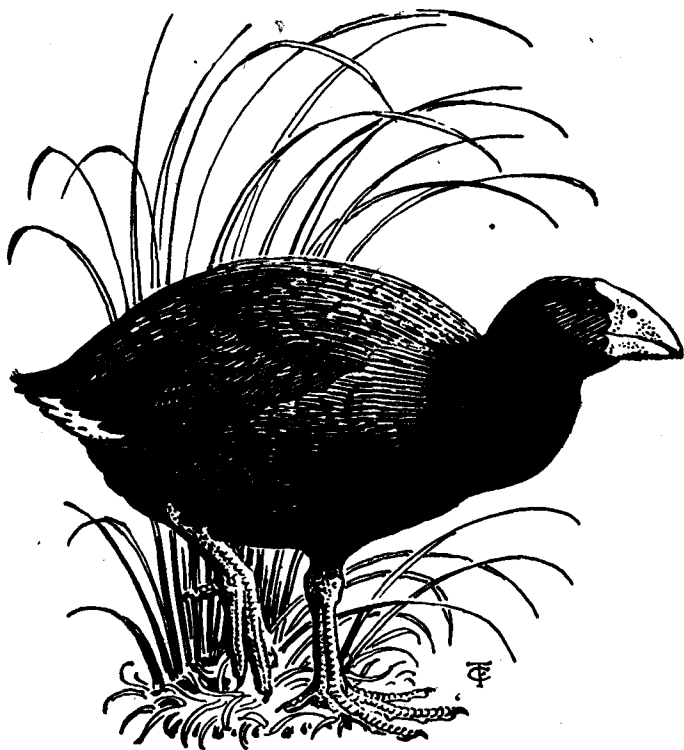


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A COMMON TERN IN THE BAY OF PLENTY

By P. C. M. LATHAM

On 8 April 1984, as B. Chudleigh and I were examining a flock of White-fronted Terns (*Sterna striata*) at the mouth of the Rangitaiki River, we noticed a tern with an all-black cap. It was slightly smaller and darker grey than the White-fronted Terns and had no white front. Shortly afterwards it flew away from us, showing a white rump and tail which contrasted sharply with its grey wings and mantle — rather like a large Black-fronted Tern (*Sterna albobriata*). The bird settled again with the White-fronted Tern flock and over the next half hour or so, I, together later with Mr & Mrs W. M. Hutton, studied it from 20-30 m away, while BC photographed it. Although at first the light was poor and a heavy shower of rain fell, conditions improved to bright sunshine. The bird was put to flight several times, once giving me an excellent view of it from below against the light. It did not keep to the edge of the flock but mingled freely, without animosity, with the White-fronted Terns.

DESCRIPTION

Body size: Slightly smaller and slimmer than a White-fronted Tern.

Forehead, crown and nape: Black from the base of the upper mandible over the entire crown to just below the eyes and down the nape to the mantle. There were a few tiny white feathers at the base of the upper mandible, which looked as though they were moulting out. The forehead sloped shallowly back to the crown, giving a rather flat-crowned "snaky" appearance to the head, similar to that of the White-fronted Tern.

Lores, cheeks, chin and throat: White, gradually darkening to grey on the neck and upper breast; not a well-defined line as in the Black-fronted Tern.

Neck and upper breast: Pale grey, gradually darkening toward lower breast.

Lower breast, belly, mantle and back: Grey, darker than on White-fronted Tern, but not as dark as on Black-fronted Tern.

Upper wing: The coverts were darker grey than the breast, belly, mantle and back; the visible primaries were very dark, almost black; the secondaries and tertials were a paler grey than the coverts and had white tips. There was no dark carpal bar. The tips of the folded wings extended well beyond the tail tips.

Underwing: Pale grey except for the blackish tips to the outer primaries. The tips of the secondaries and tertials, which were white, gave a white trailing edge to the inner wing. The first few primaries (those nearest the secondaries) were white and formed a noticeable translucent panel when the underwing was seen against the light. The outer primary, P10, had a very broad blackish band (not noticed in the field but seen in photographs viewed subsequently).

Rump, upper and lower tail-coverts: White, contrasting sharply with the grey belly and back.

Tail: Deeply forked; white except for the outer webs of the outer rectrices, which were blackish; the tips did not extend beyond the folded wing tips.

Bill: Black with no red at the base. It was as long as and of similar shape to that of a White-fronted Tern.

Legs and feet: Dull reddish, paler and slimmer than those of White-fronted Terns, but of similar length.



FIGURE 1 — Heads of Eastern Common Tern, above, and Arctic Tern, below, in breeding dress, right, and non-breeding dress, left.

The difference in head shape of the two species, slightly exaggerated here, is less noticeable in the field. It is very difficult to pick if bird is active or is hunched up in cold or windy conditions. Note the more extensive white front of the Arctic Tern in non-breeding dress. It extends well behind the eye, whereas that of the Eastern Common Tern reaches to just above the eye. The Arctic Tern's bill is all red in breeding dress. In non-breeding dress it is black, often with a dull red patch at the base, though this is difficult to see in the field. The bill of the Eastern Common Tern is black all year round.

It was obviously a *Sterna* tern, but which? As it appeared to be an adult in fresh breeding plumage, Antarctic Tern (*Sterna vittata*) was ruled out. In April, Antarctic Terns would be in worn breeding plumage or have begun a complete moult into non-breeding dress (P. M. Sagar, pers. comm.). In non-breeding plumage, the adult and the subadult Antarctic Tern have an extensive white front, white underparts and a dark cubital bar. In breeding dress the Antarctic Tern has a bright red bill and legs, white underwings and white, or very pale grey, outer edges to the outer rectrices of its tail (Watson 1975).

Equally definitely it was not a White-fronted Tern, plenty of which were about for direct comparison. This bird was a little smaller, much greyer, had no white front, had dark outer edges to the outer rectrices of its tail, had paler legs and, unlike the White-fronted Terns, was in breeding dress.

Though the Roseate Tern (*Sterna dougalli*) breeds as close to New Zealand as Queensland and New Caledonia, it has not been recorded here. This species may be quickly eliminated, too, being a very pale bird. In breeding dress the breast and belly are white, with sometimes a rosy tinge, and the tail streamers, which extend well beyond the folded wing tips, are completely white. No dark primary tips show on the underwing. The bill is black with a red base and the legs and feet are red (Slater 1970).

The Arctic Tern (*Sterna paradisaea*), which I have seen on three occasions in this locality, is not quite so easy to eliminate. However, the Arctic Tern in breeding plumage has a blood red bill and coral red legs, both the bill and the legs being shorter than those of the White-fronted Tern. The tail streamers reach, or project a little beyond, the folded wing tips (unless the bird is in moult). The underwings are white at all seasons, except for the dark grey outer primary tips. Though the outer primary, P10, has a dark band, the band is narrow (Marples & Marples 1934, Serventy *et al.* 1971). In the photographs, the P10 band on this bird was much too broad for that of an Arctic Tern (C. Corben, pers. comm.). The Arctic Terns that I have seen among White-fronted Terns had steeper foreheads and more domed crowns than their neighbours (Latham 1981) and this feature is considered important by Jacobsen (1961) and Vande Weghe (1966) when separating Arctic Terns from Common Terns. In winter and subadult plumage the Arctic Tern has a white front, breast and belly (Watson 1975).

The only other likely tern is the Common Tern (*Sterna hirundo*). One feature in my description is considered distinctive of the Common Tern, namely, the translucent patch formed by the four white inner primaries, seen when the underwing is viewed from below, against the light. First described by Richardson (1953), this field mark is said, by Hume & Grant (1974), to be "Perhaps the most useful plumage mark in the British literature . . ." In addition, the very broad dark band of the outer primary (though difficult to assess without the benefit of comparison), the legs being a similar length to those of the accompanying White-fronted Terns, and the shallow-forehead flat-crowned look of the bird are all points which reinforce the bird's identification as a Common Tern rather than an Arctic Tern, the most difficult species to distinguish from it.

However, the Rangitaiki River mouth bird does not altogether answer the description of the Common Tern to be found in most books. As an adult in breeding dress, it did not have the conventional vermilion legs and feet, orange-red bill with a black tip, or pure white breast and belly (Bannerman 1962).

The Common Tern is a more complex species than the Arctic Tern. Four subspecies are recognised, all strongly migratory, but their geographical variation is clinal with tendencies for longer wings, darker grey plumage and darker bill and legs from west to east.

The nominate race (*S.h.hirundo*) is the palest race. It breeds in North America, West Indies, Azores, Canaries, Madeira, northwest Africa, Europe, USSR west of the Ob River and south of the Arctic Circle, Afghanistan, Iran, Iraq and Turkey, and it migrates south to the Straits of Magellan and the Falkland Islands, the Cape of Good Hope and Madagascar and the Persian Gulf east to at least Sind in India (Vaurie 1965). In breeding dress the upperparts are dove-grey, the underparts (breast and belly) pure white, the legs and feet vermilion and the bill orange-red with a black tip (Bannerman 1962).

The race breeding in central and southern Siberia, and wintering presumably in southeastern Asia (*S.h.minussensis*), grades into nominate *hirundo* in the west and *longipennis* in the east. It averages slightly darker above and below than nominate *hirundo* and, though the colour of the bill, legs and feet varies individually, it always has a blacker bill than nominate *hirundo* and its legs and feet are usually brownish rather than red (Vaurie 1965).

The Eastern Common Tern (*S.h.longipennis*), breeding in northeastern Siberia and wintering in Indonesia, New Guinea, the Louisiades and the Solomons (Dementiev & Gladkov 1951) and Australia (Blakers *et al.* 1984), averages slightly darker than *minussensis*, the bill being wholly black in nearly all birds and the legs and feet varying from reddish brown to dark brown or black (Dementiev & Gladkov 1951, Vaurie 1965). A photograph in Coates (1977) shows this variation in leg colour well.

The fourth race (*S.h.tibetana*), which breeds in high central Asia — Turkestan, Tibet and Ladakh — and winters in India, is the race with darkest plumage, being darker above and below than *minussensis* and *longipennis*, but the colour of the bill, legs and feet is similar to that of nominate *hirundo* (Vaurie 1965).

Having learned all this, the anomalies in the description of the Rangitaiki tern can be understood. It presumably belongs to one of the eastern races *minussensis* or *longipennis*. Although *tibetana* is a grey bird, its bill, legs and feet are similar in colour to nominate *hirundo*. Even in winter dress this race, like nominate *hirundo*, retains some red at the base of an otherwise black bill (Henry 1955, Ali & Ripley 1981). As *minussensis* is not monotypic but grades from nominate *hirundo* in the west to *longipennis* in the east, the Bay of Plenty tern could be a bird from the eastern range of this race. However, it is far more likely to have been a *longipennis*, which is a regular migrant to the east coast of Australia. At least some authorities no longer recognise *minussensis* as a valid subspecies (Cramp 1985). This would place the Rangitaiki bird even more surely in the *longipennis* camp.

Dementiev & Gladkov (1951) stated that "It is noteworthy that the subspecies *S. h. longipennis* resembles [nominate *hirundo*] even less than the Arctic Tern does." It is certainly a very different-looking bird from any nominate *hirundo* that I have seen in Europe. The only illustration of *longipennis* in breeding dress that I could find in the literature was that in Sonobe *et al.* (1982), and this matched the Bay of Plenty bird. Photographs of the same race in non-breeding plumage taken in Australia may be seen in Simpson (1972), Wade (1975) and *Complete Book of Australian Birds* (1977).

The Common Tern is now recognised as a regular austral summer migrant to Australia. As recently as 1940, Hindwood wrote, when mentioning the three Common Terns collected by Roy Bell on Lord Howe Island in February 1915, "There are no authentic records from Australia". Four years later the Common Tern's occurrence in Australia was first reported (Hindwood 1944). Over the next 20 years reports trickled in, which resulted in Hitchcock (1965) stating that "These data suggest that south-eastern Australia is a minor wintering area for the black-billed race *S. h. longipennis*". Neither Dementiev & Gladkov (1951) nor Vaurie (1965) mentioned Australia as a wintering ground. In the last 20 years a remarkable increase in this species has been recorded in Australia, no doubt partly due to more, and better informed, observers looking for it. There is evidence to support this view in the form of allusions to the occurrence of *longipennis* in northern Australia (Robert Hall in Hitchcock 1965) and the probable misidentification of *Sterna frontalis (striata)* at North-west Cape, Western Australia, in the summer (Carter 1904 in Hitchcock 1965). It may however, reflect an extension of the bird's non-breeding range, a population increase, or both.

The easternmost race *longipennis*, which breeds in northeastern Siberia south of the Arctic Circle, is an abundant passage migrant in April-May and August-September through Korea (Gore & Won 1971) and Japan (Sonobe *et al.* 1982) but is rare in Hong Kong (Herklots 1967). It does not appear to have been recorded with any frequency in Borneo (Symthies 1981) or the Philippines (du Pont 1971), and yet Indonesia, especially the Sunda Islands, is said to be a main wintering ground (Dementiev & Gladkov 1951). Though Vaurie (1965) described eastern India south to Ceylon as a wintering ground of *longipennis*, neither Henry (1955) nor Ali & Ripley (1981) mention any subspecies but *tibetana* and nominate *hirundo* as occurring in this area. Perhaps, as Finch (1982b) suggests, Vaurie was wrong and the wintering grounds of *longipennis* may be entirely within the Australasian region. It has been recorded in Guam (Bourne 1964) and is described as a passage migrant through the Palau Group in Micronesia by Mayr (1945). Papua New Guinea is a major wintering area, where it is often abundant (Coates 1977, Finch 1982a,b) and it is a common summer migrant to the northern Solomons (Hadden 1981). After plotting any definite records of *longipennis* that he could find in the literature, (Finch 1982b) concluded that "if a line of longitude were taken from just west of Korea to New Guinea, then continuing east of that line down the coast of Australia, the bird would be encountered west of that line only as a vagrant." A race of the Common Tern is a rare visitor to Fiji (Watling 1982) and though this is most likely to be *longipennis* it is not certain. Hannecart & Letocart (1980, 1983) have not recorded the Common Tern in New Caledonia.

Apparently *longipennis* is the race that migrates most commonly to northern and eastern Australia, from Port Hedland to South Australia, being seen, at least occasionally, in flocks of 1000 or so (Blakers *et al.* 1984). On October/November visits to southeast Australia I found it, in tens rather than hundreds, about Montague Island, Bermagui and Tathra, New South Wales, in 1984 and Apollo Bay, Victoria, in 1980. In the Port Hedland area of Western Australia the species is "plentiful and regular from early September to late April", with predeparture flocks of up to 800-1000 birds (J. Darnell *in* Serventy & Whittell 1976), though it does not seem to have been determined which race, or races, are involved. Some birds are known to remain in New Guinea and Australia through the winter (Finch 1982a,b; Blakers *et al.* 1984).

Two of the nominate *hirundo* have been recorded in Australia, both wearing bands, one from Sweden found near Fremantle and one from Northern Ireland found in Victoria (Serventy *et al.* 1971). Two other birds of the same race, again wearing bands, but with a North American origin, have been recovered in the central Pacific — one in the Cook Islands from Saskatchewan and one in Hawaii from Michigan (Hitchcock 1965). A specimen from Goolwa, South Australia, has been identified as *minussensis* (Blakers *et al.* 1984) and others from that area are suspected to be of this race (Eckert 1969). The bird from Buckland Park, Port Gawler, South Australia, originally thought to be of the race *turkestanica* (Hitchcock 1965), which is no longer recognised (Bannerman 1962), may well have been a specimen of *minussensis* too. The race *minussensis* is only presumed to winter primarily in South-east Asia, though the description of the Common tern found in that region certainly fits that race (King *et al.* 1975). It may well be that a sizeable percentage of the regular wintering flocks of Western Australia are also of this race. While studying the literature it became apparent to me that there is a lack of precise knowledge of the winter quarters of the various races of the Common Tern.

As the Common Tern is now so commonplace in eastern Australia each year, it is not surprising that one has been seen here. Indeed after examining the Rare Birds Committee file on "commic" terns I found that there has been a steady trickle of unconfirmed reports over the last 10 years or so:

Waitangi River estuary, 25/4/72, a single bird (Giblin, Taylor & Todd).

Walker Beach, Point Chevalier, Auckland, a single bird considered to be a Common Tern, 21/11/80 (Jowett).

Lake Horowhenua, five "commic" terns two of which were thought to be Common Terns, 29/11/80 (Heather & Gollop).

Waiwhatawhata Beach, Hokianga, a single bird which may have been a Common Tern, 30/11/80 (Bettesworth).

Palliser Point, a flock of 12-13 birds some, if not all, of which were thought to be Common Terns, 29/10/81 (Squire & Fawcett).

Waikanae River mouth, a single bird tentatively identified as an Antarctic Tern but the description given would fit an Arctic or Common Tern equally well, 8/11/81 (Tennyson).

Lake Ferry, Palliser Bay, a single bird thought to be a Common Tern, 8/4/82 (Heather & Squire).

Some of these, almost certainly, were Common Terns, the descriptions of the Walker Beach, Palliser Point and Lake Ferry birds being particularly fitting. In addition to these was the finding of the fragmentary remains of a bird, thought to be of this species, at Karekare, Auckland west coast, on 23 August 1959 (Falla *et al.* 1979). Note that all the above sightings, except for the late October one, have been made in November or April.

Hitchcock wrote in 1965 "An additional aim [of this paper] is to alert coastal observers in eastern and south-eastern Australia, and in New Zealand, to watch more closely for the species . . ." It has taken 20 years since then to record positively the first Common Tern in New Zealand; I suspect that it will not be long before we have more.

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P. C. M. LATHAM, *c/o Papamoa Beach Post Office, via Te Puke, Bay of Plenty*



SHORT NOTE

Second New Zealand record of the Bird of Providence

On 22 September 1984 I found a beach-wrecked Bird of Providence (*Pterodroma solandri*) on the west coast of Northland between Maunganui Bluff and Omamari. The bird was identified by D. E. Crockett and subsequently the identification was confirmed by M. J. Imber. This is only the second record of this species in New Zealand, the first being that found by Falla on Muriwai Beach in January 1921. The specimen from Northland is now held at the National Museum.

Description: Back grey-brown. Head dark brown. Uppertail brown. Face and forehead freckled. Belly white in centre, grey on sides — each feather mostly white with a 10 mm grey tip on the end. Small pale tip right on the end of some feathers. Underside of tail grey-brown.

Underwing: primaries grey-brown on outer vane and tips, paler to white on basal half of inner vane.

Feet: black — paler at base of toes
Legs: paler — brown
Bill: black — large

Measurements (mm)
Culmen: 33.22
Bill width: 14.40
Bill depth: 16.08
Tarsus: right 42.14, left 41.36
Mid-toe & claw: right 59.0, left 59.10
Wing: 310
Length: 420

PATRICK MILLER, 29 Murdoch Crescent, Whangarei

BIRDS OF THE SOLANDER ISLANDS

By W. J. COOPER, C. M. MISKELLY, K. MORRISON
and R. J. PEACOCK

ABSTRACT

Birds observed on the Solander Islands 25-27 July 1985 are discussed in relation to previous records from the islands. Black Shag, Banded Rail, Song Thrush and Greenfinch have not been reported previously.

Solander Island had a major colony of Buller's Mollymawk, with an estimated 4000-5000 pairs. A further 300 pairs bred on Little Solander Island, which also had a large colony of Common Diving Petrels. On Little Solander, New Zealand's southernmost gannet colony, were 20-30 Australasian Gannets. Red-crowned Parakeets seem to have displaced Yellow-crowned Parakeets on the Solander Islands since 1948.

The faunal relationships of the Solander Islands are discussed, as is the apparent effect of predation by introduced weka on Solander Island.

INTRODUCTION

The Solander Islands lie in the western entrance to Foveaux Strait 40 km south of the South Island and 60 km west-north-west of Stewart Island, at 46° 35' S, 166° 52' E (Fig. 1). The islands (Fig. 2) are the eroded remains of an andesitic volcano (Harrington & Wood 1958). The larger, Solander Island (100 ha, Fig. 3) is roughly triangular, about 1.5 km across and 340 m high, with very steep slopes and a small summit plateau. The shoreline consists of boulder beaches and rock platforms contained within steep headlands. Little Solander Island (Fig. 4), 2 km to the west, is about 8 ha and rises to 180 m. It has cliffs to the south and west but slopes to the north and east are less steep.

The islands were discovered by Captain James Cook in March 1770 and named after Dr Daniel Solander, a botanist aboard his vessel. During the first decades of the 19th century sealers visited the islands, with one gang marooned on Solander Island from 1808 to 1813 (McNab 1907). Despite their activities and more recent open seasons up to 1946, Solander Island still holds New Zealand's largest colony of fur seals (*Arctocephalus forsteri*); 5000 were estimated in January-February 1973 (Wilson 1981).

Blanket peat covers both islands, except on steep slopes, where slips have formed fans of peat, pebbles and grit. On Solander Island the debris fans and slopes above are covered in extensive areas of *Poa foliosa* but the steeper exposed slopes are clothed in *P. astonii* and *Anisotome lyallii*. Many of the steepest cliffs and headlands are bare. *Olearia lyallii* dominates the plateau, with *Senecio stewartiae* around the periphery. Under the 6 m canopy are tall ferns of *Blechnum durum*, *Asplenium obtusatum* and *Polystichum vestitum* and extensive waist-high clumps of the large-leaved punui (*Stilbocarpa lyallii*).

The flora of Little Solander Island is less diverse. Dense *P. foliosa* grassland covers the eastern side, except where *Hebe elliptica* shrubs occur in gullies. A 2-3 m scrub of *S. stewartiae* and *H. elliptica* predominates on the northern slopes. Moister gullies and breaks in the canopy are filled with a lush growth of *P. foliosa*, *Stilbocarpa robusta* (elsewhere known only from The Snares) and some *Asplenium obtusatum*. *Poa astonii* predominates on drier soils on the summit ridge, rock outcrops, and along cliff margins. Much of the south side of the island is vertical and bare, but the very steep upper slope has a perched cover of *P. astonii* and shrubs of *Hebe* and *Senecio*.

There are no introduced mammals on either island.

The Solander Islands were included in Fiordland National Park in 1959 and were gazetted as a specially protected area in September 1973. Entry to the islands is by permit only.

Scientific visits have been few and usually brief.

Captain and Mrs J. Bollons landed on Solander Island in 1908 and collected plants (Cockayne 1909) and some rocks (Speight 1909). E. F. Stead spend an hour ashore in 1933 (Falla 1948). Sir Robert Falla made four landings on the islands: in December 1947, July 1948 (during which an ascent was made of Little Solander Island), May 1950, and May 1956. After a visit in February 1957, Harrington & Wood (1958) described the geology. G. T. S. Baylis visited Solander Island on 27 October 1958 (Johnson 1975). In January-February 1973, G. J. Wilson camped on Solander Island for several days and subsequently reported on the birdlife (Wilson 1973). A party organised by Fiordland National Park staff visited Solander Island for 16 days in November 1973 (Johnson 1975; Nilsson, R. J., 1974. Solander Island expedition 10-25 Nov 1973. Unpubl. report. NZ Wildlife Service). Johnson, Nilsson and A. Cragg visited Little Solander Island for a night in November 1976 (Johnson 1982; Cragg, A., 1976. Unpubl. report on Preservation Inlet/Solander Islands. Fiordland Nat. Park). Two of the authors visited Solander Island for two days in February 1984 (Cooper & Morrison 1984).

We visited both islands between 25 July and 27 July 1985. WJC and CMM were landed on a small terrace about mid-way up the eastern slopes of Little Solander Island, and KM, RJP and K. Gillies were landed at Eastern Bay on Solander Island (Fig. 1).

The party on Solander Island surveyed the coast and much of the lower slopes, from the south end of Eastern Bay to the north-western headland. They also climbed the cliffs behind the northern bay and traversed the summit plateau and part of the razorback ridge before descending into Eastern Bay. On Little Solander Island the eastern and northern slopes, south-east cliff top and summit ridge were all traversed.

SYSTEMATIC ACCOUNT

SOUTHERN BLUE PENGUIN *Eudyptula minor minor*

Wilson found skeletal remains at Eastern Bay on Solander Island. This remains the only record.

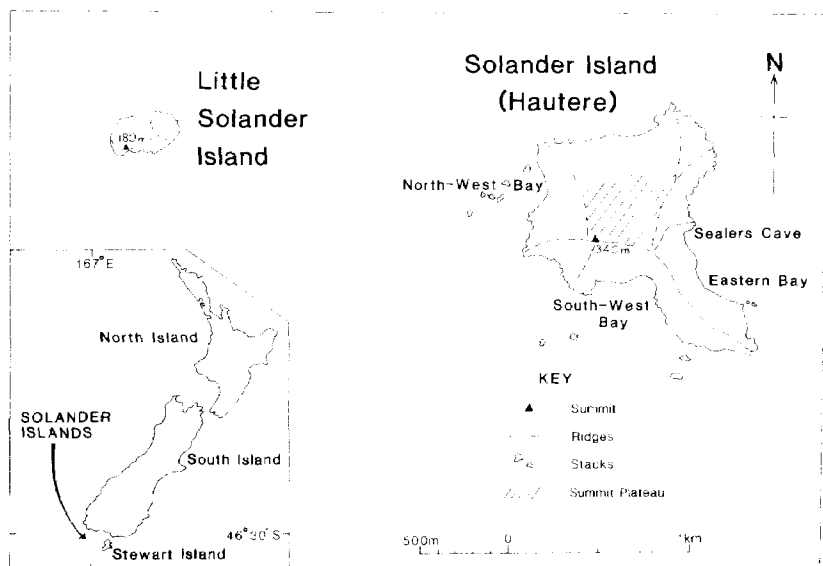


FIGURE 1 — The Solander Islands

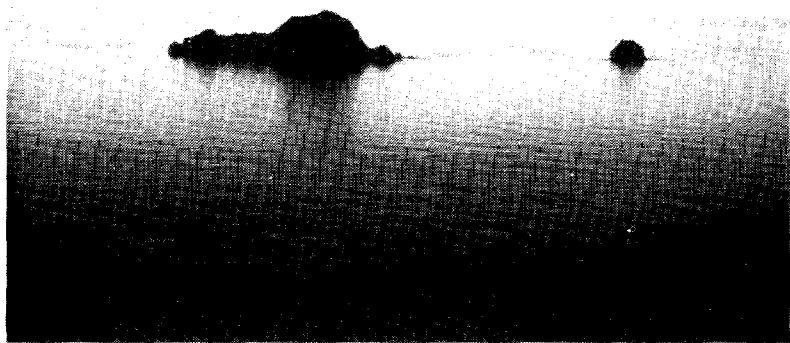


FIGURE 2 — The Solander Islands from the north-east

Photo: T. A. Paterson

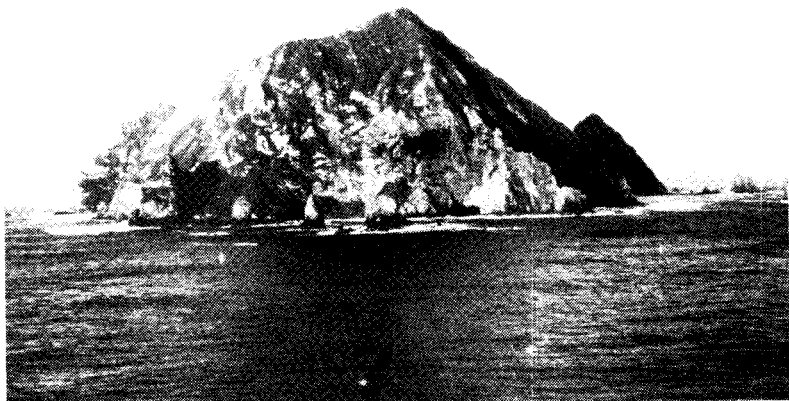


FIGURE 3 — Solander Island from Little Solander Island

Photo: W. J. Cooper, ARPS



FIGURE 4 — Little Solander Island from the south-east

Photo: C. M. Miskelly



FIGURE 5 — Buller's Mollymawk chick, Little Solander Island, 25/26 July 1985

Photo: W. J. Cooper, ARPS

FIORDLAND CRESTED PENGUIN *Eudyptes pachyrhynchus*

Ten pairs and a female were seen at nests under boulders at the south end of Eastern Bay; at least 15 adults were on nests under boulders and *Hebe* north of Sealers Cave. The nests were constructed of fresh *Poa foliosa* leaves and were without eggs. Four adults and two immatures were ashore in the northern bay.

