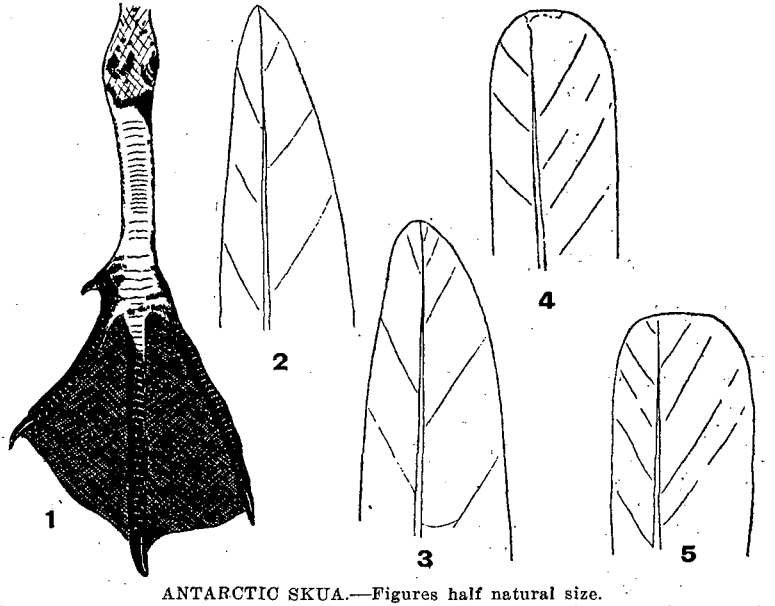
A FOURTH N.Z. RECORD OF THE ANTARCTIC SKUA, **Stercorarius skua maccormicki** (Saunders)

By C. A. Fleming, Wellington.

Until 1940, the inclusion of the Antarctic skua on the New Zealand list depended on a misidentified specimen of the subantarctic skua (**Stercorarius skua lonnbergi**) from Stewart Island (Falla, 1940). Falla recorded two authentic specimens of the Antarctic skua from the west coast of the North Isand in 1940 and a third was recorded by Sibson (1950). These records depend on a sun-dried mummy of an adult (Rangitikei, Jan. 2, 1940), an imperfect immature skin (Muriwai, Apr. 2, 1940), and a clean skull (Mitimiti, Hokianga, 1946 or 1947). The bird now described came ashore exhausted but alive at Waikanae Beach on March 29, 1953.

During the night of March 28-29, 1953, Waikanae experienced an electrical storm with thunder, lightning and strong gusts of wind. The Meteorological Service reports that the wind at Paraparaumu Aerodrome was at first northerly and later, after 5 a.m., north-easterly, with an average speed of 10 to 12 knots, but squally, a gust at about 3 a.m. reaching 38 knots. By morning strong breakers were piling spume on Waikanae Beach.

At 9 a.m. on March 29, Robin and Mary Fleming (aged 11 and 7) saw a large bird struggling in the breakers. They thought it looked like a young black-backed gull, but it was darker and had a white patch on each wing. While Mary held off their dog, Robin waded to the bird, wrapped it in her jersey, and carried it home, passive and unresisting. In shelter, it was recognised as an Antarctic skua. Although capable of standing at first, it became weaker all morning, ignored food, and died soon after mid-day. The skin has been preserved (Fleming Collection No. 763), with the following data: Weight, 1lb. 7½oz.; length in flesh, 550; wing-spread, 1370; wing, 369; tail (a little worn), 152; tarsus, 67; toe, 67;



ANTARCTIC SKUA.—Figures half natural size.

Fig. 1—Foot of Waikanae specimen to show pattern of pigmentation characteristic of juvenals.

Fig. 2—Third primary, right wing, of Waikanae specimen, showing pointed tip.

Fig. 3—Third primary, right wing, of an adult male, Cape Adare, Antarctica. Feb. 24 1904 (Dominion Museum).

Fig. 4—Fifth rectrix from tail of Waikanae specimen.

Fig. 5—Fifth rectrix from tail of an adult male, Cape Adare, Feb. 24 1904.

culmen, 51 mm.; iris, dark brown; bill, steely black; palate, cream; feet, black with front of tarsus bluish ivory (as in fig. 1), a small white patch proximally on sole.

Primaries and secondaries are fresh and unworn and show no moult. The tail-feathers are slightly worn at the tips. Contour feathers are fresh but show a little fraying on the weakly pigmented tips of scapulars and coverts. A single breast feather was new, with a vascular sheath. Head, neck and breast are uniform buffy brown, lacking the golden hackles of an adult; back and wings dark brown; scalloped by the pale-tipped scapulars and coverts. The alar patch is clear white and well-defined.

The bones were soft, and the skull showed sight contusion. The bird was a male, testes small, black, and elongate (5 x 1 mm.). Stomach: Empty, except for a little seaweed and dark brown bile.

The bird is judged to be a fledgling in its first plumage for the following reasons:—

(1) The uniform brown plumage agrees with E. A. Wilson's (1907) description and sketch (pl. 12, fig. 3) and lacks the straw-coloured neck band which (according to Wilson, p. 72) begins to appear at an age of ten or eleven months.

