

BIRD RECORDS OF THE 1971 - 1973 SNARES ISLANDS, NEW ZEALAND, EXPEDITION*

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ABSTRACT

Seven species of birds are newly recorded from the Snares Islands, New Zealand. They include the Australian Gannet, White-faced Heron, White Heron, Eastern Bar-tailed Godwit, Skylark, Grey Warbler, and South Island Fantail. There are now 53 species recorded of which 22 are breeding on the islands. Records of 32 species include departure and arrival dates of some of the sea birds and observations of winter activities of other birds.

INTRODUCTION

The sixth University of Canterbury Snares Islands expedition extended from December 1971 to January 1973. Mr H. A. Best, who was with us on the 1970-71 expedition, and Mr K. J. Sainsbury completed the party for this expedition. We arrived at the Snares from Bluff, New Zealand, on 18 December 1971 aboard the FV *Sandra Kaye*, skippered by Mr Barry Davies. Messrs Best and Sainsbury left the islands aboard Mr A. J. Black's RV *Acheron* on 22 March 1972. We remained as the first scientific party to overwinter at the Snares Islands and left on 14 January 1973 aboard the *Acheron*.

Our comprehensive research programme included surveys of the terrestrial invertebrates and cryptogams, and studies of the breeding biology of the Buller's Mollymawk and Snares Crested Penguin. Additional observations were made on the activities of other birds. This paper includes seven species of birds not previously recorded from the Snares Islands, the seasonal departure and arrival dates of some of the sea birds, and observations on the winter activities and feeding of some species. Results of our breeding biology studies of the Buller's Mollymawk and Snares Crested Penguin and other notes on the Sooty Shearwater and Mottled Petrel will be incorporated into papers written by Dr J. Warham, University of Canterbury.

We are responsible for all the observations except those kindly furnished by Mr Best and Mr G. J. Wilson, of the 1970-71 expedition. Figure 1 indicates the localities that are mentioned in the text. The birds are listed to conform to the OSNZ (1970) Checklist.

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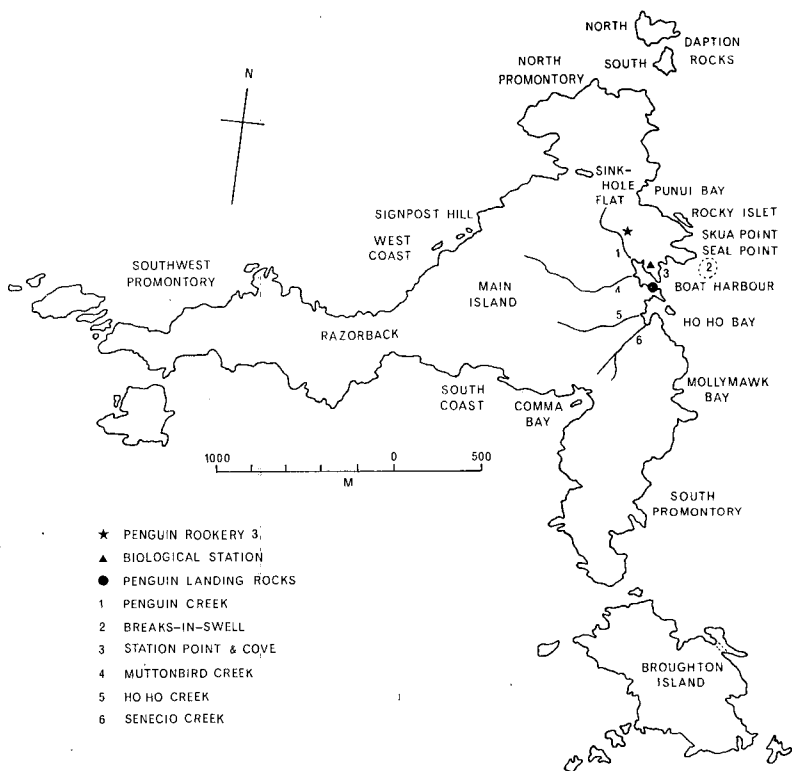


FIGURE 1 — The Snares Islands excluding the Western Chain and Vancouver Reef. Map based on 1967 RNZAF vertical photographs.