A few Fiordland Crested Penguins have been recorded by all recent expeditions, but Falla considered them to be plentiful. Little Solander Island has no suitable landings for penguins.

SNARES CRESTED PENGUIN *E. robustus*

Single birds were reported on Solander Island by Falla, Wilson, and Nilsson. One seen by Cooper & Morrison in February 1984 was overlooked in their published account. None was seen during this visit.

BULLER'S MOLLYMAWK *Diomedea bulleri*

Buller's Mollymawks were nesting over both islands and on stacks to the south-west of Solander Island. An aerial survey of Solander Island revealed an estimated 4000-5000 pairs well distributed around the island's lower slopes. The highest densities were on the western side. Occupied nests were found up to 212 m a.s.l.

We banded 137 chicks on Little Solander Island, saw six more out of reach, and found six dead chicks. Judging by the number of empty nest sites, up to 300 pairs may attempt to breed there.

Chicks on both islands ranged in development from completely downy to near fledging (Fig. 5). Food items regurgitated by chicks included squid flesh and beaks, fish bones, aquatic and terrestrial vegetation and a sweet wrapper. Ticks (*Ixodes uriae*) were seen attached near the base of the bills of five chicks. Large terrestrial leeches (*Ornithobdella* sp.), previously known only from The Snares, were seen in the nest bowls of two of the four chicks inspected at night on Little Solander.

Falla reported mollymawks as just returning to Solander Island on 9 December 1947 and found well-grown young the following July. Wilson and Cooper & Morrison found the species nesting over most of both islands, most being on eggs in February. Nilsson saw only one bird over Solander Island in November 1973, but Cragg observed them nesting at the northern end of the island on 2 November 1976. During a brief visit to Solander Island on 28 April 1983, KM saw some Buller's Mollymawks with very young chicks.

Robertson (1984) has suggested that two subspecies of *D. bulleri* be recognised, the Southern Buller's Mollymawk (*D. b. bulleri*) breeding on The Snares and Solander Islands. The laying period for these birds is January-February, as against October-November for *D. b. platei* on the Chatham Islands. An estimated 5550 pairs of *D. b. bulleri* breed on The Snares (Warham & Bennington 1983, Miskelly unpubl. data).

NORTHERN GIANT PETREL *Macronectes halli*

Although previously recorded at South-west Bay, Solander Island, by Wilson, Nilsson, and Cooper & Morrison, none was seen during our visit.

CAPE PIGEON *Daption capense*

Cape Pigeons were seen off Little Solander Island on each day of our visit, including tight flocks of over 50 birds. One group of 10 flew past the southern cliff at about 130 m above sea level on 26 July.

Falla observed 20-30 Cape Pigeons cruising around the cliffs of Little Solander Island in December 1947 and suggested that they may breed there.

MOTTLED PETREL *Pterodroma inexpectata*

We found skeletal remains of three Mottled Petrels on the summit ridge of Little Solander Island. None appeared to have been preyed on by skuas.

Wilson recorded hearing *Pterodroma* petrels, probably this species, over Solander Island at night. Nilsson found a corpse at the southern end of Eastern Bay and identified several birds by torchlight as they flew in at dusk at South-west Bay. Cragg recorded small numbers on Little Solander Island.

BROAD-BILLED PRION *Pachyptila vittata*

Single prions were observed flying along the northern cliff of Little Solander each day, and up to six at a time were flying around the south-eastern corner in the late afternoon of 26 July. All but one of the birds identified were *P. vittata*.

Falla recorded Broad-billed Prions flying around Solander Island at dawn in July, and Nilsson believed small numbers of prions flying over South-west Bay at night to be this species. He found two corpses, and he also found burrows that may have belonged to Broad-billed Prions.

FAIRY PRION *P. turtur*

One Fairy Prion was seen in flight over the eastern slopes of Little Solander Island on 26 July. Falla found remains of this species in "skua and (or) hawk castings" on Little Solander, and Cragg reported small numbers there. Wilson found bones at Eastern Bay on Solander Island, and Nilsson found a small colony at the northern end of South-west Bay.

SOOTY SHEARWATER *Puffinus griseus*

Previous expeditions have found Sooty Shearwaters breeding in low numbers on Solander Island. None was seen during our winter visit, but a few burrows probably belonging to this species were found under *Senecio/Hebe* scrub on the northern slopes of Little Solander Island. Cragg recorded small numbers on Little Solander in November.

LITTLE SHEARWATER *P. assimilis*

We heard a Little Shearwater calling in flight over Little Solander Island at night on 26 July. Falla suggested that a small seabird seen flying out to sea from Solander Island by R. C. Murphy in December 1947 may have been this species, and he picked up the feathered wings of a Little Shearwater in July 1948. Skeletal material collected at Eastern Bay by Wilson in 1973 was apparently identified as *P. a. elegans*. The nearest known breeding grounds of *P. a. elegans* to the Solander Islands are at the Chathams and Antipodes Islands.

COMMON DIVING PETREL *Pelecanoides urinatrix*

Diving Petrels were the only burrowing petrel coming ashore on Little Solander in July. Their burrows occupied all available soil. Large numbers came ashore each evening. They were first seen at 1756 on 25 July and 1753 on 26 July and continued arriving for about two hours after dark. Birds started departing before dawn, and all had apparently gone by 0820. No burrows were inspected, but the birds appeared to be courting and cleaning burrows.

Diving petrels were the only birds recorded in the middens of Southern Great Skua (*Stercorarius skua lonnbergi*), and one was seen taken in flight by a skua.

Cragg and Johnson (Unpubl. report, 1976, Botany Division, DSIR) estimated the population on Little Solander at 250 000 to 300 000 pairs, based on two 2 m x 2 m plots in *Poa astonii* and *P. foliosa* grassland with 26 and

23 burrows respectively (Johnson 1982). Skeletal material was found on Solander Island by Wilson, Nilsson, and Cooper & Morrison. Nilsson also found an adult with an egg in a burrow about 90 m above Western Bay.

AUSTRALASIAN GANNET *Sula bassana serrator*

Two groups of gannets were on Little Solander during our stay. The larger, of up to 20 birds on 17 nests, was on a rock face on the northern ridge about 80-90 m a.s.l. (Fig. 6), and two birds were seen on two nests on a steep face below and west of the main colony, 20-30 m a.s.l. Only three pairs plus 14 singles were in the upper colony at night on 26 July, and so we presume that many females had yet to return.

Courting behaviour was observed among the larger group of gannets, with birds bringing nest material, mainly *Poa astonii* and seaweed. One pair was seen copulating on 26 July, after which the male flew away and returned three minutes later with nest material. Some birds in flight were closely followed by Southern Great Skuas and one gannet was forced to settle on the sea.

The presence of breeding gannets on Little Solander Island was confirmed by Falla; it is the southernmost known colony in New Zealand. During his visit on 20 July, Falla found 20 nests (11 in a gully, three on a spur, and six at the foot of the slope), and about 14 birds. Wilson saw two groups on 30 January; one of 19 or 20 birds on 18 nests on a steeply sloping rock face about 10 m above sea level, and the other of 20-30 birds on an exposed ridge about 70 m a.s.l. Only one colony (25 birds) was seen by Nilsson during a brief aerial reconnaissance in November 1973. Cragg



FIGURE 6 --- Part of the upper gannet colony on Little Solander Island. 26 July 1985

Photo: C. M. Miskelly

recorded two groups on 2-3 November, one of 21 birds on 17 nests and the other of 28 on about six nests, other nests being under construction. Aerial photographs taken on 14 November 1980 showed three groups with a total of 62 pairs (Wodzicki *et al.* 1984), but Cooper & Morrison saw only two groups (of 28 and six) from the air on 8 February 1984.

It is difficult to see any pattern in the counts of gannets made on Little Solander Island since 1948. Most observers have found 20-30 nests, the exceptions being the counts of Wilson and Wodzicki *et al.* Falla counted 20 nests in 1948; 37 years later we counted 19 nests. This does not support the 3.4% mean annual increase (1946/47-1980/81) suggested by Wodzicki *et al.* (1984).

BLACK SHAG *Phalacrocorax carbo*

One adult flew along Eastern Bay, Solander Island, on 27 July. This species has not been recorded before from the Solander Islands.

BLUE SHAG *Stictocorbo punctatus steadi*

Two Blue Shags seen by Wilson on the north-eastern point of Solander Island remain the only record.

REEF HERON *Egretta sacra*

There are no recent records of Reef Heron. Falla observed a pair in December 1947, and Beattie (1954) reported them as breeding early this century.

AUSTRALASIAN HARRIER *Circus approximans*

This species was seen over Solander Island by Falla but has not been recorded by any subsequent party.

BANDED RAIL *Rallus philippensis*

A rail-like call was heard from among *Stilbocarpa* and *Poa foliosa* at three localities along the northern slope of Little Solander Island. Although the birds responsible were not seen, and attempts to flush one into a net were unsuccessful, we are sure that the call was that of Banded Rail. This was probably the source of the "snipe-like" call heard by Falla and the unidentified species Cragg heard calling under *Stilbocarpa*. There are probably only three or four pairs of Banded Rail on Little Solander Island, where their habitat is restricted.

Banded Rail still occur on some of the southern muttonbird islands that lack weka and rats but have not previously been reported from the Solander Islands.

STEWART ISLAND WEKA *Gallirallus australis scotti*

We recorded weka from sea level to about 200 m on the eastern and northern slopes of Solander Island. They were common under coastal scrub, and on boulder beaches where they fed in tidewrack.

Weka were introduced to Solander Island by sealers, and are probably responsible for the scarcity of burrowing petrels and larger invertebrates there in comparison with Little Solander, and for the absence of Banded Rail.

VARIABLE OYSTERCATCHER *Haematopus unicolor*

Three black-phase birds were seen at Eastern Bay and a pair was on the north-eastern point of Solander Island. Variable Oystercatchers have been recorded by Wilson, Nilsson, and Cooper & Morrison.

SOUTHERN GREAT SKUA *Stercorarius skua lomnbergi*

Up to three skuas at a time were seen on and over Little Solander during our visit. Middens found along the summit ridge and at the foot of peat slips contained remains of diving petrels and fish.

Two skuas were seen near the stacks south-west of Solander Island on 25 July, and two circled the summit plateau at 300 m on 26 July. At Eastern Bay, one skua was observed repeatedly wheeling and hovering over a Buller's Mollymawk nest with chick.

Falla saw one or two nesting pairs in December and the occasional bird in July. Nilsson reported at least two pairs on Solander Island. Cooper & Morrison saw a skua midden on Little Solander, and an immature bird was seen there by WJC, CMM and G. J. Eller during an unsuccessful landing attempt on 16 March 1985.

SOUTHERN BLACK-BACKED GULL *Larus dominicanus*

One adult and one immature Black-backed Gull were seen frequently flying around Little Solander Island during our stay. On Solander Island, nine adults were present in Eastern Bay and five adults were seen in the northern bay.

Falla (1948) reported finding a few nests above the high-water mark at Eastern Bay. Wilson recorded the species as common and found two chicks at South-west Bay. Nilsson saw small numbers on all beaches in November 1973, and he found six nests, most of which contained three fresh eggs. Cooper & Morrison saw moderate numbers around all beaches visited and found two large chicks at South-west Bay and another along the south-eastern peninsula.

RED-BILLED GULL *L. novaehollandiae scopulinus*

We saw up to six Red-billed Gulls on the rock platform on the northern coast of Little Solander Island throughout our stay. On Solander Island, groups of up to 16 were seen.

Falla recorded Red-billed Gulls as not abundant but saw at least one breeding colony on Solander Island. Wilson found three small colonies at South-west Bay, and Nilsson found another at Eastern Bay.

WHITE-FRONTED TERN *Sterna striata*

Three White-fronted Terns were seen off Solander Island. Both Falla and Wilson saw terns offshore and on coastal rocks and suggested that the species bred on Solander Island. Nilsson saw 40 White-fronted Terns on an islet near the southern end of South-west Bay, five of which appeared to be on nests.

NEW ZEALAND PIGEON *Hemiphaga novaeseelandiae*

Although not seen during our visit, Nilsson saw two pigeons on the summit plateau of Solander Island, and Cooper & Morrison saw eight in the same area.

PARAKEET spp. *Cyanoramphus* spp.

About 15 parakeets were on Little Solander, and all of the 30-40 confirmed sightings were of Red-crowned Parakeets (*C. novaeseelandiae*). Fourteen parakeets were seen on Solander Island, of which three were identified as *C. novaeseelandiae*.

The first published account of birds on the Solanders (Falla 1948) listed only Yellow-crowned Parakeets (*C. auriceps*), which were present on both islands. Wilson stated that the parakeets observed on Solander Island "appeared to be *auriceps* as reported by Falla", but this seems doubtful in view of Nilsson's record of only *C. novaezelandiae* (8 sightings) later in the same year. Cooper & Morrison also identified only Red-crowned Parakeets (5 sightings).

Red-crowned Parakeets seem to have displaced Yellow-crowned Parakeets on the Solander Islands between 1948 and 1973.

HEDGESPARROW *Prunella modularis*

About 15 were on Little Solander Island, and birds were seen regularly in coastal scrub on Solander Island. Two were seen foraging on boulders 30 m from the scrub edge in Eastern Bay.

Falla recorded them on both islands. Nilsson found them to be common on Solander Island, but Wilson and Cooper & Morrison made few sightings.

GREY WARBLER *Gerygone igata*

Grey Warblers were found throughout the *Hebe/Senecio* scrub on Little Solander Island, the total being about 12 birds. On Solander Island they were seen on the northern and eastern slopes. All previous observers have found Grey Warblers to be widespread and common on Solander Island.

SOUTH ISLAND FANTAIL *Rhipidura fuliginosa fuliginosa*

Thirteen fantails were seen on Solander Island as singles or pairs from sea level to the summit plateau. Although Falla recorded fantails on Solander Island, Wilson did not, and Nilsson saw only one bird. Cooper & Morrison saw seven adults and one juvenile.

Fantails have not been recorded on Little Solander Island.

YELLOW-BREASTED TIT *Petroica macrocephala macrocephala*

Tits were the most commonly recorded passerines on Little Solander Island, at least 20 being present. Moderate numbers were seen throughout scrub slopes on Solander Island. Falla found Yellow-breasted Tits plentiful on both islands, and subsequent parties have found them to be widespread on Solander Island.

SONG THRUSH *Turdus philomelos*

Single Song thrushes seen on both islands during our stay are new records for the Solander Islands.

BLACKBIRD *T. merula*

One male and one female Blackbird were seen on Little Solander Island, and a male was seen on Solander Island. Falla recorded this species from both islands, although Wilson and Nilsson considered it to be uncommon on Solander Island. WJC & CMM saw a Blackbird from the air on the southern face of Little Solander Island on 16 March 1985.

SILVEREYE *Zosterops lateralis*

A few Silvereyes were on Little Solander Island during our visit, 12 being the largest group. Pairs and small parties were seen occasionally in coastal scrub and on higher slopes on Solander Island. They have been recorded previously in low numbers on both islands.

BELLBIRD *Anthornis melanura*

Bellbirds are widespread and common on Solander Island but had not previously been reported from Little Solander Island, where we saw one on 27 July.

GREENFINCH *Carduelis chloris*

A Greenfinch heard among *Hebe* at Eastern Bay, Solander Island, on 26 July 1985 is the only record from the Solanders.

REDPOLL *C. flammea*

One Redpoll was seen over Little Solander Island on 25 July 1985. Redpolls have been recorded before only on Solander Island, where Nilsson saw several small groups on the summit plateau.

STARLING *Sturnus vulgaris*

We saw a flock of 12 on Little Solander Island and 18 around the northern cliffs of Solander Island. Nilsson saw about six on Solander Island in November 1973.

DISCUSSION

The Solander Islands have close faunal and floral relationships with the Muttonbird (Titi) Islands off southern Stewart Island, The Snares, and the Chatham Islands. Of the 19 native bird species breeding on the Solanders (excluding the weka), 17 (89%) are shared with Big South Cape and neighbouring islands, 14 (74%) are shared with the Chatham Islands, and 11 (58%) are shared with The Snares. The similarities between avifaunas of these cool temperate island groups is particularly noticeable among the seabirds; indeed the breeding distributions of Buller's Mollymawk and Broad-billed Prion are almost confined to these groups.

The presence of Australasian Gannet, normally a warm temperate zone species, is an anomaly, although gannets are starting to colonise the Murumurus at the southern end of Pitt Island in the Chatham Islands (Miskelly, pers. obs.).

Counts of gannets on Little Solander Island have been made in different months and so few are comparable. No observers have recorded eggs or chicks. Efforts should be made to assess reproductive success at this isolated colony, as well as to count the adults and nests. Our observations of skua-gannet interactions suggest that the skuas may be a factor acting against an increase of gannets.

Fernbirds (*Bowdleria*) and snipe (*Coenocorypha*) are conspicuously absent from the Solander Islands, as they occur (or formerly occurred) on The Snares, Chatham Islands, and islands off Stewart Island. Weka could have exterminated these species on Solander Island, as they did fernbirds on Kundy and Jacky Lee Islands and snipe on Jacky Lee, Herekopare, Solomons and Green Islands (Miskelly, unpubl.). However, as unmodified Little Solander has enough habitat for about 50 pairs of fernbird, but no birds, it is doubtful that fernbirds ever occurred on the Solander Islands. There is some evidence that snipe were formerly on Little Solander Island (Blackburn 1965), where there is sufficient habitat for 10-20 pairs.

The introduction of weka to Solander Island more than 150 years ago has apparently had a severe effect on the avifauna. Prions, Common Diving Petrel and Mottled Petrel are scarce on Solander Island, and even Sooty Shearwater chicks may suffer predation (Cooper & Morrison 1984). Banded Rail were probably present on Solander Island, as they are known to have been displaced by weka on muttonbird islands off Stewart Island (Miskelly, unpubl.).

There is evidence that Solander Island formerly held a colony of Little Shearwater (Falla 1948, Wilson 1973). Being a winter or spring breeder it would have been particularly vulnerable to weka predation because of the lack of alternative prey. Even the decline in the numbers of Fiordland Crested Penguins since 1948 may be because of weka, which take eggs of *E. pachyrhynchus* (Miskelly, pers. obs.).

Solander Island is an important breeding ground for New Zealand fur seal and Southern Buller's Mollymawk. Nearly half the population of *D. b. bulleri* breeds on the Solanders. Little Solander Island is one of the few unmodified islands in the New Zealand region. In addition to the small gannet colony, Little Solander has a significant colony of Common Diving Petrels.

ACKNOWLEDGEMENTS

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SHORT NOTES

Observations on the food of the Southern Giant Petrel near Davis, Antarctica

Hawker Island, 68°35'S, 77°50'E, is 300 m off the mainland 7 km south of Davis, Antarctica. It has the southernmost breeding colony of Southern Giant Petrels (*Macronectes giganteus*), consisting of 30-40 pairs (Johnstone *et al.* 1973). I collected boluses from the ground around the nests of giant petrels during banding visits in February 1984 and February 1985. The boluses were washed before sorting and were preserved in 70% ethanol for identification later. Bird components were identified by feathers and by comparison with skeletal material from known birds. Seal hair was identified by comparison with hair taken from dead and moulting seals.

The boluses contained remains of birds, seals and fish, birds being the most common (Table 1). Remains of Adélie Penguins (*Pygoscelis adeliae*), Southern Fulmars (*Fulmarus glacialisoides*) and Snow Petrels (*Pagodroma nivea*) occurred in 82%, 10% and 10% of boluses respectively. Fish remains occurred in 13% of boluses and remains of Weddell seals (*Leptonychotes weddelli*) in 12% of boluses.

TABLE 1 — Frequency of occurrence of food remains in boluses (n = 60)

Remains	Number	%
Birds		
Adelie Penguin	49	81.7
Southern Fulmar	6	10.0
Snow Petrel	6	10.0
Southern (Silver-grey) Fulmar	6	10.0
Antarctic Petrel	1	1.7
Cape Pigeon	1	1.7
Wilson's Storm Petrel	1	1.7
Mammals		
Weddell Seal	7	11.7
Elephant Seal	2	3.3
Fish	8	13.3
Other		
Cephalopod	2	3.3
Nematode	1	1.7
Stones	4	6.7

The sampling method I used is inherently biased towards large prey with indigestible remains. Johnstone (1977), for example, found that fish, cephalopods and crustaceans occurred less in boluses than in regurgitated stomach contents of both chicks and adult Southern Giant Petrels.

Colonies of Adélie Penguins are on Hawker Island and surrounding islands, and so one would expect penguin remains to be a common item in boluses. Penguin remains were also the most common food item reported from Terre Adélie (Mougin 1968), Signy Island, South Orkney Islands (Conroy 1972), Macquarie Island (Johnstone 1977) and South Georgia (Hunter 1983).

Mammalian remains occurred in 15% of boluses. Mougin (1968) reported mammalian remains in 28% of stomach contents, and Hunter (1983) reported them in 2% of chick regurgitations. Despite frequent visits to the main Weddell seal pupping site near Davis, I seldom saw giant petrels and never more than one at a time, whereas Conroy (1972) reported Weddell seals to be important in the diet at Signy Island. Hunter (1983), however, found few Southern Giant Petrels feeding on fur seal (*Arctocephalus gazella*) carrion at South Georgia, whereas he commonly found Northern Giant Petrels (*Macronectes halli*) at carcasses. I observed a dead elephant seal (*Mirounga leonina*) near Davis which attracted about 30 giant petrels, but they removed only a small amount of the flesh and stayed for less than a week, a finding similar to those of Johnstone (1979) and Hunter (1983).

Cephalopod remains were found in only two boluses (3%), which contrasts with frequencies of occurrence of 72% from Signy Island (Conroy 1982) and 22% from continental Antarctica (Mougin 1968). Although cephalopod beaks may be represented less in boluses than in regurgitations (Johnstone 1977 reported a frequency of 16% in boluses and 28% in regurgitations on Macquarie Island), the 3% reported here seems very low. The availability of squid in the Davis area may therefore have been low. In food studies near Davis of Weddell seals, Emperor Penguins (*Aptenodytes forsteri*) (Green in press) and Adélie Penguins, I found cephalopod remains less frequently than reported elsewhere.

The frequency of fish in this study (13%) is higher than reported by Mougin (11%), Conroy (4%), Johnstone (10%) and Hunter (6%). Fish vertebrae occurred in two boluses and were from benthic fish.

The Southern Fulmar remains in some boluses are of interest as the nearest colony of these birds is in the Rauer Islands, 25 km to the south. Boluses of the Antarctic Skua (*Stercorarius maccormicki*) from sites close to Davis had no Southern Fulmar remains, whereas they were common in skua boluses at the Rauer Islands (pers. obs.). This information, together with sightings of giant petrels in the Rauer Islands, indicates that the terrestrial foraging range of giant petrels is greater than that of skuas within the Davis area. Whereas skua nests are mainly dispersed around bird colonies, where they defend feeding territories, giant petrels nest communally and presumably do not defend feeding sites. The giant petrels may therefore have to forage further for their food.

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A survey of the Lower Arawata River

For 20 years I have been making periodic bird surveys of the braided riverbeds of Central Otago and have often felt that a similar one of the Arawata was justified. The current banding programme for the Banded Dotterel (*Charadrius bicinctus*) gave added incentive to the project as I anticipated finding some of them there.

The Arawata arises in a huge catchment draining the western glaciers and snowfields of the Main Divide immediately south of the Aspiring region (including the Bonar Glacier of Mt Aspiring itself), and it reaches the Tasman Sea at Neils Beach, a few kilometres north of the Jackson Bay settlement. (As with most South Westland rivers, the mouth is a well-frequented whitebaiting area). The broad level valley of the lower Arawata begins where the river tumbles from the mouth of the formidable Ten-Hour Gorge, some 50 km from the sea; the valley floor then varies in width from a few hundred metres to nearly 3 km, most of this (especially since 1979) being occupied by the shingly bed of the river itself. The grassy grazing flats and more or less stable scabweed islands and terraces have been considerably reduced in recent years by major flooding, especially 'old man' floods in the autumns of 1979 and 1982 and several weeks of persistent high flooding in the summer of 1984. These changes have undoubtedly affected birdlife, particularly Banded Dotterels and oystercatchers, which prefer the 'stable' scabweed areas of riverbeds rather than the vast expanses of clean flood-washed shingle which now characterise this riverbed. For this reason the upper reaches (14 Nov in Table 1), with smaller river volume and hence more traditional habitat intact, was the most productive of bird numbers and densities.

Having failed in negotiations for a jetboat, I decided to fly into the valley. Even though three airstrips are marked on map S.106, none is now usable because of the flooding mentioned above; landing is possible only on the shingle beaches of the riverbed itself, when water levels are low enough;

a dry spring this season made such an approach possible. We flew in a Cessna 185 from Makarora airstrip and landed on the riverbed about 2 km below the Ten-Hour Gorge, walked up to the start of the flats and began to count at 10 a.m. on 14 November 1985. It took 2½ days to reach the sea coast. I believe this to be the first time that this river has been thoroughly examined for birdlife.

Map reference: NZMS 1/S.97 Jackson Bay & S.106 Aspiring.

