birds before they can mate and nest, but it is certainly mysterious how they discovered the heronry nearly 400 miles south of their feeding grounds at Foxton. Presumably White Herons are near enough kin for their courtship rites to excite the mating instinct in the Spoonbills and they both put on their nuptial dress of breeding plumes, though the Spoonbill's crest is only from the back of the neck and is much smaller than the White Heron's.

We saw the Spoonbills fly to the nests to feed the young, but they were too high to observe any feeding particulars. Mr Ken Nolan, the caretaker there, however, says he has seen the Spoonbills carrying fish in their bills to the nests. This fish, it would seem, could only have been small flounder. No doubt in the mud where the Spoonbill feeds with a swinging motion of its bill there must be numbers of small flounders, and these could no doubt be caught by the Spoonbill. This theory is confirmed by the fact that on a Bluff estuary the Black Swans that are shot often have young flounders in their crops.

It would seem a difficult job for the Spoonbills to feed on their usual food of small crustaceans and worms, and if flounders could form a portion of the diet it would probably be a much easier task rearing the young. The small crustaceans and worms on which the Spoonbills feed are also the food of other waders. These waders (Godwits, Knots, Dotterels, etcetera), with their narrow bills, must take their food individually, but a bird so large as the Spoonbill could hardly gather enough food to live on if it had a narrow bill. The broad bill, sweeping in numbers of crustacea at each sweep, must simplify the feeding process. This rather resembles the whalebone whales engulfing large numbers of whale food at each mouthful. As it is said, the largest animal in the world lives on one of the smallest animals!

In Europe a similar species of Spoonbill is reported often to nest in heronries where other species of *Ardea* are breeding, so that our example at Okarito is not unique. They are also reported to live on vegetable matter as well as fish, crustacea and insects, as they consume large quantities of marsh plants.

SHORT NOTES

WHITE ISLAND GANNETRIES IN AUGUST

During a trawling expedition in the Marine Department's m.v. *Ikatere* in the Bay of Plenty during August 1956 I was able to spend a short time ashore on White Island examining some of the gannetries. Robertson and Wodzicki (1948) and Fleming and Wodzicki (1952) have described these gannetries and given counts of birds and nests as at January 1947. Oliver (1913, 1955) gives further details for December 1912, but as no observations during August appear to have been published, these brief notes may be of some interest.

Gannet Point: N.Z. Gannetry No. 24 (Fleming and Wodzicki, 1952).

This, the largest colony on the island, was visited on 16 August. All the available clear area was taken up with birds, many thousands being seen on the main part, A of the above authors. No accurate count could be made as when the cliff was climbed all the birds left the colony and flew around the headland. The entire area of A was covered with newly formed nests, little hollows in the bare ground or low raised mounds of earth, some unlined but many lined with fresh *Mesembryanthemum* only, no other building material being seen in the nests. However, one gannet was seen flying with dry seaweed in its beak. There were no eggs at all in the entire area A. The smaller portion of the colony on the other side of the ravine, area B, was also initially covered with birds and when most had flown no eggs could be seen there either. The above is in marked contrast with January 1947, when 'there were quite large areas of guano-covered ground without nest mounds in

addition to a considerable number of unoccupied mounds' (Robertson and Wodzicki, 1948). However, it probably means that all available nesting space is occupied early in each season.

The slopes surrounding this colony were honeycombed with 'mutton bird' burrows, and though some signs of fresh activity were seen, the few burrows examined were empty. This was surprising as Oliver (1913, 1955) found that *Pterodroma macroptera gouldi*, the common breeding petrel of White Island, had nearly fully fledged young in December 1912.

Rocky Point: N.Z. Gannetry No. 23.

These nesting areas were examined from the sea and gannetries A, B and C were fully occupied, the roosting area D not being seen.

The West Point Gannetry (No. 22) was not examined and there were no birds at the abandoned Dam site (No. 25).

These observations add additional evidence for the later egg laying period of the White Island Gannetries suggested by Oliver (1955).

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—*J. C. YALDWYN*

A NOTE ON GREY DUCKS BREEDING AT MIHI, IN THE ROTORUA-TAUPO AREA

Mihi is a little known district, half-way between Rotorua and Taupo, about a mile or so from the main highway. It is a thermal area with an extremely active boiling pool, a number of mud pools, fumeroles and the like scattered in the rough mixed manuka and pine bush. The area concerned is a couple of hundred yards from the Waikato River and includes a small Maori settlement.

On 30 August, with Mr P. A. F. Lewis, of Rotorua, I was exploring the thermal activities on a rough silica patch, when a large bird took off from under a small but compact clump of tea-tree scrub. Investigation revealed a nest of ten eggs, typically those of a Grey Duck, with breast-feather lining, etcetera. The nest was left undisturbed.

On 9 September, accompanied by Mr M. S. Black, of Rotorua, we returned to this spot for further observations. As our car passed down the side road into Mihi, a clutch of ten young ducklings, recently hatched, appeared on the low bank at the side of the road. They had obviously been shepherded there, and as we watched they fluttered to the road, crossed it right in front of the stationary car, and with the parent bird in attendance made for a small swampy area. Our arrival at this time was providential for the ducks, as well as being an astonishing coincidence. Some Maori youngsters spotted the ducklings, cut them off from the parent bird and splashed into the swamp after them. The parent bird flew over a low hummock and the lads were somewhat peremptorily driven off by shouts and threats from our party.

The subsequent developments were interesting. The parent duck flew up and down, gradually losing height until she landed in a small shallow stretch of water just out of sight over a low hill. From this position she flapped in and out of sight several times. The main body of the ducklings soon got their bearings and in a compact little knot made towards her. Presumably to get their directions, they stopped in a body from time to time, then set off again and presently disappeared over the hill. One laggard, separated from the main group, appeared to have no chance of catching the others, but to our surprise the parent bird, after attending to the main party, came back up the slope and waited, just in view, until this last member of the family reached her, taking several minutes in his journey of numerous short dashes and pauses. My