BIRDS OF THE SOLANDERS.

By R. A. Falla, Wellington.

Lying some 30 miles west of Stewart Island, and silhouetted against the sunset as one looks out from the shores of Te Waewae Bay, are the islets—one large and one small—which on March 11, 1770, Cook named after the Swedish botanist who was assistant to Sir Joseph Banks. The Solanders, or rather the large one, became well known to early sealers who found there sufficient numbers of fur seals to warrant leaving parties of hunters until it was convenient or possible to pick them up again. So great was the uncertainty of this procedure that five men picked up in 1817 had been there without relief for periods of up to five years. Even in the present century sealing parties have been marooned for weeks because landing and embarkation are impossible in bad weather. Sperm-whaling ships worked the famous "Solander Grounds," but gave to what Frank Bullen calls "the awful side of that sea-encircled pyramid" a wide berth.

Naturalists have not had much opportunity of examining the flora and fauna, and the only earlier visit for that purpose of which I know is that of Mr. E. F. Stead, who was landed for a brief hour by a boat's crew from the "Matai" in a mid-winter gale in 1933. Two more recent opportunities arose in the course of an investigation into the condition of the stock of fur-seals made on behalf of the Marine Department. The first was on December 9, 1947, when the launch "Alert," commanded by Mr. A. J. Black, anchored off the north-east coast of Big Solander at 6 a.m. and the party spent the whole of a long day ashore. Time for general exploration was limited by the prior claims of seal study; but Dr. Robert Cushman Murphy and Mrs. Murphy found time for bird-watching; and an ascent to about 600 feet was made by Alastair Thompson and the writer. This took us to the top of a razor-back ridge buttressed against the main pyramid, leaving some 500 feet of much richer vegetation to be explored by the next party that has time to make the climb. The sides of the island are so steep that coarse tussock and coastal **Hebe** gives place only gradually to forest which is dense and verdant on the saddles and in the valleys near the summit. The main rock appears to be a coarse granite, and tumbles of huge boulders along three stretches of the coast form the beaches. The shallow surrounding water is studded with rocks and pinnacles.

The Little Solander, which lies a mile or so south-west, was inspected by circumnavigation only in the evening of December 9, and no landing was attempted. It is about 400 feet high and rises sheer on the east and by a steep gradient on the west.

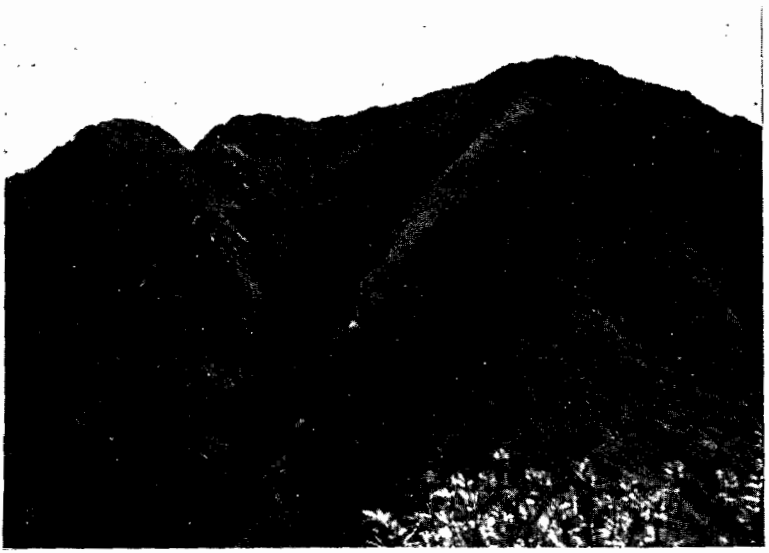
The next visit was a winter one, on July 20, 1948, also in the "Alert." This time, with much less daylight available, landings were made on both Little Solander and the west coast of the big island. There were only ten seals on the narrow ledge that gives access to Little Solander; but the opportunity was too good to be missed, and the combined skill of W. Hansen and T. Field, of Bluff, landed a surprised ornithologist on the ledge with only a small hand camera as impedimenta.