TABLE 1 —

Date	Nov. 14	Nov. 15	Nov. 16		
Times	1000-1830	0710-1730	0820-1400		
Stretch covered	Mouth of Ten-Hour Gorge to Waipara Inc.	Waipara Inc. to Main Rd bridge	Bridge to mouth & S. side of spit		
Distance (km)	17.5	24	7.5		
Weather	Fine, v. warm; strong upval. wind in p.m.	O'cast. cool, calm; light upval. wind in p.m.	O'cast, dull, cool; NW showers.		
Visibility	Excellent	Good	Poor		
Species				Totals	Comments
Black-backed Gull	35	24	98	157	Scattered throughout, but no breeding colonies
Caspian Tern	—	—	1	1	Near river mouth
Black Shag	9	3	2	14	
Spotted (or Blue?) Shag	—	—	8	8	Roosting on N. spit; too distant to determine subspecies
Paradise Duck	167	113	4	284	Commonly paired, many with ducklings; broods of 4 to 12 seen.
Grey Duck	11	17	—	28	No broods seen.
Mallard	—	2	—	2	
S.I.P.O.	39	26	19	84	Pairs throughout, mostly with nests or chicks
Variable Oystercatcher	—	—	2	2	Near river mouth
Banded Dotterel	123	84	11	218	Mostly with chicks — at least 9 at flying stage
Spur-winged Plover	69	34	4	107	Mostly with chicks
Pukeko	—	6	—	6	About 1 km above bridge on true right
Harrier	1	1	—	2	
Falcon	—	1	—	1	
Welcome Swallow	—	2	1	3	See under 'Discussion'

Recorded but not tallied

On the riverbed: Yellowhammer, Chaffinch, Starling, Skylark

In adjacent scrub/forest communities: Blackbird, Song Thrush, NZ Pigeon, Kaka, Kea (1), Tui, Bellbird, Shining Cuckoo, Long-tailed Cuckoo, Tomtit, Fantail, Grey Warbler, Silvereye, Morepork

Results

1. On the valley floor, and compared with most Central Otago riverbeds, there was a notable absence of Redpoll, Pipit, White-backed Magpie, Pied Stilt, Black-billed Gull, Shoveler, Canada Goose, Black Swan, White-faced Heron, and Black-fronted Tern.

There were vast areas of typical Wrybill habitat, but none were seen. Near the river mouth and on the spit we might have expected White-fronted Tern and Red-billed Gull. However, the south side is relatively unstable and subject to spring-tide flooding; the north side looked more promising in stability and vegetative cover but, owing to the size of the river, was inaccessible to us.

2. Density for all species lumped together was approximately as follows:

Day 1: 26 birds/km

Day 2: 13/km

Day 3: 20/km (but mostly mobile Black-backed Gulls; without them density was 7/km)

The down-valley decline was due mostly to habitat deterioration from flooding.

3. Paradise Shelducks were the most numerous species; they are obviously thriving and breeding very successfully, broods of up to 12 being recorded. Although Black-backed Gulls were scattered throughout, we were surprised to find neither solitary nests nor breeding colonies.

South Island Pied Oystercatchers were in reasonable numbers and breeding successfully; we checked most of them for leg bands but found none. We were pleasantly surprised to find a considerable number of Banded Dotterels; most had chicks, but a few full 3-egg clutches were seen. At least nine chicks had reached the flying stage. RM caught and colour-banded one female adult and two near-flying chicks. PC saw an adult male, colour-banded and orange-dyed, on the river bed opposite the Gallery Hut (44°09.5'S, 168°42.5'E), mated with an unbanded female. More than 90% of the adult Banded Dotterels were checked for leg bands.

4. Two Welcome Swallows were seen by DM and PC flying over marshy ground and resting on fence posts in the vicinity of Gallery Hut. On a horizontal beam inside a lean-to of this old hut was one nest containing two eggs, and a second half-built nest of damp mud. A single bird was flying among the cottages at Neils Beach near the river mouth.

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CLASSIFIED SUMMARISED NOTES, NORTH ISLAND

1 July 1984 to 30 June 1985

Compiled by L. Howell

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Abbreviations: asl. above sea level; BoP. Bay of Plenty; B. Beach; E. estuary; FP. Forest Park; FoT. Firth of Thames; H. Harbour; HQ. Headquarters; imm/s. immature/s; juv/s. juvenile/s; I. Island; L. Lake; Lag. Lagoon; NP. National Park; Pen. Peninsula; Res. Reserve; R. River; SF. State Forest; SP. Sewage Ponds; [. . .] Reports not yet received by Rare Birds Committee.

NOTE: Manukau Harbour and FoT census dates are in July 1985.

BROWN KIWI *Apteryx australis*

Maunganui Bluff, 1 dead on beach on 22/9 (PM). Tapora, releases of birds from Northland, 1 on 18/8, 2 on 13/10 (KW). Ponui I., Hauraki Gulf, calling in dense bush on 6,7/4 (MJT).

BLUE PENGUIN *Eudyptula minor*

Sandspit to Little Barrier, 98 on 28/12 (TGL). Waitarere B., 1 tangled in fishing net on 23/12 (BA).

NEW ZEALAND DABCHICK *Podiceps rufopectus*

Aupouri Pen., 32 on Jan. survey (AVH). Round Hill L chain, 4 on 23/2; Burgess' L, Te Maire, 2 on 24/2; L Wainui, 6 on 24/2 (PM, KM). L Ototoa and adjacent lakes of S Kaipara Head, 33 plus 1 chick on OSNZ survey on 10/2 (MJT). Tuakau SP, 1 on No. 1 pond on 21/4 (BB). Hamilton, University L, 1 on 25/5 (FN); Rose Garden, 1 on 18/5 (AL). L Rototua, Mokoia I, 1 on 19/5 (PB). Tongariro R. below Whitiakau confluence, 1 on 10/6 (WA). Matata Lag, 1 on 1/6 (PCML). Thornton Lag, 6 on 3/5 and 30/6 (RMW). Westshore Lag census, 4 on 14/7; L Tutira, 6 on 15/3; Te Awanga Ls, 9 on 20/4 (KVT). Te Mahanga, 2 on 15/6 (JLL, CFM, KVT). Pohangina R end No. 1 line, 2 adults, 2 chicks on 3/2 (RJW). L Purimu, 6 on 17/11. Wallingford, 2 pairs in roadside swamp (BDH). Waitotara E. 1 on 1/6; Westmere farm pond, 1 on 27/4 (PB). Marton SP, 2 on 22/10 (BDH). L Horowhenua, c. 60 on 25/6; Ohau R. lake near mouth, 10 on 28/7; (WRJ). Waitare corner, south beside SH1, 2 from Jan to Mar (JLM, MM, WRJ). Foxton No. 1 L, 7 on 1/1 (JLM, MM). Masterton SP, 21 on 9/9, 31 on 27/1. Waingawa SP, 4 on 27/1. L. Wairongomai, 8 on 27/7, 12 on 3/3; Ohau B lag, 8 on 27/7, 2 on 2/3; L Papaitonga, 0 on 27/7 (BDH).

AUSTRALIAN LITTLE GREBE *Tachybaptus novaehollandiae*

L Wahakari, 2 on 1/11 (VH). Reservoir L, 1 on 27/1 (AVH). L Kereta South, South Kaipara Head, 1 on 10/2 (BAE), 1 on 13/2 (KRB, MJT).

WANDERING ALBATROSS *Diomedea exulans*

Otane, 1 blown inland during easterly gale on 16/3, successfully released (HR). Foxton B, 1 dead on 28/10 (JLM, MM).

ROYAL ALBATROSS *D. epomophora*

L Wairapa, 1 blown inland during southerly storm, sitting in backwater, flew off strongly towards the middle of the lake after first hitting a fence, 19/5 (RGP, HAR).

NEW ZEALAND BLACK-BROWED MOLLYMAWK

D. melanophrys impavida

Papamoa, 1 adult blown ashore on 5/7, died soon after; Mt Maunganui, 1 sub adult freshly dead on 31/12 (PCML, KF).

BULLER'S MOLLYMAWK *D. bulleri*

Hukuwai B, 1 dead on 23/9 (WMH).

GIANT PETREL *Macronectes* sp.

Napier foreshore, 1 wearing a Cape Town band, in an exhausted state, 2/5 (KVT). Wanganui, Castlecliff, 1 passing on 3/10 (PB). Foxton B, 1 flying north on 7/10; Ngauranga, single birds on 14/9 and 8/1 (JLM, MM).

CAPE PIGEON *Daption capense*

Dargaville West Coast, 1 ashore alive on 5/8 (PM). East Coast Bays, Auckland, 1 heading seaward on 22/7 (TGL).

GREY-FACED PETREL *Pterodroma macroptera*

Murimotu I, 1 found dead among flax on 21/10 (PM, KM). Dragon's Mouth Cove, Hen I, numerous overhead after dark on 8/7, noisy overhead on 24-27/4; Stanley I, a common breeding species, eggshells lying about suggested that eggs had hatched on 20-23/7 (TGL).

SOFT-PLUMAGED PETREL *P. mollis*

Hukuwai B, 1 dead on 13/11 (WMH, PCML).

COOK'S PETREL *P. cookii*

Little Barrier I, western side, scores on 5/12, large numbers on 13/12; Takatu to Little Barrier I, 125 on 28/12, hundreds on 11/1; Maori Passage, Kawau Bay end, not often seen but 1 flying seaward on 11/1; Little Barrier I to Leigh, 44 on 7/2; Great Barrier I, Port Fitzroy, calls of incoming birds heard after dark on 13/2; Little Barrier I, an occupied burrow near the foot of the Valley Track hill only 50 m asl.

In summer 1984-85 (TGL). Te Ahumata, 2 corpses near the old silver mines on 11/5 (PM, KM).

KERGUELEN PETREL *P. brevirostris*

Dargaville West Coast, alive on beach on 5/8 (PM, KM).

BLUE PETREL *Halobaena caerulea*

Dargaville West Coast, alive on beach on 5/8 (PM, KM).

LESSER BROAD-BILLED PRION *Pachyptila vittata*

Dargaville West Coast, 2 alive on beach on 5/8 (PM, KM).

ANTARCTIC PRION *P. salvini*

Dargaville West Coast, 2 alive on beach on 5/8 (PM, KM).

NARROW-BILLED PRION *P. belcheri*

Dargaville West Coast, alive on beach on 5/8 (PM, KM).

FAIRY PRION *P. turtur*

Dargaville West Coast, alive on beach on 5/8 (PM, KM).

GREY PETREL *Procellaria cinerea*

Foxton B, several parties of 5 or 6 passing north on 6/10, 50 passing north on 23/1 (JLM, MM).

BLACK PETREL *P. parkinsoni*

Cape Barrier to Cuvier I, up to 5 following astern of *Te Ra* on 19/2; Takatu to Little Barrier I, several following astern on 28/3 (TGL, BB). Hirakimata, one at 6.10 p.m. at the summit on 2/5, droppings of others seen along Palmer's Track on 3/5 (PM, KM).

WESTLAND BLACK PETREL *P. westlandica*

Wanganui South B, 1 after 2 days of gales on 16/5 (PB).

FLESH-FOOTED SHEARWATER *Puffinus carneipes*

Leigh to Little Barrier, c. 280, some on the water among dolphins (*Delphinus*), on 7/2; Cape Barrier, c. 8 km to the east, a swirl of c. 1000, some taking small silvery fish c. 100 mm in length on 19/2 (TGL).

BULLER'S SHEARWATER *P. bulleri*

Leigh to Little Barrier, 88 on 7/2 (TGL).

SOOTY SHEARWATER *P. griseus*

Dargaville West Coast, 1 km offshore on 16/3 (PM). Leigh to Little Barrier, 4 singles heading north on 7/2 (TGL). Wanganui, South B, c. 8 close inshore after 2 days of gales on 3/9 (PB).

FLUTTERING SHEARWATER *P. gavia*

Bream Head to Hen I, quite common on 8/7; Tiritiri Matangi I, just south c. 30 on 22/7 (TGL). Great Barrier I, large flocks at various points from Miners Head to Cape Barrier in May (PM, KM). Coromandel Pen, north of Colville, c. 1000 feeding offshore on 4/7; Motokawau, 25 on 9/11 (JB). FoT, off Wharekawa, some thousands in rafts and hundreds flying up and down in great lines after a storm on 24/2 (BB, BJB, ND). Foxton B, recorded offshore from Dec to Jan, maximum count 1200/hour passing south on 24/2; Pt Nicholas, present intermittently from 14 July to 24 Oct, max c. 500 on 3/9, c. 50 in Jan and c. 300 after storms on 17/5 (JLM, MM).

LITTLE SHEARWATER *P. assimilis*

Hen I, 3 heading south on 8/7; Dragon's Mouth Cove, Hen I, odd birds calling before dawn on 10/7, quite vocal overhead after dark on 24-27/4; Stanley I, vocal overhead with a few coming ashore after dark, some eggshells near small burrow entrances, appeared to belong to this species on 24-30/7 (TGL).

WHITE-FACED STORM PETREL *Pelagodroma marina*

Little Barrier I to Takatu, 8 on 20/8, 4 on 11/1; Little Barrier I to Leigh, 7 on 13/12; Takatu to Little Barrier I, 9 on 28/12 (TGL). Coromandel Pen, The Cow I, nesting in hundreds, one headless on 1/12 (DMW).

DIVING PETREL *Pelecanoides urinatrix*

Bream Head to Hen I, 69 on 8/7; Taurikura to Hen I, c. 250 on 11/7; Leigh to Little Barrier I, 6 on 5/11 (TGL).

AUSTRALASIAN GANNET *Sula bassana serrator*

Muriwai, Motutara, top already packed, 2 pairs prospecting mainland cliff on 9/9 (RBS). Muriwai, mainland cliff, 10 on eggs 7/1 (JES), 7 fluffy chicks in Feb (MJT). Horuhoru I, Hauraki Gulf, c. 2000 at the colony on 11/11; Manukau H census, 21 winter (BB). FoT, c. 14 feeding offshore on 31/12 (PB). Kawhia H, 7 on 23/6; Raglan H, 1 on 23/6 (FN). Waverley B, c. 20 fishing on 1/6 (PB). Foxton B, recorded all months except Feb and May, 5 and 1 imm on 5/4; Wellington H, 11 on 23/4 (JLM, MM).

BLACK SHAG *Phalacrocorax carbo*

Manukau H census, summer 3, winter 63; FoT census, summer 58, winter 82 (BB). Tuakau, Waikato R, colony in kahikatea, 15 adults, 8 juvs nearly flying on 17/11 (JVD); many with white breeding patches, much loud croaking, a few large imm on 21/4 (BB). Hamilton L, 8 on 14/10, 16 on 23/2, 3 on 27/4 (MBa). Aotea H, 4 on 24/11; Kawhia H, 8 on 24/11, 11 on 23/6 (FN). Taharoa, L Rotoroa, 1 on 6/1; L Harihari, 3 on 9/1 (SC). L Arapuni, abundant on 28/12; L Ohakuri, 163 including c. 40 juvs on 19/1 (ASR). Matata, Awaitea Wetlands, c. 30 occupied nests on willow bushes on 19/8; Kaituna Cut, c. 4 occupied nests in a Pied Shag colony by Kaituna R on 11/11 (PCML). Waiaua R mouth, 5 on 27/5 (WMH). Westshore, 60 on census 14/7; Waitangi, 39 on census 14/7; Tuki Tuki E, 2 on census 14/7, c. 75 on 9/5 (KVT). Tuki Tuki R and Waipawa R, 25 on 30/11; Tutakuri R, 23 on 3/12 (WSC). L. Poukawa, 16 on 17/6 (KVT). Foxton, Whirokino, colony of c. 45 (JLM, MM). Lake Wairarapa, max 68 on 30/12 (HAR).

PIED SHAG *P. varius*

Te Huka Stream, 17 roosting in 2 pohutukawas at night 20-22/10; Cape Karikari, 48 on 13/4; Oruaea Bay, Whananaki South, 27 on 26/8, 8 nests, 5 with 1 adult, 2 with 2 adults, 1 unoccupied (PM, KM). Stead Bay, Hen I, 3 below beacon on 8/7 (TGL). Great Barrier I, Waikaro Point, colony on southern side on 30/4; Medlands B, colony with 10 nests on 7/5 (PM, KM). Manukau H census, summer 94, winter 187; FoT census, summer 23, winter 30; Maioro Lookout, Waikato R, 45 on Sand I and c. 20 upriver on 19/8 (BB). Coromandel Pen, north side Kirita H, 15-20 nests, standing apparently young awaiting parents on 8/12 (JB); Te Kouma, 10 nests in pohutukawas on 1/12 (DMW). Ohope Spit, 26 on 7/2 (RMW). Petone-Ngaurangi, 1 on 4/2 (JLM, MM).

LITTLE BLACK SHAG *P. sulcirostris*

Hobson Bay, Auckland, roosting flock of c. 45, 2 with L Rotorua bands, on 15/5 (MJT). Manukau H census, winter 206; FoT census, summer 8, winter 154; Maioro Sand Mine, near Waikato R mouth, 75 on 19/8; FoT, Access Bay, 16 on 1/9 (BB). Manukau H, Waimahia Inlet, 58 on 11/8 (KJF). FoT, Wharekawa, 18 in shingle ponds on 16/7 (AJG). Coromandel Pen, Te Kouma H, 2 nests on 1/12 (DMW). Hamilton L, 2 on 14/10, 6 on 23/2, 1 on 27/4 (MBa). Raglan H, 1 on 23/6 (FN). L Arapuni, 1 on 28/12 (ASR). Taharoa, L Nukumiti, 3 on 6/1 (SC). L Taupo, Tauranga-Taupo R Mouth, 160 flying past after communal fishing on 10/3 (PG). Nukuhou R, Upper Ohiwa H, 40 on 5/7; Ohiwa H, 85 on 2/6 (WMH). Waitangi census, 100 on 14/7, 25 on 3/11; Ahuriri E, 59 on census 3/11, c. 100 on 3/2; Tukituki E census, 30 on 3/11 (KVT). Wanganui, Virginia L, 7 on 20/2; Wanganui, 40 on 13/5 (PB). L Horowhenua, 20 on 18/8 (WRJ). Manawatu E and Loop, present all months max 67 on 5/5; Petone-Ngaurangi, 13 on 6/7, c. 15 from 4/2 to 17/4 (JLM, MM).

LITTLE SHAG *P. melanoleucos brevirostris*

Manukau H census, summer 8, winter 32; FoT census, summer 4, winter 8 (BB). Hamilton L, 2 on 14/10, 23 on 23/2, 25 on 27/4 (MBa). Kawhia H, 2 on 23/6, 1 on 24/11; Aotea H, 1 on 24/11, 1 on 23/6 (FN). Taharoa, L. Nukumiti, 5 on 6/1, L; Harihari, 1 on 9/1 (SC). L Ohakuri, 21 on 19/1 (ASR). Matata, Awaitei Wetlands, c. 30 in willow bushes but not occupying nests on 19/8 (PCML). Ahuriri E census, 49 on 14/7, 19 on 3/11; Waitangi, 10 on census 14/7; Tukituki E, c. 3 on census 14/7 (KVT). Tukituki R and Waipawa R, 15 on 30/11; 8 on 3/12 (WSC). Wanganui, L Westmere, 6 pairs nesting in new colony on 16/9, 16 on 22/9, colony abandoned on 25/11 (OCT). Petone-Ngaurangi, 31 on 19/6 (JLM, MM).

SPOTTED SHAG *Stictocarro punctatus*

Onehunga, 5 on groyne on 1/7 (RBS). Manukau H census, winter 6; FoT census, summer 70, winter 26; FoT, Tawhitokino, 2 on 26/8; Tarata Point, 109 on 25/2, 55 on 28/6 (BB). Coromandel Pen, Motokawau I, 50 adults, 12 nests, also on ledges of adjoining islets on 9/11; Motuokino (Shag Rock), large colony with many juvs on 10/11; The Cow I, c. 100 on 10/11; Kirita H, many juvs on 8/12 (JB). Clive sewer outfall, 19 in prenuptial plumage on 28/7 (JLL, KVT). Black Reef, 13 on 28/8 (BMT, KVT). Waikanāe E, since 1981 frequent in small numbers from late Mar to mid-Sep, 1 on 18/12 (AJDT). Petone-Ngaurangi, singles on 5/11, 28/11 and 19/6 (JLM, MM).

WHITE-FACED HERON *Ardea novahollandiae*

Great Exhibition Bay, 3 on 16/5 (BHS). Paua, 31 on 28/10; Rarawa B, 9 on 24/6; Henderson Bay, 10 on 24/6; Kowhai B, 12 on 26/1; Rangaunu H, 29 on 30/6 (AVH). Little Barrier I, 1 at edge of floodwaters on the flat on 19/8 (TGL). Manukau H census, summer 199, winter 204; FoT census, summer 159, winter 118 (BB). Karaka shellbanks, c. 65 on 10/11 (SJD, AR), 84 on 5/5 (BB, DGB). Raglan H, 11 on 23/6; Kawhia H, 18 on 24/11, 20 on 23/6; Aotea H, 43 on 24/11 (FN). Matahui, 25 on 25/11, 55 on 8/6 (PCML). Ahuriri E, 26 on census 14/7, 31 on census 3/11 (KVT), c. 40 including juvs on 31/12 (NiTC, CFM). Tukituki R and Waipawa R, 61 on 30/11 (WSC). Hokio B Rd, 58 on 16/6 (WRJ). Lake Wairarapa, 47 on 25/11 (HAR).

WHITE HERON *Egretta alba*

Te Kao, 1 on 23/6; Houhora Heads, 2 on 23/6 (AVH). Port Waikato vicinity, 2 on 18/8 (BB, PB), 1 on 25/11 (DMW). Coromandel Pen, Wyrna Bay, 1 in pine tree in Dec (JB). Waikato R, Rangiriri, 1 on 12/6 (PA). L. Whangape, 1 with White-faced Herons on 13/7 (AR). Matata, 2 on 19/8, 1 on 1/6, 2 on 9/6 (PCML). Waiau R mouth, 1 on 27/5; Whakatane R mouth, 1 on 1/6; Waioeka R mouth, 1 on 17/6 (WMH). Tukituki E, 1 on 21/7, 1 on 25/5; Ahuriri E, 1 on 8/6 (MT, PWT). Clive, 1 on 9/10 (ARG, KVT). L. Hatuma, 1 on 18/5 (CFM). L. Horowhenua, 2 from July to 31/10 (WRJ). Manawatu E and Loop, 1 from July to Oct, 1 in May (JLM, MM). Nukumarū, L. Waikato, usually 2 each year (PB).

REEF HERON *E. sacra*

Taurikura, Whangarei H, 2 on Calliope I, 1 on adjacent beach on 11/7 (TGL). Ruakaka E, 1 on 10/5 (BHS). Brown's I, Hauraki Gulf, 2 on 17/12 (PB). Te Arai, Mangawhai, and Tamaki E, reports of single birds (MJT). Tryphena H, Puriri Bay, 1 on 11/5 (PM, KM). Awhitu Pen, Hudson's Bay, 2 on 21/11 (JT). FoT, Tawhitokino, 1 on 26/8 (BB, JVD); Kawakawa Bay, 2 in Sep (MO); Waharau, 1 on 28/6 (BB); Kaiaua, 1 on 14/4 (GMHP). Port Waikato, 1 on 10/2 (KJF). Coromandel Pen, Stony Bay, 1 from 5-14/4 (VL); Kikowhakarere Bay, 2 resident (DH); Wilson's Bay, 2 resident; Coromandel H, 2 on 11/10; Motokawau I, 1 on 9/11 (JB). Opoutere, 1 on 25/12 (BB). Thames Coast, Tapu, 1 on 6/4 (CMM). Raglan H, 1 on 23/6; Kawhia H, 1 on 24/11, 2 on 23/6 (FN). Whakatane Heads, 1 on 30/1; Ohiwa H, 1 on 3/3, 2 in June (RMW, WMH). Opotiki, Tirohanga Stream, 1 on 9/7, Waiotahi E, 1 on 27/7; Waiau E, 2 on 23/11, 1 on 27/5; Waioeka R mouth, 1 on 17/6 (WMH). Ahuriri E, 1 on census 14/7 (KVT), 1 on 6/1 (ACS). Blackhead B, 1 on 23/2 (CFM). Kairakau, 2 on 17/3 (BMT). Petone-Ngaurangi, singles on 10 dates from 10/9 to 9/4; Pauatahanui, 2 on 8/7 (JLM, MM).

CATTLE EGRET *Bubulcus ibis*

Kaitaia, 30 on 30/10 (PCM). Te Kao, c. 80 on 7/11 (ML); 4 on 10/12 (PA, MB). Waipapakauri, 70 on 30/10, 30 on 2/5 (PCM). Far North, first record 15/4, maximum 126 on 3/7, last record 11/12 (AVH, PA, MB). Ruakaka Rd, Marsden Point, 5 on 11/5 (BHS). Orewa, 16 on 27/6 (JED). Parakai, 45 on 22/6 (CE). Mangere Ponds, 5 on 29/6/84 (CS); 6 on 9/6 (GIN). Mangere, Ambury Farm Park, 5 on 6/6, one of which was standing guard over the corpse of a dead bullock chasing others off (RBS, JAFJ, TGL). FoT census, summer 90, winter 81; birds appear to make landfall Apr/May at Waikato

R mouth and then move to Rangiriri (BB). Piako, c. 90 on 28/10 (RBS). Waitakaruru, 6 in breeding plumage on 27/11 (DGB). Piako, 2 on 23/5 (JAB). Coromandel Pen, Ohui, 3 on 14/6 (HS). Aka Aka, Parry's Farm, 36 on 20/5, stayed 4 days (AS). Ngatea, c. 80 on 5/9 (DH). L. Rangiriri, c. 150 on 21/5 (BJZ). Rangiriri, Churchill Rd East, Holme's Farm, 200+, including an all-white bird with a metal band, 28/8 (BDH, HAR), 170 on 27/5 (ASR). L. Waahi, 3 on 12/7 (AR). Hamilton, Rotutuna, 16 on 24/6 (BK). Paterangi, 3 on 22/5; L. Ngaroto, 14 on 14/5 (RD). Waikawau, 4 on 10/8 (BK). North of Tauranga-Taupo R, 2 with sheep on 12/6 (WRJ). Papamoa, 1 in garden probably resting after a storm on 15/8; Kaituna Cut, 4 on 9/6, 12 later in June (PCML, DGB). Awaitei, 3 in breeding dress on 24/11, 22 on 8/6 (RMW, WMH). Kukumoa, Opotiki, 15 on 11/8, 16 on 19/10 and 15/11, 3 on 20/5, 11 on 8/7 (WMH). Mecanee, 6 on 12/7, 3 on 8/6 (KVT, MT, PWT). Fernhill, 14 on census 26/8; Te Hauke, 6 on 20/3 (KVT). Waipukurau racecourse, 5 on 26/5; L. Hatuma, 10 on 8/6 (CMF), 9 on 17/11 (BDH). Foxton, south on SH1, 39 including 2 with bands on 16/7 (RAC, SEC). L. Horowhenua, maximum 83 on 30/9; Foxton, south, maximum 82 on 30/8 (WRJ, MO). Manawatu E, c. 40 from July to Nov with a maximum of 85 on 6/10, 26 overwintering at Whirokino, then 90 at Oturoa Rd on 15/6 (JLM, MM). Whangaeu, 13 on 19/9; Kai Iwi, 10 on 9/9 (Oct). Longburn, 1 on 25/5 and 16/6 (MKT). Nukumarū, 17 on 20/10 with beef cattle by main road (BDH).