RECORDS

YELLOW-EYED PENGUIN (*Megadyptes antipodes*)

None of these birds have been recorded from the Snares Islands. We did not see any during this expedition despite searching penguin landing areas on the east side of the main island throughout the year. It is possible that they do visit the islands but such visits must be very rare.

SOUTHERN BLUE PENGUIN (*Eudyptula m. minor*)

One bird was first heard calling during the last week in September. The calls were heard periodically in the late evening and the bird was captured and identified on 29 November with the aid of Falla, Sibson & Turbott (1970). Calling continued during December and early January, generally from the same area in the *Olearia lyallii* forest near the Biological Station. Its short series of calls of only a few seconds duration prevented finding the bird again or its probable burrow.

SNARES CRESTED PENGUIN (*Eudyptes pachyrhynchus atratus*)

The last adult was seen on 28 May 1972 at the penguin landing rocks on the south side of Boat Harbour. The first observed returning male of the 1972-73 season was sighted on 20 August, but one bird was heard calling on 18 August. The mean arrival date for males was about 1 September. The first female was seen on 30 August, and the mean female arrival date was about 9 September. The first egg was seen on 18 September, and it hatched on 26 October. Chicks began to appear at the sea rocks on 9 January 1973. In 1972, nearly all of the chicks had left the rocks by the end of January, the same time reported by Warham (1967).

BULLER'S MOLLYMAWK (*Diomedea bulleri*)

The first fledgling known to leave the islands flew from Mollymawk Bay on 22 August. The last adult was seen on the South Coast on 23 October, and the last fledgling was seen at Punui Bay on 27 October. More than 90 per cent of the birds had left by 15 October.

Between 3 and 10 August, 858 fledglings were banded in the more accessible areas of the main island, including all of the promontories. It was apparent from a recheck of all the banding areas during the following months that less than 2 per cent of the banded birds were lost to predators such as Southern Skuas (*Stercorarius skua lonnbergi*), Giant Petrels (*Macronectes* spp.), storms and other causes. By considering all the inaccessible birds and those on Broughton Island, it is estimated that 1000 to 1200 fledglings left the islands.

In the 1972-73 season, the first adult was observed on a nest on 9 December on the South Coast. The first egg of the 1971-72 season was noted on 5 January at Mollymawk Bay, and it hatched on 11 March. The first egg of the 1972-73 season was found on 31 December in the same colony.

SALVIN'S MOLLYMAWK (*Diomedea cauta salvini*)

Mollymawks larger and differently marked from the Buller's were fishing off Breaks-in-Swell in late October. These birds were identified on 4 November as Salvin's Mollymawks by a close-up sighting from a dinghy on a trip to Broughton Island. Regular sightings were then made at Breaks-in-Swell until early December. Fleming & Baker (1973) estimated more than 1000 pairs of these birds were on three islets of the Western Chain on 2 December 1972.

SOUTHERN GIANT PETREL (*Macronectes g. giganteus*) andNORTHERN GIANT PETREL (*M. g. halli*)

Most of the Giant Petrels that we saw during the expedition were *M. g. halli*. Two different white birds of *M. g. giganteus* made short visits. An almost entirely white one cruised the area between Signpost Hill and the north side of the Southwest Promontory for at least six days in May. The second white bird, which had some dark feathers on the body and neck, fed on a dead penguin in September at Station Cove.

Macronectes numbers fluctuated throughout the year, although a few were always present. The highest numbers were seen in January 1971, 1972 and 1973 when flocks of 100-125 were in the Ho Ho Bay-Station Cove area. This was during the time that the penguin chicks departed. Numbers dropped in February, but 40-50 appeared in early May when the young *Puffinus griseus* flew. The population stayed near this level throughout the winter but dropped to about 10 after the Buller's Mollymawk chicks left in September.

Giant Petrels frequently were found in mollymawk colonies, even in those colonies well into the forest. They were often interrupted while eating freshly killed chicks, but none was ever seen making a kill. Wounds on surviving attacked chicks indicated that a blow on the head from the *Macronectes* bill may be the usual method of attack. Several small Buller's Mollymawk colonies lost every chick to Giant Petrels and Southern Skuas.

Warham (1967) found no signs of Giant Petrels breeding on the main island though he stated "They could have done so on Broughton Island." We spent 4 and 20 November exploring Broughton Island and saw no Giant Petrel nests. We believe that they do not nest at the Snares Islands.