By cautious fly-on-the-wall tactics two of us reached the top and got back again with some photographs and a few plant specimens that should be of interest to botanists. Later, on the Big Solander, seal study was again resumed, with Mr. C. J. Lindsay and the writer snatching a few moments to make the acquaintance of birds. We got off at dark just in time to escape being marooned by a change of weather.

The birds of the Solanders may be conveniently divided into the oceanic wanderers that converge there for nesting, the resident natives, the naturalised species that have found their way there, and the ubiquitous weka that Maori sealers placed here, as on other islands, as a food standby.

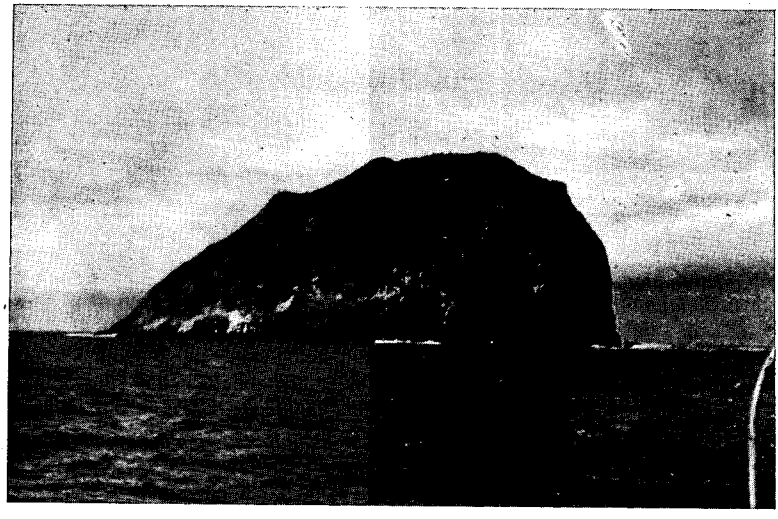
Crested Penguin (**Eudyptes pachyrhynchus**).—With nesting-grounds extending from Port Pegasus to South Westland, this penguin is plentiful on Big Solander. It looks much like the several crested species further

SOLANDER ISLANDS, BEARING SOUTH-EAST.

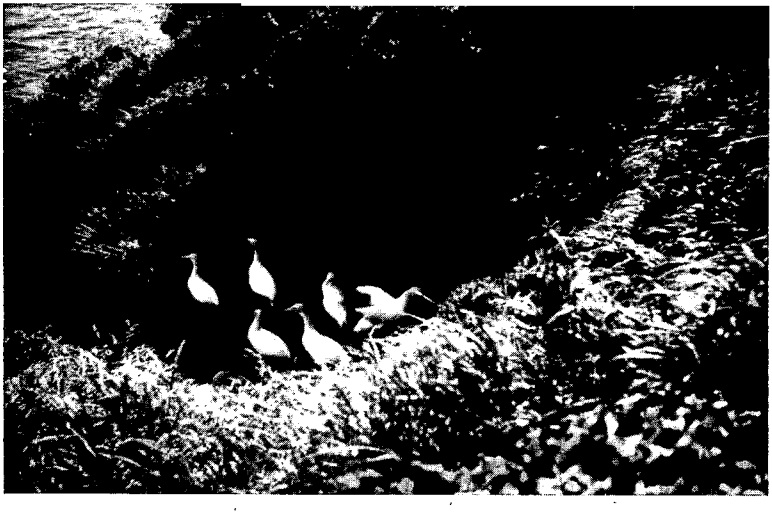


FOREST ON EAST SLOPES OF SUMMIT, BIG SOLANDER.

Photos by author.



LITTLE SOLANDER ISLAND. Main Gannet Colony is in gully near left of top.



GANNET COLONY IN SHELTERED GULLY, LITTLE SOLANDER.