AUSTRALASIAN BITTERN *Botaurus poiciloptilus*

Awanui, 1 crossing SH1, froze, then retreated into swamp on 6/5 (PCM). L. Half, Ngataki, 1 on 27/1; L. Waihopo, 2 on 27/1 (PM, KM). Ngakapua L, 1 on 27/1 (AVH). Reservoir L, Sweetwater, 2 on 27/1 (JS, MS). L. northwest of Round Hill, 2 on 23/2; Tikinui, 1 on 16/3; L. Wainui, 1 on 24/2 (PM, KM). Coromandel Pen, Opoutere, 2 on 25/3 (JW). Ryburn's Lag, 9 in July (AR). Ohinewai, Black L, 1 on 6/2 (BJZ). Te Rore, 1 on 14/5, L. Ngaroto, 2 on 14/5 (RD). L. Rotochu, Soda Springs, 1 booming early p.m. on 14/1; L. Whakamaru, 2 booming early p.m. on 31/8 (PB). Upper Hydro L Hinemaiaia R, 1 on 31/12 (WAW). Ohiwa H, Nukuhou E, 1 on 9/7, 3 on 3/5, 1 on 6/5 (RMW, WMH). L. Oinga, single birds on 6 occasions in winter (JGH, RMH). South of Himatangi Radio Station, 1, no date (LC). Foxton, The Loop, booming heard in Dec and single birds in Jan and Feb (JLM, MM). L. Horowhenua, 1 on 15/12 (WRJ).

GLOSSY IBIS *Plegadis falcinellus*

Coromandel Pen, Ring's Rd, 3 in E several times in summer (EEP). Foxton Loop, 3 on 6/10, 8/10, 26/12 (JLM, MM, MO, WRJ).

ROYAL SPOONBILL *Platalea regia*

Rangaunu H, 3 on 18/8 (AVH); 6 on 13/5 (BHS). Mangere Inlet, Onchunga, on pile at wharf among Black-backed Gulls on 1/7 (RBS). Whitford, Broomfield Rd, 1 on 1/5 (JBD). Manurewa, Wattle Downs, 1 on 7-9/5 (TV, MS). Coromandel H, 2 on 16/4, 3 later (ST, JB). L. Waahi, 1 on 10/11 (FJT). Raglan H causeway, 1 on 3/3 (BW). Hamilton, Waikato R, Howell Ave, 3 seen regularly (FN). Thornton Lag, 2 on 3/5 (RMW). Cape Kidnappers, 1 among Gannets on 13/1 (MT, PWT). Tukituki E, 1 with Black-backed Gulls on 20/12 (KVT). Westshore Lagoon, 11 on 5/5 (TB). Ahuriri E, 7 on 8/4, 8 on 29/6 (ALH, MT, PWT). Manawatu E, present July to Nov and Mar to June, 37 on 4/5 (JLM, MM), 23 on 30/6 (WRJ, MO).

MUTE SWAN *Cygnus olor*

Hamilton L, 2 on 14/10, 1 on 23/2, 1 on 27/4 (MBa). L Poukawa, 10 on 17/6 (KVT). Wanganui, Virginia L, 6 on 1/9, 2 chicks raised, 1 bird with broken wing taken to the vet then released (PB).

BLACK SWAN *C. atratus*

Tuakau SP, 8 on 21/4 (PB). Hamilton L, 46 including 10 juvs on 14/10, 123 including 4 juvs on 23/2, 80 on 27/4 (MBa). Kawhia H, c.1250 on 28/5 (FN). Taharoa, L. Nukumiti, 95 on 6/1; L Rotoroa, 170 on 6/1; L Rototapu, 3 including 1 juv on 6/1; L Harihari, 19 including 14 juvs on 9/1 (SC). L Ohakuri, 10 on 19/1 (ASR). L Tutira, c.500 on 10/3 (JGH, KVT). Ahuriri E, 72 on census 3/11, 95 on 3/6, 130 on 14/7 (KVT, MT, PWT). L Purimu, 135 on 17/11, (BDH). Foxton Loop, c.100 in Aug; Foxton No.1 L, c.70 on 5/4; Whirokino, a pair with 4 cygnets on 28/10 (JLM, MM). L Horowhenua, c.500 in April; Whirokino, 40 in April (WRJ, MO). Wanganui, Kaitoke, 38 adults with 7 cygnets on 3/9, 72 adults with 23 cygnets on 28/10 (OCT). Pt Nicholas, 1 on 24/10; Petone — Ngauranga, 1 on 31/10 and 6/11 (JLM, MM).

CANADA GOOSE *Branta canadensis*

Tuakau SP, pair on 21/4 (BB). L Waikare, 6 on 22/10 (PB). L Waahi, 21 on 10/11 (FJT). Hamilton L, 3 on 14/10, 23/2 and 27/4 (MBa). Taharoa, L Rotoroa, 6 on 6/1 (SC). Hinemaiaia R, Upper Hydro L, c.200 on 13/12 after steady increase in recent years (WAW). Kaituna Cut, c.11 on 24/11; Little Waihi, 58 on 9/6 (PCML). Matata, 2 on 24/11 (RMW). Ahuriri E, 1 on census 3/11 (KVT). Ngaruroro R, 1 on 1/12 (WSC). L Hatuma, 1 on 17/11 (BDH). L Horowhenua, 3 all year (WRJ). Foxton No 1 L, 2 on 1/1 and 26/1 (JLM, MM) Wanganui R, 1 on 29/6 (OCT). L Wairarapa, 42 on 9/2 (HAR).

PARADISE SHELDUCK *Tadorna variegata*

Aupouri Pen, Jan survey, 807; Karikari Pen, Jan survey, 82 (AVH). Little Barrier I, a male on floodwaters on 19/8 (TGL). Great Barrier I, Okiwi Airstrip, Claris Aerodrome, Kaitoke B, large groups in April, May (PM, KM). Mataitai, 17 on 28/10; Mangatangi Dam, 1 pair with 4 well grown ducklings on 2/12 (RBS). Manukau H census, summer 12, winter 5; FoT census, summer 6, winter 21; L Whangape, c.50 on 2/3 (BB). Karaka, 7 on 10/4 (SJD, AR); 51 on 26/5, one with white around eye, light chestnut on upper breast, lower breast was same colour as adult male Paradise Shelduck, possible hybridisation with Chestnut-breasted Shelduck (KJF). Pureora Village, 300 on 3/6 (BW). Taharoa, L Nukumiti, 112; L Rotoroa, 250; L Rototapu, 13 all on 6/1; L Harihari, 92 on 9/1 (SC). L Ohakuri, 3 on 19/1 (ASR). Matahui Pt, 2 on 8/6; Papamoa, c.44 during June; Awaitei Wetlands, c.80 on 19/8 (PCML). Ohiwa H, 20 on 29/12; Raukokore E, 55 on 31/12 (DJO). Ahuriri E, 67 on 3/11, 84 on census 14/7; L Tutira, c.40 on 10/3; L Poukawa, 150 on 17/6; Te Awanga Ls, 15 on 20/4 (KVT). Tukituki R and Waipawa R, 390 on 30/11; Tutaekuri R, 15 on 3/12; Ngaruroro R, 183 on 1/12 (WSC). Waitotara, 55 in ploughed field on 25/4 (PB). L Horowhenua, 10 on 20/4 (WRJ). Foxton No. 1 L, 5 on 11/8; Foxton Loop, maximum count of 24 all males 6/10 to 24/11; Manawatu E, 3 on 25/1 (JLM, MM). Waikanae E, 30 on 12/1 (BAT). L Papaitonga, 195 on 27/7; Waingawa SP, 80 on 27/1 (BDH).

MALLARD *Anas platyrhynchos*

Manukau H census, summer 269, winter 377; FoT census, summer 99, winter 1522; Tuakau SP, c.300 on 21/4 (BB). Ohinewai, Black L, 92 on 6/2 (BJZ). Hamilton L, 235 with 50 juvs on 14/10, 1167 on 23/2, 1967 on 27/4 (MBa). Matata, c.2000 on 1/6 (PCML). Ahuriri E, c.580 on census 14/7; Waitangi, 194 on census 14/7; Te Awanga Ls field trip, 106 on 20/4; Horseshoe L, 400 on 11/6 (KVT). Westshore Lagoon, c.400 on 3/6 (MT, PWT). L Horowhenua, 2500 on 30/4 (WRJ). Manawatu E, c.650 on 15/6 (JLM, MM).

GREY DUCK *A. superciliosa*

FoT census, summer 10; Tuakau SP, c.20 on 21/4 (BB). L Ohakuri, c.10 on 19/1 (ASR). Matata, c.40 on 1/6 (PCML). L Tutira, 1 on 10/3 (KVT). Virginia L, 12 on 9/2 (PB). Manawatu E, 2 on 15/6 (JLM, MM).

GREY TEAL *A. gibberifrons*

Swan L, Ngataki, 8 on 27/1; L Half, 2 on 27/1; Round Hill L chain, 4 on 23/2 (PM, KM). Manukau H census, winter 7; FoT census, summer 1, winter 200; Tuakau SP, 250 breeding 1 with duckling on 21/4 (BB). Karaka, 16 on 20/3 (KJF). Miranda, 10 on 11/11 (BHS). Ohinewai, Black L, 13 on 6/2 (BJZ). Taharoa, L Harihari, 1 on 9/1 (SC). Kaituna Cut, 20 on 11/11, 60 on 10/2 (PCML). Ahuriri E, 46 on census 14/7; L Poukawa, 100 on 17/6; Horseshoe L, 150 on 11/6 (KVT). L Tutira, 11 on 15/9; Westshore Lagoon, 4 on 3/2 (ACS). Waitotara E, present on 11/6 (PB). Manawatu E, 16 on 8/7, 15 on 4/5, 2 on 16/6 (JLM, MM). Waikanac E, 1 on 22/5 (AJDT). L Wairarapa, flock of c.300 near Tauherenikau R mouth on 27/1 (HAR).

BROWN TEAL *A. chlorotis*

Waipiro Bay, Bay of Islands, 12 on 16/3; Ngunguru Stream, 2 on 16/10 (PA). Great Barrier I, Port Fitzroy, 2 near wharf on 10/2; Kaiaara Bay, 3 on 11/2; Nagle Cove, 2 tame birds taking bread on 12/2; Port Fitzroy, 4 at head of Forestry Bay on 13/2; Whangaparapara, 14 at head of bay on 14/2 (TGL).

NEW ZEALAND SHOVELER *A. rhynchotis*

L Half, Ngataki, c.40 on 27/1 (PM, KM). HQ Pond, Aupouri, 3 on 27/1 (AVH). Round Hill L chain, 17 on 23/2; L northwest of Round Hill, 28 on 23/2 (PM, KM). Manukau H census, winter 23; FoT census, winter 4 (BB). Matata, c. 240 on 1/6 (PCML). Ahuriri E, 55 on census 3/11, 171 on 14/7; Horseshoe L, 300 on 11/6, 320 on 19/8; L Poukawa, 60 on 17/6 (KVT). L Purimu, 600 on 6/4 (CFM). Westshore Lagoon, 400 on 3/6 (MT, PWT). Waitotara E, 21 on 1/6 (PB). L Horowhenua, 350 on 30/4 (WRJ). L Papaitonga, 260 on 27/7; Masterton SP, 175 on 9/9 (BDH).

BLUE DUCK *Hymenolaimus malacorhynchos*

Turiawae Stream, 1 during morning and evening on 13/4 (RD). Tongariro NP, Whakapapa Intake, calling continuously at water's edge, 8 reported on 23/2 (BS). Pohangina R headwaters, 1 adult with 4 young on 9/1 (SK). Munganiatae R, 2 pairs on 22/8 (AJDT).

NEW ZEALAND SCAUP *Aythya novaeseelandiae*

L Half, Ngatiki, 15 on 27/1; L northwest of Round Hill, 6 on 23/2; Southern Round Hill L chain, 21 on 23/2 (PM, KM). Straka's Refuge, Waiwera, 12 adults, 3 young on 19/1 (JES). Western Springs, Auckland, 1 female on

8/12 (PB). L Arapuni, 19 including 1 pair with 3 young on 28/12; L Ohakuri, 17 on 19/1 (ASR). Taharoa, L Nukumiti, 3 on 6/1; L Rototapu, 2 on 6/1; L Harihari, 2 on 9/1 (SC). L Whakamaru, copulation observed culminating in complete immersion of female by male which hung onto her neck, 26/11/83 (RMW). L Rotorua, Mokoia I, 900, of which less than 12 were female, on 19/5 (PB). Matata, 30 on 1/6 (PCML). L Tutira, 80 on 10/3; Horseshoe L, 50 on 11/6 (KVT). Wanganui, Kaitoki L, 28 on 23/9, 9 on 28/10 (OCT, CW). Mangakino Hydro L, 13 adults, 1 pair with 7 young on 29/12 (AJDT). S. Taranaki, farm pond on Manutahi Rd, 2 on 20/10 (BDH).

AUSTRALASIAN HARRIER *Circus approximans*

L Ohakuri, 6 including 1 bathing on 19/1 (ASR). Kaituna Cut, 2 adults, 5 subadults, possibly one family on 10/2 (PCML).

NEW ZEALAND FALCON *Falco novaeseelandiae*

Below Mt Tarawera, 1 seen to miss a Skylark on 19/5 (RMW). Urewera NP, Galatea Faces, 1 on 16/9 (BC). L Taupo Forest, a pair raised 2 young by 17/12 (JGI). Hongi's Track, Whakatane end, 1 on 23/2 (RMW). Kereu R mouth, 1 calling loudly in evening on 29/12 (DJO). Waipunga, Taupo Rd, 2 adults and 3 imms on 27/12 (REW, PWT). Totara Res, 1 on 18/8 (MO).

BROWN QUAIL *Synoicus sylvophilus*

Motukawanui I, Cavalli Group, common on 6/4 (TGL). Coromandel Pen, Opoutere, heard in summer, 2 on 24/12 (BB). Katikati, Tuapino, 5 in spring, 1 pair raised 5 chicks, 9 in June (BC). Maketu Spit, 3 on 30/9 (PCML).

CALIFORNIAN QUAIL *Lophortyx californica*

Matahui Pt, 1 pair with 3 chicks on 25/11 (PCML). Hastings, Davis Rd, 1 male on 19/12 and 18/2 (CFM).

BANDED RAIL *Rallus philippensis*

Great Barrier I, Port Fitzroy Forest HQ, a pair on 1/5; Tryphena H, Puriri Bay, 1 on 11/5 (PM, KM). Te Maunga, by main Tauranga — Mt Maunganui Rd, 1 feeding in open at 10 a.m. on 24/5 (PCML). Ohiwa H, Wainui Rd, 2 on 9/7, 1 killed by car on 17/11, 4 on 31/3; Patawa I, 2 on 11/7; Burma Rd, present on 22/1 (WMH).

WEKA *Gallirallus australis*

Cape Brett, several on 1, 2/9; Whangamumu, 1 on 8/9 (PM, KM). Coromandel Pen, Opito Bay, 1 on 4/2 (BB).

MARSH CRAKE *Porzana pusilla*

Waikato R, Potter's I, a labrador brought in 1 unharmed in May 1984 (AS). L Aniwhenua, widespread in raupo, several on 4/3/84 (JGI). Awaiti Wetlands, 1 on 8/6 (WMH). Peka Peka swamp, 1 in response to tape on 3/5 (HR).

SPOTLESS CRAKE *P. tabuensis*

L Waikare, east side near Humpbank Bridge, 2 came to taped calls on 3/3 (BB). L Aniwhenua, widespread in raupo, several on 4/3/84 (JGI). Clive, a juvenile feeding along the edge of a muddy creek for 30 mins joined for 10 mins by a wary and secretive adult on 12/3 (ARG, KVT). L Oinga, heard on several occasions in winter 1984 (JGH, RMH).

PUKEKO *Porphyrio melanotus*

St Johns L, 21 on 1/7 (TGL). Meadowbank, Old St Johns L, 21 on 1/7; Mangere Ponds, numerous in swamps (RBS). Hamilton L, 7 on 14/10, 9 on 27/4 (MBa). Ahuriri E, 23 on 3/11, 6 on census 14/7; L. Poukawa, c.100 on 17/6 (KVT). Westshore southern marsh, 12 on 8/6 (MT, PWT).

AUSTRALIAN COOT *Fulica atra australis*

L. Waipirohita, Karikari, 1 on 28/1 (AVH). Western Springs, Auckland, 3 pairs breeding in spring raised number to 16 (VL). L. Whangape, 3 on 16/1 (BJZ). Hamilton L, 83 with 3 juvs on 14/10, 175 on 23/2, 111 on 27/4 (MBa). L. Taupo, Motuoapa Marina, 1 on 17/4/84, perhaps first record for L. Taupo, 2 on 22/12, 7 adults and 15 young on 31/12, 30 on 12/6 (WRJ, DJO). L. Tutira c.200 on 15/9, c.65 including 1 juv on field trip 10/3 (ACS, KVT). L. Purimu, 4 on 26/12 (CFM). L. Westmere, 18 on 1/6; Virginia L, 150 on 11/5 (PB). Centennial Lag, 1 adult with 5 chicks, no date (LJD).

SOUTH ISLAND PIED OYSTERCATCHER *Haematopus ostralegus finschi*

Ruakaka E, c.52 on 10/5 (BHS). Mangere, Kiwi Esplanade, greatly favoured for roosting in wet weather, and feeding, c.2000 on 11/10, c.12 000 on 22/2, c.10 000 on 19/6 (RBS). Manukau H census, summer 3809, winter 19478; FoT census, summer 1636, winter 9076; Miranda to Taramaire, 8125 on 12/5 (BB). Karaka, c.8000 on 10/3 (SJD, AR). Coromandel Pen, Colville, c.150 in Sept and on 26/2 (JB, DAL). Kikowhakarere Bay, c.64 in Oct (DH). Raglan H, 120 on 23/6; Kawhia H, 1074 on 24/11, 2065 on 23/6; Aotea H, 100 on 24/11, 358 on 23/6 (FN). Bowentown Shellbanks, 74 on 24/11, c.450 on 8/6; Sulphur Pt, c.85 on 7/7 (BC). Little Waihi, 2 on 24/11, 9 on 9/6 (PCML). Ohope Spit, 25 on 24/11, 38 on 30/12 (WMH, PCML). Ohiwa H, Ruatuna Rd, 80 on 2/7, 139 on 10/6 (WMH). Ngaruroro R, 10 on 1/12 (WSC). Westshore southern marsh, 3 on 31/12, 22 feeding in boggy pasture on 9/6 (JLL, CFM, MT, PWT). Tangoio, 2 on 12/4 (JB). Blackhead B, 2 on 23/2 (CFM). Manawatu E, 85 on 10/2 and 7/4; Foxton B, 20 feeding on pasture on 22/1 (JLM, MM). Wanganui, South B, 22 no date (PB). L. Wairarapa, 25 on 27/1, 38 on 30/3, 26 on 19/5 (HAR).

VARIABLE OYSTERCATCHER *H. unicolor*

Tom Bowling Bay, 26 on 5/3; Ponaki Bay, North Cape, 7 on 6/3 (PA). Te Werahi, 17 on 1/9; Spirits Bay, 29 on 8/9; Great Exhibition Bay, 78 on 3/2; Kowhai B, 22 on 30/9; East B, 65 on 17/11; Karikari B, 9 on 1/10; Matai Bay, 18 on 13/6 (AVH). Houhora Bay, 66 on 9/3 (PM, KM). Rarawa B, 8 on 14/5; Ruakaka E, c.24 on 10/5 (BHS). Omaha Spit, 30 on 7/5 (SC). Brown's I, Hauraki Gulf, 5 including a territorial pair on 17/12 (PB). Port Onehunga, 1 on groyne on 1/7 (RBS, TGL). Great Barrier I, Nagle Cove, 3 at head of bay on 13/2; Port Fitzroy, 3 at head of Forestry Bay on 13/2 (TGL). Great Barrier I, on all sandy beaches on the east coast between 30/4 and 7/5 (PM, KM). Mangere, Kiwi Esplanade, 1 on 11/10 (RBS). Manukau H census, winter 2; FoT census, winter 1; Opoutere, 14 on 25/12; Waikato R mouth, Maioro Sand I, 2 on 19/8 (BB). Coromandel Pen, Colville, 44 on 26/2 (DAL). Tairua, 21 on 13/3 (DGB). Otahu E, 49 on 16/6; Whangamata, 8 on 16/6 (HS). Waiuku, Karioitahi, 6 on 7/9 (JVD). Raglan H, 2 on 23/6; Kawhia H, 7 on 24/11; 2 on 23/6; Aotea H, 1 on 24/11, 3 on 23/6 (FN). Bowentown Shellbanks, 13 on 24/11, 25 on 8/6 (BC). Sulphur Pt, 47, 1 nest with eggs on 24/11 (KF). Little Waihi, 38 on 24/11, 27 on 9/6; Maketu Spit,

7 pairs some with eggs others with 3-4 days old chicks on 24/11, 40 on 9/6 (PCML). Pikowai B, 6 possible paired with fresh scrapes on 29/7; Ohope Spit, 16 on 24/11, 8 pairs behaving as though they had chicks on 30/12, 12 on 8/6 (WMH, PCML). Ohiwa H, Wainui Rd, 30 on 13/2; Waiotahi E, 13 on 13/2; Waioeka R mouth, 6 on 25/7, 2 on 19/4; Coromandel Pen, Whangapoua B, 86 on 29/6; Waiaua R mouth, 8 on 1/4 (WMH). Motu R mouth, 2 pairs on 29/12; Raukokore R mouth, 2 pairs on 31/12 (DJO). Waitangi, 1 on 3/11 (JPCW). Blackhead B, 2 on 23/2 (CFM). Maraetotara E, 1 on 21/3, 2 on 23/5 (BMT). Ahuriri E, 4 on 8/6 (MT, PWT). Turakina E, 2 on 29/6; Hokio E, 8 on 8/7 (MO). Manawatu E, 8 on 6/2 (CRS, PMS, LJD), 15 on 11/8 and 27/10; Petone-Ngauranga, 5 on 9/4 (JLM, MM). L Wairarapa, 14 on 30/3 and 30/6 (HAR).

SPUR-WINGED PLOVER *Vanellus miles novaehollandiae*

Aupouri Pen, 43 on Jan survey (AVH). Auckland Region, 17 on 4 sites in June (MJT). Wharekawa, FoT, 4 on 10/4; Orere Valley, 2 on 9/5 (RBS). Manukau H census, winter 8; FoT census, winter 21; increasing rapidly and well distributed in South Auckland (BB). Whangamarino Swamp, eastern side, 3 on 7/9; L Arapuni, 7 on 28/12; L Ohakuri, 1 on 19/1 (ASR). L Ngaroto, 9 on 16/6 (RD). Otorohanga, 5 on valley flats near Rewarewa on 1/6 (AP). Pureora Village, 4 on 3/6 (BW). L Taupo, Waimarino R mouth, 4 on 10/3 (PG); near Poutu Canal, Turangi, 5 on 19/1 (PB). Katikati, Tanners Pt, 4 on 14/10; Matahui Pt, 5 in late June (BC). Papamoa B, 2 on 15/7, 4 mobbing a harrier on 28/8, 1 pair with 2, 3-4 days chicks on 7/9; Maketu, 2 on 28/12, Matata, 2 on 9/6 (PCML). Tararewa R mouth, 2 on 24/11 and 5/5; Rangitaiki R mouth, 7 on 4/5; Ohiwa H, Nukuhou E, 8 on 6/5 (RMW). Kawerau, present on 4/1; Raukokore E, 2 on 30/12 (DJO). Kiorenui, Kaingaroa Forest, present on 14/10 (WMH). Waitangi, 27 on 25/5 (MT, PWT). Ahuriri E, 45 on census 14/7; L Poukawa, 95 on 17/6 (KVT). Te Awanga, 10 on 23/3 (BMT). Tukituki R and Waipawa R, 85 on 30/11; Tutaekuri R, 11 on 3/12; Ngaruroro R, 52 on 1/12 (WSC). Manawatu E, 31 on 23/12, 52 on 8/7 (JLM, MM, BA). L Horowhenua, 47 no date (WRJ). Waikanae E, 13 on 8/12 (AJDT). L Wairarapa, 402 on 30/6 (HAR); L Onoke Spit, 30 on 1/12 (HAR).

GREY PLOVER *Pluvialis squatarola*

Paua, 1 on 5/11 (AVH). FoT, Miranda, 1 on 13/1 and 10/3 (RC, SJD, AR).

LEAST GOLDEN PLOVER *P. fulva*

Paua, 50 on 28/10 (AVH). L Ohia, 73 on 9/1 (PA). Takahiwai, c.15 on 23/3 (PM, KM). Jordan's Farm, Kaipara H, 44 on 12/2 (SJD). Manukau H census, summer 6, winter 1; FoT census, summer 62, winter 1 (BB). Karaka, 42 on 5/2 (BHS). Maketu E, 10 feeding on 28/12; Kaituna Cut, 47 on 10/2 (PCML). Ohope Spit, 1 on 17/11, 12 on 24/11, 12 on 7/2 (WMH, RMH). Maungawhio Lag, Mahia, 12 on 3/1 (PM). Westshore, southern marsh, 26 on 8/1 (MT, PWT); north pond, 2 on 3/2 (ACS). Ahuriri E, 16 on census 3/11 (KVT). Porangahau E, 1 on 17/11 (BDH, HAR). Manawatu E, 4 on 23/12 (BA), present from 6 Oct to 8 Apr, max 35 in Jan, Feb and Mar (JLM, MM). Foxton B, 2 on 22/1 (JLM, MM). L Wairarapa, 38 on 25/11, 37 on 30/12 and 9/2, 21 on 30/3 (HAR).

