

6. Sago - " " " " House Sparrow, Hedge Sparrow, Finches.
7. White sugar - " " " House Sparrow, Silvereyes.
8. Brown sugar - " " " Same as above.
9. Bread crumbs - " " " All birds, including Hedge Sparrow, though this latter bird did not take very much.
10. Small white millet seed - Readily taken by Blackbirds.

The matter of greatest interest, I venture to think, centres around the Hedge Sparrow, which, according to Oliver, is entirely an insect eater. The records confirm the opinion I have had for some time that the Hedge Sparrows main food is seeds, though it possibly feeds on insects during the breeding season, and though I watched carefully this breeding season I was unable to verify this. May be that it feeds on insects during the summer because of the absence of quantities of seed, in a like manner that the Tui feeds on insects during the winter. You will notice that this bird will eat a variety of food during the winter.

It was amusing to watch the Silvereyes settle among the other birds when only grain was put out, then to examine what the other birds were feeding on, look puzzled, and fly away. When sugar and bread crumbs were on the board they soon found out and made a good meal.

The first birds to leave were the House Sparrow and Blackbird, then the Finches, and lastly the Hedge Sparrow.

All these observations were taken from indoors, and when I was having a cup of tea about 4 p.m., thus the birds could be watched without being disturbed by me..

I am not at all certain if this subject is of any special interest from an ornithological point of view, yet as a study of the winter feeding habits of birds it may be a pleasant diversion from the more serious aspects of ornithology, and I should be interested to know if this has been previously attempted.

—E. W. Hursthouse.

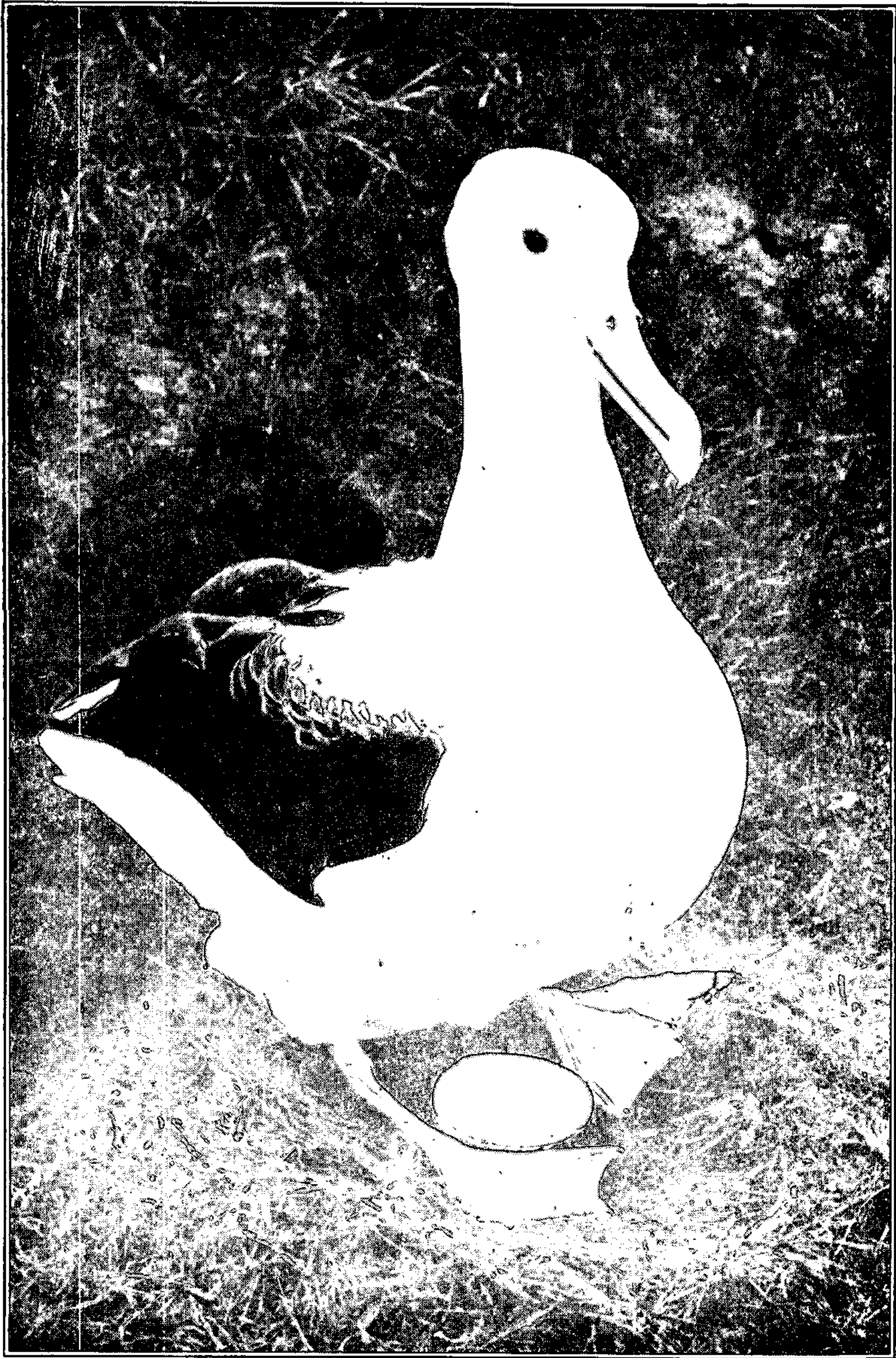
THE ROYAL ALBATROSS.

Diomedea Epomophora Sandfordi.

By L. E. RICHDALE.