FIGURE 2 — Northern Giant Petrel (*Macronectes giganteus halli*) accepting fish from D. S. Horning, Boat Harbour, Snares Islands, 6 October 1972.

Photo: Carol J. Horning

The Giant Petrels normally were very shy but one bird showed some unusual behaviour on 6 October. A female *M. g. halli* (det. Dr J. Warham from a colour slide) swam to the boat landing while fish were being cleaned. It came out onto the rocks and sat down at the feet of DSH and began to eat the fillets (Fig. 2). It accepted several bits of fish from our hands and stayed with us about 15 minutes until all the fish were cleaned. The bird then re-entered the water and was harassed for several minutes by three or four young sea lions porpoising around it in the confined area. It then swam out of Boat Harbour with another Giant Petrel. At no time did this bird show fear of us.

SNARES CAPE PIGEON (*Daption capensis australis*)

Hundreds of these petrels were seen during the expedition. Their numbers did not fluctuate noticeably throughout the year, which may indicate that there is no winter exodus. From a dinghy in August, many birds were seen flying and resting on the cliffs at North Promontory and North Daption Rock where they are known to nest (G. J. Wilson pers. comm.). They were frequently seen at the mouth of Boat Harbour, in Ho Ho Bay, and at Breaks-in-Swell, which is a favourite year-round feeding area for these birds.

MOTTLED PETREL (*Pterodroma inexpectata*)

No birds were heard calling as they flew overhead at night after mid-April, but some continued to come ashore to feed their young. The last chick was seen on 8 June near the Biological Station. The characteristic "ti, ti, ti" call was first heard again on 24 October, and one burrow was found cleaned out a few days later. A bird on an egg was seen on 7 December in an open nest partially covered with *Asplenium obtusatum* and *Poa astonii* on a rock face at the upper supralittoral zone.

BROAD-BILLED PRION (*Pachyptila v. vittata*)

Warham (1967) stated that live birds had not been seen at the Snares Islands, though skeletal remains had been found. On 2 February 1971, three live birds were found by G. J. Wilson in a southeast-facing rock crevice on Rocky Islet. On 9 March 1972, at least three live birds were seen at the same place. Several fresh skulls, bones, and many feathers were found as castings in Skua middens on the Southwest Promontory Razorback on 3 August. One Skua casting containing an almost entire skeleton of this prion was found on the south side of Station Cove on 29 September. One dead fledgling or adult was found in a *Hebe elliptica* bush in front of a rock crevice about 40 m above mean sea level (MSL) on the southeast side of the Razorback. One dead 2-5 day old chick, possibly of this species, was found nearby.

Prions, probably both Fairy (*Pachyptila turtur*) and Broad-billed, were seen flying near and over the main island during most

months. It is most probable that some birds of these two species stay in the Snares Islands area throughout the year.

SOOTY SHEARWATER (*Puffinus griseus*)

No adults were heard calling or seen flying after 27 April and the last known adult was seen on 17 May when a banded bird, Z-5461, was found. The last chick was seen at the summit of Signpost Hill on the morning of 29 May. About 50 birds were flying over the island during the evening of 11 September. But several burrows freshly cleaned out by these shearwaters were seen on the West Coast on 8 September. Judging by the quantity of birds arriving each evening, nearly all of them had arrived by the end of the first week in October.

Many small *Poa tennantiana* plants in the forest were chewed down to their bases by these birds after their arrival. We observed that they cut the leaves and took them into their burrows. Grass clippings were seen in more than a dozen burrows and clipped *Poa* clumps were found in the forest all over the main island. This is another animal influence, besides trampling and burrowing, that may explain the paucity of herbs and grasses within the *Olearia* forest at Snares Islands.

SOUTHERN DIVING PETREL (*Pelecanoides urinatrix chathamensis*)

The last bird that we saw of the 1971-1972 season was seen during the night of 23 April. Hundreds of birds were flying around Breaks-in-Swell on 25 August. Freshly excavated burrows were first noticed on 27 August in the open *Olearia* forest near the southeast margin of Sinkhole Flat. Their calls were heard the next evening, and the first bird was seen ashore on 1 September. A few days later several groups of birds were calling around the Biological Station and continued to do so for several weeks.

