

would allow ample time for migration. However, if all records refer to the same bird, it probably over-wintered here, perhaps in some other locality where the food supply was better, as it is unlikely that it would every season migrate so far beyond the normal range of its species. Most such over-migrating birds are believed to be immature birds which have not made the journey before. The Tattlers at Waikanae and Aramoana probably fall into this category. Immature Arctic waders often remain in New Zealand during the southern winter. Adult Tattlers seen in New Zealand, including the Manukau bird, would thus normally be individuals which have stayed through the winter unnoticed.

In Australia, Keast has studied habitat preferences in the Grey-tailed Tattler. The ecological separation from other waders noted by him was well borne out at Waikanae, and would merit further study. Habitat preferences have been suggested for differentiating between the two races of Tattler, but insufficient evidence is available on this point. However, the fact that both races have been observed together in Alaska (Bent 1929) and that both often resort to reefs and rocky coasts, and avoid extensive mudflats (Bent 1929, Keast 1949, and others), suggests that such a separation is unreliable.

In conclusion, I wish to thank Dr. C. A. Fleming for helpful discussion, the use of his notes, and the loan of a specimen.

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A WEST COAST, SOUTH ISLAND, SEA BIRD LOG IN WINTER, 1961

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One of the New Zealand Oceanographic Institute's recent winter cruises in the M.V. *Viti* provided an opportunity for noting the birds at sea off the West Coast of the South Island. The purpose of this cruise, from May 31 to June -, 1961, was the investigation of the benthic fauna of the Continental Shelf and the plotting of the bottom topography by echo-sounding. The area covered by these investigations was from Wellington to Foveaux Strait and included some of the fiords of south-west New Zealand. The vessel's track was arranged to cover

a series of stations on lines 40 miles apart extending from close inshore at 10 fathoms to the 100 fathoms line. The following notes relate something of the birds seen during these operations.

OBSERVATIONS

Wednesday, May 31, 1961: Departed Wellington, 8.30 p.m.

June 1: Past D'Urville Island, across Golden Bay, and Farewell Spit (Noon position: 40° 26.7' S., 172° 50.0' E.; air temperature, 55°; wind speed and direction, Westerly 16 knots; barometer, 30.11ins.; 24-hour weather, fine and clear to overcast in late evening).

Giant Petrels and Black-backed Gulls were common around the ship. One Cape Pigeon and one Shy Mollymawk were seen during the day, as well as four Storm Petrels (sp.?) in Golden Bay.

June 2: Off Karamea to Cape Foulwind (41° 22.5', 171° 37.5'; 70°; SW-5; 30.24; cloudy-fine, through fine-clear to overcast with light rain at midnight).

Three White-fronted Terns were noted during the day and two or three Black-backed Gulls kept constant company, including one or more brown juvenile birds. During the afternoon a large petrel very similar in size, shape and colour to the Westland Petrel, whose only known breeding grounds are near here, was seen at 2.05 p.m., and three Gannets came close in at 2.25 p.m. A single Shy Mollymawk was seen from time to time.

June 3: Off Hokitika and southwards (42° 39', 170° 47'; 54°; W-4; 30.09; cloudy fine, through cloud-fine and clear to overcast dull with light rain to clear at midnight).

A pair of Buller's Mollymawks were around the ship most of the day, with a solitary Shy Mollymawk and a Giant Petrel. An adult Wandering Albatross appeared at 1.00 p.m., joined at 1.30 p.m. by a completely brown juvenile. Numerous Black-backed Gulls, most of which were brown juveniles, and two or three Red-billed Gulls were also present at various times. At one period, 1.45 to 2.15 p.m., eight Buller's Mollymawks appeared with the Black-backed Gulls to feed on galley scraps (N.Z.O.I. Station B 469).

June 4: Off Jackson's Bay and Cascade Point. (43° 59.8', 168° 23.2'; 53°; W-7; 30.08; overcast clear to fine and clear).

One adult and one brown juvenile Wandering Albatross were near the ship all day, with a single Buller's Mollymawk, a Giant Petrel and a Shy Mollymawk.

June 5: Thomson Sound, Doubtful Sound to Puysegur Point. (45° 16.8', 166° 51.3'; 46°; ESE-1; 30.27; fine and clear through cloudy fine and clear to overcast clear at midnight).

Six Cape Pigeons, two Buller's and one Shy Mollymawk were seen in the early morning before entering Thomson Sound. These same species of Mollymawk were present off the entrance to Doubtful Sound.

