THE BIRDS OF THE CAVALLI ISLANDS, NEW ZEALAND

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SUMMARY

An annotated species list is given, recording the distribution and abundance of birds observed in the Cavalli Islands between 27 December 1978 and 7 January 1979. Comparisons are made with data from previous surveys by Sibson (1951), Adams (1969) and Crockett (1975, 1977).

Fifty-five bird species have now been recorded from this group of islands, four of them, the short-tailed shearwater (Puffinus tenuirostris), white-faced heron (Ardea novaehollandiae), pukeko (Porphyrio p. melanotus), and Arctic skua (Stercorarius parasiticus) for the first time on this survey. Two species, the white-faced storm petrel (Pelagodroma marina maoriana) and the bellbird (Anthornis m. melanura) have not been reported since the 1951 survey and are presumed to be no longer resident.

It is suggested that the decline in numbers of pipits (Anthus n. novaeseelandiae) and fantails (Rhipidura fuliginosa placabilis) may be attributable to the presence of increasing numbers of two recent colonists, the myna (Acridotheres tristis) and the welcome swallow (Hirundo tahitica neoxena).

INTRODUCTION

The fauna of the Cavalli Islands has received scant attention from ornithologists. Falla (1934) made passing reference to some of the breeding petrels of the group, but no comprehensive survey was conducted until December 1951 (Sibson 1951). This survey, which provides the only published account, was conducted while stock still grazed the main island. It therefore forms a significant base for future studies on any changes which may accompany the reversion of pastureland to, what in the end may be, coastal forest.

From 17 - 24 October 1969, a Wildlife Service party camped on Motukawaiti studying both the fauna (especially the breeding Procellariiformes) and flora of most of the islands in the group. An unpublished report compiled by G.P. Adams is on file with the Fauna Conservation Officer, Wellington.

Members of the Northland Branch of the Ornithological Society of New Zealand have twice camped on, and surveyed, Motukawanui.
Unpublished reports of these expeditions (24 - 27 October 1975; 22 - 25 October 1976), compiled by D.E. Crockett are filed with the Commissioner of Crown Lands, Auckland.

From 27 December 1978 - 7 January 1979, the Offshore Island Research Groupcamped on Motukawanui. During this period I was able to visit every major island in the group, some more than once. This paper presents data from these surveys, supplemented by records

Fig. 1. Map of the Cavalli Islands off the north east coast of northern New Zealand. Names in parentheses are unofficial names used by our party for reference (from Hayward 1979).
from other members of the party, on the numbers and status of the
birds present. Where possible, comparisons are made with data from
the earlier expeditions.

SURVEY METHODS

In providing a base map for on-going O.S.N.Z. surveys, Crockett
(Fig. 2) has divided Motukawanui into sixteen areas of roughly similar
size, each corresponding essentially to a single watershed. To provide
complimentarity of data, Crockett’s scheme has been followed in the
present survey. Counts were made in each of these sixteen areas (min.
2, max. 12 per area) by means of traverses at a slow pace (viz.
Ratkowsky and Ratkowsky 1979) either along the ridges between
catchment areas or through the valleys of the catchments themselves.
In the heavily vegetated areas walking counts were supplemented by
stationary counts. Comparable counts were made on the other islands
of the group, all of which were sufficiently small to be surveyed as
single units.

Maximum numbers of birds seen or heard on any one survey are
recorded in Table 1. Breeding species are marked by an asterisk (*).
Nomenclature follows Ornithological Society of New Zealand (1970)
except in the case where a more recent revision applies (Kinsky and
Falla 1976). Binomials only are given for introduced species.

For all island and locality names mentioned in Table 1 or the text,
refer to Fig. 1.

ANNOTATED SPECIES LIST

Order Spheniciformes
Northern blue penguin, Eudyptula minor iredalei Mathews, 1911
BREEDS on virtually all the islands in the group, from near sea-level
“to 150 feet” (Sibson 1951). This species was commonly observed at
sea and frequently corpses were found, storm wrecked on beaches. A
well-grown chick was seen ashore at Cormorant Bay.

