

tatus) which at first it was thought to be. I noted other individuals in the region. Mr. George Masters collected the Yellow-tailed Pardalote at "Mongup, Salt R." in January, 1869.* This place is situated at the junction of the Pallinup River and the Peenebup Creek, about 40 miles N.W. of the estuary. I was interested to learn that the local vernacular name for the ground-building, and perhaps all, Pardalotes was "Budgerygar," a name usually applied to the Warbling Grass-Parrot (*Melopsittacus undulatus*). The native name is Bilyabiet.

White-naped Honeyeater, *Melithreptus lunatus*.—Noted in the wooded parts along the shores of the estuary, especially among the Yate trees.

Brown Honeyeater, *Stigmatops indistincta*.—A very plentiful Honeyeater at the estuary, and a spirited contributor to the early morning bird music.

Western Spinebill, *Acanthorhynchus superciliosus*.—Fairly common, and noticed among the banksia blooms.

Tawny-crowned Honeyeater, *Glyciphila fulvifrons*.—The open-country Honeyeater, where it was often to be seen. Noted at the dwarf banksias. It has a pleasing song in the dawn, which is not heard during the day.

Singing Honeyeater, *Meliphaga virescens*.—This species did not frequently come under notice.

Gold-winged Honeyeater, *Meliornis novæ-hollandiæ*.—Birds were noted in the scrubs right on the sea beach, but the species did not appear to be plentiful in the area.

Red Wattle-Bird (Tungaluk), *Anthochaera carunculata*.—A numerous bird especially in the tall timber such as the "yate."

Australian Pipit (Perit Perit), *Anthus australis*.—A plentiful species all over the district and on the journey from Gnowangerup. It was also seen running along the shore of the estuary like a Dotterel.

Grey Bell-Magpie (Jarburn, Jarbell), *Strepera versicolor*.—This species was numerous in the wooded parts, which it enlivened by its peculiar penetrating notes.

Grey Butcher-bird (Yoyjeddie), *Cracticus torquatus*.—Noted at the estuary.

Western Magpie (Kulbardie), *Gymnorhina dorsalis*.—A common bird at the estuary.

A Sea-Birds' Haven.

BY KENWY LAWRY, Melbourne.†

HAVING observed birds at Willis Island for six and a half months, and noted carefully their domestic habits, a few notes may be of interest. The period in which I made these observations was from May 1st to November 15th, 1923, this being the main nesting season.

The island contains bird-life of ten species, namely: Sooty Terns (*Sterna fuscata*), Noddy-Terns (*Anous stolidus*), White Gannets (*Sula dactylatra*), Grey Gannets (*Sula leucogaster*), Red-legged Gannets (*Sula sula*), Land Rails (*Hypotaenidia philipensis*), a small white Gull (*Sterna bergii*) with black back, Frigate-Birds (*Fregata ariel*), and a species of small Snipe, also the "Night-Bird" or "Mutton-Bird" (*Puffinus pacificus*). The Sooty Terns are in the great majority, and to me made the most interesting study. There were a great number of these on the Island when I arrived there in May, but the mating season started in June and the number increased by thousands; in fact, walking about the Island was difficult owing to these birds flying in one's face, and it was necessary to knock them out of the way to save walking on them.

*A. J. North, *Nest and Eggs of Birds in Australia*, Vol. II., p. 28.

†Communicated by A. H. E. Mattingley.

The Sooty Terns started to lay in July and made a rookery at the western end of the Island. They lay on the bare sand amongst the grass, not on the beach. No nest is made and they lay within a few inches of each other. The majority lay one egg, but many two. The eggs are the size of a pullet's, grey in ground color and spotted with dark red. Spots are thick at the big end and thin out towards the small end. Some eggs have red smudges as well as spots. The eggs are so large in comparison to the birds that it is almost impossible for the female to cover the egg. The birds which lay two eggs sit on one and put a wing over the second; but they change the order of the eggs every day so that each egg gets an equal share of the warmth of the brooding bird. A big percentage hatch both eggs. The male as well as the female does a share of the brooding.

