

NESTING OF NEW ZEALAND DOTTEREL, 1950.

By H. R. McKenzie, Clevedon.

The nesting activities of 1948 and 1949 at Mataitai, Clevedon, ("Nesting of New Zealand Dotterel," *Notornis*, Vol. 4, No. 2, p. 24) were followed by a further successful season in 1950. Two pairs of birds laid three clutches, each of three eggs, from which four chicks were known to reach the flying stage. This may appear to be a poor percentage, but I think it is quite good for the species and for the particular locality. One egg of the clutch of three often fails, while in this place there is also risk from wandering cattle, dogs, cats, hedgehogs, rats, stoats, hawks and gulls. Fortunately, ornithological interest is so general in Clevedon that there is little risk of egg-stealing or of wanton destruction of chicks.

No. 1 NEST.

July 8.—Two pairs in fine red colour, showing some territorial aggression.

August 5—No. 1 pair had an empty nest. This was a sham or "play" nest, larger and deeper than the true nest. No. 2 pair and three other birds were present. Of the three younger birds one was partly coloured and two quite pale.

August 15.—Empty nest had been trampled by cattle. Pair still on territory.

August 19.—Less demonstrative than before.

September 10—Nest, two eggs, found by member, Miss L. M. Burnside. Male bird made great fuss.

Sept. 11—I watched from 9.47 a.m. to 4.28 p.m. A duck-shooter's old mai-mai about 70 yards from the nest served well as a vantage point. The behaviour noted showed that incubation had not yet begun. 9.47 a.m., from road, one bird on nest; 10.6 a.m., left nest as I passed to mai-mai beyond. 10.17 a.m., I entered mai-mai. 10.27 a.m., female went on nest; 10.42 a.m., left; 10.55 a.m., male sat; 11.13 a.m., male got up and reached for nest material. He picked up pieces of dry grass and small pieces of shell which he sometimes threw past one shoulder or the other; sat again. 11.38 a.m., "nest building" again; 12.9 p.m., changed over. Did not see male leave but saw female come on; male stretched himself and flew off to flats. 12.29, female left; 12.35, male sat; 12.38, male left.

This behaviour continued until I disturbed them at 2.36 p.m. Again watching by telescope from the road, I saw both the male and female playing at nest-building. They would reach out for material, become absorbed in this pursuit, gradually leave the nest, and finally walk away as if they had forgotten all about it. Once, when the female approached the sitting male he left in a crouching run, then turned and pursued her, in a hectoring attitude. The desultory sitting by turns continued. At 2.36 p.m. there were still two eggs.

Sept. 12.—6.5 p.m., three eggs. It appears probable that no egg was laid on the 11th, and that the third egg was laid in the earlier part of the 12th. I have found through long experience with many species that birds usually, though not invariably, lay in the morning.

Sept. 13.—3.16 p.m., from road bird seen sitting. 4.12, approached along fence to obtain better view. Female took alarm and left nest. I then crossed the tide-flat, passed the nest and went on to the mai-mai. 4.56 p.m., entered mai-mai. 4.58 p.m., female went on nest, although she had watched me enter the mai-mai and could still see me in it; 6.0 p.m., being unable to stay any longer I gave up the wearying task of watching the stolidly sitting bird. She was certainly incubating. The male did not now approach the nest at all, but remained on guard, chasing small birds from the territory. The change from the erratic behaviour of the 11th was most marked.

October 6—Members, Miss M. J. McCallum and F. Murray, watched for the purpose of noting incubation behaviour. This proved dull work as the female sat steadfastly.

Oct. 7.—6 p.m., three eggs, all cracked a little.

Oct. 8.—6.15 p.m., no alteration noted.

Oct. 9.—6.10 p.m., one chick showing. The other eggs cracked further.

Oct. 10.—6.25 p.m., no change since the 9th.

Oct. 11.—6.10 p.m., three chicks hatched. Two close together and one a foot away from them; all four feet from nest. Very quiet, so newly hatched.

Oct. 24.—The three chicks, now 13 days old, were found marooned by the tide on a small sand-bank. When a rescue was attempted they swam 24 feet to the shore with ease and apparent confidence.

Oct. 28.—Three chicks seen. A fine even brood.

Nov. 29.—Two strongly flying chicks with parents. One missing. Unfortunately the date of flying was not obtained owing to my being away on holiday. These two young birds could be distinguished from all of the others for some months and may possibly still be there. The missing one was probably killed before it could fly. Although the area was visited frequently these older chicks were usually hidden so could not readily be checked for casualties. Also we always avoided disturbing the birds unduly.

No. 2 NEST.

September 11.—An empty nest was found on another sand-bank about 70 yards from No. 1 pair. This territory had been appropriated for some time.