NEW ZEALAND DOTTEREL *Charadrius obscurus*

Ponaki Bay, North Cape, 4 on 6/3; Spirits Bay, 5 on 7/3 (PA). Te Werahi, 15 on 22/1; Tom Bowling Bay, 10 on 24/1; Great Exhibition Bay, 41 on 3/2; Kowhai B, 19 on 30/9; East B, 30 on 17/11; Rangaunu H, 35 on 1/11 (AVH). Rarawa B, 4 on 14/5; Ruakaka E, 2 on 10/5 (BHS). Omaha Spit, 45 on 2/3 (SC). Te Matuku Bay, Waiheke I, 22 on 28/1, 33 on 30/4 (BS). Brown's I, 10 plus 1 chick on 17/12 (PB). Mangere Airport, pair with 2 chicks on 22/11 (BG). Manukau H census, summer 21, winter 38; FoT census, summer 8, winter 15; Karaka, 7 on 8/11, 4 adults and a 2 egg nest on 27/11 (BB). Karaka, 8 of which 1 pair had 3 chicks and 1 pair 2 chicks on 12/1 (SJD, AR); 13, 7 being chicks on 20/1 (KJF); 14 on 19/4 (RP). Auckland International Airport, 4 pairs, 1 nest with 3 eggs (KJF, IS). Puhinui Creek Refuge, 4 on 30/12 (RC). FoT, Mataitai, 27 on 1/4 (AJG); Kawakawa Bay, 2 on 28/10; Matingarahi, 2 on 28/10 (RBS); Access Bay, 8 on 12/1 and 10/3 (BB, SJD, AR), 14 on 12/5 (BB). Coromandel Pen, Colville, 26 on 26/2; Pauanui Spit, 16 on 1/3 (DAL); Matarangi B, 1 pair on 28/10 (JB); Opoutere, 6, one 2 egg nest and a scrape (BB). Whangamata, 3 on 16/6 (HS). Tapu vicinity, 1 on 6/4 (CMM). Waikato R mouth, 5 on 12/12 (PB). Kawhia H, 7 and 3 egg nest on 24/11; 10 on 23/6; Aotea H, 2 on 24/11 (FN). Bowentown B, 3 on 8/6; shellbanks, 1 pair with 3 eggs on 24/11 (BC). Sulphur Pt, 3 pairs nesting on 25/11, 15 on 9/6 (AM). Kaituna Cut, 2 pairs holding territories on 30/9, 10 on 10/2; Maketu Spit, 10 pairs and 2 subadults on 12/8; 9 pairs, 2 3-egg nests, 1 1-egg nest, 1 nest with an egg predated by a gull on 30/9; 9 pairs, 1 with 2 and 1 pair with 3 downy chicks c.5 days old, 1 nest with deserted egg on 24/11; 22 on 9/6 (PCML). Little Waihi, 4 on 10/2, 7 on 9/6; Otamakarau-Herepuru, 2 pairs on 29/7; Tarawera R mouth, 1 pair on 9/6; Rangitaiki R mouth, 4 on 19/8 (PCML). Ohope Spit, 22 on 21/7, 7 pairs breeding on 24/11, 51 on 8/4, 48 on 8/6 (WMH, RMW). Waioeka R mouth, 7 on 7/9, 4 on 3/7; Waiau R Mouth, 15 on 14/7, 12 on 8/7 (WMH). Motu R mouth, 1 pair on 29/12 (DJO).

RINGED PLOVER *C. hiaticula*

Access Bay, first seen on 9/11/83, present 14/10 to 10/6, it assumed breeding dress with warm brown on back, well-marked black and white head pattern; its bow tie became a wide black pectoral band (BB).

BANDED DOTTEREL *C. bicinctus*

Ponaki Bay, North Cape, 12 on 6/3 (PA). Herekino, 20 on 13/6 (JS, MS). Te Werahi, 30 on 22/1; Spirits Bay, 8 on 8/9; Great Exhibition Bay, 19 on 3/2; East B, 24 on 28/1; Rangaunu H, 56 on 30/6; Waimango, 12 on 4/11 (AVH). Waikuku B, 30 on 24/1 (RT). Ruakaka E, 12 on 10/5 (BHS). Great Barrier I, Whangapoua E, 9 on 1/5; Kaitoke B, 14 on 6/5 (PM, KM). Manukau H census, summer 6, winter 534; FoT census, summer 4, winter 92 (BB). Karaka, 100 on 9/2, 411 on 11/4, 223 on 3/6 (SJD, AR, RP, BB). Miranda Coast, 57 on 3/7 (BB), 120 on 9/2; Miranda to Access Bay, 92 on 8/4 (SJD, AR), Miranda, c.125 on 10/3 (RBS). Port Waikato, Limestone Downs, 1 pair with 2 egg nest on 19/8 (TH). Coromandel Pen, Colville, 32 on 26/2; Pauanui Spit, 26 on 26/2 (DAL); Tairua, c.30 on 15/7 (DGB); Onemana, c.44 on 16/6; Whangamata, 37 on 6/3 (HS). Kawhia H, 10 on 24/11, 342 on 23/6; Aotea H, 8 on 24/11, 4 on 23/6 (FN). Mt Tarawera, several at summit on 29/12 (PM, KM). Hinemaiaia R, Upper Hydro L, 2 on pumice flat on 31/

12 (WAW). Bowentown B, 217 on 5/5, 6 on 8/6 one with colour band which was also present autumn 1984 (BC). Sulphur Pt, c.20 pairs breeding (AM). Otamarakau-Herepuru, c.7 pairs sorting out territories on 29/7; Otamarakau, 4 pairs with scrapes on 19/8 (PCML). Ohope Spit, c.350 on 1/7, c.500 on 8/6; Waioeka R mouth, 6 on 17/9, 16 on 26/5, 11 on 17/6; Waiotahi R mouth, 6 on 13/2 (WMH). Motu R mouth, 6 on 29/12; Raukokore R mouth, 6 pairs, 2 downy chicks, 2 fledged chicks on 31/12 (DJO). Maungawhio Lag, Mahia, 2 on 3/1 (PM). Westshore southern marsh, 30 on 8/1 (MT, PWT). Waitangi, 20 on 1/12 (KVT, RSS). Tukituki R and Waipawa R, 963 on 30/11; Tutaekuri R, 237 on 3/12; Ngaruroro R, 438 on 1/12 (WSC). Wanganui, South B, 60 on 20/5; Wanganui Airport, 55 on 15/6; Whangaehu E, 15 on 4/5; Turakina E, 65 on 13/5 (PB). Manawatu E, 59 on 6/2 (CRS, PMS, LJD), 85 on 8/4 (JLM, MM). Hokio B, 2 on 8/7 (MO). Manawatu R, Longburn, 12 on 9/5 (MKT). L Wairarapa, 116 on 30/12, 170 on 27/1, 259 on 9/2, 351 on 30/3, 259 on 30/6 (HAR).

MONGOLIAN DOTTEREL *C. mongolus*

Karaka, 1 from 14/10 to 27/11; in Oct it was pale grey above and snowy white below with fine high shoulder tabs (BB, DGB, KJF). FoT, Access Bay, 1 on 8/4 and in June, when it was still pale (SJD, KJF, BB).

LARGE SAND DOTTEREL *C. leschenaultii*

Karaka, 1 from 30/12 to 7/2 and on 5/5 (BB, DGB, KJF). Access Bay, 1 on 25/2 (KJF).

BLACK-FRONTED DOTTEREL *C. melanops*

Matata, 2 on 28/5 and 1/6 (BC, PCML). Ahuriri E, 28 on census 14/7; Te Awanga Ls field trip, 10 on 20/4 (KVT). Maractotara E, 9 on 31/3 (BMT). Tukituki R and Waipawa R, 368 on 30/11; Tutaekuri R, 134 on 3/12; Ngaruroro R, 127 on 1/12 (WSC). Turakina E, 3 on 30/9, 1 on 2/12, 2 on 10/2, 27 on 13/4, 2 on 29/6 (OCT, PB). Longburn SP, 43 on 24/5 (MKT). Otaki R, 1 on mud above main road bridge, 23/2 (BDH). Huangarua R, Martinborough, 7/4, 45 on same stretch as were 43 in Nov-Dec 1972 and 44 in July 1973 (BDH, HAR). L Wairarapa 2 on 30/3, 38 on 30/4, 36 on 19/5, 60 on 30/6 (HAR).

WRYBILL *Anarhynchus frontalis*

Great Exhibition Bay, 2 on 3/2; Kowhai B, 17 on 24/6 (AVH) Ruakaka E, 1 on 10/5 (BHS). Mangere Ponds, 17, evidently overstaying, on No. 4 pond on 31/10, c.600 on 6/6, c.420 on 19/6 (RBS). Manukau H census, summer 2, winter 1287; FoT census, summer 42, winter 2000 (BB). FoT, 2500 on 3/7, and 27/1, c.3000 on 24/3 (BB, CRV). Access Bay, 1500 on 12/4 (CMM). Coromandel Pen, Colville, 1 on 26/2 (DAL). Matahui Pt, 10 on 8/6; Kaituna Cut 2 on 30/9, 1 on 10/2 (PCML). Sulphur Pt, 51 on 8/6 (AM). Porangahau E, 6 on 18/11 (HAR). Manawatu E, present all months, 20 on 6/1, 22 in Feb (WRJ, MO, JLM, MM). Hokio B, 5 on 8/7 (MO). Turakina E, 1 on 30/9, 1 on 2/12 (OCT). L Wairarapa, 1 on 30/6 (HAR).

FAR-EASTERN CURLEW *Numenius madagascariensis*

Paua, 3 on 5/11 (AVH). FoT, Kaiaua, 2 on 2/12; Access Bay, 6 on 15/2 (RBS). Manukau H census, summer 6, winter 3; FoT census, summer 3 (BB). FoT, 7 on 26/2 (TC). Maketu E, 1 on 28/12 (PCML). Ohope Spit, 1 on 24/11 (WMH). Wanganui, South B, 1 on 14/2 (PB). Manawatu E, present from 10/11 to 10/3, max 3 (JLM, MM). Waikanae E, 1 on 17/12 (AJDT).

ASIATIC WHIMBREL *N. phaeopus variegatus*

Paua, 18 on 28/10, 32 on 5/11; Rangaunu H, 1 in Nov (AVH). Manukau H census, winter 15; FoT census, summer 25, winter 19 (BB). Karaka, 18 on 7/2, 12 on 14/4, 3 on 6/5 (KJF, RP, JU). FoT, 25 on 28/10 (RBS). Kawhia H, 2 on 23/6 (FN). Bowentown B, 1 tired bird probably just arrived on 15/9, seen until late Oct; Sulphur Pt, 1 on 14/4; Bowentown Shellbanks, 1 on 8/6 (BC). Kaituna Cut, 2 on 11/11, 4 on 24/11 and 10/2 (PCML). Ohope Spit, 1 on 17/11, 5 on 24/11, 4 on 7/2, 2 on 8/4 (WMH, RMW).

AMERICAN WHIMBREL *P. phaeopus hudsonicus*

Karaka, 8 on 27/11 (KJF, AVS).

WHIMBREL sp.

Takahiwai, 19 on 23/3, 12 on 22/6 (PM, KM). Manukau H census, Karaka, winter 1, 3 on 12/1 (BB, SJD, AR), 12 on 12/4 (CMM). Mahia, Maungawhio Lag, and Table Cape, 4 at each location probably the same birds as those that later flew to the north on 3/1 (PM, KM). Manawatu E, 2 possibly Asiatic on 25/11 (JLM, MM).

[BLACK-TAILED GODWIT sp.]

Takahiwai, 1 on 23/3 (PM, KM). Ohope Spit, probably Hudsonian on 24/11 (WMH, RMW). Kaituna Cut, presumably the same bird on 7/4 (BC).]

BAR-TAILED GODWIT *L. lapponica*

Paua, 5000 on 5/11; Kowhai B, 1800 on 10/11; Rangaunu H, 4500 in Nov (AVH). Manukau H census, summer 16 109, winter 1776; FoT census, summer 6319, winter 333 (BB). Karaka, 5000 in Nov (BB, SJD, AR). Access Bay, 4000 on 25/2 and 10/3 (SJD, KJF, AR), 252 on 9/5 (RBS), 1 albino all summer to migration (BB). Coromandel Pen, Colville, 40 on 26/2 (DAL); Tairua, c.120 on 13/3 (DGB); Opoutere, 140 on 24/12 (BB). Waikato R mouth, 10 on 12/12 (PB). Kawhia H, 2805 on 24/11, 243 on 23/6; Aotea H, 1 on 24/11, 171 on 23/6 (FN). Bowentown Shellbanks, c.2500 on 24/11, 120 on 8/6 (BC). Matahui Pt, 202 on 8/6 (PCML). Sulphur Pt, c.2500 on 25/11, 104 on 8/6 (PCML, AM). Kaituna Cut, 380 on 30/9, 520 on 24/11, c.800 on 29/12; Maketu Spit, 27 on 9/6; Little Waihi, 280 on 24/11, 9 on 9/6 (PCML). Ohope Spit, 260 on 1/7, 3200 on 24/11, 230 on 8/6; Waiohahi R mouth, 4 on 25/10, 6 on 13/2 (WMH). Westshore southern marsh, c.200 on 8/1 (MT, PWT). Tukituki E, 13 on 9/5, 13 on census 3/11; Ahuriri E, 360 on census 3/11, 31 on census 14/7 (KVT). Blackhead B, 54 on 23/2 (CFM). Meeanee, 11 feeding in a flooded field 2 km inland on 2/6 (MT, PWT). Porangahau Estuary, 173 on 18/11 (BDH, HAR), Manawatu E, 260 on 27/9, 420 on 6/1, c.380 on 10/3 (WRJ, JLM, MM). L. Wairarapa, 49 on 25/11 (HAR).

GREENSHANK *Tringa nebularia*

Waikuku B, 1 on 28/1 (RT). Matahui Pt, 1 now in 9th year of residence on 14/7, not present in spring, in worn breeding plumage on 6/2, in winter plumage on 8/6 (BC, PCML). L. Wairarapa, 1 on 13/1 and 9/2 with yellow legs (TCD, BDH, RNH, HAR, CFT).

MARSH SANDPIPER *T. stagnatilis*

Karaka, 1 from 28/10 to 11/4 (MG, SG, RP). Westshore northern pond, 1 from 19/2 to 24/2 (ALH).

WANDERING TATTLER *T. incana*

Karaka, 1 identified by its call on 30/12 (KJF). Weymouth, probably 1 of this species on 20/1 (RC).

SIBERIAN TATTLER *T. brevipes*

Jordan's Farm, Kaipara H, 1 on 28/10, 2 on 24/3 (SJD, AR). Aotea H, 2 on 24/11 (AP, BJZ).

TATTLER sp.

Ohope Spit, 1 on 24/11, 8/4 and 6/5 (WMH, RMW).

TEREK SANDPIPER *Xenus cinereus*

Manukau H, Puhinui Creek Refuge, 1 on 12/8 (RC). Karaka, 2 on 10/1 and 12/4 (BHS, CMM), 1 on 12/1 to 12/5 (BB, SJD, AR). Access Bay, 3 on 25/10 to 10/3 (KJF *et al.*). Waitangi, 1 on 24/11 (JLL, KVT). Manawatu E, 1 on 19/1 and 5/5 (JLM, MM).

TURNSTONE *Arenaria interpres*

Paua, 150 on 28/10, 1500 on 5/11; Great Exhibition Bay, 47 on 3/2; Kowhai B, 230 on 26/1; Rangaunu H, 510 on 15/11; Waimango, 74 on 4/11 (AVH). Otahuhu, Harania Creek, 2 on 25/11 (RBS). Manukau H census, summer 404, winter 51; FoT census, summer 74, winter 12 (BB). Karaka, 400 on 24/1, 500 on 10/3, 400 on 8/4, 9 on 3/6 (BB, SJD, AR, DGB). Puhinui Creek Refuge, 31 on 12/8 (RC). Access Bay, c.350 on 31/10, c.264 on 15/1, c.23 on 9/5 (RBS, BB). Kaiaua, 12 on 12/4 (CMM). Kawhia H, 4 on 23/6 (FN). Bowentown Shellbanks, c.200 on 24/11, 21 on 8/6 (BC). Kaituna Cut, 13 on 30/9, 25 on 24/11, 30 on 29/12; Maketu Spit, 4 overwintering on 12/8, 2 on 9/6; Little Waihi, 2 on 24/11 (PCML). Ohope Spit, 2 on 17/11 (WMH). Waitangi, 3 on 28/11 (PWT, MT). Ahuriri E, 2 on census 3/11; East Clive 1 feeding on concrete top of sewer outfall on 8/12 (KVT). Porangahau E, 2 on 18/11 (BDH, HAR). Manawatu E, 1 on 27/9, 1 or 2 from 6/10 to 24/2 (WRJ, JLM, MM). L Wairarapa, 5 on 25/11 (HAR).

KNOT *Calidris canutus*

Paua, 3000 on 5/11; Kowhai B, 2400 on 26/1; Rangaunu H, 1800 on 15/11 (AVH). Mangere, c.1000 on 11/10; Miranda, c.250 on 9/5 (RBS). Miranda to Taramaire, 1360 on 12/5; Manukau H census, summer 9950, winter 2211; FoT census, summer 4831, winter 95 (BB). Karaka, 800 on 29/7, 6000 on 10/11, 20000 on 20/1, 3000 on 20/3 (IS *et al.*); 7 dead in hide, 1 with Queenscliffe, Australia, band (3/6/84) on 19/5 (AR). Access Bay, 5000 on 31/10, 8000 on 25/2, 50 on 12/4 (BB, KJF, CMM). Aotea H, 1 on 23/6 (FN). Bowentown Shellbanks, 20 on 24/11 (BC). Matahui Pt, 1 overwintering on 8/6 (PCML). Sulphur Pt, 4 on 25/11 (AM). Kaituna Cut, 19 on 30/9, 120 on 24/11, 130 on 10/2; Little Waihi, 10 on 24/11 (PCML). Ohope Spit, 4 on 24/11 (WMH, RMW). Waitangi, 17 on 25/11 (MT, PWT). Ahuriri E, 3 on census 3/11 (KVT). Porangahau E, 18 on 18/11 (BDH, HAR). Manawatu E, present from 15/9 to 4/5, 20 on 27/9, 256 on 9/2 (WRJ, JLM, MM). Wanganui R, 3 on 23/9 (OCT). Waikanae E, 1 on 18/12 (AJDT). L Wairarapa, 55 on 25/11 (HAR).

SHARP-TAILED SANDPIPER *C. acuminata*

Paua, 4 on 5/11; Waimango 4 on 4/11 (AVH). Miranda, 9 on 3/2 (RBS). Karaka, 2 on 10/11, 8 on 11/4, 3 on 19/5 (SJD, AR, RP, ST). Access Bay, 15 on 12/1, 3 on 19/5 (SJD, AR, ST). Kaituna Cut, 1 on 30/9, 5 on 11/11,

7 on 24/11, 8 on 10/2 (PCML). Westshore, 6 on 3/2 (ARG, ACS). Manawatu E, 1 on 23/2 (JLM, MM). L Wairarapa 6 on 25/11, 7 on 30/12, 6 on 27/1, 4 on 9/2 (HAR).

PECTORAL SANDPIPER *C. melanotos*

FoT, Access Bay, 1 on 15/12 to 9/2 (BB, SJD, AR). Karaka, 2 on 30/12 to 11/4 (KJF, RP). Puhinui Creek Refuge, 1 on 12/8 (RC). Manawatu E, 2 on 9/2, 1 on 9/3 (JLM, MM). L Wairarapa, 1 on 25/11, 4 on 23/12, 3 on 30/12 and 13/1 (HAR).

CURLEW SANDPIPER *C. ferruginea*

Mangere, 1 with Wrybill on 31/10, 1 on 19/6 (RBS). Access Bay, 6 on 19/8, c.30 on 12/1, 6 on 14/4 (PB, SJD, AR, BB). Karaka, 1 on 14/10 (BB, DGB, KJF). Kaituna Cut, 1 on 30/9 (PCML). Manawatu E, 1 from 9/2 to 9/3 (JLM, MM). L Wairarapa, 1 from 25/11 to 9/2, with Golden Plovers (HAR).

RED-NECKED STINT *C. ruficollis*

Waimango, 3 on 4/11 (AJH). FoT, Access Bay, 15 on 15/1, 6 on 12/4 (RBS, CMM). Manukau H census, summer 16, winter 11; FoT census, summer 4 (BB). Karaka, 31 on 6/1, 35 on 14/4, 9 all pale on 3/6 (KJF, RP, BB). Aotea H, 2 on 24/11 (FN). Kaituna Cut, 3 on 30/9, 10 on 24/11 and 28/12 (PCML). Waitangi, 2 on 25/11 (MT, PWT). Westshore southern marsh, 4 on 3/11, 7 on 8/1 (KVT, MT, PWT). Porangahau E, 3 on 18/11 (BDH, HAR). Turakina E, 1 on 30/9 (OCT). Manawatu E, 1 on 27/9 still showing breeding plumage (WRJ). L Wairarapa, 1 on 25/11 (HAR).

PIED STILT *Himantopus himantopus leucocephalus*

Herekino, 12 on 2/6 (JS, MS). Twilight B, 7 on 30/10; Paua, 163 on 28/10; Great Exhibition Bay, 41 on 3/2; Tahanga, 244 on 30/6; Waimango, 27 on 16/6 (AVH). Mangere, up to 500 over summer, 2000 at the end of February, a massive departure in June (RBS). Manukau H. census, summer 543, winter 2962; FoT census, summer 770, winter 3424; Karaka, 729 on 1/7; Miranda, 561 on 12/5 (BB). Kawhia H, 212 on 24/11, 100 on 23/6; Aotea H, 63 on 24/11, 97 on 23/6 (FN). Bowentown Shellbanks, 184 on 8/6 (BC). Matahui Pt, 430 on 8/6 (PCML). Sulphur Pt, 25, 25/11 (AM). Kaituna Cut, c.100, 1 pair with 3 downy chicks on 11/11, c.300 on 9/6; Little Waihi, c.220 on 9/6; Matata, a high 230 on 1/6 (PCML). Ohiwa H, 250 on 8/6; Opotiki, Kukumoa, 93 on 17/6 (WMH). Ahuriri E, 232 on census 3/11, c.1000 on 5/5, 612 on census 14/7 (KVT, MT, PWT). Tukituki E, 50 on 25/5 (MT, PWT). Tukituki R and Waipawa R, 1106 on 30/11; Tutaekuri R, 239 on 3/12; Ngaruroro R, 461 on 1/12 (WSC). L Poukawa, c.600 on 17/6 (KVT). Turakina E, 20 on 13/4 (PB). Manawatu E, 107 on 6/2 (CRS, PMS, LJD), 320 on 23/2, c.450 on 4/5 (JLM, MM). L Wairarapa, 442 on census 25/11, 776 on 30/12, 842 on 19/5, 1159 on census 30/6 (HAR).

BLACK STILT *H. novaeseelandiae*

Piha, 1 matching node H on 8/3 and 12/3; Whatipu Lag, 1 on 17/3 and 19/3 probably the Piha bird (CS). Mangere Ponds, 1 smudgy on 6/6 and 9/6 (MJT, RBS, JAFJ, TGL). Weymouth, Palmers B, 1 pure black on 10/8 (RC). Miranda, 2 strongly marked hybrids and 4 with heavy black collars on 3/7 (BB). Coromandel Pen, Opoutere, 1 all-black except for one downy feather near vent, protecting a bird with typical white and brown-black plumage

of young pids and blacks on 25/3 (JW). Kawhia H, 11 and 1 hybrid on 23/6; Aotea H, 1 on 23/6 (FN). Manawatu E, single smudgy hybrid on 26/12, 10/3 and 5/5 (JLM, MM). L Wairarapa, 1 smudgy on 2/12, 2 smudgy on 30/12, 1 smudgy on 30/3 (HAR).

POMARINE SKUA *Stercorarius pomarinus*

Foxton B, 1 imm with white area on rump and large wing patches on 8/4 (JLM, MM).

ARCTIC SKUA *S. parasiticus*

Bream Bay, 2 on 28/4 (TGL). Access Bay, 1 on 9/2 and 7/4 (SJD, AR). Ohope Spit, 1 dark phase on 3/2 (WMH). Clifton to Cape Kidnappers, c.30 harrying White-fronted Terns, both pale and dark phase in a.m. on 6/1, none seen p.m. (PM, KM). Kapiti Island, 1 pale phase on 8/12 (HAR).

SKUA sp.

Bream Bay, 1 all-dark, perhaps a Pomarine, on 28/4; Tiritiri Matangi I, south, 1 with distinctive white rump harrying White-fronted Terns, perhaps a juv Pomarine, on 22/7 (TGL). FoT, Waitakaruru, 3 harassing Caspian and White-fronted Terns on 10/3 (RBS). Haumoana, 1 white phase harrying White-fronted Terns on 4/4 (ARG, KVT). Foxton B, singles on 29/12, 10 on 23/3 and 6/4 with c.5 on 8/4 presumed Arctic (JLM, MM).

BLACK-BACKED GULL *Larus dominicanus*

Dargaville West Coast, chasing prions on 5/8 (PM, KM). Manukau H census, summer 447, winter 276; FoT census, summer 553, winter 321 (BB). Raglan H, 42 on 23/6; Kawhia H, 53 with 3 chicks on 24/11, 35 on 23/6; Aotea H, 2 on 23/6 (FN). L Arapuni, 4 on 28/12; L Ohakuri, 10 on 19/1 (ASR). L Rotorua, Mokoia I, 2 with downy chick on 7/1 (PB). Raukokore R mouth, c.65 adults, c.35 nests, c.30 chicks varying from large downy to recently fledged on 31/12 (DJO). Ahuriri E, 356 on census 3/11, 252 on census 14/7; Waitangi, 108 on census 3/11, 400 on 9/5, 470 on census 14/7 (KVT). Tukituki R and Waipawa R, 664 on 30/11; Tutaeaki R, c.600 on 3/12; Ngaruroro R, c.2050 on 1/12 (WSC). Foxton B, west of No 3 L, 50 pairs in colony (JLM, MM).

RED-BILLED GULL *L. novaehollandiae scopulinus*

Manukau H census, summer 10, winter 173; FoT census, summer 18, winter 2379 (BB). Coromandel Pen, Tairua, 200 and c.100 nests on 8/12 (DGB); Ruffins Rocks, 200 including juvs on 4/10, several pairs with fledglings on 16/10 (JB). Opoutere, Hikunui Rock, 130 sitting in colony on 21/10 (BB). Raglan H, 55 on 23/6; Kawhia H, 66 on 24/11, 78 on 23/6; Aotea H, 3 on 24/11 (FN). Maketu Spit, a first-time nesting colony with c.100 adults and c.100 chicks on 24/11 (PCML). Motu R mouth, c.100 adults with 10 recently fledged chicks on 29/12; Raukokore R mouth, 3 nests near a Black-backed Gull colony on 31/12 (DJO). Napier, Marine Parade, c.700 on 25/5 (MT, PWT). Waitangi, 230 on 12/7; Tukituki E, 250 on 9/5 (KVT). Manawatu E, 68 on 6/2 (CRS, PMS, LJD).