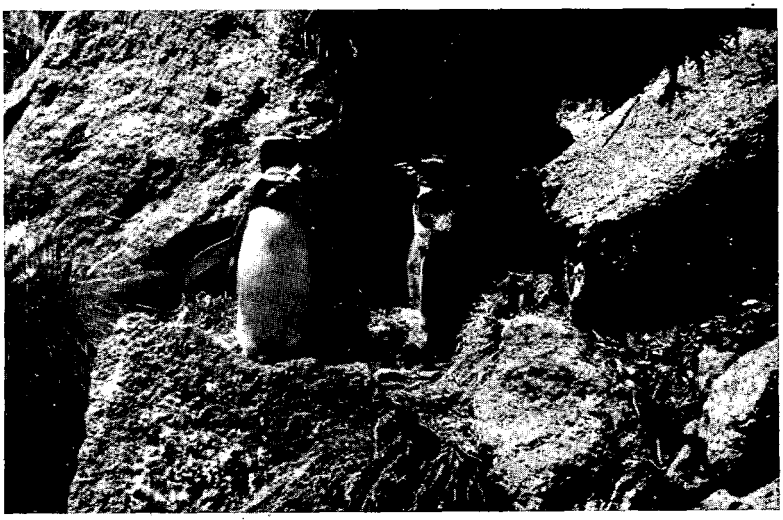
Photos by author.

BULLER MOLLYMAWK, SOLANDERS.

YOUNG BULLER MOLLYMAWK, SOLANDERS.

Photos by author.

CRESTED PENGUINS AND FUR-SEAL PUPS, SOLANDERS.



CRESTED PENGUINS AND YOUNG, SOLANDERS.

Photos by author.

south but differs in many respects. For one thing, its chin feathers are only superficially dark, and a muscular bulge on each cheek discloses their white bases in several distinctive bands. It also lacks the visible area of fleshy skin at the gape, and has a much wider superciliary band of yellow than the others. Also, it is shyer and does not stand its ground long before shuffling for cover. For the most part nests are well hidden under rocks and shrubs. In July, the crested penguins were occupying nesting-sites—quite undemonstratively, except for an occasional squawk —and in December their young were fully fledged and beginning to depart.

*Snares Crested Penguin (**Eudyptes atratus**).—Our party in December had just returned from the Snares; and if any doubts still lingered as to the distinctness of **atratus** from **pachyrhynchus** they were dispelled when the first band of crested penguins interviewed on the shores of Big Solander quickly melted away and left one of our Snares friends standing his ground with indifference. Even allowing for the fact that he probably was not as near the moult as the local birds, his darker plumage, narrower crest, and flesh-lined bill marked him as a foreigner. This solitary specimen was the only one seen on the Solander.

Buller Mollymawk (**Thalassarche bulleri**).—In 1933, Mr. E. F. Stead identified the breeding mollymawk of the Solanders as this species, which is known to breed also at the Snares and Chatham Islands. It has a curiously late laying season at the end of January or early February, and as none had appeared over the land up to December 6 at the Snares, we were not hopeful of finding many at Solander on 9th. However, on this date there were some 20 or 30 pairs circling the hillsides and peaks, some of them touching down on old nest sites, but too nervous and restless to allow of close approach. Old nests were found at all levels from 50 to over 600 feet, and many of them were well-preserved and neatly shaped, some like truncated cones, but others with a column more cylindrical, nearly a foot high, and cupped on top. It is difficult to form an estimate of their number as they are on steps and ledges on spurs and hillsides, often surrounded by scrub. Where a ledge is not naturally wide enough to allow a bird to manoeuvre and use its wings, considerable excavation, presumably with bills, has been done in the banks at the back. This includes the cropping off of hanging and exposed roots.

Apart from the few mollymawks over the land this species was not in December noticed at sea round the island where the abundant mollymawk was the form of a **T. salvini**, which breeds on the Snares Western Reef.