June 6: Puysegur Point area and to the south-west. (46° 03.5', 166° 28.5'; 49°; S-15; 30.06; overcast clear through overcast with rain at midnight).

Numerous Cape Pigeons were around the ship all day. Two Buller's Mollymawks and one adult Wandering Albatross were also noted and a lone Skua appeared in the late afternoon.

June 7: Puysegur Bank to approaches of Chalky Inlet. ($46^{\circ} 20'$, $165^{\circ} 22'$; 46° ; S-13; 29.92; overcast cloudy, overcast fair, fine and clear, to mainly overcast and light rain at midnight).

Two Giant Petrels were near the ship all day, and Cape Pigeons were commonly seen. The same numbers of mollymawks and albatrosses were recorded. Prions of uncertain species were also seen occasionally.

June 8: Through Dusky Sound to Breaksea Sound ($45^{\circ} 40.4'$, $166^{\circ} 45.2'$; 46° ; N-5; 29.84; overcast with light rain to fine and clear).

Four Buller's Mollymawks, a few Cape Pigeons and Red-billed Gulls were at the entrance to Dusky Sound. During a passage up Wet Jacket Arm a Black Shag was noted flying past at hourly intervals. Black-backed Gulls were occasionally seen and small parties of Blue Penguins and White-throated Shags were feeding near the ship. At the end of this arm a Bush Hawk flew out to the ship, made a quick inspection, circling the bows, and returned to the bush; near here were also two Black Oystercatchers on a rocky shore platform.

At 3.45 p.m., on the seaward journey down Wet Jacket Arm, two large light-coloured swans with brown markings on the wings flew slowly past the ship, keeping low over the water and close to the cliff side. In all respects of size and shape they resembled young Black Swans.

June 9: From sea to head of Milford Sound. ($44^{\circ} 40'$, $167^{\circ} 55.3'$; 42° ; calm; 29.97; fine and clear, and overcast only at midnight).

In the entrance to the Sound were many Cape Pigeons and Red-billed Gulls, two or three Black-backed Gulls, two Wandering Albatrosses, two Buller's and a Shy Mollymawk.

In the Sound itself, apart from occasional Black-backed Gulls and large numbers of Red-billed Gulls, the only other bird seen was a single Black Shag.

Later in the day, off the entrance to the Sound, there were twelve Buller's Mollymawks (one of which was caught and marked with an O.S.N.Z. ring, No. 0-1151), eight Red-billed Gulls and three Black-backed Gulls.

The return northward voyage to Wellington was made further out to sea and the snowy peaks of the Southern Alps were the only signs of land visible on the distant horizon.

June 10: Okarito to Cape Foulwind. ($42^{\circ} 27'$, $170^{\circ} 12.5'$; 54° ; E-7; 30.26; partly overcast to fine and clear late in the day).

South of the latitude of Okarito, 4 adult Wandering Albatrosses with a brown juvenile and two Cape Pigeons were seen. Later in the morning the number of albatrosses increased to seven adults and two juveniles. In the afternoon two prions were seen at 2.30 p.m. and the number of albatrosses had dropped to two adults and one juvenile, with a solitary Cape Pigeon.

June 11: Farewell Spit to Cook Strait. ($40^{\circ} 37.5'$, $173^{\circ} 39.0'$; 55° ; SE-7; 30.48; fine and clear, overcast clear, to fine and clear).

Twenty Black-backed Gulls, including four brown juveniles, together with four Giant Petrels followed the ship across Tasman Bay to Stephen's Island. Red-billed Gulls joined them in Admiralty Bay, and a single adult Wandering Albatross appeared at 5.00 p.m.

The only other bird noted was a single King Shag close to Ranigtoto Island in the late afternoon.

June 12: Berthed at Queen's Wharf, Wellington.

DISCUSSION

These observations include a number of items of immediate interest. Other records, such as the numbers and locations of Wandering Albatrosses, will be of value in filling out a pattern of dispersal and seasonal movement of these birds which will some day become more evident. Similarly the information on the Black-backed Gulls and Gannets adds a little to the knowledge of the distribution of these species. According to Oliver (1955: 609), the Black Swan occurs in "small numbers in the Fiordland region (Doubtful Sound, Caswell Sound, Lake Hauroko)." The record of the two immature birds confirms this.