Order Procellariiformes
Giant petrel, Macronectes giganteus (Gmelin, 1789)
Sibson (1951) reported a single bird off Waiti Bay and Crockett
(1975) lists the species also. These northern records may be either the
northern (halli) or southern (giganteus) subspecies (vide Sibson 1969).
Antarctic fulmar, Fulmarus glacialisoides (Smith, 1840)

Listed, with no indication of abundance, by Crockett (1975). This
species, although rarely sighted in northern New Zealand waters, has
not infrequently been found beach-wrecked, once in very large
numbers, on the Auckland west coast (Crockett and Reed 1976).
Grey-faced petrel, Pterodroma macroptera gouldi (Hutton, 1869)
“Is (or was) the most generally distributed of the petrels in the Cavallis” (Sibson 1951). Recorded as breeding on all islands of significant size, the numbers of burrows ranging, according to Adams’ (1969) estimates, from “a few” (on Motukawanui) to “some hundreds” (on Moturahurahu). I found corpses of chicks on Motukawanui and Panaki.

Lesser broad-billed prion, Pachyptila s. salvini (Mathews, 1912)

A single, storm-wrecked corpse was found on Motukawanui. Sibson (1951) recorded a like corpse on Motukawaiti.

Fairy prion, Pachyptila turtur (Kahl, 1820)

Sibson (1951) recorded a single corpse on Motukawaiti.

Flesh-footed shearwater, Puffinus carneipes hullianus Mathews, 1912.

Sibson (1951) noted that this species was “surprisingly scarce”; and, indeed, it has not been reported since.

Buller’s shearwater, Puffinus bulleri Salvin, 1888

Commonly seen at sea but has not been reported to breed in the group. On one occasion, groups of birds totalling some seven hundred, in company with several hundred fluttering shearwaters, were seen off the eastern tip of Motukawaiti, flying northward.

Sooty shearwater, Puffinus griseus (Gmelin, 1789)

Reported by both Falla and Pycroft (in Sibson, 1951) to breed in the Cavallis. The species was not seen by Sibson (1951) or Adams, (1969), but is listed by Crockett (1975). I saw a few with Buller’s and fluttering shearwaters off Motukawaiti and storm-wrecked corpses were found on Motukawanui and Kahangaro.

Short-tailed shearwater, Puffinus tenuirostris (Temminck, 1835)

A single corpse was found on Motukawanui.

Fluttering shearwater, Puffinus g. gavia (Forster, 1844)

Sibson (1951) recorded a large breeding population on Motuharakeke and flocks of 800 - 1000 at sea. Adams reported smaller breeding colonies, also, on Motutakapu and Te Anaputa, while Crockett (1975) listed the species as breeding on Motukawanui. Flocks of this species, numbering some hundreds of birds, were frequently seen offshore. Corpses were found on Motukawanui and Motuharakeke.

North Island little (allied) shearwater, Puffinus assimilis haurakiensis Fleming and Serventy, 1973

Adams reported “a few” breeding on Motuharakeke. Crockett (1975) saw birds ashore on Motukawanui, but breeding was not confirmed. I saw none at sea, but found a corpse on Motukawanui. Sibson (1951), similarly, recorded the species only from a single corpse.

White-faced storm petrel, Pelagodroma marina maoriana (Mathews, 1912)

Listed as one of the breeding petrels of the Cavallis by Falla, this species has since been recorded only by Sibson (1951) who found on
Motukawanui

Fig. 2. Map of Motukawanui, Cavalli Islands, showing survey areas (1-16). After Crockett (1977).

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Hamaruru, “many nests in two pohutukawa-filled gullies and a few on open ground”. Adams (1969) suggested that a pig released on to Panaki (which is joined to Hamaruru at low-tide) may have been the prime reason for the disappearance of the colonies.

Northern diving petrel, Pelecanoides u. urinatrix (Gmelin, 1789)

A small flock was sighted just north of the Cavallis and corpses were found on Motukawanui (4) and Motuharakeke (1). Earlier writers recorded the species as breeding in considerable numbers on Motuharakeke, Te Anaputa, Horonui and Motutakapu, and also in lesser numbers on several other islands.