Sept. 12.—Still one empty nest. From this date the pair continued to make play-nests until the end of October. They would have six or eight at once and would spasmodically desert some and make others. These activities extended along the narrow spit for 60 yards until the last ones were subject to being covered by high tides. These we filled in so that they might be persuaded to keep to the higher ground. We made a determined effort to obtain a clutch-laying record, hoping to see the empty nest one evening, the egg the next, and so on to the completion of the clutch. To do this we had to travel nearly seven miles by road, cross a boggy field and then 200 yards of mudflat. This was done every day for 30 days. By this time we thought that they would not breed, so slackened our watch to two or three days together and then missing three or four, hoping to chance upon the right time if the eggs were laid. This tedious work could not have been carried out without the splendid work of Miss G. M. Cowles, F. Murray and other members. When I could not take my car, F. Murray and W. W. Renouf provided vehicles. Once when no car was available, Miss Cowles valiantly did the trip alone by cycle on a rough metal road, in very hot and dusty conditions. After all this devoted effort, the nest was found on November 1 by a visitor, Mr. R. H. D. Stidolph, with the complete clutch of three eggs. I had stood within two yards of it two days earlier and not seen it. Mr. Stidolph, knowing nothing of our extended vigil, came back very pleased with his find, but was somewhat taken aback, I am afraid, by the things I said. Such, however, are the fortunes often to be expected in bird-watching.

Nov. 1.—Three eggs. Female incubating.

Nov. 25.—10.30 a.m., two of the three eggs cracked a little.

Nov. 26.—6.15 p.m., one egg a little broken, one cracked.

Nov. 27.—6.35 p.m., one chick in nest; one egg with hole in it.

Nov. 28.—6.45 p.m., two chicks a few feet away from nest. The third egg contained a dead chick.

Dec. 25.—One chick ringed; No. 5901 on left leg; red sight ring on right leg.

Dec. 26.—The other chick ringed; No. 5902 on right leg, red sight ring on left leg. The two chicks were frequently seen from this time to date of flying.

Jan. 17, 1951.—No. 5901, when pressed, flew falteringly with a parent flying each side of it. No. 5902, when cornered, fluttered five or six yards just off the ground twice and thereafter could only run.

More will be written of the subsequent doings of these ringed birds.

No. 3 NEST.

This was almost certainly made by the owners of No. 1 nest. It was noted that the parents of the first two chicks were no longer with them and that they had evidently returned to their old territory, the new nest being only 16 feet from the site of No. 1. There were only two pairs of adult breeding birds in the locality so that there is little doubt that it was a case of one pair having two broods in one season.

Dec. 25—Nest, three eggs, found by my son, R. R. McKenzie. We had been ringing chick No. 5901 when the behaviour of the birds attracted us to the spot.

Jan. 13, 1951.—Two eggs chipping, one whole. The whole one later proved to have a large dead chick in it, having been almost ready to be hatched.

Jan. 14.—Of the two chipped eggs one had a hole in it.

Jan. 15.—One chick four feet from nest. One egg with cracks and two small holes in the shell.

Jan. 16.—Two chicks gone from nest.

Feb. 7.—One small chick. The other was not seen again.

March 2.—Ringed surviving chick of this brood, No. 5903, and put red sight ring above metal ring, both on the left leg. It was 46 days' old when ringed and showed no signs of flying. It seemed strong and healthy and could run as fast as the others had done. It was certainly not injured when ringed. It is thought that a dog which prowls the flats may have killed it as it was not seen again.

SUMMARY.

The period covered by the laying of the eggs was not observed in any of these three nestings. It is obvious that such a record will be very difficult to obtain.

Incubation Periods.—No. 1 nest, either 29 or 30 days. No. 2 nest, 28 and 29 days, or more. The bird was already incubating when found by Mr. Stidolph, so the period could easily have been longer. No. 3 nest, no record; nest found after incubation had well begun.

Hatching to Flying Periods.—No. 1 nest, something under 49 days; not a complete record; date of first flying was missed. No. 2 nest, one chick flying weakly at 50 days; one scarcely flying at all at 50 days. No. 3 nest, one chick last seen at 46 days; no sign of flying; it did not even extend its wings when running at its utmost so should have taken well over 50 days to fly had it lived.

The early nesting record of 1949, two eggs on September 11, has apparently been improved upon by one day, i.e., two eggs on September 10, 1950. It appears that this early nesting is not general. Buller, quoting Potts, states that eggs and young have been seen in October and November. Guthrie-Smith ("Mutton Birds and Other Birds," pp. 102-104) states that they arrive on the breeding grounds on Stewart Island about the middle of October. However, some must arrive earlier, since he found a tiny chick on November 7. From the evidence obtained at Clevedon it would seem that the first egg of the clutch would have been laid about October 3 and the birds would have been present for some time before that date. Falla, 1940, mentions territorial attachment from September 1st onward. The dates given by these writers probably indicate the normal commencement of the breeding season.