

It was under the gnarled dry roots of old rata trees that the breeding colonies of Crested Penguins were found. Under our feet the springy peat was alive. Murmurs of the incubating birds were as soothing as the purr of kittens; but in one hole an argument between two birds was conducted in a raucous tenor.

Twenty-six nests were located. Under one tree in various tunnels, by means of a torch, and flat-on-the-face stance, we could see ten birds on nests. Although we restricted our count to observed nests, we could hear birds which were inaccessible to eye and torch. All birds were sitting closely. In three nests when the bird moved we noted two eggs in each, but six nests had only one egg. Old moulted pin-feathers lay at the entrances to the holes. The crests were bright yellow, prominent with an upswept look. With their pale pink feet, large bright eyes and well-groomed plump black and white bodies, these penguins are a fine sight in their peaty recesses.

P.D. visited this island again and also landed on Seymour Island, near the entrance of the sound, on two occasions in September. In the meantime he had procured a suitable camera in order to photograph the birds in their dark recesses (*vide* Plates V, VI and VII).

SUMMARY

Rolla I.

28/8/56. 26 nests found.

12/9/56. Three chicks seen, two being in one nest.

25/9/56. Chicks well grown, the bigger being the size of an adult Little Blue Penguin. On one nest were two dead chicks. There was still one incubating bird with egg unhatched.

Seymour I.

11/9/56. One nest with eggs in open under supplejack. This was the only nest seen in the open. On 26/9/56 the nest contained two chicks.

Other birds noted on Rolla I. were: Pigeon 1, Tomtit 2, Fantail 2, Yellow-head 2 in full song, Grey Warbler 1, Bellbird 1, Black Oyster-catcher 4.

THE ROYAL SPOONBILL

By ROBERT A. WILSON

The establishment of a new species in any country is an interesting study. When the bird is as large and striking as the Royal Spoonbill (*Platalea regia*) it is doubly so. With the breeding of three pairs last season at the white heronry near Okarito, South Westland, and return in May 1956 to the estuary of the Manawatu River of twelve birds, it may be considered that the Royal Spoonbill can be struck from the list of stragglers in New Zealand and promoted to the status of a resident species.

New Zealand has been colonized by several new species in the last hundred years. Buller records the first appearance of the White-eye (*Zosterops lateralis*) in the North Island in 1856, but it was not recorded as breeding till 1862. It was presumed to have come from Australia and was named by the Maoris as 'tauhou' or 'stranger'.

The Spur-winged Plover (*Lobibyx novaehollandiae*) had only one specimen recorded before 1930 which was taken in 1886. Now it is breeding freely in Southland.

The White-faced Heron (*Notophox novaehollandiae*) has been recorded as a straggler fairly frequently over the years. I myself shot one on the Rangitikei River over sixty years ago, but no record exists of its having bred in this country before 1930. It is a common bird in Australia. Shortly after this date it was recorded as breeding in South Canterbury and it is now spreading rapidly over both Islands and is becoming almost a common bird.

One explanation of this may be that, as Dr Falla states, it is a frog-eater in Australia and the introduction of frogs to New Zealand may have made this country a much more congenial home. One of the earliest observers of this heron in New Zealand, Mr E. Ellis, has described in the July issue, 1945, of *N.Z. Bird Notes* how he watched it stalking and catching frogs. One advantage this species possesses over some of its relatives is that apparently it can nest without the stimulus of numbers in a rookery, as it is recorded as nesting in many places in single pairs.

In England the classical example of the spread of a new bird is the Fulmar (*Fulmaris glacialis*), which during the last hundred years has spread all round the coast of the British Isles. James Fisher has written a book of 500 pages on this bird alone and it has excited great interest among bird lovers. Here again the food supply may explain the spread. The Fulmar feeds on the same plankton as the whalebone whales, of which hundreds of thousands used to inhabit northern waters. They have been exterminated by whaling and this may have made more food available for the Fulmar.

The Fulmar also requires a stimulus of numbers in a community before it can nest and breed. When a new locality is colonized it takes some years of occupation before sufficient numbers are congregated in the colony to produce the stimulus for breeding.

The position of the Glossy Ibis (*Plegadis falcinellus*), also an Australian bird, is at present in doubt. An immature bird was shot near Nelson in 1935, but the first record was 1902. Since then several stragglers have been seen and recorded, but in 1954 a large flock, up to 24, was recorded first in Southland, then in the north of the South Island, and then in November 1954 a flock of 16 was seen for some weeks in the Manawatu. This would seem to indicate it was breeding in New Zealand: since then nothing more has been recorded of them, but it is quite possible they have bred somewhere.

In the case of the Royal Spoonbills, their chief home in the North Island has been the estuary of the Manuwatu River near Foxton, Stidolph seeing four there in November 1943. In his review of the species in the April number of *N.Z. Bird Notes* in 1948 he says he thinks two may have been young birds, but from that date to 1950 there was no sign of their breeding. During that period Foxton was their chief home, though they were recorded from the Waikanae and Waitotara river mouths. In May and June 1946 four birds visited Lake Ellesmere, but one was probably shot as later only three were seen, and in May 1947 the three were recorded again at Foxton. During this period I several times in company with the late Major Buddle visited the locality to see if they were breeding. In Holland they are reported to nest in swamps and there was a secluded swamp close to their feeding grounds at Foxton, but we saw no sign of their nesting. No more than three were seen together till after 1950.

In the summer 1949-50, however, Dr Falla reported having seen a pair of Royal Spoonbills in breeding plumage at the white heronry at the Roto Sanctuary near Okarito, and in September 1952 five were reported as having been seen at Foxton by a member of the King's College Bird Club. Since then they have generally been reported absent from Foxton in summer, but returning in greater numbers each autumn until, as stated in the preface, in May 1956 twelve have been counted there. The official rangers of the Roto Sanctuary and visiting ornithologists have reported that Spoonbills have bred successfully each season since 1949 and that there has been a gradual increase in the number of breeding pairs from one to three or perhaps four. Usually two young have been reared in each successful nest.

In November 1955 I accompanied Dr Falla to the Okarito heronry and we saw three pairs of Spoonbills breeding there. While the White Herons were nesting on low trees like kowhai and tree ferns, the Spoonbills were nesting high up, 80 feet or so, in the branches of tall rimu trees some 50 to 100 yards distant from the heronry.

Apparently, therefore, the Spoonbills require the stimulus of other breeding

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 plumages, 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. *Ikateri* 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