At night-time, whichever bird is sitting, the mate flies practically the whole time and calls continually pass between them. The female does all the feeding of the young, and this is mainly done with squid, each fish being about the length of a little finger. She has great difficulty in feeding her young owing to the food being robbed in the action of disgorging by the Noddy-Tern, who swoops down and tries to secure the food before the young can swallow it. I have seen cases in which the young Sooty Tern and the Noddy-Tern struggled for food and the Noddy-Tern eventually flew up carrying both the food and the young Sooty Tern. In one case, the young bird was carried up some 70 feet before being dropped, and was killed in the fall.

The mother bird not only feeds her young, but gathers salt water which she brings in and disgorges to the young bird. This is mainly done in the heat of the day. The feeding takes place night and morning.

It is interesting to note that the young of the Sooty Tern start to practice flying a week after they are hatched, and keep at it until they can raise themselves a short distance from the ground. They fly freely within four weeks of hatching and then disappear from the Island altogether. Up to the time they disappear they are grey, with occasional white feathers.

The Noddy-Terns do not lay on the sand, but nest in the branches of shrubs which grow on the Island. The vegetation on the Island is very scrubby, and the nests are never more than three feet from the ground. These birds are not nearly as plentiful as Sooty Terns, but their young leave the Island about the same time as those of the Sooty Tern.

I observed that the Sooty Terns laid in five batches, of thousands of birds in each batch. The first batch made rookeries at the western end of the Island, the second batch at the north, the third at the south-west, the fourth at the south-east, and the fifth at the crest of the Island, mainly around the buildings.

The "Night-Birds" arrived at the Island in October, and used their old burrows to lay in. They are never seen in the daytime, but come up at night and utter a very distressing call, which suggests somebody moaning with pain. They keep this up all night.

The Gannets appear to breed all the year round. The Grey and the Red-legged Gannets make their nests in the shrubs. The White Gannet lays on the coral, just above high water mark. These birds feed their young for about four months before they fly; the youngsters seem to make no attempt to learn to fly for the first three months. It is heavy work for the mother birds to feed them, as the young birds are very voracious. The Gannets have difficulty also in bringing the food home, owing to the Frigate-Birds, which are continually on the watch and fly out to meet them, catching them by the tails with their beaks and shaking the Gannets until they disgorge food. They then let go, and swoop down to recover the disgorged food before it reaches the water.

The Frigate-Birds do not fish for themselves, but live wholly on food pirated from the Gannets. There are only six Frigate-Birds on the Island, and they mainly roost on the wireless aerial, which is a splendid point of vantage for them. I shot one of these Frigate-Birds, which was 6ft. 7in. from tip to tip of wings.

The small white Gulls on the Island I cannot classify, having never observed the species anywhere else about the Pacific islands which I have visited. This bird does not nest on Willis Island. The small birds similar to Snipe frequent the beaches, but are few in number and are not very strong fliers. They do not appear to breed on the Island.

The Land-Rails are evidently of the same species as the Land-Rail on the mainland. They do not fly, but are very fast runners. They are very fond of water and drink great quantities if it is given to them; but as there was no fresh water on the Island before it was inhabited, these Rails evidently secured moisture from the eggs of the Sooty Terns. This they do at the present time, even if supplied with water. They will eat almost anything. I brought three of these birds alive to Melbourne.

The Land-Rail has a dangerous enemy in the bird of the Snipe variety. This bird can almost kill a Rail with a single peck, but will not attack unless it corners a Rail where it can be easily tackled. The Rails are continually fighting amongst themselves. The method of killing is by pecking in a vital spot under the wing. There are only about thirty Rails on the Island. These birds start breeding in April and each pair has only one brood.

Eggs on the Island in the breeding season are so abundant that we found it necessary to lay duck boards between the quarters and the station.

The White-backed Swallow.—In an article by Mr. W. B. Alexander in last October's issue of *The Emu*, it is stated that no record of the White-backed Swallow (*Cheramæca leucosternum*) has been made east of the main dividing range. I have seen these birds on a number of occasions, in this district (the Upper Hunter Valley) and on one occasion, during the spring of 1924, a pair nested in a creek bank not far from my home.—M. THOMPSON, Anticline, N.S.W.