BLACK-BILLED GULL *L. bulleri*

FoT census, summer 60, winter 50 (BB). Miranda, 51 on 3/9; Miranda and Access Bay, 151 on 1/9 (BB, JAB). Access Bay Spit, c.50 incubating and 20 in attendance on 29/11, 10 sitting, 32 juvs and 7 chicks; when disturbed the young formed a tight bunch surrounded by adults on 11/1 (BHS). Kawhia

H, 1 on 24/11, 2 on 23/6 (FN). Matahui Pt, 8 on 8/6; Little Waihi, 1 subadult on 10/2, 3 on 9/6; Otamarakau, 1 on 9/6; Matata, 2 on 9/6; Tarawera R mouth, 2 on 1/6 (PCML). Opape B, 1 dead on 11/12 (WMH). Mahia Pen, more common than Red-billed Gulls in Jan; East Cape to Napier, more common than Red-billed Gulls in Dec and Jan (PM, KM). East Clive, 200 pairs nesting around edge of White-fronted Tern colony on 29/11, had a successful season; Tukituki E, 50 on 9/5; Waitangi, 500 on census 14/7; L Poukawa, 100 on 17/6 (KVT). Tukituki R and Waipawa R, 107 on 30/11; Ngaruroro R, 25 on 1/12 (WSC). L Horowhenua, 700 on 7/7 (WRJ). L Wairarapa, 107 on 30/3, 150 on 30/4 (HAR).

WHITE-WINGED BLACK TERN *Chlidonias leucopterus*

Karaka, 1 in non-breeding plumage with White-fronted Terns on 10/3, present on 20/3 (SJD, AR, KJF). Bowentown Shellbanks, 1 subadult between 16/1 and 20/1; Tarawera R mouth, probably the same bird on 23/2, both occasions with White-fronted Terns (BC). L Horowhenua, 1 from 2/7 to 15/12 (WRJ). Manawatu E, 2 imms on 19/1 (JLM, MM).

GULL-BILLED TERN *Gelochelidon nilotica*

Meeanee, 2 hawking over field on 8/7 (KVT, JLL). Ahuriri, E, 1 on 3/2, 1 on 18/6 (KVT, ACS).

CASPIAN TERN *Hydroprogne caspia*

Walker I, Rangaunu H, 60 on 18/8 (AVH). Mangawhai Spit, 17 pulli banded, c.45 had fledged on 16/12 (KRB). Tahuna-Torea Res. Tamaki E, 42 on 19/2 (MJT). Great Barrier I, present from Miners Head to Cape Barrier in April, May (PM, KM). Manukau H census, summer 34, winter 155; FoT census, summer 48, winter 124 (BB). Karaka, 45 on 5/5; Access Bay 80 on 3/7, both maximum winter counts (DGB). Waikato R mouth, 20 on 19/9 (BB). Coromandel Pen, Colville, 2 on 26/2 (DAL); scattered pairs breeding in isolated spots on the east coast (BB). Mercer, 1 above Waikato R on 26/6 (BJZ). Raglan H, 5 on 23/6; Kawhia H, 19 with 2 chicks on 24/11, 20 on 23/6; Aotea H, 7 on 24/11, 4 on 23/6 (FN). L Rotorua, Sulphur Bay, 38 on 17/3 (RWJ). Bowentown Shellbanks, 25 on 8/6 (BC). Matahui Pt, 13 on 8/6 (PCML). Sulphur Pt, 12 on 25/11, 42 on 8/6 (AM). Ohope Spit, 7 on 8/6, 29 on 7/2, 24 on 10/2 (WMH, RMW). Ahuriri E, 26 on 14/4, 15 on 6/6, 6 on census 14/7 (ACS, KVT). Tukituki E, 24 on 9/5, 17 on census 14/7; Waitangi, 25 on census 14/7 (KVT). Blackhead B, 5 on 17/1 (CFM). Te Awanga, 7 on 20/6 (KVT). Manawatu E, 12 on 6/2 (CRS, PMS, LJD), 30 on 4/5 (JLM, MM). Lake Wairarapa max. 10 on 30/6 (HAR).

BLACK-FRONTED TERN *Sterna albostrata*

Tarawera R mouth, 1 on 27/4, numbers gradually rose to 40 on 1/6 made up of R mouth 13, feeding over fields 21, Rangitaiki R mouth 6 (PCML). Meeanee, 20 hawking over sheep paddock on 12/7 (KVT). Waitangi, 14 on 4/8, last record for 1984; first arrivals 6 on 25/4; 34 on 19/5, 66 on 3/6; Ahuriri E, 2 on 5/5; Napier. Marine Parade, 34 on 11/5, 63 on 16/6 (MT, PWT). Manawatu E, 1 on 9/2 (JLM, MM). Waikanae E, 110 on 22/5 (AJDT). Waikawa B, Manakau, 1 2nd-year on 2/3 (BDH).

FAIRY TERN *S. nereis*

Waipu Sandspit, nest with 2 eggs on 28/11, 2 young on 13/12 (AG). Bird I, Tapora, 10 including 3 imms on 22/6 (SC, JED).

LITTLE TERN *S. albigrons*

Miranda, 6 on 15/1; 1 on 9/5 (RBS). Manukau H census, Karaka, summer 6; FoT census, summer 4 (BB). Access Bay, 9 on 31/12, 10 on 9/2, 3 on 12/4 (PB, SJD, AR, CMM). Kaituna Cut, Maketu E, 1 on 24/11, 3 on 28/12 (PCML). Manawatu E, 2 on 6/2 (CRS, PMS, LJD), 1 from 1 to 15/9, 2 from 16/9, 3 from 10/11 to 24/11, 2 from 10/12 to 7/4, 1 in summer plumage until 5/5 (JLM, MM, AJDT).

WHITE-FRONTED TERN *S. striata*

FoT, Kaiaua, c.80 with only 3 juv on 9/5 (RBS). Manukau H census, summer 46, winter 25; FoT census, summer 1055, winter 292; Access Bay Spit, c.250 with a few courting on 30/9, 800 on 31/10, c.700 incubating with 1500 present on 29/11, no chicks (BB). Coromandel H, Ruffin's Rock, 100 on 9/10 (JB). Aotea H, 1 on 24/11 (FN). Maketu Spit, 1 pair nesting, 1 egg near Red-billed Gull colony on 24/11 (PCML). Ohope Spit, 12 with 4 downy chicks on 10/2, 70 on 6/5, c.200 and 133 nests on 26/12 (WMH, DJO). Waiaua R mouth, 60 on 23/11, 72 on 1/4 (WMH). Motu R mouth, a colony of c.400 adults with young from large downy to recently fledged on 29/12 (DJO). East Clive, c.300 congregating at nesting site on 18/10, built up to a colony of 600 nests with a prolific season; Tukituki E, 40 on 9/5, 22 on census 14/7; Waitangi, 32 on census 14/7 (KVT). Blackhead B, 56 on 23/2 (CFM). Napier, Marine Parade, 140 on 2/6 (MT, PWT). Manawatu E, 33 on 6/2 (CRS, PMS, LJD), 200 on 10/3, 1000 on 8/4; Petone-Ngaurangi, c.70 on 19/3 (JLM, MM).

ARCTIC TERN *Sterna paradisaea*

Bowentown shellbanks, one on 20/1 (BC).

NEW ZEALAND PIGEON *Hemiphaga novaeseelandiae*

Motokawanui I, Cavalli Group, seems to be absent, or if present, very rare 6-7/4; Stanley I, a few in puriri trees on 23-30/7 (TGL). Papakura, Ponga Rd, 27 on 27/3; Red Hill, 10 on 31/5 (JVD, BB). Clevedon, Twilight Rd, 14 on 10/5 (AJG). Otanewainuku, 4 on 7/10 (PCML). Kawerau, 1 displaying on 24/12; Kereu R mouth, 3 displaying on 30/12; Raukokore R mouth, 7 on 31/12 (DJO). White Pine Bush, 15 in silver dollars on 9/10 (JB). Wanganui, St Johns Hill, 3 regularly (PB).

MALAY SPOTTED DOVE *Streptopelia chinensis*

Mangere Ponds, 170 feeding on seeds, grit and debris on 9/6 (GJM); Puketutu I, 50 on 6/6 (RBS, JAFJ, TGL).

BARBARY DOVE *S. risoria*

Mangere Ponds, 1 with Malay Spotted Doves on 6/6 (RBS, JAFJ, TGL). Thornton Wildlife Management Res, 1 on 3/5 (RMW).

WHITE COCKATOO *Cacatua galerita*

Pukekohe district, Puni to Mauku, 2 flocks of 12 and 18 feeding and calling in June (ICS). Waikato R mouth, 2 on 9/9 (AJG). Port Waikato, Limestone Downs, 11 on 14/5 (MG, SG). Wairamarama, Pukehau Farm, 60 being part of the 200-strong winter flock on 27/6 (DMW). Waingaro, 7 foraging in pasture under kahikatea on 9/9 (ASR). Otanewainuku, 2 flew in, roosted for 2 minutes then flew off to the west, very vocal on 7/10 (PCML). Rata, 40 on 21/6 (RS).

KAKA *Nestor meridionalis*

Great Barrier I, Mt Hobson, 6 in rimu forest near summit, others heard on the lower slopes on 11/2; Kiwiriki Bay, present on 12, 13/2; Whangaparapara Trig, several on 14/2 (TGL); seen in all parts of island in April, May (PM, KM). Manurewa, Olive Davis Reserve, 1 on 23/6 (JVD). Pukeowhare, B. Bishoff's farm, 3 on 17/7 (AS). Morrinsville, Howie Park, 1 in strawberry tree on 5/6 (PJ). Rotorua City, Lynmore, 1 on 1/10/83 (JRL). Pureroa, Bismark Rd, a flock of 26 on 31/8 (PB). Mt Maunganui, Arataki, 1 probably from Mayor I exhausted and hungry on 10/2; it was fed and released at Otanewainuku; the second instance in this location in less than 3 years (PCML). Matemateaonga Waikway, Wanganui, 2 no date (CRS, PMS, LJD, RJW).

EASTERN ROSELLA *Platycercus eximius*

Clevedon, Polo Club ponds, 2 on 10/7 (JVD). Papakura, Red Hill, often recorded on edges of bush, 5 on 24/6 (BB). Coromandel Pen, Stony Bay, 6 on 14/4 (VL). Hamilton, 1 in compost bin in garden on 13/9 (MS). Levin, Kimberley Rd, 23 on 15/9 (MO).

RED-CROWNED PARAKEET *Cyanoramphus novaezeelandiae*

Stanley I, often flushed from the ground covered with seeds beneath tawapou groves on 23-30/7; Little Barrier I, a pair feeding on the flowers of elytranthe growing in the crowns of ancient beech trees on 14/11; Great Barrier I, Mt Hobson summit, a pair in rimu forest on 11/2 (TGL).

YELLOW-CROWNED PARAKEET *C. auriceps*

Dragon's Mouth Cove, Hen I, several feeding in the tops of kanuka trees on 11/7; Little Barrier I, a few on lower slopes in the kanuka forest on 8-20/8 (TGL).

PARAKEET sp. *Cyanoramphus* sp.

Great Barrier I, Whangaparapara, 2 on 5/5; Cape Barrier Rd, 2 on 9/5 (PM, KM). Maramarua SE, south end, ridge bush remnant, 16/9, 1 heard probably Red-crowned since they are in the Hunua Ranges (BB).

SHINING CUCKOO *Chrysococcyx lucidus*

Te Kao, first call 23/9 (PA). Waiotira, first heard on 22/9; Great Barrier I, Kiwiriki Bay, a pair of Grey Warblers feeding a well-grown juv on 12/2; Cuvier I, several young being fed by Grey Warblers in last week of Feb (TGL). Remuera, first heard on 31/10 (RBS). Papakura, Red Hill, 1 strongly barred, singing in wattle, no downward slur at song end on 29/9 (BB). Clevedon, 1 on 13/9 (AJG). Glen Massey, Te Puroa Res, 1 on 28/9; Hamilton, Rukuhia, up to 7 regularly visited a silver dollar gum in Jan (ASR). Opotiki, Waoeka Res, 1 coming from a nest in a pine tree on 24/10 (WMH). Tarawera R, 10 km upstream from Kawerau, 1 fledged by Grey Warblers with 2 adults singing in the vicinity on 27/12; Raukokore R mouth, 2 fledged accompanied by Grey Warblers on 31/12 (DJO). Blowhard Bush, 1 on 13/10 (CFM, KVT). Wanganui City, 2 regularly (PB).

LONG-TAILED CUCKOO *Eudynamys taitensis*

Little Barrier I, a fledgling with c.40 mm tail was fed by a female Robin at least twice on 9/1, later a chick in the same area was being fed by Whiteheads (IGM); Thumb Track, especially plentiful and noisy with much long calling in groups on 6-10/1 (BB). Otanewainuku, 2 calling on 7/10 (PCML).

Kereu R mouth, 1 on 30/12 (DJO). Black Birch Range, 1 on 9/12 (KVT). Wanganui, Matemateaonga Walkway, 15 on 18/1; Atene Skyline Walkway, 1 imm on 23/3 (SED, LJD). Whirinaki, c.12 in mixed podocarp forest on 1/1; Pureroa North Block, 3 on 30/12 (BAT, AJDT).

MOREPORK *Ninox novaeseelandiae*

Stanley I, a few on 23-30/7 (TGL). Remuera, repeated calls on 7/11 (RBS). Pikowai, 1 in fresh plumage dead at roadside on 29/7 (PCML). Kereu R mouth, c.5 on 30/12 (DJO). Foxton, Roundbush, 1 responded to taped calls (JLM, MM). Kai Iwi, 1 with weta in stomach dead on road (PB).

NEW ZEALAND KINGFISHER *Halcyon sancta vauensis*

Ahuriri E, 5 on 11/4 (KVT), 23 on 16/6 (MT, PWT). Te Awanga, 1 with mouse on 15/5 (BMT). Waimarama, 10 on 27/6 (KVT). Manawatu E, 9 feeding on mudflats on 8/4 (JLM, MM).

KOOKABURRA *Dacelo novaeguineae*

Kowhai L, South Kaipara Head, 1 on 10/2 (KRB). Mahurangi West, 1 on 30/3 (BAE).

NORTH ISLAND RIFLEMAN *Acanthisitta chloris granti*

Tongariro NP, most common bush bird in Chateau area of park in Jan (PM, KM). Mamuku Range, L Rotohokahoka track, 8 on 21/5; Desert Rd, Oturere Gully, a pair on 19/1 (PB). Urewera, Mt Manuoha, abundant on 24/12; Mt Tauhara, 1 in montane forest on 27/5 (MCS). Mohi Bush, Maracetotara, plentiful in Jan (MT, PWT). Black Birch Range, 1 on 9/12, 2 on 20/5 (KVT, ARG). Menzies Bush, Tararua, 14 seen and more heard (RAC). Eastbourne, Days Bay, 1 on 17/11 (JLM, MM).

SKYLARK *Alauda alvensis*

Turakina E, 2 flying with Banded Dotterels on 13/4 (PB).

WELCOME SWALLOW *Hirundo tahitica neoxena*

Ohinewai, Black L, 1 pure-white bird except for normal dark eyes and colour around mouth, feathers tattered, on 6/2 (BJZ, ASR). Papamoa B, a flock of c.100 feeding about cattle on 17/5 (PCML). L. Oinga, c.1000 winter 1984 roosting in an area 30 m square in raupo (JGH, RMH). L. Poukawa, c.400 on 7/5 (KVT). Ahuriri E census, 28 on 3/11, 86 on 14/7 (KVT).

FAIRY MARTIN *Petrochelidon ariel*

Papakura, Red Hill, 1 with Welcome Swallows after cyclone on 23/1 (BB).

NEW ZEALAND PIPIT *Anthus novaeseelandiae*

South Kaipara Pen, 8 on OSNZ survey 9-10/2; West Auckland beaches, present in low numbers (MJT). Otamarakau-Pikowai, 3 on this stretch on 29/7 (WMH, PCML). Raukokore R mouth, 3 pairs on 31/12 (DJO). Waipunga, Taupo Rd, numerous on 27/12 (REW, PWT). Clifton to Cape Kidnappers, 7 on 28/8 (ALH, KVT). Foxton B, adult male in display flight from 10/11 to 31/12 (JLM, MM).

HEDGESPARROW *Prunella modularis*

Motokawanui I, Cavalli Group, quite numerous on 6/4; Cuvier I, singing on 22/2 (TGL). Hastings, 1 on city lawn feeding on porridge scraps in winter 1984 (KVT); Davis Rd, 2 on 2/3 (CFM).

FERNBIRD *Bowdleria punctata*

North Cape, several in low scrub and rushes on 21/10; Swan L, Ngataki, heard on 27/1 (PM, KM). South Kaipara Head, 1 heard on 10/2 (KRB). Pollen I, Waitemata H, 17 in low scrub on 20/1 (DGB, CE). Great Barrier I, Te Ahumata, present in the plateau/crater scrub on 11/5; Kaitoke Swamp, common on 6, 12/5; Tongariro NP, Chateau to Mangatepopo Hut, in several areas of subalpine scrub on 8 and 10/1 (PM, KM). Pihanga, eastern slopes, 2 in bracken and broom on 23/6/84 (PHS). Hinemaiaia R, Upper Hydro L, 2 on 31/12 (WAW). Tongariro NP, Mangatepopo Hut track, many on 2/9 (BDC).

WHITEHEAD *Mohoua albigilla*

Otanewainuku, one party of 3 but most seemed to be in pairs on 7/10 (PCML). Blowhard Bush, field trip, 8 on 13/10; Black Birch Range, heard on 9/12 (KVT). Matemateaonga Walkway, Wanganui, many heard (LJD, CRS, PMS, RJW). Eastbourne, Days Bay, several males singing on 17/11 (JLM, MM).

GREY WARBLER *Gerygone igata*

Whangaparaoa Pen, Shakespeare Bay, a dominant singer on 9/9 (RBS).

FANTAIL *Rhipidura fuliginosa*

Waiuku, Glenbrook, pure white bird seen in Apr and mid-June (TH). L. Rotorua, Mokoia I, 200 including 160 in feeding flock over summit on 19/5 (PB). Levin, 1 black phase being harassed by 2 pied birds on 14/4 (MO).

PIED TIT *Petroica macrocephala tottoi*

Pukerenga Hills, Kaiwaka, 1 male on 16/12 (PA). FoT, Waharau, 2 males and a female on upper track on 24/2 (BB, BJB, ND). Otanewainuku, still plentiful on 7/10 (PCML). Kawerau, 1 near river on 24/12 (DJO). Rotoma, frequently seen in summer but previously scarce (RMW). Blowhard Bush, field trip, 1 heard on 13/10 (KVT). Wanganui, Lismore Forest, 2 on 26/8 (OCT). Eastbourne, Days Bay, 1 male on 17/11 (JLM, MM).

NORTH ISLAND ROBIN *P. australis longipes*

Little Barrier I, Valley and Thumb Tracks, singing part song on 6-10/1 (BB). Hinemaiaia R, road to Lower Hydro L, 1 singing on 7/10 (WAW). South Whakarewarewa SF, 1 in *Pinus radiata* on 21/7 (JGI). Otanewainuku, plentiful with cocks singing lustily a.m. on 7/10 (PCML). Wanganui, Matemateaonga Walkway, 4 on 18/1 (CRS, PMS, LJD, RJW).

SONG THRUSH *Turdus philomelos*

Mangonui R, Waiotira, first full song on 4/5 (PA). Otanewainuku, 1 singing lustily in bush on 7/10 (PCML). Hastings, first song on 21/4 (KVT).

BLACKBIRD *T. merula*

Kaikohe, first full song heard on 19/6 (PA). Katikati, a male partial albino in June, has been present for 2 years (BC). Otanewainuku, numerous in native forest on 7/10 (PCML). Te Awanga, 1 singing subsong on 29/5 (BMT). Foxton B, a very notable influx on 7/7 (JLM, MM).

STITCHBIRD *Notiomystis cincta*

Cuvier I, several pairs from June 1982 transfer bred successfully during 1983-84; c.20 present in Feb 1984; in March only 1 despite a fortnight's

searching; it appears the population is dying out; a booster transfer of 30 made from Little Barrier I in April (CRV, TGL). Little Barrier I, rather quiet but a male flew at my head during lunch 6-10/1 (BB).

BELLBIRD *Anthornis melanura*

Stanley I, scarce on 23-30/7 (TGL). FoT, Waharau, 1 sudden snatch of song on 9/5 (RBS). Mangatahi, Ngaruroro R, 1 in willows on 19/1 (MT, PWT). Taradale, 1 in garden feeding on winter cheer pokers on 11/6 (ARG). Te Awanga, 1 heard on 26/2 (BMT).

TUI *Prothemadera novaeseelandiae*

Middlemore, Auckland, now often heard (RBS). Clevedon, Tawhitokino, a few in kowhais; Kawakawa Bay, Richardson's farm, c.100 in kowhai grove with 31 in one tree, all on 26/8 (BB, JVD). Manurewa, Hill Rd, 1 eating an apple on 29/6 (JVD). Wanganui, St Johns Hill, 8 regularly (PB).

YELLOWHAMMER *Emberiza citrinella*

Little Barrier I, several in rank pasture on 19/8 (TGL). Haumoana, 30 feeding on tarsealed road on 6/6 (KVT).

CHAFFINCH *Fringilla coelebs*

Waiotira, song on 4/8; Stanley I, 1 singing on 26/7 (TGL). Remuera, first full song on 25/8 (RBS). Otanewainuku, numerous in native forest on 7/10 (PCML). Haumoana, 30 feeding in vineyard on 6/6 (KVT). Hamilton, first call of the season on 31/8 (PA).

GREENFINCH *Carduelis chloris*

Remuera, first 'jeering' on 13/9 (RBS). Pirongia, first call of the season on 10/8 (PA). Te Akau, Waimai, c.550 in ploughed paddock on 19/5 (FN). Mt Tongariro, flying over summit west to east on 2/9 (BDC). Meeanee, c.250 on 25/5 (MT, PWT). Ahuriri, c.40 feeding on seeds of hedge mustard on 8/4 (KVT).

GOLDFINCH *C. carduelis*

Remuera, attracted by seeding zinnias throughout April (RBS). Ahuriri E, c.400 on 2/3; Te Hauke, c.500 on 8/4 (JLL, CFM, KVT).

REDPOLL *C. flammea*

FoT, Waharau, 3 on 15/12 (BB). Meremere, Whangamarino Swamp, large flocks on 5/8; Humpback Bridge, 1 a streaky imm slightly red on head and breast on 5/8 (PB). Kawerau, c.6 singing on 24/12; Raukokore R mouth, 6 singing on 31/12 (DJO). Mangatahi, 2 feeding on mullein seedheads on 20/10 (MT, PWT). Waipunga, Taupo Rd, numerous on 27/10 (REW, PWT).

HOUSE SPARROW *Passer domesticus*

Hastings, c.4000 roosting in oaks on 13/6 (KVT).

STARLING *Sturnus vulgaris*

Remuera, young left nest on 19/11 (RBS). Hastings, Civic Square oaks, c.2500 arriving to roost from 1630 to 1715 hours on 7/5; Haumoana, a whirling mass of c.4500 high in the air while c.200 were in a vineyard eating grapes on 22/5 (KVT).

INDIAN MYNA *Acridotheres tristis*

Remuera, young just out of nest on 15/3 (RBS). Pukahu, 32 mainly in small flocks on 17/6 (KVT).

NORTH ISLAND SADDLEBACK *Philesturnus carunculatus rufusater*

Motokawanui I, Cavalli Group, has been breeding, but transfer does not seem to be quite as successful as those to other kiore-only islands; only 15 on 6-7/4 (TGL). Tiritiri Matangi I, breeding successfully after release of 24 birds in Feb 1984 (JLC). Tiritiri Matangi I, thriving, many using roost and nest boxes in 1984-85 season; Little Barrier I thriving but possibly 3 instances of nests predated by kiore; Stanley I, numerous, population several hundred on 23-30/7, many using roost and nest boxes; Fanal I, Mokohinau Group, 29 released near north-western end on 3/3 (TGL). Little Barrier I, one challenging passers-by from the ranger's hedge 28/3-2/4 (BB).

NORTH ISLAND KOKAKO *Callaeas cinerea wilsoni*

Little Barrier I, 24 birds transferred from Rotorua between October 1981 and April 1983, 9 resighted in 1984-85 season; one pair had well-grown dependent juv in Jan, 6 including a pair of locally bred found (TGL). Rangitoto Ranges, Cowan Wildlife Refuge, c.8 singing on 13/4 (RD). Pirongia, Mt Mahaukura, 2 on eastern slope on 12/11 (MCS).

WHITE-BACKED MAGPIE *Gymnorhina tibicen hypoleuca*

Riverside, Whangarei, recent fledgling on 4/9 (PA). Raukokore R mouth, common, one flock of 35 on 31/12 (DJO).

ROOK *Corvus frugilegus*

FoT census, Miranda, winter 78 (BB). Waitakaruru, 6 on 6/4 (CMM). Poronui Station, east of Taupo, 1 with magpies on 31/5 (JH). L Poukawa, c.40 on 17/6 (KVT). Levin, 2 on 11/4 (WRJ).

CLASSIFIED SUMMARISED NOTES, SOUTH ISLAND

1 July 1984 to 30 June 1985

Compiled by P.D. Gaze

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Abbreviations: ad. adult, c. approximately, Ck Creek, Est. Estuary, Hbr. Harbour, Hd. Head, I. Island, imm. immature, juv. juvenile, L. lake, m asl. metres above sea level, Pen. Peninsula, Pk. Park, pr. pair, Pt. Point, R. River, Sd. Sound, SP. Sewage Pond, SF. State Forest, Stm. Stream.

SOUTH ISLAND BROWN KIWI *Apteryx australis australis*

Milford Track, 1 heard Clinton side of MacKinnon Pass on 10/3 (SCS).

GREAT SPOTTED KIWI *A. haastii*

Goulard Downs Hut, 1 on 26/4; Saxon Hut, Heaphy Track, c. 7 on 27/4 (TS). Charleston area, common (DJO).

YELLOW-EYED PENGUIN *Megadyptes antipodes*

South East I., 1 ad. present Jan and early Feb (AJDT). Bushy Beach, Oamaru, 1 on nest with 1 egg, another with 2 eggs on 29/9 (BW). Sealers Bay, Codfish I., 3 incubating on 27/10 (WJC).

BLUE PENGUIN *Eudyptula minor*

Charleston, numerous tracks on beach (4/10), 5 offshore on 4/10, 11 on 20/3, c. 20 on 22/6 (DJO), Pinnacles, Chatham I., several nesting in rock crevices on 22/11 (ADJT). Oamaru Hbr, 1 on 22/3 (BW). Sealers Bay, Codfish I., plentiful on 28/10 (WJC).

FIORDLAND CRESTED PENGUIN *Eudyptes pachyrhynchus*

Kahurangi Pt, 1 on 23/2 (BR). Monroe and Murphys Beach, ads arrive at colonies late June and depart by March (NJW). Martins Bay, many coming and going near Long Reef Hut on 19/11 (SCS). Oamaru Hbr, 1 on 18/3 (BW); 20+ ashore on 5/12 (BMS). Stewart I., 6 off Kopeka R. on 26/11 (CMM). Sealers Bay, Codfish I., with large downy chicks on 27/10 (WJC).