Order Pelecaniformes

Australian gannet, Sula bassana serrator Gray, 1843

Commonly observed at sea in small numbers (up to ten). Sibson (1951) suggested that from its name, Motutakapu (= Gannet Island) might once have been the site of a gannery. I saw a few birds roosting, mornings and evenings, on Kaitirehe Rocks, and although I saw no evidence of nesting, the site may well merit watching in the future.

Black cormorant, Phalacrocorax carbo novaehollandiae Stephen, 1826

None was seen, although Sibson (1951) and Adams (1969) each recorded single stragglers.

Pied cormorant, Phalacrocorax v. varius (Gmelin, 1789)

This species is easily the most abundant cormorant in the group. Sibson (1951) recorded about fifteen, and Crockett (1975) some twenty-eight pairs nesting in pohutukawa trees in Cormorant Bay, Motukawanui. Adams (1969) observed pied cormorants near Panaki Island, and although noting a breeding colony (c. 60 birds) on the south coast of Motukawaiti, makes no mention of any on Motukawanui. During this survey no evidence for any recent colony was seen on Motukawaiti. The Cormorant Bay colony had only a single abandoned nest, although as many as twenty-one birds roosted in the trees there. Numerous islands and rock stacks are used regularly as roosting areas but none, perhaps save Moturahurahu Bay, appears as a likely nesting site. The maximum number of birds seen on any one survey was fifty-one, including a few in first year plumage.

Little black cormorant, Phalacrocorax sulcirostris (Brandt, 1837)

The only record of this species is Adams’ (1969) sighting of a single bird on Motukawaiti.

Little pied cormorant, Phalacrocorax melanoleucos brevirostris (Gould, 1837)

This species, as noted by previous observers, is not at all common. Sibson (1951) recorded it only as “an occasional visitor” while Adams (1969) found “a small number” amongst pied cormorants on Motukawaiti. In contrast to the almost ubiquitous pied cormorant this species was seen on only five occasions.

Order Ciconiiformes

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White-faced heron, *Ardea novaehollandiae* (Latham, 1790)

A single bird, the first recorded in the group, was seen in Parapara Bay, Motukawanui.

Reef heron, *Egretta s. sacra* (Gmelin, 1789)

Sibson (1951) reported a pair of reef herons nesting at Waiti Bay and a single bird on Motukawaiti, while Crockett (1977) estimated that “at least three pairs frequent, or breed in, the group”. I saw two single birds and one pair on Motukawanui and a single bird also on Whatapuke.

Australian bittern, *Botaurus stellaris poiciloptilus* (Sagler, 1827)

The sole recorded sighting of this species is that of Crockett (1975) in the swamp behind Waiti Bay.

**Order Falconiformes**

Australian harrier, *Circus approximans gouldi* Bonaparte, 1850

Sibson (1951) estimated that perhaps five pairs frequented the group and he reported a nesting pair on Panaki. Adams (1969) and Crockett (1977) made similar estimates of numbers. On this survey single birds were regularly seen circling the summits of most islands and a nest with young chicks was found on Motukawanui.

**Order Galliformes**

Brown quail, *Synoicus ypsilophorus* (Bosc, 1792)

This species was not seen by Sibson (1951) although he noted that “occasional visitors from the mainland have been recorded” (by Mr G. McDonald, then a local resident). Adams (1969) reported it from both Motukawanui and Panaki while Crockett (1977) suggested that this species was better suited by the (then) vegetation than was the less common Californian quail. During this survey, small groups of up to four birds were very frequently seen in open pasture and a nest containing eggs was found on Motukawanui.

Californian quail, *Lophortyx californica* Shaw, 1798

Crockett (1975) was the first to record this species and as noted above, reported (1977) that it was far less common than the brown quail. Such appears to be still the case with only single birds being seen on two occasions.

Pheasant, *Phasianus colchicus* Linnaeus, 1758

Both Adams (1969) and Crockett (1977) reported a number of pairs on Motukawanui. No bird was seen or heard during the present survey, but a single fresh feather was found.

**Order Gruiformes**

Pukeko, *Porphyrio porphyrio melanotus* Temminck, 1820

The sighting of four birds in the swamp inland of Waiti Bay is the first record for the group.