The records of Buller's Mollymawk are of particular interest since this species still qualifies for Alexander's (1955: 9) title — "the rarest and least known member of the Albatross family." Oliver (1955: 176) also has commented on it: "So far as is known this is a stationary species, it not having been observed in any numbers far away from its breeding grounds." This mollymawk, recognised in 1893 as a distinct species, has been found breeding on the Snares and Solander Islands, and on various islands in the Chathams Group (on the Sisters, Forty-fours, and perhaps Round Rock or Star Keys). Murphy (1936: 525) has given a concise account of it, remarking "... its range to westward of its breeding area is so restricted that it has never yet been recorded as a member of the Australian sea-bird fauna." A young bird, "not many weeks out of the nest," was taken near Iquique, Chile, and was described by Reichenow in 1893 as *Diomedea platei*, and Murphy (1930: 6; 1936: 525) later recorded three birds taken twenty miles off the Peruvian coast. Published New Zealand mainland records are sparse, but the Ornithological Society Checklist (1953: 17) summarised them thus: "... ranging north to northern New Zealand, south to Auckland Islands ... and east to Chile and Peru." Plotting the known records shows that several specimens of this mollymawk have been found wrecked on the Auckland west coast; while others have been seen in Cook Strait, on Lake Onoke Spit, off Island Bay, Wellington, in Foveaux Strait and around Stewart Island. No further details of its movements up the east and west coasts of the South Island seem to have been recorded previously. Evidence is provided from the observations of this cruise of the concentration of Buller's Mollymawk at this time of the year, and in these weather conditions, from about the latitude of Hokitika (June 3) and Milford Sound (June 9) to the south-west.

TABLE 1

Scientific names of birds mentioned

Blue Penguin, *Eudyptula minor*.
 Wandering Albatross, *Diomedea exulans*.
 Buller's Mollymawk, *D. bulleri*.
 Shy (or White-capped) Mollymawk, *D. cauta*.
 Giant Petrel, *Macronectes giganteus*.
 Westland Petrel, *Procellaria westlandica*.
 Cape Pigeon, *Daption capensis*.
 Prion, undet., *Pachyptila* sp.
 Gannet, *Sula bassana serratior*.
 Black Shag, *Phalacrocorax carbo novaehollandiae*.
 White-throated Shag, *P. melanoleucos*.
 King Shag, *P. carunculatus carunculatus*.

Black Swan, *Cygnus atratus*.
 Falcon (or Bush Hawk), *Falco novaeseelandiae*.
 Black Oystercatcher, *Haematopus unicolor unicolor*.
 Southern Skua, *Stercorarius skua lonnbergi*.
 Black-backed Gull, *Larus dominicanus*.
 Red-billed Gull, *L. novaehollandiae scopulinus*.
 White-fronted Tern, *Sterna striata*.

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COUNTS OF GULLS ON OTAKI BEACH, NORTH ISLAND OF NEW ZEALAND

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Observations made in recent years and the extensive banding of both the Black-backed Gull (*Larus dominicanus*) and the Red-billed Gull (*Larus novaehollandiae*) as reported in the Annual Reports of the Banding Committee, Ornithological Society of New Zealand, and the classified summarised notes in *Notornis*, have provided much information on the distribution and movements of these species. Little is known, however, about their numbers. This note provides some information on the distribution and numbers of the two species in the southern part of the west coast, North Island.

TECHNIQUE USED

Eleven counts of gulls were carried out between the estuaries of the Otaki and Ohau Rivers, from 20 to 29 March, 1961. The weather throughout this period was mostly fine with light to moderate winds and mild temperatures. A total distance of about seven miles of beach was covered, the area being divided into five sectors (Fig. 1): from the Otaki River estuary to Otaki Beach — one mile, from Otaki Beach to Waitohu Stream — three quarters of a mile, from Waitohu estuary to Wairongomai Stream — two miles, Wairongomai estuary to Waikawa stream estuary — one and two-third miles, and from Waikawa stream to Ohau River estuary — one and a half miles. More counts were made on Sectors 1 and 2 than on the others. When making the counts, the observer walked at a steady pace taking care to avoid double counting. Separate records were kept of Red-billed Gull and adult and juvenile Black-backed Gulls. Gulls at estuaries were also counted separately. Full details of all the counts are deposited in the files of the Animal Ecology Division, D.S.I.R.

RESULTS

Distribution

Gulls in this part of the coast are concentrated at the estuaries with much smaller numbers scattered along the beach. Table 1 shows the mean numbers of gulls observed at Otaki and Waitohu estuaries.

Between the estuaries Black-backed Gulls were distributed along