AUSTRALIAN GANNET (*Sula bassana serratator*)

One bird was observed for more than ten minutes on 8 December while it was flying around Breaks-in-Swell. It was feeding amongst rafts of other seabirds including the Salvin's Mollmawk. It glided just above the sea surface and made five dives, the highest one was from about 15 m. It was once within 10-15 m of the east end of Seal Point. It then flew east and finally disappeared. The wind on 7 December was ENE force 6 (Beaufort scale), NNW at the time of observation, and force 6 NW the following day. This is a new Snares Islands record.

PIED SHAG (*Phalacrocorax v. varius*)

Shags were seen many times throughout the expedition. Two birds spent much of the winter perched together on an up-ended *Senecio stewartiae* tree at the south side of Boat Harbour. A third

one was often seen in the Ho Ho Bay area. Other birds were noted off Broughton Island and along the east side of the South Promontory in November.

One shag frequently was found standing amongst the penguins at their landing area on the south side of Boat Harbour. It stayed with the penguins until they left in May and was found amongst them again soon after the penguins came back in late August.

There may have been a breeding pair of Pied Shags present during the expedition but no nests were found.

WHITE-FACED HERON (*Ardea novaehollandiae*)

The first Snares Islands sighting of this species was of one bird flying north over Seal Point about 14 February. Most additional sightings were made at the penguin landing rocks on the south side of Boat Harbour, but birds were seen at Ho Ho Bay and north to Seal Point. Two birds were twice seen flying together. These birds were not seen after 22 March. On 27 October, a dead adult female was found at the forest edge on the penguin landing rocks on the south side of Boat Harbour. This was preserved as a voucher specimen, and is deposited in the National Museum (DM-17264).

WHITE HERON (*Egretta alba modesta*)

One bird was seen on 24 April sitting on the penguin landing rocks at the south side of Boat Harbour, conspicuous because it was taller than the nearby penguins. Shortly after the bird was sighted, it flew north over Seal Point and disappeared. While in flight its general body colour, long black trailing legs, and the double crook in its neck made its identification positive, despite the heavy rain and easterly wind. This is a new Snares Islands record.

MALLARD (*Anas platyrhynchos*) and GREY DUCK (*A. superciliosa*)

Most of the birds seemed to be Grey Ducks but two male Mallards were seen once on 26 April.

There were 30-40 birds at Snares during some of the year. When we first arrived, a female and six ducklings were swimming in Boat Harbour. Red-billed Gulls (*Larus novaehollandiae scopulinus*) were observed diving at the ducklings and they disappeared within a week.

Ducks were often flushed from marshy clearings. In July, 11 flew from a marsh above Sinkhole Flat. One female with 11 ducklings was found walking in the forest near a small stream southwest of Sinkhole Flat on 19 December 1972. Eight ducks and about 25 ducklings were seen on 27 December 1972 in Muttonbird Creek Valley.

During the winter large patches of *Callitriche antarctica* (starwort) were eaten by ducks. One was once seen feeding on a marine green alga (*Ulva* sp.) at the edge of Boat Harbour at low tide.

AUSTRALASIAN HARRIER (*Circus approximans gouldi*)

A single harrier flew up and down Penguin Creek Valley on 28 September. The next day it was flushed from the clearing east of Penguin Rookery 3. This bird spent several hours a day cruising over open areas in view of the Biological Station. The last sighting was on 4 October.

EASTERN BAR-TAILED GODWIT (*Limosa lapponica baueri*)

On 28 October one specimen was seen in an inland 12 x 40 m grassy-swampy clearing. The next sighting was 5 November at the edge of the *Olearia lyallii* forest near the Biological Station. About 20 more sightings of this bird were made on the north and south sides of Boat Harbour. The last sighting was on 13 January 1973.

The Godwit was most often seen feeding amongst *Callitriche antarctica* mats in small drainages at the edge of the *Hebe elliptica* zone at Station Cove. It also fed in the eulittoral zone above *Durvillea antarctica*, wading in shallow pools in the upper eulittoral, and on the supralittoral rock zone. It was also seen in the *Olearia* forest probing bare peat and cracks in rotten logs, feeding in a similar habitat and manner to that of the Snares Islands Snipe. This is a new Snares Islands record.