On July 20 they were at sea round the Solanders in great numbers, and dotted conspicuously over their nesting sites on both islands. Two or three hundred nests occupied on Little Solander were in very exposed situation on the steep slopes amongst **Poa foliosa**. On the big island many were in better shelter and some far enough under **Hebe** bushes to cause the adults to crouch and dodge branches when approaching them. The young were practically all well-fledged with less down than contour feathers; some certainly could have flown in less than a fortnight from that date. One looked more downy than fledged; but most had their white-plumaged heads clear of down, and the dark horn-coloured bill that gives little promise of the bright adult colour. They were being fed, three or four deliveries per parental visit, and no striking variation was observed from the usual feeding posture of other albatrosses, with the gapes at right-angles. Not all nest sites were occupied; many were not in use, and on as many more adults were displaying—tail-spreading, bowing, bill-rubbing, and mutually preening. The whole scene was both animated and noisy, the commonest call being a lamb-like bleat which echoed weirdly round the hill: the other cry was a staccato rattle. Both I take to be made by adults, but did not confirm the fact. The difficulty of estimating numbers on a short visit has been mentioned; but there were several hundreds in view on a face which is less than a quarter of

* This was pointed out (Falla, Rec. Auckland Inst. and Museum, vol. 1, No. 6, p. 324, 1935, from a study of museum specimens.

the available ground. Many are hundreds of yards from their nearest neighbours, and in this matter of scattered distribution on a nesting-ground **T. bulleri** differs markedly from the concentration found in **T. culminata** and **T. melanophrys**, while **T. cauta** is somewhat intermediate in this respect.

Cape Pigeon **(Daption capense)**.—There is no conclusive justification for including Cape Pigeons in a Solander list, but when a fulmar begins cruising steadily round clefts in steep cliffs one begins to suspect its intentions. Twenty or thirty of them were doing it round the Little Solander in December; while in July a compact group of about the same size was manoeuvring at sea near the island with the precision of a flock of domestic pigeons.

Broad-billed Dove Petrel **(Pachyptila vittata)**.—There is little doubt that on the Solanders as at many other islands in the Foveaux Strait area, the breeding prions are **P. vittata** and **P. turtur**. All that we happened on in the brief time available in December were empty burrows and blue feathers and white feathers everywhere, with wekas patrolling the area. On July 9, at dawn (this was a visit on which no landing was made) **P. vittata** was seen in numbers round the island, but they vanished with daylight.

Fairy Prion **(Pachyptila turtur)**.—On Little Solander on July 20 the skua and (or) hawk castings contained recognisable remains of this species.

Sooty Shearwater **(Puffinus griseus)**.—Burrows of muttonbirds were plentiful on Big Solander at all levels, but not in great concentration, and birds with eggs were examined on December 9.

Allied Shearwater **(Puffinus assimilis ?)**.—In December, Dr. R. C. Murphy saw a small white-breasted bird like a shearwater emerge from the scrub and fly seaward. In July, I picked up the feathered wings of a small shearwater identifiable as **P. assimilis** and agreeing with **P. a. kempi**.

Diving Petrel **(Pelecanoides urinatrix)**.—Seen offshore in December and July in numbers, diving petrels were found in July to be the principal burrowing petrel on Little Solander. The burrows start at the lowest edge of the peat cap of the island, many in waterlogged situations and others in dry tussock mats. There was evidence of much nocturnal scraping, but only one bird was found at home to our call at 11 a.m.

Australasian Gannet **(Moris serrator)**.—For many years gannets on the Solanders have had the status of an unconfirmed fisherman's tale. Odd birds are seen in Stewart Island waters every summer, and were reported by Stuart Sutherland (Press articles about 1920) as regular visitors to Preservation Inlet. Also, in late April, 1948, Mr. A. J. Black saw an exhausted young gannet in speckled plumage in Caswell Sound. The difficulty was to imagine how the exposed type of nesting rocks favoured by gannets in more mellow latitudes north would be even tenable in gale-swept Foveaux Strait. Gannet colonies are so conspicuous that one expects to see them at a distance, and several passing surveys had failed to disclose any white patches on the sombre Solanders.