**Order Charadriiformes**

Variable, oystercatcher, *Haematopus unicolor* Forster, 1844

Neither Sibson (1951) nor Adams (1969) list this species. Crockett
(1975, 1977) however, noted the presence of 3 - 4 pairs. A pair with two well-grown chicks was seen on Motukawatu and a pair and a number of single birds observed on Motukawanui.

New Zealand dotterel, Charadrius obscurus (Gmelin, 1789)

The dotterel population appears to have changed little since Sibson (1951) recorded a total of five pairs on the two main islands. Adams (1969) listed three pairs on each of these islands and a further pair on Whapakule, while Crockett (1977) gave a total of eight pairs. My observations agree with those of Adams.

Arctic skua, Stercorarius parasiticus (Linnaeus, 1758)

On two occasions skuas, almost certainly of this species, were seen harrying terns off the southern end of Motukawanui.

Southern black-backed gull, Larus dominicanus Lichtenstein, 1823

Previous observers have consistently recorded this species in small numbers and noted its habit of nesting on rock stacks on most islands. During this survey nesting was observed at seven localities, each site having one to four nests occupied by young chicks.

Red-billed gull, Larus novaehollandiae scopulinus Forster, 1844

Sibson (1951) recorded two colonies, the larger at Waiiti Bay and the smaller on Motukawaiti. Adams (1969) reported seeing only a few birds on each of the two main islands while Crockett (1975) simply listed the species with no indication of numbers. Although some sizeable flocks were seen during this survey, especially in Parapara Bay, no evidence of recent nesting was found and no birds in immature plumage were sighted.

Caspian tern, Hydroprogne caspia (Pallas, 1770)

This species has been listed by all previous observers and Sibson (1951), additionally, recorded nesting on both main islands. Single birds were regularly seen, while a pair on Motukawaiti had two well-grown chicks in attendance.

White-fronted tern, Sterna striata (Gmelin, 1789)

Sibson (1951) reported that the breeding population was “remarkably small, only a few dozen birds nesting on rocks off Motukawatu”. Adams (1969) did not list the species and Crockett (1975) made no mention of nesting colonies. Flocks of up to thirty birds were regularly to be seen at sea and more than a hundred, most with young chicks, were found nesting on Horonui and Motutapere.

Order Cuculiformes

Shining cuckoo, Chalcites I. lucidus (Gmelin, 1788)

The sole record of this species is that of Adams (1969) from Motukawatu.

Order Strigiformes

Morepork, Ninox n. novaeseelandiae (Gmelin, 1788)

Sibson (1951) reported hearing only a single bird, while Adams (1969) made no mention of the species. Crockett (1977), however,
estimated that at least six pairs held territories on Motukawanui. On this survey, moreporks were regularly heard at night and at least three were seen in scattered localities on Motukawanui.

**Order Coraciiformes**

New Zealand kingfisher, *Halcyon sancta vagans* (Lesson, 1830)

Sibson (1951) thought that this species was scarce, recording only two pairs on Motukawanui and one on Panaki, while Adams (1969) recorded its presence on the two main islands only. Crockett (1975, 1977) however, reported that in 1975 kingfishers were “abundant”, and in 1976 that “possibly twenty pairs have territories around the coasts of Motukawanui”. Nesting burrows, some occupied, were indeed plentiful in Limonite Bay and Waiti Bay, and small numbers of birds were frequently seen on Motukawanui. One was seen also on Hamaruru.

**Order Passeriformes**

Skylark, *Alauda arvensis* Linnaeus, 1758

As has been noted by previous observers, the skylark is the commonest of the grassland species, breeding on both main islands, and having a total population of at least fifty. A nest, with eggs, was found on Motukawanui.

Welcome swallow, *Hirundo tahitica neoxena* Gould, 1852

This species was first recorded in the group by Adams (1969) who noted a pair on Motukawaiti in October 1969. Only seven years later, Crockett (1977) reported at least eighty birds in a wide variety of habitats on Motukawanui. The present population would seem to be similar, flocks of thirty to forty being regularly seen. Nesting birds were found in an old building on Motukawanui and in sea caves on Kahangaro. Doubtless the species also breeds on other islands with suitable sites.

