STILTS NESTING AT ARDMORE. SEASON 1946-47.

By A. F. Stokes, Ardmore, Papakura.

Two adult and three young stilts (Himantopus himantopus) reappeared on my farm on May 16, 1946, no birds having visited the area since March 29. These were doubtless the parents and brood of the previous season, less one chick. Since the brood learned to fly the reappearance of this chick was erratic, the last record of the whole four together being March 29, 1946. (See Vol. 2, No. 2, page 26.) It is, therefore, reasonable to suppose, owing to its earlier behaviour, that this chick had joined up with other stilts.

In the winter months the weather seems to influence their visits. From May 16 to July 30 the party of two adults and three young came on twelve occasions, nine of which were wet days. Probably most of the fine weather was spent on the mudflats of the Manukau, only four miles distant to the west.

A careful watch was kept to discover the direction they took to and from my farm. This was found several times to be the west so that the balance of their time presumably was spent at the Papakura Creek, a branch inlet of the Manukau Harbour. The Clevedon estuary to the north-east is nine miles away. They were never seen to fly to or from Clevedon.

The two adult birds first separated themselves as a pair on July 14. Two of the chicks seemed to play at pairing, leaving the third one by itself. There could, of course, be no prospect of these young ones breeding as they were only now assuming the darker plumage of the later juvenile stage. On August 1 another adult pair joined the party, but only stayed one day. These were much more timid than the others, which fact revealed how used to the place the family party had become. From August 14 to 28 the adult pair stayed and gave indications of nesting near the site of last year, but nothing came of it.

At last on October 9, this pair was found with a nest and one egg in a wet patch on Mr. Ray Brown's farm, about 700 yards from the first site on my farm, with a main road between. On October 13 they had started incubation of three eggs. Two hatched on November 8 and the third on November 9. This would place the incubation period at about twenty-seven days. When seen on November 9 all three chicks were in a little heap two yards from the nest. The old birds now tried to do as they had done the previous season, i.e., to take the chicks to the first site on my farm. On November 11 they had moved them 300 yards but the hedges and ditches at the main road must have deterred them for they had returned to the nesting field on November 12, losing one chick in this adventure. Another attempt was made on November 13, at a different point on the main road. Here the two chicks were rescued from the road ditch, nearly drowned. My family revived them in warm water, but one died the next morning and the other got out of its box and was killed by a neighbour's cat. This was a most regrettable end to their short but extremely adventurous lives.

It was noted that the old birds moved the chicks by flying a short distance and then calling them. Also it was found that the chicks, even at this tender age, could swim short distances.

Upon the loss of their chicks the parents went away and brought

back their brood of the previous year, making a great fuss of them for two days, the juveniles then leaving. The parents now frequented the first nesting site of 1944 and I found there on November 25 their nest with one egg. On Nov. 26, at 4 p.m. another egg was laid and the bird sat constantly from that evening. Examination of the nest on Nov. 29 showed four eggs. On December 21, at 6.30 a.m., there were two newlyhatched chicks in the nest and one ten yards away being brooded by the male bird. By 8.30 a.m. the three chicks were running about quite smartly and feeding. The female still sat during Dec. 22, while the active chicks, keeping close together, employed themselves busily, watched over by the male. The fourth little chap hatched on Dec. 23 and quickly joined the family party. It was darker in colour than the others. The average incubating period in this case would be twentyfive days. This shorter period may have been brought about by harder sitting owing to urgency caused by the lateness of the season and also by the hotter weather. The female bird now seemed to think that she had done her share of the task and spent much of her time washing and preening, leaving the care of the chicks to the conscientious male. On January 3 two of the young birds disappeared, probably taken by vermin. On Jan. 18 the remaining two were running about and squeaking a great deal. On Jan. 21 they made short flights of about three vards.

