark brown, with numerous minute dots and spots of a deeper hue over the whole surface. Length, 20 lines; breadth, 13 lines.

Var. η. Ground-colour brownish-white, with spots and dashes of wood-brown tinged with lilac, and obsolete lilac spots at the larger end. Length, 17 lines; breadth 14 lines.

The nest of the Australian Magpie is a large open structure, composed of sticks and twigs, lined with grass and hair. It is usually placed in the fork of a tree, or among the bushy boughs of a species of *Angophora*. The eggs are usually three, but sometimes four in number.

These lively and showy birds are great favourites among all school-boys, soon becoming tame enough to be allowed to run and fly about at pleasure, and coming down when called to receive a worm or a piece of meat from the hand. They are great mimics, especially of the larger birds and domestic fowls; but their own song is very pleasant and full of melody. It may be often heard at sunrise, as they leave the tall trees with sweeping flight, and make for the patches of cleared land, where they may be seen running over the bright green grass or searching for worms in the newly-ploughed fields, every now and then throwing back their heads and pouring forth their liquid flute-like notes. Young birds get their full livery after the first year.

11. MYIAGRA PLUMBEA (Gould, vol. ii. pl. 89).

This pretty Flycatcher arrives here about the same time as *Monarcha carinata*, or perhaps a little earlier. It is, however, much more regular in its visits than that bird, coming every year, whereas the other is not so regular, nor in such constant numbers. *Myiagra plumbea* is a pleasing, active little bird, ever

on the move, and, even when perched, continues to pour out its guttural squeaking note, which is always accompanied by a tremulous motion of the wings, as if it were always anxious to be off again. It has another melancholy but pleasing note, which, when heard far off in the bush, is never to be forgotten, and at once warns you of its return. Although it is not so numerous during the months of November and December as when it first arrives in September, still many remain and breed with us, pairing off and beginning to build sometimes as early as October, but more usually during the two following months. They then leave the closely wooded sides of the creeks and water-courses, and show a decided preference to the more open or half-cleared land, choosing as sites for their nests the horizontal boughs of the larger trees, upon which they build neat round open nests, two inches in diameter by one and a half deep, and composed of stringy-bark (the bark of a *Eucalyptus*), bound and fastened together with cobwebs, the outside being ornamented with scales of bark, glued on with cobwebs, and made to resemble, as much as possible, the boughs to which they are fastened. They are lined with grass and thin strips of bark. The eggs, which are from two to three in number, have the ground-colour bluish white, and a zone of slate-blue and lilac dots near the larger end. In some the markings are of a wood-brown tint, or consist of lilac spots alone, with a dot of deeper tint in the centre of each spot. Their length is from 8 to $8\frac{1}{2}$ lines, and the breadth from 6 to 7 lines.

This species remains with us until about March. I have not noticed any later.

12. MONARCHA CARINATA (Gould, vol. ii. pl. 95).

I have never myself had the pleasure of finding the nest of this beautiful species; but perhaps the fact that very few breed about Sydney may be a sufficient excuse for this seeming neglect.

For the nest and eggs which at present grace my collection I am indebted to Mr. George Masters, of Petersham, who procured them during a visit to Kiama in January 1864.

The only instance I know of this bird's breeding in the vicinity

of Sydney was in December 1860, when I observed a pair, accompanied by two young ones scarcely able to fly. The first specimen I obtained last year was during September—about the 25th. Mr. Masters had also shot some a few days before at Petersham, about three miles distant from Sydney. They seldom remain long, but disappear as miraculously as they come, only a few remaining to pair and breed.

The nest procured by Mr. Masters was placed between the upright forks of a small tree, about eight feet from the ground. It is a neat structure, cup-shaped, and open above, composed of grass and fine rootlets closely interwoven; the outside is ornamented with green moss, *Hypnum*, &c., which give it a very beautiful and pleasing appearance. It is four inches in length by three across, and about an inch and a half deep inside. The eggs are two in number, their ground-colour pinkish-white, with numerous bright red or pinkish salmon-coloured spots and markings sprinkled all over the surface, but more numerous towards the thicker end. They measure 10 lines in length by 8 in breadth.

In this bird the plumage of both sexes is alike. I can discover no difference whatever.

13. CORVUS CORONOIDES (Gould, vol. iv. pl. 18).

In New South Wales we have two distinct races, if not species, of *Corvus*, known by the names of the White-eyed and the Black-eyed Crow. Both of them are equally plentiful about Sydney, indeed throughout the whole country, so far as I have visited it; but in some places the Black-eyed birds, and in others the White-eyed ones, prevail.

The birds with the white irides seem to be larger, and have the bill, if anything, longer and stouter than the other race. Mr. F. G. Waterhouse, of Adelaide, informs me that the young of the first have the irides white also; the young of the second have the irides black. The eggs of the White-eyed Crows differ from those of the Black-eyed race in being more lengthened and of a lighter green. They are not so bright in colour, nor are the markings (which have more brown in them) so distinct. Their length is about 21 lines, their breadth from 13 to 14 lines.

The eggs of the Black-eyed Crows are of a bright green, strongly blotched with deep black and brown markings, with a tinge of yellowish wood-brown in some places. They are from $19\frac{1}{2}$ to 21 lines in length by 14 or 15 lines in breadth.