SNARES ISLAND SNIPE (*Coenocorypha aucklandica huegeli*)

In daylight, snipe were most audibly active during light rains and just after heavy ones. But they generally were more active at night. The last known chick (newly hatched) of the 1972 season was found on 4 May following its parent amongst the *Poa tennantiana* tussocks near Signpost Hill.

A forthcoming paper on the Snares Island Snipe by Dr Warham will include our sightings of the colour banded birds.

SOUTHERN SKUA (*Stercorarius skua lonnbergi*)

These birds were present throughout the year. It was expected that they would depart during the winter months because they are known to leave other southern islands then. Although there was a drop in numbers after the departure of the Sooty Shearwater chicks in May, about half the summer population of nearly 100 birds remained around the islands. The numbers increased again in early September when Diving Petrels were once again abundant.

Skuas frequently were found in the forest interior. Some had middens on hilltops under the *Olearia*. They seldom flew in the dense forest, but if flushed, they managed to get aloft after breaking through the canopy. One pair may have had a nest in the forest near the West Coast, because the area was strongly defended by up to six birds.

Mollymawk chicks apparently were killed by skuas. No skua was seen making a kill, but they were often in the mollymawk colonies

! with Giant Petrels. It is possible that the petrels killed the larger chicks and the skuas only ate their leavings. However, it seems highly likely that small mollymawk chicks were killed by skuas because Giant Petrels were not seen in the colonies before June.

The earliest skua egg was found on 3 October but most nests did not have two eggs until early November. There were at least 30 nesting pairs of skuas on Main and Broughton Islands.

Nest areas were defended vigorously not only by the nesting pair, but also by other skuas. Attacks on us were usually made from behind. Apparently a bird would drop its feet to deliver a blow on the backs of our heads. Most attacks consisted of repeated attacks by two to eight birds. This made tussock country travel more than usually uncomfortable during the nesting season, especially when we were hit by banded birds.

SKYLARK (*Alauda a. arvensis*)

Three birds were seen on 14 February by H. A. Best flying high above an inland grassy clearing north of Penguin Creek. On 14 April, three birds were seen by DSH over a grassy clearing as they were flying south high over the forest. This is a new Snares Islands record.

GREY WARBLER (*Gerygone igata*)

One bird was sighted on 9 July at the Biological Station. Other sightings revealed several birds, probably fewer than 15, in the same area. They were also seen and heard regularly in the Muttonbird Creek Valley, Ho Ho Bay area, and on Skua Point. No birds were seen or heard after the first week in October, indicating that they did not become established. This is a new Snares Islands record.

They were seen feeding mainly at the branch tips of *Hebe elliptica*. Their food was primarily several species of flies (midges, scavenger flies and blowflies), but they were also feeding on aphids, small beetles and parasitic wasps.

SOUTH ISLAND FANTAIL (*Rhipidura f. fuliginosa*)

One pied phase bird was seen near the mouth of Muttonbird Creek (CJH) on 24 March. This bird was carefully compared with the descriptions of fantails given by Falla, Sibson & Turbott (1970). Regular sightings of at least every 15 days were made until 7 September, after which it was not seen. Favoured areas for the bird were in the *Olearia* forest in Muttonbird Creek Valley, in the *Olearia* and *Senecio stewartiae* near the margin of Ho Ho Bay, and nearly half way up Penguin Creek Valley. Sightings were also made at Comma Bay and along the South Coast on the west side of the island. Food seemed to be principally the blowfly, *Calliphora huttoni*, and other flying insects, hawked amongst the trees in a manner similar to that of the

Black Tit (*Petroica macrocephala dannefaerdi*). Several times Black Tits were seen chasing the Fantail out of their territories. This is a new Snares Islands record.

SILVEREYE (*Zosterops lateralis*)

These birds are common (Warham 1967) and were seen in large numbers throughout the year. One pair was seen gathering nest material (mop strings) in late September. No nests were found until 30 November, when two were discovered in *Hebe elliptica* on Skua Point. The accessible nest contained three chicks, which flew on 4 and 5 December. The second nest was in an impenetrable thicket and could not be examined. Chicks were seen being fed in *Olearia* trees in early November.