H. R. McKenzie and F. Murray arrived from Clevedon on Jan. 22 to ring them. The stronger bird made a round-about flight of about two minutes, F. Murray doing some hard running and good anticipation, catching it almost as soon as it landed. Its ring number is 47-1 on the right leg. The less advanced bird made a short flight and then hid in the grass, where it could not be found. We all went into hiding until one of the parents called it out. It was soon caught and had placed on its right leg ring No. 47-2. The difference in the development of the two birds was very marked in size, strength, power of wing and of voice, but this may not be conclusive evidence to the effect that the weaker bird was the last of the four to be hatched. In any case, the stronger bird could definitely be accepted as one of the first three hatched, so that the time from hatching to the first flight was thirty-two days. If the weaker bird was the last one hatched it flew in thirty days.

The rings used were plain white metal, very light. If a similar opportunity occurs next season I hope to be able to use coloured rings. There would be little chance of sighting ringed birds on the extensive shores of the Manukau Harbour, but the rings would be most helpful when the birds come back to the farm where they were reared.

Of the clutch of the previous season the first two to fly did so at thirty-three days (see Vol. 2, No. 2, page 26) while the other two flew at thirty-five and thirty-six days respectively. The two newly-ringed youngsters now developed rapidly in flight until on February 1 the whole family flew away. The male and two young returned, but left again for good on February 2nd.

There is unfortunately only a short story of the more timid pair which came on August 1. These (presumably the same birds) came again on October 10 and 27. Their nest with one egg was found in Mr. Brown's paddock on November 3, a little distance from that of the first pair. On Nov. 5 between 8 a.m. and 5 p.m. a second egg was laid. A few days

later a cow put its foot on the eggs and the birds left the vicinity. From the small number in the clutch and their hasty departure, I presume that they were young birds and that they may return with more determination next season.

HUTTON'S SHEARWATER (Puffinus gavia huttoni Math.) IN NEW ZEALAND.

By V. I. Clark and C. A. Fleming, Wellington.

In 1912, Gregory Mathews, in his "Birds of Australia," Vol. 2, published a description of a new subspecies (huttoni) of the common Australian and New Zealand fluttering shearwater (Puffinus gavia) from the Snares Islands.* based on a specimen in the Rothschild Museum, collected by Henry Travers in January, 1890. He recorded an Adelaide specimen as belonging to the new race, which is larger than other forms of the species. In 1937 a storm-killed example from West Australia was sent to Mathews who mistook its relationship and described it as Puffinus leptorhynchus n. sp. believing it to be related to the Manx shearwater rather than to the fluttering shearwater. In 1939, Dr. D. L. Serventy collected two specimens at sea off Kangaroo Island, South Australia, and his detailed account of them, and of the history of the subspecies appeared in the Emu for October, 1939, where full literature references may be found. Serventy concluded that Puffinus gavia huttoni is a valid and distinctive subspecies, and included in it the Snares Island birds (there are apparently three skins in existence, none of them in New Zealand), a New South Wales storm-killed bird, the West Australian example and his two Kangaroo Island skins. Among dozens of fluttering shearwater examined and measured from the Auckland west coast and other New Zealand districts, none had turned up which could be assigned to the large race huttoni, except, perhaps, some of those collected by the Whitney expedition in 1926.

It was therefore a pleasant surprise when one of us (C.A.F.) in 1940 recognised as Puffinus gavia huttoni a somewhat moth-eaten, dried, flat skin from Kapiti Island in the Dominion Museum. It had been sent in some years before by Mr. A. S. Wilkinson, who had recognised its distinctness from the usual form of gavia, but it had never been examined nor reported upon. In April, 1947, three large skulls were recognised among the remains of small shearwaters at Pukerua Bay (V.I.C.); from their condition it appears almost certain that they had been washed ashore during the severe storm of February 17, 1947. One of the three larger-sized heads was kept, and it is clearly a specimen of huttoni. Finally, in October, 1947, a further example came ashore at Pukerua Bay, fresh, and in good feather, but was badly mauled by black-backed gulls before it was collected by V.I.C. These occurrences lead us to believe that this petrel, hitherto considered rare in New Zealand, may be of regular occurrence, and, since it can be recognised by anyone who can take measurements, we suggest that its distinctness from the common fluttering shearwater should be emphasised by the allocation of a different vernacular name, Hutton's shearwater.

Hutton's shearwater may be recognised by its dimensions alone: the

^{*} No later visitors to the Snares have seen this petrel and there is a possibility that Travers's specimens were wrongly labelled.