The nests of both races are alike—large bulky structures of sticks and twigs, some often half an inch thick. These form the groundwork of the nest, which is usually placed in the most inaccessible trees. Finer materials are used for the inner parts, and it is lastly lined with grasses, stringy-bark, and tufts of hair from various dead animals. The eggs are four or five in number. Both races are found over the whole of Australia; but, as I have above stated with respect to New South Wales, in some places one or the other predominates. In South Australia the White-eyed bird seems to be most common, whereas about Sydney both are equally plentiful. During the breeding-season they are chiefly found in pairs; but throughout the greater part of the year they assemble in large flocks of from fifty to several hundreds, and are most abundant near the slaughter-houses and “boiling-down” establishments. They also visit the fowl-houses and yards in search of eggs or any refuse that may be thrown out. During the breeding-season they have a great antipathy to Hawks; and should one of these birds come in sight, the angry pair will immediately pursue the intruder, and never desist from their efforts until they have driven him away. They usually have two broods a year, beginning to breed in August, and continuing until November, or even later in some instances, according to the locality.

Crows may be often seen in company with Gulls (*Xema jamesoni*), feeding upon the small fry left by the fishermen after drawing their nets on the low sandy parts of the beach. They have a peculiar waddling gait, and when walking appear very clumsy. Their native name is “Warga.”

14. MYZOMELA SANGUINOLENTA (Gould, vol. iv. pl. 63).

This is one of the most beautiful of our Australian Honey-eaters. It is strictly a migratory species, arriving here during July and August, and leaving us again in January. Sometimes it is to be found in great numbers, at others very few come about

us. In 1863 we were not favoured (so far as I am aware) by a single specimen, nor have I observed any at present during this season (1864).

When they have arrived, their presence is usually indicated by their pleasing liquid notes, among the tops of the mahogany and other trees which are in full bloom during these months. They are often accompanied by various species of *Trichoglossus*, chiefly *T. concinnus* and the more beautiful *T. swainsoni*, with occasionally a few of *T. chlorolepidotus*. The "Blood-bird," under which name *Myzomela sanguinolenta* is generally known here, breeds during the months of October, November, and December, making a neat but somewhat scanty nest of stringy-bark, seldom with any other lining. It is suspended between a fork or twigs at the end of some bough in the bush, or among the upright and topmost branches of the tea-tree.

The nest is perhaps smaller than that of any other Australian bird, being in some instances scarcely one inch and a half in diameter by one inch in depth. The eggs are two, seldom three, in number, of a delicate white strongly marked with reddish- and yellowish-brown spots, more numerous at the larger end. They are from 6 to 7 lines in length, and from 5 to 6 lines in breadth.

PARRA GALLINACEA (Gould, *Birds of Australia*, vol. vi. p. 75).

There has been so much left unsaid with respect to the nidification of the birds in the immediate neighbourhood of Sydney, that I feel I may be going out of my way in describing the eggs of the species from other parts of the country; yet the novelty and the beauty of these at present under consideration will, I hope, in some manner atone for my error*. For the first eggs of this beautiful *Parra* which I possessed I was indebted to Mr. Edward Hill, of Woolarla, near Sydney, who very kindly presented me with a pair which he stated were procured by a friend of his, living a few miles north of Rockhampton. Since

* [The eggs of *Parra gallinacea* have recently been described by Mr. Gould (P. Z. S., 1864, p. 661) from two examples which may very possibly have been out of the same nest as the first mentioned by Mr. Ramsay. —ED.]

then, however, I have obtained specimens from Messrs. Macgillivray and Wilcox from the Clarence River, procured, I believe, from a nest found in a lagoon in the neighbourhood of Grafton.

Mr. Gould, in his magnificent work on our Australian birds, having given us beautiful figures of the nest and young, as well as of the adult birds, it will be useless for me to redescribe them here. I shall therefore not take up time by going over old ground, but proceed at once to say what the eggs are like. They vary in form from being quite oval and pointed equally at both ends, to almost round or pyriform as in some of the Plovers. When of this last shape, they are usually placed in the nest with their small ends pointing inwards. In length they are from $13\frac{1}{2}$ to $14\frac{1}{2}$ lines, and in breadth from 10 to 11 lines. The ground-colour is a light yellow olive, becoming with time much darker. The whole surface is crossed and re-crossed with irregularly curved and rather broad black lines, turning and twisting in every direction, and, in some examples, with shorter lines, making various ill-shapen letters or figures, while in others these markings take the form of blotches. Appearing beneath the shell are deep yellowish-brown streaks and hair-lines recrossing them on the surface. Some specimens are more numerously streaked than others, and have the broader black lines predominating; in others the fine hair-lines and those of yellowish brown are most visible. The eggs are four in number; and the nest, which is composed of sedge, grass, and aquatic plants, is placed close to the water's edge, or upon any bunches of weeds or grass growing in the water, which may be sufficiently strong to bear its weight.

XXVII.—*Notes on Krüper's Nuthatch and on the other known Species of the genus Sitta.* By P. L. SCLATER, F.R.S., &c.

(Plate VII.)

DR. HARTLAUB having kindly forwarded for my examination a pair of the newly discovered Nuthatch of Asia Minor (lately described by Herr von Pelzeln of Vienna, as noted in the last