New Zealand pipit, *Anthus n. novaeseelandiae* (Gremlin, 1789)

This species appears to have declined steadily in number since the time of Sibson’s visit. He reported (1951) it as “pleasingly abundant” on Motukawanui, the estimated population being greater than twenty pairs. He estimated that there were some five to ten pairs on Motukawaiti and also recorded it from Hamaruru. Adams (1969) listed it from the two main islands and Motuharakeke. Crockett (1975), however, reported that the species was not common, only twenty individuals being observed on Motukawanui. The pipit is now very rare, a sole bird and a nest being found on Motukawanui and a further single bird on Whakapukeiti.

Hedge sparrow, *Prunella modularis* (Linnaeus, 1758)

Although reported as plentiful on Motukawanui by Sibson (1951) and Crockett (1975, 1977), and on smaller islands too, this species was found to be only sparingly distributed, being regularly sighted or heard only in the valley of, or adjacent to, the Waiti Stream.
Grey wagler, *Gerygone i. igata* (Quoy and Gaimard, 1830)

Sibson (1951) and Crockett (1975, 1977) recorded grey warblers only on Motukawanui while Adams (1969) listed it on two further islands. During the present survey the species was found to be most abundant in the coastal forest valleys of Motukawanui but was also recorded on four other islands.

North Island fantail, *Rhipidura fuliginosa placabilis* Bangs, 1921

This species was found by Sibson (1951) "only in the bush on Motukawanui, where it is plentiful". Adams, (1969) and Crockett (1975, 1977), recorded its presence but gave no indication of numbers. At present it seems to be very rare indeed, only five being seen during our stay, all in forest or in the densest scrub.

Song thrush, *Turdus philomelos* Brehm, 1831

Sibson (1951), Adams, (1969) and Crockett (1975, 1977) all record the thrush as abundant, at least on Motukawanui, and present on a number of smaller islands. At present the species seems to be much scarcer, only four being seen on Motukawanui and a single bird on Nukutaunga.

Blackbird, *Turdus merula* Linnaeus, 1758

All previous surveys record the blackbird as a regularly seen, though not particularly abundant, bird. It has been reported from all islands of significant size in the group, breeding on many. Although obviously more common than the thrush, the maximum number seen on any one survey was still only five.

Silvereye, *Zosterops I. lateralis* (Latham, 1801)

Sibson (1951) reported this species as "easily the most abundant passerine in the group" and recorded it on most islands. Later surveys have confirmed this conclusion. I found this species to be particularly abundant in the relatively unmodified forest of the Kikipaku Stream valley, and still plentiful in scrub habitats elsewhere.

Bellbird, *Anthornis m. melanura* (Sparrman, 1786)

Sibson (1951) reported a small population of, perhaps, 12 pairs in surviving patches of bush on Motukawanui. However, no further sightings have been recorded.

Tui, *Prosthemadera n. novaeseelandiae* (Gmelin, 1788)

Sibson (1951) suggested that probably only one pair bred on Motukawanui, but noted too, that as many as six at a time, possibly visitors from the mainland, had on occasion been sighted by a resident. Neither Adams (1969) nor Crockett (1975, 1977) recorded the species, an indication that it is, perhaps, only a visitor. Four were seen in the upper Kikipaku Stream valley and on a subsequent occasion three, perhaps some of the same birds, were seen in the headwaters of the Waititi Stream.

Yellow hammer, *Emberiza citrinella* Linnaeus, 1758

Sibson (1951) noted that this species was "thinly distributed
only”, on Motukawanui. Crockett (1977), however, found it plentiful there over open scrub, and certainly at present it is very common. Adams (1969) recorded yellow hammers on Nukutaunga and during this present survey they were seen, too, on Hamaruru and Motuharakeke.

Chaffinch, *Fringilla coelebs* Linnaeus, 1758

Recorded by Sibson (1951) as “the commonest of the finches”, though not so by Crockett (1975), this species was found to be widely distributed on Motukawanui but on few of the other islands in the group.

Greenfinch, *Carduelis chloris* (Linnaeus, 1758)

Listed as “scarce” by Sibson (1951), this species appears always to have been the least common of the introduced finches. However, the population may at present be expanding since as many as five birds were seen at one time and frequent sightings were made in scrub-filled valleys throughout Motukawanui. A single bird was also found on Motuharakeke.