ERECT-CRESTED PENGUIN *E. sclateri*

Sandfly Bay, 1 dead, moulting on 23/3 (CMM).

SOUTHERN CRESTED GREBE *Podiceps cristatus*

L. Rotorua, Kaikoura, c. 10 on 4/12 (BEE), 2 on 25/1 (WFC). L. Ianthe, 3 in April; L. Mapourika, 2 in April (CSL). L. Marymere, 2 on 25/8, nest with 2 eggs on 15/1, one of eggs submerged under nest; L. Hawdon, 1 on 9/9; L. Grasmere, 1 on 23/9, 3 ad. and 2 chicks on 25/4, 2 ad. on 26/5; L. Letitia, 4 ad. and 1 imm. on 25/8; L. Sarah, 2 from 14/1- 30/3; L. Lyndon, 3 on 19/8, 7 on 3/11, 5 on 9/12; L. Ida, 1 on 28/4; L. Catherine, 2 ad. and 3 chicks on 22/12; L. Evelyn, 2 on 6/1; L. Selfe, 6 on 29/11 (PL). L. Emma, a pr with 2 chicks plus 4 occupied nests on 9/2, 16 ad. and 3 juv. on 16/2, 25 ad. and 9 juv. on 13/4 (DG). L. Paringa and L. Moeraki, present (NJW). Fiordland, rare resident, gone from L. Fergus and L. Gunn, big decline on L. Monowai. Recorded since 1980 on L. Ronald, Green L. and L. Poteriteri, breeding on L. Ta Anau, L. Manapouri, Island L. and L. Monowai (KM, JVM). L. Te Anau, 2 in Middle Arm on 16/4 (AW). L. Monowai, 3 pr with 2 young, 1 young, 1 imm. on 17/2, 12 on 28/4 (HJ, MJ). Andersons Bay Inlet, Dunedin, 1 on 8/8 and 28/7 (WJC, BMCK).

HOARY-HEADED GREBE *P. poliocephalus*

Bromley SP, 1 on 15/6 (PMS).

AUSTRALIAN LITTLE GREBE *Tachybaptus novaehollandiae*

St Anne's Lagoon, 1 on 25/12 (BE); 2 on 11/5 (AB). L. Rotoiti, Kaikoura, 1 on 4/12 (BEE). Bell Hill, present 1984-85 (CSL).

BULLER'S MOLLYHAWK *Diomedea bulleri*

Grey R. Mouth, 1 on 23/5, 2 on 29/6 (NJW). Pitt Strait, Chatham I., c. 6 on 24/1 (AJDT).

GIANT PETREL sp. *Macronectes* sp.

Grey R. Mouth, 1 on 22/5 (NJW), Oamaru Hbr, 1 on 4/11 (BW). Lawyers Hd, 1 on 26/1 (KCG).

SOUTHERN GIANT PETREL *Macronectes giganteus*

Nelson Hbr, a white phase bird on 4/7 (NTQ). Kaikoura, 26 on 31/8 (BEE). Grey R. Mouth, 1 on 22/5 (NJW).

ANTARCTIC FULMAR *Fulmarus glacialis*

South Cape, 1 50 km south on 26/11 (CMM).

BLACK-WINGED PETREL *Pterodroma nigripennis*

South East I., c. 50 about summit at night, some with soil on bills on 31/12 (AJDT).

CHATHAM ISLAND PETREL *P. axillaris*

South East I., 1 in burrow with egg on 5/2 (AJDT).

BROAD-BILLED PRION *Pachyptila vittata*

Cascades, Chatham I., cat killed bird found on 12/1; South East I., only odd birds present 28/1 to 6/2 (AJDT).

FAIRY PRION *P. turtur*

Ko Oreao, Chatham I., 4 landed by spotlight, 1 with brood patch in mid Nov (AJDT). Oamaru foreshore, 11 on 22/9 (BW).

WESTLAND BLACK PETREL *Procellaria westlandica*

Westport, c. 20 around fishing boat on 22/6 (DJO). Grey R. Mouth, several on 3/6, 1 on 29/6; S. Westland, winter visitor (NJW).

FLESH-FOOTED SHEARWATER *Puffinus carneipes*

Kaikoura, several present on 26/9 (BEE).

BULLER'S SHEARWATER *P. bulleri*

Kaikoura, 100s close to shore on: 24/11, a rare occurrence, 20 on 19/1 and 2 on 11/5 (BEE). Monroe Beach, South Westland, 1 in early April (NJW). Pitt Strait, Chatham I., c. 15 on 24/1 (AJDT).

SOOTY SHEARWATER *P. griseus*

Grey R. Mouth, several on 1/2, many on 21/4 (NJW). Kaikoura. 6 on 27/10, c. 11 on 11/5 (BEE). Ko Oreao, Chatham I., 1 seen while spotlighting on 20/11 (AJDT). S. Westland, summer visitor (NJW). L. Gunn, 1 on 19/5; Knobs Flat, 1 ad, and 2 juv. on 14/5; Te Anau, 1 on 13/5, 17/5, 18/5; Manapouri, 1 on 18/5; Mossburn, 1 on 14/5; Five R. Jct., 1 on 16/5 (AW). Warrington Beach, hundreds feeding in surf on 18/10; St Clair, 20,000+ inshore on 23/3 (KCG). Inchclutha, 200,000+ on 23/3 (PS).

FLUTTERING SHEARWATER *P. gavia*

Charleston, 3 offshore on 27/2, 1 following and diving with a feeding Gannet on 14/6 (DJO).

HUTTON'S SHEARWATER *P. huttoni*

Kaikoura, several thousand feeding on 31/8 and again 27/10 (BEE).

WILSON'S STORM PETREL *Oceanites oceanicus*

Stewart I., 1 off Lords R. on 26/11 (CMM).

GREY-BACKED STORM PETREL *Garrodia nereis*

Ko Oreao, Chatham I., commonly seen by spotlight in Nov (AJDT). Stewart I., 1 50 km off South Cape on 26/11 (CMM). Gore, 1 caught by cat on 10/3 (WJC).

WHITE-FACED STORM PETREL *Pelagodroma marina*

Ko Oreao, Chatham I., several seen by spotlight in Nov (AJDT).

AUSTRALASIAN GANNET *Sula bassana serrator*

Farewell Spit, c. 600 present throughout breeding season, c. 80 nests in Nov (JMH). Nelson SP, 1 on 10/2 (IL). Brightwater, 1 over river on 15/6 (EH). The Steeples, Cape Foulwind, c. 45 sitting on 2 well-used white stacks, c. 70 birds in vicinity, no previous record as roosting or breeding site (DJO). Charleston, 3 on 29/7, 2 on 21/2, 3 on 23/2, 7 on 24/2, 3 on 26/2, 8 on 27/2, c. 40 with 4 dark juvs. on 1/6, 7 on 14/6 (DJO). Grey R. Mouth, 1 on 1/2, 2 on 15/3, 1 on 21/3 catching yellow-eyed mullet, 1 on 30/3, 2 on 4/6 (NJW). Ashley R. Mouth, 1 on 5/8 (PL). South East I., 1 on 31/1 (AJDT). Monroe Beach, regularly seen, 6 on 11/6 (NJW). Oamaru, 6 on 17/11 (BW). Karitane, 1 on 6/2 (KCG). St Clair, 1 on 20/10 (BW). Lawyers Head, 50+ on 26/1 (KCG, PS). Green I., 6 on 28/10 (KCG). Bluff, 1 ad. on 1/1; Curio Bay, 4 ad. on 28/1 (MLB). Little Solander I., c. 12 in top colony, 2 in lower colony on 16/3 (WJC, GE, CMM).

BLACK SHAG *Phalacrocorax carbo*

Waimea Est., c. 400 during winter census; Motueka Spit, c. 100 usually present (JMH). Mokihinui Gorge, 1 on 5/4 (TS). L. Rotoiti, 3 on 20/12 (DJO).

Charleston, southerly movement offshore during Feb with up to 10 birds per hour (DJO). Grey R., 16 on 12/3 and 27/4 (NJW). I. Kanierere, 1 in Aug-Sept (NJW). L. Sarah, 1 on 14/1; L. Lyndon, 2 on 19/8; Bromley SP, 26 on 27/4 (PL). L. Emma, 8 on 13/4 (DG). Ohau R. Mouth, 17 roosting on logs and islands on 29/5; Butchers Dam, Alexandra, 45+ on 16/6 (PC). Outram, 14 on 26/4; 30 on 6/6; Tokomairiro R. Mouth, 6 roosting on 10/4 (PS).

PIED SHAG *P. varius*

Rocks Road, Nelson, c. 20 nests in Norfolk Pines on 15/6 (JMH). L. Grassmere, 6 in June (BAN). Kohaihai Est., 7 on 25/11; 4 on 22/6 (CSL). Ashley R. Mouth, 2 on 15/6; Bromley SP, 1 on 27/4 (PL). Wairaurahiri R. Mouth, 7 on 19/5 (CCO). Smokey Beach, Stewart I., 1 on 6/4 (AJDT).

LITTLE BLACK SHAG *P. sulcirostris*

Waimca Est., 16 on 29/8 (JMH).

LITTLE SHAG *P. melanoleucos brevirostris*

L. Pearson, 9 on 25/1; L. Lyndon, 10 on 19/8; Ashley R. Mouth, 10 on 15/6; Bromley SP, 47 on 27/4 (PL). L. Emma, 88 on 13/4 (DG). Aramoana, 17 on 27/1 (BMcK). Alexandra, 1 at Lower Lanes Dam, 12 at Butchers Dam on 16/6 (PC). Angus Burn, 3 on 18/5; Wairaurahiri R. Mouth, 5 on 19/5 (CCO).

KING SHAG *Leucocarbo carunculatus carunculatus*

Stewart I., Admiralty Bay, 3 roosting on 22/7 (JMH). Snake Pt, Queen Charlotte Sd, 3 on 29/8 (WFC).

STEWART ISLAND SHAG *L. c. chalconotus*

Bushy Beach, 2 on 29/9 (BW).

SPOTTED SHAG *Stictocarbo punctatus punctatus*

The Steeples, Cape Foulwind, present on cliffs, possibly breeding on 20/2 (DJO). Punakaiki, 183 occupied nests on 18/8 (CSL). Grey R. Mouth, max. of 30+ on 3/6, fresh breeding plumage in early June (NJW). Kaikoura, 500 flying past on 9/6 (BEE). S. Westland, uncommon, Murphy Beach, 1 ad. in breeding plumage on 11/6 (NJW).

WHITE-FACED HERON *Ardea novaehollandiae*

Hope, 80 in paddock in June (EH). Delaware Bay, 30+ in June (GDQ). Fairhall, 40 on 20/6 (PJ). Orowaiti Est. 1 or 2 July to 19/11 and 12/3 to June (DJO). Cobden Lagoon, present all months except April; Blaketown Lagoon, usually present (NJW). Inchbonnie, 1 on 2/7 and 17/7; Te Kinga, 1 on 13/8 (PJF). S. Westland, uncommon (NJW). Haast, 4 in field with herefords on 9/5; Donalds Flat, Waitototo, 1 with 3 Cattle Egret on 12/5 (PC). Shelter Rock, Rees Valley, 1 on 4/4 (BMcK).

WHITE HERON *Egretta alba*

Nelson district, 7 during June census (JMH). Grovetown, 1 on 29/6 (PJ). L. Catherine, 1 on 29/11; Avon-Heathcote Est., 1 on 29/6; L. Forsyth, 5 on 1/9 (PL). L. Ellesmere, 1 on 24/8 and from 23/2 to 8/6 (EG, PL, CMM). L. Emma, 1 on 16/2 and 13/4 (DG). Hawksbury Lagoons, 1 on 24/3 (CMM). Kakanui, 1 on 1/4 and 19/5; All Day Bay, 1 on 1/4, 28/4 and 19/5 (AB), 1 on 30/8 (PS). Tomahawk Lagoon, 1 on 28/4 (AJDT). Alexandra, 1 in district 9-26/6 (PC).

LITTLE EGRET *E. garzetta*

Waimea Est., 1 on 11/4 (PW), 1 in June (AB). Orowaiti Est., 1 from July to 1/12, breeding plumage in Nov, 1-2 from 12/3 to June (CSL, DJO). Westport Airport, 1 on 8/10 (DJO).

REEF HERON *E. sacra*

Okiwi Bay, 1 on 30/3 (GDQ). Kaikoura, 1 on 19/1, 1-2 on 23/3, 2 on 11/5 (BEE). Mokihinui Est., 1 on 14/4 (DJO). Avon-Heathcote Est., 1 on 29/8 (PL). Parapara, 22 on 1/6 (CMM). Boulder Beach, Otago Peninsula, 1 on 8/12 (PS).

CATTLE EGRET *Bubulcus ibis*

Takaka, 15 in June; Motueka, 6 in June; Waimea Est., 35 in June (AB). 6 in August (JW). Appleby, 6 in April (JB). 32 in May (DB), 21 on 3/6 (CMM). Hope, 6 in June (EH). Grovetown, 13 on 20/11, 32 in 29/6; Fairhall, 24 on 12/6 (PJ). Orowaiti Est., 7 on 25/11, crown and foreheads pale orange; Westport, 23-24 from 16/6 onwards (DJO). Barrytown, 20 on 13/5, 12 on 25/5 (DJO, CSL). Mt Fyffe Rd, Kaikoura, 20 on 13/5 (BEE), 12 on 15/6 (PJ). Coal Ck, 18 on 4/5, 17 on 11/5, c. 16 on 23/5; L. Ryan, 2 on 25/5 (CSL). Cobden, 2 on 26/5 (NJW). Waikuku, 2 on 5/5 (AB); 11 on 15/6, (JFMF, JSF). Christchurch, 2 on 4/6; L. Ellesmere, 14 on 12/1 and 16/3 (PL). Springston South, 14 on 23/2 (CMM). L. Paringa, 3 on 18/4 (CSL). Haast, 7 on 9/5 (PC); 4 on 6/6 (NJW). Berwick, 8 on 9/7, increasing to 28 on 26/8; Paretai, 21 on 28/8 (PS). Okuru Motor Camp, 3 on 9/5; Drake Flats, Waitatoto, 1 dead on 10/5 possibly killed by Falcon; Donald Flats, 3 on 12/5; Galloway, 5 on 4/5; Cardrona R., 1 on 23/6 (PC). Te Anau, 1 on 19/8, 2 on 25/4, 2 on 1/5, 1 on 4/6 (KM, JVM), 1 on 10/4, 2 on 12/4, 3 on 14/4 (AW), Manapouri, 4 on 6/4 (JVM), 6 on 23/5 (AW), 5 on 26/5 (KM, JVM). Lillburn Valley, 1 on 9/5 (WJC). Wyndham, 52 on 9/9, 6 on 4/11 (WJC), 6 in eclipse on 28/2 (RRS). Waianawa, 1st seen on 24/4, 2 on 2/5, 0 on 13/5, 9 on 16/5 (WJC). Makarewa, 13 on 28/7 (KM, JVM), 16 on 28/7 (WJC). 25 on 8/11, 12 still in eclipse, 24 on 25/11, 2 in eclipse, 3 in breeding plumage, 11 on 4/12, 7 in breeding plumage, 0 on 6/12 (WJC). Invercargill, 2 in mid March (WJC), 30 on 13/5 (MLB), 22 on 18/5, 5 on 2/6; Tisbury-Motu Rimu Road, 20 on 29/6 (WJC). Waituna, 2 on 19/6 (MLB).

NANKEEN NIGHT HERON *Nycticorax caledonicus*

An unbanded bird at Double Cove, Q. Charlotte Sound, on 12 and 17/5 (CJRR).

AUSTRALASIAN BITTERN *Botaurus stellaris*

Marahau, 1 in May (DB). Westport, 1 dead on roadside on 12/8 (DJO). Cobden Lagoon, 1 on 18/3 (NJW). L. Ryan, 1 pr present (NJW). L. Emma, 1 on 16/2; Maori Lakes, 6 on 22/10 (DG). Henley, 1 on 26/8 (PS). Middlemarch, 1 at 450 m asl in tiny wetland on 24/3 (KM, JVM).

GLOSSY IBIS *Plegadis falcinellus*

L. Tuakitoto, 1 feeding in paddock with 20 White-faced Herons on 25-28/8 (PS).

ROYAL SPOONBILL *Platalea regia*

Farewell Spit, 2 in Sept, 19 in June (JMH). Puponga, 2 on 1/6 (CMM). Motueka, 17 in June (JMH), Mapua, 6 in June (AB). Waimea Est., 5 on

9/7, 17 on 29/8 (JMH), 8 on 11/4 (PW). Vernon Lagoons, 10 on 28/8 (WFC). Bromley SP, 5 on 27/4 (PL), 8 on 15/6 (CMM, PMS), 12 on 29/6 (PL). Okarito, no young raised (CSL). L. Wainono, 3 on 17/11 (BW). Hawksbury Lagoon, 13 on 26/1, 25 on 10/2 (AGH), 1 on 16/6 (PS). Maukiekie I., Otago Coast, nested for second season with c. 7 nests and c. 10 young fledged (CL).

MUTE SWAN (*Cygnus olor*)

Ashley R. Mouth, 2 on 15/6; Coopers Lagoon, 8 on 21/4 (PL).

BLACK SWAN *C. atratus*

Bells I. SP, 6 on 20/4 (PDG, GDQ). Waimea Est., 15 in June (IL). Nelson Haven, up to 5 in June (GDQ). Karamea, 1 nesting on 22/6 (CSL). L. Rotoiti, 1 on 28/10 (PJ). L. Ryan, 3 plus 3 young on 20/2, 1 plus 3 young on 21/3, 2 on 23/6; Cobden Lagoon, 3 plus 3 young on 20/2; Blaketown Lagoon, 2 on 16/6 (NJW). L. Grassmere, 102 on 25/4, 106 on 26/5 (PL). L. Emma, 248 on 13/4 (DG). L. Paringa, L. Moeraki, present (NJW). Hawkesbury Lagoon, 172 on 16/5 (PS). Aramoana, 173 on 27/1 (BMCK).

CANADA GOOSE *Branta canadensis*

L. Grassmere, 214 on 25/4, 187 on 26/5 (PL). Greymouth area, spreading from releases, breeding (CSL). L. Emma, 47 on 13/4 (DG). Washdyke Lagoon, 250 on 7/7 (BHS). L. Monowai, 84 on 28/4 (MJ). Waituna Lagoon, 85 on 10/2 (MLB, WJC).

PARADISE SHELDUCK *Tadorna variegata*

Stephens I., Marlborough Sds, 15 on 8/6 (WFC). Ward, 12 on 15/11, 1 pr raised all 9 young by 30/11 (TJT). Mokihinui Forks, 23 on 6/4 (TS). Waiau, 270 on 5/1 (LJD, SED). St Anne's Lagoon, 6 on 11/5 (AB). L. Kaniere, present July to Sept (NJW). L. Emma, 60+ on 13/4 (DG). Washdyke Lagoon, 10 on 7/7 (BHS). Karitane, female possibly on nest on 19/8 (KCG). Kaikorai Est., pr with 9 young on 19/11 (AGH). MacLennan, Catlins, pr with young on 10/1 (KCG). Middlemarch, 150+ on 6/3 (PS). Angus Burn, 2 on 18/5; Wairourahiri R. Mouth, 6 on 19/5 (CCO).

MALLARD *Anas platyrhynchos*

Westport Airport, maximum count, c. 600 on 20/6; Cobden Lagoon, maximum counts, 60 in Jan, 90 in Mar, 50+ in Apr, 50+ in May, 40+ in June (NJW). Te Whanga Lagoon, Chatham I., c. 5 on 10/11 (ADJT).

GREY DUCK *A. superciliosa*

West Coast, less common than Mallard except for forested areas (PJF *et al.*). Mokihinui R., present; Westport Airport, present (DJO). Greymouth present (CSL, NJW). L. Kaniere and S. Westland, present (NJW). Chatham I., 3 at Big Slump on 29/11, 2 at L. Rakeinui on 12/1 (AJDT).

GREY TEAL *A. gibberifrons*

Bells I. SP, 8 on 29/8 (JMH), 60+ on 20/4 (PDG, CDQ). Waiau, 3 on 5/1 (LJD, SED). St Anne's Lagoon, 20+ on 25/12 (BEE). Hapuku, 2 on 12/9, 4 on 3/12, 10+ on 20/1, 8 on 3/2; L. Rotorua, Kaikoura, 13 ad. and 4 ducklings on 4/12 (BEE). L. Brunner, unconfirmed sighting on 11/8 (CSL). Brooklands Lagoon, 6 on 10/5 (AB); 3 on 15/6 (PL). Avon-Heathcote Est., 60 on 15/6 (CMM). L. Emma, 7 on 13/4 (DG). Hawksbury Lagoons, 200 on 24/3; L. George, 30 on 22/3 (CMM). L. Te Anau, 59 at south end on 19/7, 56 on 20/5 (JVM).

NEW ZEALAND SHOVELER *A. rhynchos*

Farwell Spit, 70 on 2/6 (CMM). Westport Airport, c. 15 on 22/6 (DJO). L. Ryan, maximum count, 37 on 21/3; Cobden Lagoon, maximum counts, 2 in Jan, 1 in Feb, 21 in Mar, 40 in Apr, c. 50 in May, 40 in June; Blaketown Lagoon, 50+ on 21/4, 150 on 23/6 (NJW). Hapuku, 3 on 12/9, 2 on 20/1, 4 on 13/5 (BEE). Waiau, 3 on 5/1 (LJD, SED). St Anne's Lagoon, 30+ on 11/5 (AB). L. Evelyn, 1 on 29/11; Brooklands Lagoon, 14 on 15/6 (PL). Bromley SP, 600+ on 15/6 (CMM). L. Emma, 19 on 13/4 (DG). Washdyke Lagoon, 100+ on 7/7 (BHS). Hawksbury Lagoons, 50 on 24/3 (CMM). L. Te Anau, 20 at south end on 19/7, 47 on 20/5, 80+ on 24/5 (JVM).

BLUE DUCK *Hymenolaimus malacorhynchos*

Gourland Downs, 1 pr on 26/4 (TS). Present on Heaphy, Karamea, Wangapeka and Mokihinui Rivers, St James Walkway, Fox R. and 12 Mile Ck (DJO *et al.*). L. Rotoiti, 1 at Lake Head Jetty on 1/6, 3 on shore on 3/6 (NJN). Lynn Stm, 2 on 8/4 (DG).

NEW ZEALAND SCAUP *Anas novaeseelandiae*

L. Rotorua, Kaikoura, 47 ad. and 3, 4 and 6 young on 4/12 (BEE). L. Kaniere, present all months, breeding, maximum of 14 on 28/8 (NJW, CSL). Waiau, 12 on 5/1 (LJD, SED). St. Anne's Lagoon, 40 on 25/12, including 1 bird with 3 ducklings and 1 bird with 9 ducklings (BEE). L. Sarah, 21 on 8/9, 30 on 2/3, 42 on 30/3; L. Letitia, 21 on 25/8; L. Grassmere, 73 on 23/9, 99 on 25/4, 103 on 26/5; L. Marymere, 15 on 10/11; L. Georgina, 6 on 7/4; Bromley SP, 35 on 27/4; The Groynes, Christchurch, 15 on 3/6 (PL). L. Emma, 311 on 13/4 (DG). L. Paringa, L. Moeraki, present (NJW). Pike R., 2 pr on 5/12 (BHS). L. McKerrow, 10+ on 5/12 (BHS). Martins Bay, 8 on 5/12 (BHS). L. Hauroko, 12 on 22/3 (CMM). L. Te Anau, 221 at south end on 7/4 (KM). L. Monowai, 50+ on 28/4 (MJ). L. Hauroko, 3 nests on 11/12, all hatched by 20/12; L. George, 1 male on pond, Henderson Extension, on 23/12 (WJC).

AUSTRALASIAN HARRIER *Circus approximans*

West Coast, common and breeding in agricultural area (PJF *et al.*). Mokihinui Forks, 1 on 6/4; Matiri Range, 1 on 8/4 (TS). L. Kaniere, 1 in Sept only (NJW). Chatham I., common, particularly in the north in Nov; South East I., several on 28/1 (AJDT). Yates Point, Fiordland, 1 on 14/8 (KM). Wairaurahiri R. Mouth, 1 on 19/5 (CCO).

NEW ZEALAND FALCON *Falco novaeseelandiae*

Stephens I., 1 on 7-11/6; Waikakaho Valley, 1 on 6/7 (WFC). Ward, regular visitor to farm; lame falcon killed NZ Pigeon on 5/5 (TJT). Oparara R., present, possibly breeding; Millerton, 1 ad. on 13/5; Westport, 1 on 1/5 (DJO). Homestead Spur, 1 at 1500 m on 17/2; Mt Terako, 1 on 8/4; Hapuku R., 1 chasing Black-backed Gull on 27/11; Kowhai R., 4 on 25-26/11; Charwell R., 1 on 5/5; Hundalees, 1 chasing Harrier and another heard on 17/5 (BEE). Hawdon R. 1 ad. and 3 imm. on 17/2 (JFMF, JSF). Logan Park, 1 on 14/6 (MD). Timaru Ck, L. Hawea, 1 on 6/2; Shovel Flat, Matakitaki R., pr probably nested on 18/2; Upper Manorburn Dam, 2 pr on 20/2 (PC). Rees Valley, 1 chasing Harriers at 25 Mile Hut on 5/4; Symes Rd, Old Man Range, 1 on 23/2 (BMCK). L. Hauroko, 1 road-killed on 22/3 (CMM).

NANKEEN KESTREL *F. cenchroides*

Tiwai Pt, 1 on 30/4, 29/6 (AW, WJC) and 28/7 (CMM, WJC).

CHUKOR *Alectoris chukar*

Mid Dome Pk, 9 at 1460 m asl on 26/3 (KM).

PHEASANT *Phasianus colchicus*

Greendale, 1 male on 22/6 (JMF, JSF).

BANDED RAIL *Rallus philippenis assimilis*

Waimea Est., 2 on 23/3 (GDQ, SH, DGO).

CALIFORNIA QUAIL *Lophortyx californica*

Lake Rotoiti, 1 on 21/12 (DJO), 2 on 27/12 (PJ). Homestead Spur, 2 at 930 m on 17/2 (BEE). Hammer, bird sitting on 10 eggs (DH).

WESTERN WEKA *Gallirallus australis australis*

Heaphy Track, Buller, Greymouth and Inchbonnie, common (TS *et al.*). Charleston, breeding, newly hatched young on 27/8, 3/10 and 14/3, the latter independent by late June (DJO). Waimatua, 1 dead on road on 4/3 (WJC).