The principal foods of the flocks seen in the winter were aphids, psyllids, and small flies found on the terminal buds of *Hebe* and *Senecio*, and amongst the leaves of *Olearia*. They frequently were seen drinking sweet sap from a crack in a dying *Olearia* on Station Point. The chicks were also fed larger flies and small moth larvae.

BLACKBIRD (*Turdus merula*)

The usually very shy blackbirds were common throughout the year in all forested areas of the main island. They were seen feeding on insects on the peat and often picked blowfly maggots from bird carcasses (they never ate the carcass itself).

These carcasses were a good source of insects for all of the insectivorous birds. Three ten-day dead Sooty Shearwaters were completely dissected and all of the blowfly (*Calliphora huttoni*) larvae were extracted. There were 5080, 6112, and 9685 last instar maggots respectively in the three birds.

CHAFFINCH (*Fringilla coelebs gengleri*)

These birds were not as common as the other finches. The first male was seen on 12 August, following a day of northerly winds. Females may have been at Snares earlier, but they were not definitely identified until after the arrival of this male.

The largest flock, two males and four females, was around the Biological Station during September, and a female appeared in the Ho Ho Bay area several times during this month. A single male was singing near the mouth of Muttonbird Creek on 12 December. We found no evidence that these birds breed at the Snares Islands.

GREENFINCH (*Carduelis chloris*)

Individuals and small flocks were seen for about a week at a time during April, October, November, and December. They seemed to appear and disappear with storms and they are not permanent residents.

GOLDFINCH (*Carduelis carduelis britannica*)

These birds apparently were brought to the Snares by northerly gales. The first two were seen on 12 April. One of them was found dead within an hour of the first sighting and the other one was not seen after that day. On 25 April a flock of five was found. Later in the day a dead bird was discovered at the weather station clearing. A single bird spent several days in May pecking at *Poa annua* seeds around the huts. No more birds were seen until October, when there were apparently separate arrivals of one, three, and about 15. Several Goldfinches flew across Broughton Island when we were there on 4 November. One was seen with the newly arrived Greenfinches on 5 December and several appeared on 11 January after a day of NE and NW gales. They do not nest at Snares at present.

REDPOLL (*Acanthis flammea*)

These finches were numerous around the Biological Station and Boat Harbour areas but they were not seen or heard anywhere else on the islands. They most commonly fed on the seeds of *Poa annua* but they also fed on small insects, such as aphids, from the foliage of *Hebe elliptica*.

HOUSE SPARROW (*Passer domesticus*)

Warham (1967) noted two males and one female near the Biological Station. He stated "it will be interesting to see how the birds fare now that the castaway hut has been recovered and offers no nesting sites." Two males were seen by H. A. Best in January 1972. However, no others were seen and there is no evidence that they presently breed at the Snares Islands.

DISCUSSION

Warham & Keeley (1969) suggested that the origin of the Snares Islands finches is Australia. They believed that the Snares Islands are in the right direction to assist dispersal from Tasmania and Southern Australia during gale-force westerlies. They supported their hypothesis by an increase in the variety of European passerines, the Australian Tree Martin, and wading birds of probable Australian origin during the 1968-69 summer.

We believe that many stragglers sighted at Snares may have come from New Zealand. We noted that finches often arrived after a gale-force northwesterly if the wind backed easterly. Finches also arrived during northerly or northeasterly winds. The arrival of finches is soon noted at Snares because there is a large *Poa annua* sward at the Biological Station, where they feed on the seeds of this grass. The finches generally do not remain more than a few days at Snares. Several were found dead within hours of their arrival. The Grey Warbler and the South Island Fantail undoubtedly came from New Zealand.

Warham & Keeley (1969) stated that of 45 species of birds present, 23 species were believed to breed at the Snares Islands.

The seven newly recorded birds, Australian Gannet, White-faced Heron, White Heron, Eastern Bar-tailed Godwit, Skylark, Grey Warbler and South Island Fantail have not been observed to nest at Snares. We found 21 species currently breeding on the islands, not including the Mallard Duck whose breeding status is unknown. The newly reported Fulmar Prion (*Pachyptila crassirostris*) (Fleming & Baker 1973) nests on the Western Chain. Hence there are 22 breeding species, and 53 bird species have been recorded at the Snares Islands.

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