Goldfinch, *Carduelis carduelis* Linnaeus, 1758

Recorded in past surveys as one of the most abundant and widely distributed finches, this species was regularly seen, usually in pairs, and especially on Motukawanui.

House sparrow, *Passer domesticus* (Linnaeus, 1758)

Previous observers have noted the presence of house sparrows in small numbers on most islands in the group. Sibson (1951) recorded in particular, their unusual habit of frequenting clefts and cliffs, and also their scarcity about the homestead. During the present survey they were, similarly, found on most offshore islets, not infrequently in considerable numbers, but on Motukawanui were only common near the homestead!

Starling, *Sturnus vulgaris* Linnaeus, 1758

A species which has been consistently reported as common throughout the group, frequently breeding on cliffs. On Motukawanui starlings were only seen in any abundance at its southern end but on many of the smaller islands sizeable flocks, flying or roosting, were a frequent sight in the mornings and evenings.

Indian myna, *Acridotheres tristis* (Linnaeus, 1766)

Mynas were first recorded by Crockett (1975) who noted that they were very common, at least on Motukawanui. During the present survey they were found to be numerous and widespread on the main islands and present in lesser numbers on most smaller islands. Evidence of recent nesting was found in holes in a basalt cliff near Motumahanga and also in a hollow tree on Panaki.

**CONCLUSIONS**

Prior to this present survey, birds of fifty-one species (twenty-one
of them sea-birds) had been recorded from the Cavalli Islands. Two further shore/land birds can now be listed, namely the white-faced heron and the pukeko, and also two additional sea-birds, the Arctic skua and the short-tailed shearwater (this last from a beach wreck only). All but nine of the previously listed species were found. Seven of these nine had previously been recorded only as single vagrants or beach wrecks, and so it appears that only two once resident species have disappeared - the white-faced storm petrel and the bellbird, neither of which has been sighted since Sibson's 1951 expedition.

Although the waters around the Cavallis abound in sea-birds, the number of breeding species is small, only four of the reported twelve
Procellariiform species having bred there in recent years. Unfortunately the timing of this most recent survey (December - January) enabled little to be added to our knowledge of their current status.

On the other hand, most of the shore/land birds are firmly resident, with most breeding on Motukawanui, but many on other islands too. The data, from this and previous surveys, are too fragmentary to make possible an accurate assessment of variation in population size for each species. However, a few of the more obvious changes can be noted.

It is worthy of comment that two of the now most abundant land birds in the group are recent self-introductions - the welcome swallow which probably colonised in, or shortly before, 1969; and the Indian myna, not recorded in 1969 but certainly numerous in 1975.

The reversion of pasture to rougher grassland following the removal of stock from Motukawanui has not yet progressed far enough to have had a marked effect on the numbers of open country species. The numbers of skylarks, yellow hammers, chaffinches and goldfinches appear to have declined only marginally, those of the thrush and hedge sparrow somewhat more so. Only two species appear to have suffered dramatic reductions in number. Both are natives: the pipit, whose decline is rather puzzling since it is reportedly (Falla, Sibson and Turbott 1979) more suited to a rough grassland habitat than to pure pasture - and the fantail which, it is tempting to speculate, may be suffering from competition with the welcome swallow. For both these species, too, it is not unlikely that the myna, a recent arrival and a known predator (Moon 1979) may be contributing to no small measure to their rapid decline.

The numbers of shore birds are little different from those recorded in earlier surveys. Indeed some, notably the plovers, appear to have reached a maximum population density and future expansion in numbers or marked change in species composition seems unlikely in view of the limited availability of soft shore feeding areas.

The trampling of wetland areas by stock may well have been the major reason for the paucity of swamp dwelling species so far recorded. The future for such species would now seem to be far more secure.

The present land bird fauna is predominantly an exotic one with the three Galliforms and eleven of seventeen Passeriforms being introduced species. Continued reversion of pasture must ultimately limit grassland species while expanding the area available to those tolerant of scrub. Long term regeneration of coastal forest by expansion from the present scattered remnants must surely benefit those few native, forest dwelling species already established: and further species, the New Zealand pigeon (Hemiphaga n.
for instance, might not unreasonably be expected to colonise from the closely adjacent mainland.

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