Since November, 1936, my study of the sub-species of the Royal Albatross, breeding at Taiaroa Head, has proceeded steadily. The other sub-species, as far as is known, breeds only on the Campbell and Auckland Islands. Both forms, which are readily distinguishable from each other on the wing, may be seen off Taiaroa Head, although I have never known the latter to settle on shore. As far as I can ascertain, from 1919 to 1935 a pair of the smaller sub-species nested each year at Taiaroa Head, but on each occasion some mishap overtook the egg. It was not till definite action was taken at the end of 1937 that the birds received some protection and quickly increased in numbers to the extent of six breeding pairs.

Vandalism and misfortune still continued to take their toll till the 1941-42 season, when it was possible to give the birds absolute protection. That season five pairs each laid an egg, each egg duly hatched,



MALE ALBATROSS WITH EGG.

and each chick succeeded in completing its allotted span ashore. This is a striking testimony of what can be achieved if a sound policy in bird protection is followed.

An account of my observations on these huge petrels appears in *The Emu*, April, 1939, and January and April, 1942. The object of this short review is to place on record a few observations made in 1941-1942 and to keep the members of the O.S.N.Z. informed of breeding results.

Strangely enough, the chick which was hatched first (January 26) was the last to leave (September 30), remaining 247 days ashore. It was this chick which received so much attention, being familiarly referred to as "Jacky," but unfortunately I was forced to point out that it was probably a "lady."

For two weeks prior to his departure "Jacky" frequently had every one on the *qui vive* in the expectation that he was about to fly. The cause of these false alarms was his habit of engaging in little short jumps and practice flights. On September 29, the chick made an exceptionally long flight of 20 yards, reaching a height of six feet from where he crashed on his beak on a gravel road. Soon regaining an upright posture, apparently unhurt, he expressed his feelings by continued vocal efforts to such a degree that the onlookers declared he was "swearing," but I should say the real cause was excitement. I well remember the excited calling of a Skua chick when it made its first little flight of six feet from the ground.

During the final two days "Jacky" had frequently visited the cliff edge, standing there for a considerable time. At this stage it is the custom for chicks to wander about all over the nesting areas, and in these peregrinations may be found several hundred yards from the old nest. While on the cliff edge "Jacky" would lean forward with wings outstretched but always pulled back at the last minute. At 2.30 p.m. on September 30, with a very light easterly blowing, and after one of those series of balancing feats lasting about an hour on the cliff edge, he suddenly leaned forward, opened his wings and soared into the air. At first he dropped considerably and eventually landed out in the sea some 1500 yards away, as measured by a range finder. The height of the take-off would not be more than 100 feet. The observer did not state whether the chick took a short run before leaving or if he flapped his wings during the 1500-yard flight. He must, however, have performed both these operations, especially as there was so little wind at the time. The chick remained on the water washing and exercising his wings at intervals till 6.30 p.m., when he rose off the water to what looked like 30 feet. He quickly lost height, but when nearly on the water, he flapped his wings vigorously, gained more height, and eventually went out of sight heading north-east.

During those four hours the bird was under constant observation through a telescope. I had always considered, judging by the impression gained from previous chicks, that a wind of at least force 3, Beaufort scale, was necessary before the chicks could take off. In this respect "Jacky" has upset my ideas.

The proximity of the last meal ashore to the departure of the chick has always been an interesting topic. Unfortunately, I have never been able to witness that last meal. From a reliable source I have the information that "Jacky" was fed two days before he flew, while another of the five chicks in 1941-42 was seen to be fed at least at 11 a.m. on the day before it left and possibly the day it left, for I was not quite sure within a few hours of the exact departure time of the chick. When the breeding area was visited at 8 a.m. on the day after feeding, the chick was found to have flown, thus departing within the 21 hours after receiving food.

As expected, the 1942-43 season produced only one egg, which duly hatched. Unfortunately, when three months old the chick fell a victim to a ferret which had been taken into the enclosure.

I wish to thank the Council of the Royal Australasian Ornithologists' Union for the use of the accompanying photograph, which has appeared in *The Emu*. At the same time, I should like to draw the attention of members to the work of the Union and to its excellent journal, and to urge all who are seriously interested in birds to become a member of it. Information can be obtained from our secretary.

THE INVASION OF NEW ZEALAND BY SPINE-TAILED SWIFTS IN THE SUMMER OF 1942-43.

By L. W. McCaskill.

The Spine-tailed Swift, *Hirundapus caudacutus*, Latham, is found in summer in the east coast districts of Australia and in Tasmania. It breeds in June in Japan, Mongolia, Siberia and the Himalayas. Previous records in New Zealand are:

1. Manaia, in Taranaki, March, 1888.—"New Zealand Birds." Oliver.
2. A bird shot at Tokomaru in November, 1930. Mr. R. H. D. Stidolph reports that he has seen the skin.
3. A male bird in the Auckland Museum. Collected by Mr. N. A. Clifton, jun., at Mokau on November 22, 1935.

Following on reports of these swifts having been seen in Westland in December, 1942, an appeal for information was inserted in "N.Z. Bird Notes," vol. I, no. 1. The notes sent in by members and others are summarised below:

1. November 29, 1942.—One adult male was found dead in a tree at Hokitika. (The specimen is now mounted in the Canterbury Museum.)
2. November 30.—Mr. Turbott, of Auckland Museum, was sent a live bird picked up on this date by Mr. R. D. Meredith at a point 27 miles south of Te Awamutu. It was flying at high speed eastwards when it collided with an overhead wire and was picked up stunned. It was placed in an aviary in the Auckland Zoo, but was dead next morning. It was a male in first winter plumage.
3. December 1.—Mr. Turbott received another bird which was found dead by Mr. Adams at Milford. Its gizzard was half filled with insect remains and chitinous fragments, and its plumage, condition