(2) The bluish tarsal patch of young fledglings is generally lost by March although it persists later in 20 per cent. of birds (Wilson, p. 68, 72).

(3) The primaries are more pointed than in adult skuas, and the tail feathers are rounded, in contrast with their rather squarish outline in adults (see figs 2-4)). According to Dwight (1925, pp. 98, 100) pointed primaries and rounded rectrices are diagnostic of the first (juvenal) plumage of **Laridae** and are one of the best characters to distinguish first-year from second-year birds. The first primaries, acquired by the chick at the nest, are retained until moulted during the following summer, about a year after hatching. Probably the situation is similar in the closely-related skuas. If so, the Waikanae skua is a young fledgling in its first plumage; by March, a yearling would have replaced its well-worn pointed primaries. A bird in its second or later years would probably show evidence of a recent moult.

(4) Soft bones and undeveloped testes are compatible with youth, but not conclusive evidence. Adult Antarctic skuas weigh 3lb. (Wilson, p. 75); the light weight of the Waikanae specimen is probably due to starvation before death.

On the Antarctic Continent, Antarctic skuas hatch their eggs in January (exceptionally late December) and the young fly in late February and early March (Wilson, p. 72). Together with their parents, the young migrate northward in March (Wilson, p. 72; Falla, 1937, p. 250). The bird that died at Waikanae on March 29, 1953, was probably no more than three months old and had made a rapid passage from Antarctica to New Zealand. There are no meteorological data to suggest how the bird began this journey, but weather conditions south of New Zealand during the week before its death show how it could have been helped on its way across subantarctic waters.

According to the New Zealand Meteorological Service, at midnight on March 25 a vigorous cold front extended from Campbell Island to the central Tasman Sea, and S.S.E. winds on its south-west side reached a speed of 30 knots, so that a bird could have travelled from near Campbell Island to 40°S in mid-Tasman in about a day. By March 27, a depression had developed in the eastern Tasman and, by midnight on March 28, northerlies west of the North Island probably brought the bird on a lee shore where it was exhausted and blown ashore. The probable route was thus north-eastward, south of Stewart Island to the Tasman, and thence southward to Waikanae.

The winter habits and distribution of the Antarctic skuas are unknown but they are generally assumed to be pelagic in the pack ice. Two of the New Zealand records are of young birds which apparently exceeded the normal limits of the exodus migration.

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RINGED GIANT PETRELS.—In the summer of 1947-48, the Australian National Antarctic Research Expedition set up research stations at Heard Island (lat 53° S., long. 73½° E.) and at Macquarie Island (lat 54½° S., long. 159° E.) which have been maintained continuously up till the present time. Among other duties the biologists have been ringing giant petrels (**Macronectes giganteus**), southern skuas (**Stercorarius skua lonnbergi**) and other birds. Already many of these birds have been recovered from various parts of the Southern Hemisphere, including a giant petrel in New Zealand between Raglan and Hamilton, in the North Island, this bird having flown over 4000 miles. During a recent visit to New Zealand over one hundred giant petrels were seen by the writer congregated about an outlet pipe leading into Wellington Harbour from a meat works. Others were seen swimming alongside ships tied up to the wharves. Excellent opportunities are presented here to obtain sight records of ringed birds since the rings are sufficiently big to be seen on the tarsus when the bird is undisturbed. Both plastic and aluminium rings were used, the former being red, black, white or brown with no inscription. Many of the birds ringed were nestlings and evidently only these come to Australia and New Zealand. It would be interesting if some sight records could be obtained to determine, by noting the amount of fading of face and body plumage, the age at which these birds will come into northern waters.—M. C. Downes.

RELATIONS OF REDPOLL (**Carduelis flammea**) WITH OTHER ANIMALS.—At Wellington this species competes with the goldfinch (**Carduelis carduelis**) for cassinia seed, the staple food of the area. House sparrows (**Passer domesticus**) also eat this seed when ranging through the countryside in autumn from nearby built-up areas. However, seed supplies seem adequate for all three species, and they feed together amicably in autumn in the same clumps of seeding bushes. The redpoll has at no time been seen to attack the swamp harrier (**Circus approximans**), which does not prey on passerine birds, though magpies (**Gymnorhina hypoleuca**) and starlings (**Sturnus vulgaris**) attack it, so that it was a matter of surprise to see a large flock of redpolls in early winter attack a bush hawk (**Falco novaeseelandiae**). This hawk is a predator of small birds. During the early part of the nesting season redpolls exhibit threatening postures in flight at starlings, yellowhammers (**Emberiza citrinella**) and hedge sparrows (**Prunella modularis**) and also at man. Surprisingly, birds still defending the immediate area around suitable nesting sites in January were not seen to attack vagrant family parties of goldfinches passing nearby.—H. L. Secker, Wellington.

SHINING CUCKOO RECORDS.—Last year, Mr J. M. Cunningham, 39 Renall Street, Masterton, carried out a pilot study of the dates of arrival of the shining cuckoo in New Zealand, and the results and an indication of the methods adopted are given elsewhere in this issue. The study is being repeated with modifications this year, and members are invited to inform him of their 1953 records. Not only the first date is required, but also that at which the birds became common and resident in the district.