A few gannets were on the wing there on December 9, and approaching Little Solander from the N.W. we watched some alight on it. Most of them dropped out of sight into a tiny scrubby gully near the top; but six birds were sitting in the tussock at the foot of the slope. We watched them flying in and out for some time and concluded, to quote our notes, "that there could not have been more than 20 nests, probably fewer."

It was in the hope of examining the sites, but no expectation of finding birds so early, that we made our landing on July 20. The advance guard, however, already was there, about fourteen birds in all. By cautious approach they were seen to be billing, bowing and displaying generally, all on nest sites; but they soon took fright and flew away. The nests themselves were all old mollymawk nests in varying stages of flattening, and the total count was 11 in the gully, 3 on the spur just

above, making, with the six at the foot of the slope, 20 nests in all. Each departing bird disgorged before leaving a neat pack of fresh fish of herring size, four to five fish in a pack of total weight about 1lb.

Such is the story to date of our most southerly known colony of **Moris serrator.** Although as a systematist I should be prepared to find such a quaint and outlandish group of gannets composed of a distinct sub-species the only superficial feature that seemed to distinguish them from northerners was the pale washy tone of their head colour.

White-fronted Tern **(Sterna striata).**—Numbers were flying about in December, probably nesting round the shores, and a compact flock was noticed on an outlying rock in July.

Red-billed Gull **(Larus scopulinus).**—These gulls were not abundant but at least one small breeding colony was established on tumbled rocks below which was a "pupping" rookery of fur seals in December.

Black-backed Gull **(Larus dominicanus).**—In December a few nests were distributed along the north-east beach above high-water mark. The few chicks that had hatched were very small, and the maximum egg-clutch was three.

Southern Skua **(Catharacta lonnbergi).**—One or two nesting pairs seen in December, and an odd bird on the wing in July, suggest that the skua is not as common as might be expected.

Stewart Island Weka **(Gallirallus scotti).**—The usual reddish form of the Stewart Island weka, of which no plumage variant was noted, is abundant and bold on Big Solander. It already has been remarked that burrowing petrels are hard to find, and there is little doubt but that steady depredation by wekas is responsible for the high proportion of old disused burrows overgrown with moss, and the many damaged and empty new burrows. The seal rookeries also are happy hunting grounds, and in December wekas were busy devouring after-birth. At this time one pair was seen with a half-grown chick.

Reef Heron **(Demigretta sacra).**—One pair seen in December, but not noted on winter visit.

Harrier **(Circus approximans).**—Seen soaring over Big Solander, and doubtless visiting the small island also.

Yellow-crowned Parrakeet **(Cyanorhamphus auriceps).**—There are parrakeets on both Solanders and those seen at close quarters were all **auriceps.**

Grey Warbler **(Pseudogerygone igata).**—Warblers on Big Solander seemed more plentiful in proportion than is usually the case in island populations. One nest found was composed so largely of feathers, with only a few fibres to support them, that it fell to pieces when handled. The feathers were mainly prions, with a few parrakeet.

Fantail **(Rhipidura fuliginosa).**—Pied fantails were seen on Big Solander.

Yellow-breasted Tit **(Petroica macrocephala).**—Tits were plentiful on both islands and normal male and female plumages were noticed.

Bellbird **(Anthornis melanura).**—Fairly common on Big Solander.

Silver-eye **(Zosterops lateralis).**—Several pairs and small parties noticed on Big Solander in December.

Hedge Sparrow **(Prunella modularis).**—Colonisation of outlying islands is a marked propensity of this little deportee, which occurs on both Solanders.

Blackbird **(Turdus merula).**—Also on both islands.

The above list is certainly far from complete, and will remain so until some visitor has time to observe more carefully and to reach the higher saddles. There is just a chance that there may be snipe on Little Solander, where the ground, though restricted, is suitable, and where we heard a snipe-like call when leaving. We were not able either to record a pipit, which seems a likely bird; and why there are no shags is as interesting a question here as it is at the Snares.