BUFF WEKA *G. hectori*

Chatham I., female hiding under kelp, occasionally submerged, pr with large downy chick on 22/11 (AJDT).

MARSH CRAKE *Porzana pusilla*

Todds Valley, 1 killed by cat on 23/3 (GDQ). Seddon, 1 juv., on 30/6 (TJT). Westport, present on pakihi ponds south of town (DJO). L. Sarah, 4 on 5/1 (PL). Maori Lakes, 3 on 22/10; L. Emma, 6 on 16/2, 1 on 13/4; Sunday I. (upper Rangitata), 1 on 20/10 (DG). L. Ellesmere, 1 on 4/6 (PL). Thornbury, 4 on 17/3 (CMM), seen regularly (OJL).

PUKEKO *Porphyrio porphyrio*

West Coast, common and breeding in wetlands and agricultural land (PJF *et al.*). Heathcote-Avon Est., c. 200 on paddocks on 16/5; South Coast, Chatham I., 3 plus large downy chick on 27/11 (AJDT).

BLACK-TAILED WATER HEN *Tribonyx ventralis*

Kongahu Swamp, 1 on 29/8 and present until Nov (CSL).

AUSTRALIAN COOT *Fulica atra australis*

St Anne's Lagoon, 5 on 11/5 (AB). L. Coleridge, 10 on 28/4; Bromley SP, 1 on 2/6; L. Emma, 16 on 13/4 (DG). Lower Lanes Dam, Alexandra, 13 including 2 imm. on 16/6; Upper Lanes Dam, 5+ on 16/6 (PC).

SOUTH ISLAND PIED OYSTERCATCHER *Haematopus ostralegus finschi*

L. Rotoiti, 3 on 23/11 (PJ), c. 80 on 20/12 in cut marshy paddock (DJO). L. Station, 30+ on 25/12 (PJ). Buller, common on larger estuaries; Okari Est., 150 on 12/8, 76 on 25/11, c. 290 on 22/6; Orowaiti Est., 0 on 25/11, c. 620 on 22/6; Charleston, flocks calling and moving north at night on 10, 11, 12 and 17/1 (DJO). Washdyke Lagoon, 7 on 7/7; Haldon Arm, L. Benmore, 1 on 14/7 (BHS). Central Otago, banded female K-4797 back at same nesting area for 14th consecutive season on 13/10 (PC). Aramoana, 80 on 12/8, 209 on 27/1 (BMcK). The Oval, Dunedin, 78 on 15/6 (PS).

VARIABLE OYSTERCATCHER *H. unicolor*

Nelson Haven, 14 pr in Sep (JMH). Whites Bay, 1 pr nesting on 9/12, 2 young on 18/12, different pr with 2 eggs on 21/12, 2 young on 24/2 (BAN). Okari Est., 14 on 22/6; Orowaiti Est., 1 partially white bird on 15/9; Charleston, 1 pr bred c. 2.5 km from coast on a shingle river bed, 1 half grown chick on 13/2 (DJO). Kowhaihai R. maximum count of 11 on 25/11 (CSL). Okuru

Est., 25 on 6/6 (NJW). Martins Bay, 1 pr on 6/12 (BHS). Sandfly Bay, 4 on 14/7 (BMcK). Tomahawk Beach, 9 on 15/6 (PS). Angus Burn, 5 on 18/5; Wairaurahiri R. Mouth, 2 on 19/5 (CCO).

SPUR-WINGED PLOVER *Vanellus miles novaehollandiae*

Stephens I., 3 on 1/6 (WFC). L. Rotoiti, c. 110 in cut marshy paddock on 20/12 (DJO). West Coast, common throughout (CSL *et al.*). Mokihinui Forks, 3 on 6/4 (TS). Dashwood, 1 pr with 4 young on 24/2 (BAN). Te Whanga Lagoon, Chatham I., 2 on 10/11 (AJDT). Washdyke Lagoon, 8 on 7/7; Haldon Arm, L. Benmore, 62 on 14/7; Ahuriri R., 2 on 2/12 (BHS). Stewart I., 2 at Ringaringa on 10/3, 2 at Native I. on 11/3 (CMM).

LEAST GOLDEN PLOVER *Pluvialis fulva*

Orowaiti Est., 1 on 27/1 (DJO). L. Ellesmere, 7 on 13/4 (PL). Awarua Bay, 15 on 24/11 (WJC); 21 on 27/11 (MLB), 8 on 3/3, 1 in breeding plumage (MLB, WJC); 30 on 4/3 (MLB); 37 on 18/3, all but one in eclipse (WJC, GE, CMM). Awarua South, 2 in eclipse on 17/3 (WJC); 26 on 5/4 (KM, JVM). Waituna Lagoon, 7 on 10/2, 2 on 2/3 (MLB, WJC).

NEW ZEALAND DOTTEREL *Charadrius obscurus*

Farewell Spit, 6 in June (JMH). Motueka Sandspit, 1 on 9/2 (JMH, GDQ). Oreti Beach, 4 on 7/5, 3 on 3/6 (MLB). Awarua Bay south, 18 on 22/7 (WJC), 28 on 25/7 (JVM), 6 on 12/8 (WJC), 1 on 16/2 (RRS), 21 on 17/3 (WJC, GE, CMM); 27 on 14/4 (WJC); 21-33 from 17/3-29/6 (MLB). Smokey Beach, Stewart I., 1 on 6/4 (AJDT).

BANDED DOTTEREL *C. bicipitus*

Vernon Lagoons, 3 on 28/8 (WFC). Orowaiti Est., 49 on 10/2, 0-7 March to June (DJO). Blaketown Lagoon, maximum count, c. 35 on 20/2 (CSL *et al.*). Cobden Lagoon, 1-2 from Mar to May (NJW). Te Whanga Lagoon, Chatham I., 2 on 10/11 (AJDT). L. Lyndon, 2 on 24/11; Avon-Heathcote Est., 17 on 29/6 (PL). Washdyke Lagoon, 6 on 7/7; Ahuriri R., 5 pr on 2/12 (BHS). Martins Bay, 2 pr on 6/12 (BHS). Aramoana, 62 on 27/1 (BMcK). Cabbage Point, 44 on 11/1 (KCG). L. Hawea, one colour dyed and banded bird from Australia near lakehead on 29/9; Old Man Range, nest with 3 eggs in tundra zone 1 km south of Obelisk on 22/1 (PC). Kaipo Beach, Fiordland, 4 on 17/8 (KM). Awarua paddocks, 193 feeding among sheep on 2/6 in 2 paddocks 15 km apart; Awarua Bay, c. 300 on 3/3, 176 on 4/3, 17 on 9/3, 1 on 18/3; Waituna paddocks 258 feeding with other waders and sheep on 2/6 (MLB). Smokey Beach, Stewart I., 1 on 6/4 (AJDT).

BLACK-FRONTED DOTTEREL *C. melanops*

Ashburton R., a pr with 2+ chicks on 6/10 (DG). Homestead Tarn, Ahuriri R., 1 ad. on 12/6 (PC). Taieri R., Outram, 3 ad. and 2 chicks during survey on 17/11 (PS). Lower Mararora R., 1 imm. on 3/4; Mararora Dam, 9 ad. on 26/5, 7 ad. on 16/6 (KM). Waimatuku R. mouth, 1 on 29/4; Lower Mataura R., 2 on 28/4 (RRS).

WRYBILL *Anarhynchus frontalis*

Ashley R., 6 on 22/12 (RVM). Ashley R. Mouth, 1 on 15/6; L. Ellesmere, 44 on 24/8, 37 on 5/9 (PL); 60+ on 22/12 (PMS). L. Wainono, 1 on 17/11 (BW). Cabbage Point, 2 with 44 Banded Dotterel on 11/1 (KCG). Hawkesbury Lagoon, 1 found dead on 27/1 (PS). Oreti Beach, 3 on 7/5, 3 on 3/6, 4 on 19/6 (MLB). Invercargill Est. shellbanks, 1 on 3/1 (KM).

FAR-EASTERN CURLEW *Numenius madagascariensis*

Farewell Spit, 6 on 2/6 (CMM). Cabbage Point, 1 on 11/1 (KCG). Invercargill Est. shellbanks, 1 on 3/1 (KM). Waituna Lagoon, 10 on 3/1, 9 on 10/2, 9 on 2/3 (WJC), 7 on 19/3 (GE, CMM). Fortrose Est., 4 on 21/6 (MLB), 11 on 29/6 (SLL).

WHIMBREL sp. *N. phaeopus*

Waituna Lagoon, 2 on 3/1, 1 on 10/2 (WJC, MLB). Fortrose Est., 2 on 29/6 (SLL).

ASIATIC WHIMBREL *N. p. variegatus*

Avon-Heathcote Est., 1 on 27/10 (PL). Farewell Spit, 5 on 3/6 (CMM).

ASIATIC BLACK-TAILED GODWIT *Limosa limosa*

Avon-Heathcote Est., 7 on 27/4, 15/6, 30/6 (PL, CMM, PMS). L. Ellesmere, 11 during Jan (JFMF, JSF, PL); 8 on 15/2 (PG). L. George, Colac Bay, 1 on 16/3 (GJE, WJC, CMM).

BAR-TAILED GODWIT *L. lapponica*

West Coast, 799 in Nov census (CSL). Orowaiti Est., 4 on 27/1, 1 on 12/3 in breeding plumage, 4 on 22/6, 9 on 30/6; Okari Est., 34 on 25/11, 11 on 26/6 (DJO). L. Ellesmere, 18 on 21/1 (PL). Aramoana, 183 on 27/1 (BMcK). Invercargill Est., new migrants present on 28/9 (MLB). Awarua Bay, 257 on 18/3 (CMM).

GREENSHANK *Tringa nebularia*

L. Ellesmere, 1 through June (PL, CMM, PMS). Awarua Bay head, 1 on 3/3 (MLB, WJC).

MARSH SANDPIPER *T. stagnatilis*

Hawksbury Lagoon, 1 on 6/2, present for a month (KCG). Awarua Bay, 1 on 2/12 (KM, JVM). Waituna Lagoon, 1 on 3/1 (WJC).

TATTLER sp. *Tringa* sp.

Cabbage Point, 1 on 26/12 (KCG). Awarua Bay, 2 on 7/10, 4 on 24/11 (WJC); 3 on 19/12 (KM), 5 on 3/3 (MLB, WJC); 5 on 5/4, 1 with light barring breast and belly, 4 partly barred on side of breast (KM, JVM).

SIBERIAN TATTLER *T. brevipes*

Kaikoura, 1 on 27/1 with short nasal groove, 2 on 10/2, 1 positively identified (BEE). Aramoana, 2 on 30/4/83 (AJDT). Papanui Inlet, 1 on 15/6, 22/6 (KCG).

TEREK SANDPIPER *Xenus cinereus*

Awarua Bay head, 2 on 3/3 (MLB, WJC) and 18/3 (WJC, GE, CMM).

TURNSTONE *Arenaria interpres*

Waituna Lagoon, 34 on 19/3, 25 on 4/5 (WJC, CMM). Awarua Bay, 300 on 18/3; Oreti Beach, 43 on 20/3 (CMM).

SNIPE sp. *Gallinago* sp.

L. George, Colac Bay, 1 on 19/12 (KM, JVM); 20/12 (WJC); 16/3 (WJC, GE, CMM); 21/3 (GE, CMM).

CHATHAM ISLAND SNIPE *Coenocorypha aucklandica pusilla*

South East I., many with large chicks but 1 on 2 eggs on 5/2 (AJDT).

KNOT *calidrus canutus*

Okari Est., 8 on 25/11 (CSL, DJO). L. Ellesmere, 29 on 12/1, 21/1 (PL). Aramoana, 2 on 25/11 (PS). Invercargill Est. shellbanks, 101 on 3/1 (KM); c. 600 at Jocks Roost on 3/1 (MLB); 3 on 29/6 (KM). Awarua Bay, 6 on 28/7 (KM); 52 on 4/3 (MLB); 110 on 18/3 (WJC, GE, CMM); 40 on 5/4 (KM, JVM).

SHARP-TAILED SANDPIPER *C. acuminata*

L. Ellesmere, 17 on 24/2 (JFME, JSF); 3 on 7/3 (EG). Waituna Lagoon, 6+ on 3/1, 12 on 10/2 (MLB, WJC).

PECTORAL SANDPIPER *C. melanotos*

L. Ellesmere, 2 on 23/2 (CMM); 2 on 7/3 (EG). Inchclutha, 6 on 21/2 (KH), 6 on 10/3 (PS). L. George, Colac Bay, 1 on 20/12, 16/3, 31/3 (WJC, GE, CMM).

CURLEW SANDPIPER *C. ferruginea*

Awarua Bay, 1 on 24/11 (WJC); 4 on 19/12 (KM, JVM); 9 on 3/3 (MLB, WJC); 13 on 8/3 (WJC, GE, CMM); 13 on 5/4 (KM, JVM). L. Ellesmere, 9 on 22/12 (PMS); 4 on 8/6 (CMM).

RED-NECKED STINT *C. ruficollis*

Farewell Spit, 13 on 3/6 (CMM). L. Ellesmere, 87 on 22/12 (PMS); 56 on 2/1 (JFME, JSF); 42 on 1/3, 15 on 8/6 (CMM). Awarua Bay head, 33+ on 3/3 (MLB, WJC); 25 on 18/3 (WJC, GE, CMM); 32 on 5/4 (KM, JVM). Waituna Lagoon, 20+ on 5/12, 5 on 10/2, 2 on 3/3 (WJC, MLB).

SANDERLING *C. alba*

Awarua Bay, 1 on 18/3 (WJC, GE, CMM). Waituna Lagoon, 1 on 10/2, 2/3 (MLB, WJC).

PIED STILT *Himantopus himantopus leucophalus*

Orowaiti Est., maximum count, 63 on 23/6 (DJO). L. Ellesmere, 167 on 21/1 (PL). Opihi R. Mouth, 4 on 11/9 (BHS). Washdyke Lagoon, 62 on 7/7 (BHS). Kaikorai Est., 215 on 22/12 (AGH). L. Wanaka west, 1 on paddock on 26/6 (PC). L. Monowai, 71 on 18/3; Awarua Bay, 123+ on 4/3, 58 on 9/3 (MLB).

SOUTHERN GREAT SKUA *Stercorarius skua lomnbergi*

Charleston, 1 on 1/6 (DJO). Little Solander I., 1 on 16/3; Stewart I., 2 at Kuri Pt; 2 at Pearl I. on 26/11 (CMM).

POMARINE SKUA *S. pomarinus*

Charleston, 1 juv. on 21/2 (DJO). Coopers Lagoon, 1 at sea on 3/3 (JFME, JSF).

ARCTIC SKUA *S. parasiticus*

Charleston, 1 juv. on 21/2, 2 dark birds on 23/2, 1 light phase ad. on 23/2, 3 dark birds plus 1 juv. on 24/2, 2 dark phase ad., 1 light phase ad., 2 juv. plus 1 other on 20/3, 2 dark birds on 1/6 (DJO). Murumurus, Chatham I., 1 small skua, probably Arctic on 6/2 (AJDT). Coopers Lagoon, 3 at sea on 3/3 (JFME, JSF). St Kilda Beach, 7 chasing White-fronted Terns on 25/1 (PS, KCG). Clutha R. Mouth, 1 on 6/4 (KCG).

SOUTHERN BLACK-BACKED GULL *Larus dominicanus*

Nelson Boulder Bank, 1150 nests on 7/11 (JMH). L. Rotoiti, 4 on 20/12; Millerton, Denniston, large colonies at c. 700 m asl; Charleston, Tauranga Bay, isolated pairs nesting on cliffs; Rapahoe, large colony at c. 700 m asl (DJO). Angus Burn, 5 on 18/5; Wairautahiri R. Mouth, 8 on 19/5 (C.C.O).

RED-BILLED GULL *L. novaehollandiae scopulinus*

Nelson Boulder Bank, c. 800 nests on 7/11 (JMH). Greymouth, less common than Black-billed Gull (CSL). Big Slump, Chatham I., a few nesting offshore on 29/11 (AJDT).

BLACK-BILLED GULL *L. bulleri*

L. Rotoiti, c 400 in cut marshy paddock on 20/12 (DJO); 3 on foreshore on 14/10, 20 on 22/10, none on 21/12 (PJ). Grey R. Mouth, maximum count, c. 75 on 21/4; Cobden Lagoon, maximum count, 22 on 16/6; Blaketown Lagoon, maximum count, 30 on 29/6 (NJW). L. Pearson, 75 on 16/1 (PL), Waiau R., Balloon Loop, 197 ad., 82 new chicks on 5/12; Maratara Dam, 351 ad., 224 large downy chicks and 1184 nesting ad. on dam on 16/12 (KM). Thornbury, 2000+ on farm beside Aparima R. on 8-20/6 (OJL.). Haast, common, (NJW).

CASPIAN TERN *Hydroprogne caspia*

Motueka Sandspit, 50 on 9/2; Nelson Boulder Bank, 4 pr bred 1984/85 (JMH). Kaikoura, 1 on 9/6 (BEE), Mokihinui Est., Granity, Orowaiti Est., Buller R., Okari Est., Tauranga Bay, Punakaiki, Greymouth, 1-5 throughout the year (CSL, DJO, NJW). Lyell Ck Mouth, Buller R., 2 on 17/6 (BEE). Grey R. Mouth, 1 begging juv. on 20/2 (DJO). Cora Lynn, 2 on 24/1; Ashley R. Mouth, 2 on 15/6; Avon-Heathcote Est., 7 on 27/4; L. Ellesmere, 1 on 8/6 (PL). Rakaia R. Mouth, 56 on 15/6 (KH). Washdyke lagoon, 1 on 11/8 (PL). Waituna Lagoon, 10 on 19/3 (CMM). Warrington Beach, 2 on 18/11, 2 on 16/6; Papanui Inlet, 1 on 22/6; Cabbage Point, 2 ad., 2 young on 11/1 (KCG), 8 on 16/6 (BMcK). Catlins Lake, 2 juv. on 26/8 (BMcK). Ohau R. Mouth, 1 on shingle bar on 29/5 (PC). Thornbury, 2 beside Aparima R. on 8-20/6 (OJL).

BLACK-FRONTED TERN *Sterna albobriata*

Riwaka, 6 in June (AB). Motueka Sandspit, 1 juv. on 9/2 (JMH). Appleby, 6 in paddocks on 6/7 (GBW). Waimca Est., 1 on 11/4 (PW). Upper Wairau, 9 on 6/10; Fairhall, 33 on 25/6 (PJ). Dashwood, 550+ on 11/5 (TJT). L. Rotoiti, c. 40 in cut marshy paddock on 20/12, adult plumage (DJO). Howard R. Mouth, 4 ad. plus 1 juv. on 3/11 (PJ). Awatere, 88 on 29/6 (PJ). Greymouth breakwater, 1 on 20/2 (NJW). L. Pearson, 22 on 16/1; Ashley R. Mouth, 28 on 15/6 (PL). Opihi R. Mouth, 35 on 11/9 (BHS). Okura Est., 4 on 6/6 (NJW). Washdyke Lagoon, 11 on 11/8 (PL). Waituna Lagoon, 8 on 19/3 (CMM). Upper Oreti R., 5 taking fingerlings on 4/9 (WJC). Etal Ck, Aparima R., 21 on 27/7. 40 on 8/10 (MLB). Oreti Beach south, 294 on 24/2 (WJC). Whero Rock, 4 imm. nearby on 12/3 (CMM). Eglinton Valley, rare migrant, a few pr breed irregularly (KM, JVM). Halfmoon Bay, 2 on 5/4 (AJDT).

LITTLE TERN *S. albigrons*

Grossi Pt, 4 on 10/11 (EH).

WHITE-FRONTED TERN *S. striata*

Motueka Sandspit, 200 pr nested; Nelson Boulder Bank, unsuccessful nesting (JMH). Mohikiniui Est., c. 115 during May; Granity, maximum count of c. 200 on 17/3; Tauranga Bay, 200-300 on Wall Rock on 11/8; Okari Est., 42 on 22/6; Charleston, maximum counts for each month, 3 in Aug, 9 in Sep, c. 20 in Nov, 25 in Feb, average ratio of 1 juv. to 4 ad., 43 in Mar, c. 100 in June (DJO). Grey R. Mouth, usually 1-10 from Dec to June but 37 on 18/3 and 200+ on 21/3 (NJW). Clay Pt, Banks Pen., c. 600 on 27/3 (BHS). Chatham I., 1 pr nesting at Red Bluff on 2/12, flocks of up to 60 seen on South Coast on 13-30/11, 1-2 pr breeding offshore at Big Slump on 29/11 (AJDT). Opihi R. Mouth, c. 40 on 11/9 (BHS). Otago Mole, 113 on 25/11, 200+ on 27/1 (BMcK). St Clair Beach, 1000+ on 25/1 (KCG, PS). Invercargill Est., 67 nests with eggs on 27/11 (MLB).

NEW ZEALAND PIGEON *Hemiphaga novaeseelandiae*

Mt Richmond, 1 at 1250 m on 2/12 (SLK). L. Rotoiti, 1 in plum blossom on 16/9 (PJ). Mt Fyffe Hutt, 1 flew over at 1150 m on 18/5 (BE). Greymouth, present (CSL). Westport, present (DJO), Te Anau Wildlife Park, 23 feeding on crack willow on 2/8, 35 on 19/8; Queens Reach, Te Anau - Manapouri, 54 feeding on grass and clover on 12/8; Manapouri, 59 feeding on grass on 8/9 (AW).

CHATHAM ISLAND PIGEON *H. novaeseelandiae chathamensis*

Chatham I., none seen from Pinnacles to Ko Oreao on 13-30/11 (AJDT).

ROCK PIGEON *Columba livia*

Grovetown, 40 on 7/11 (PJ),

WHITE COCKATOO *Cacatua galerita*

Greymouth, escaped cage bird present for past 3-4 years (CSL).

SOUTH ISLAND KAKA *Nestor meridionalis*

Heaphy Track, 1 at Saxon Hut on 27/4, 2 at Saxon R. on 28/4 (TS). L. Rotoiti, pr chased by Tui on 11/8, 1 feeding in beech, 6 m from habitation on 18/11, heard flying from Big Bush to St Arnaud at 0545 h on 7/4 (PJ). Charleston, present in unlogged forest (DJO). Hollyford Valley, common from Hokuri R. to road end on 20/11; Routeburn Valley, 1 near Falls Hut on 27/4 (SCS). Blue Mountains, 1+ in May (MF). Otatara, 1 present Nov-Dec (WJC). L. Hauroko, 1 on 22/3 (CMM).

KEA *N. notabilis*

Goulard Downs, 2 on 26/4; Mohikiniui Forks, 1 on 6/4; Matiri Range, 8 on 7/4 (TS). L. Rotoiti, 3 at camp ground on 20/12; Charleston, 4 during Mar-April were well outside their normal range (DJO). L. Alta, Queenstown, 2+ in bluffs on 18/3 (PC).

EASTERN ROSELLA *Platycercus eximius*

Bethune's Gully, Dunedin, 1 on 14/10 (AGH). Leith Valley, 2 on 27/7 (AJDT). Arrowtown, 1 from Aug-Oct (MJS).

CHATHAM ISLAND RED-CROWNED PARAKEET

Cyanoramphus novaeseelandiae chathamensis

Chatham I., a few at Ko Oreao in Nov, 2 at Cascades on 10/1, a few at Murphys Hill 15-20/1 (AJDT).

PARAKEET sp. *Cyanoramphus* sp.

Heaphy Track, 1 at Lewis Hut on 25/4 (TS). Charleston, present in unlogged forest (DJO). L. Kaniere, present in most months (NJW). L. Hauroko, 3 on 22/3 (CMM). Codfish I., abundant throughout, particularly in groups of 2-3. Yellow-crowned Parakeets more common at higher altitudes, Red-crowned Parakeets at lower levels. Second most common bird along coastal tracks (WJC).

YELLOW-CROWNED PARAKEET *C. auriceps*

Mavora L., 2 on 9/9 (BMcK). Rouburn Valley, widespread, especially in red beech forest on 24/4 (SCS).

ORIENTAL CUCKOO *Cuculus saturatus*

Tukurua, Golden Bay. One on 2-4/12 (W. R. L. Wilkins). Cobden, 1 in Feb, in same garden as last year (CSL). Seddonville, 1 present Jan-Mar (NZFS).

SHINING CUCKOO *Chrysococcyx lucidus*

L. Rotoiti, 2 on 20/12 (DJO). Westport, 1st record on 26/9 (TS). Charleston, 1st on 25/9, newly fledged bird on 19/12, song ceased on 18/1 (DJO). Reefton, many on 27/10; Greymouth, 1st on 9/8 (CSL); 1 juv. in late Dec; L. Kaniere, 1st in 3rd week of Oct (NJW), Christchurch, 1 gleaning caterpillars from kowhai on 5/4 (PMS). Alexandra, 1 flew into window on 22/1 (PC). Te Anau, 1st heard on 5/10; Manapouri, 1st heard on 7/10 (AW).

LONG-TAILED CUCKOO *Eudynamis taitensis*

Mt Duppa, heard on 6/2 (JMH). L. Rotoiti, heard after dark on 20/12 (DJO). Charleston, no records; Fox R., only record of 1 on 10/11 (DJO). Greymouth, no records (CSL). L. Kaniere, 1 dead in late Oct (NJW). Martins Bay, 1 on 5/12 (BHS). Southbridge, 1 on 7/3 (CO'D). Waiau R., Rainbow Reach, 1st heard on 7/10 (AW).

MOREPORK *Ninox novaeseelandiae*

Kaihoka Lakes, heard in May (JB). West Coast, common, breeding (CSL, DJO, NJW). Codfish I., 1 mobbed by 5 Brown Creeper, chased by 2 Bellbirds on 28/10 (WJC).

LITTLE OWL *Athene noctua*

Takaka, heard in winter (LL). Otago Hbr, 1 dead on Pilots Beach on 23/3 (AJDT). Invercargill, 1 on 19-21/4 and 27/4, flew into suburban gardens at dusk causing alarm calls followed by silence from other birds (MLB), 2 seen in pines on 29/8 and 3/6 (MC).

NEW ZEALAND KINGFISHER *Halcyon sancta*

Kaikoura to Ure, 9 on wires on 13/6 (PJ). West Coast, fairly common, breeding (PJF, CSL, DJO, NJW). Charleston, song from 14/8-27/2 (DJO). L. Ryan, only record of 1 on 21/3; L. Kaniere, uncommon, recorded from Sep onwards (NJW). Craigieburn Stm, 1 on 31/3 at 800 m asl (PL). Karitane, 6 on 16/5 (PS). Papanui Inlet, 3 on 22/6; Andersons Bay, 2 on 18/8; Catlins, 1 on 4/1; Macandrew Bay, 4 on 22/6 (KCG). Alexandra, 1 at Muttontown Gully on 18/5, 1 at Manor Ck on 20/6 (PC). Invercargill coast, last spring sighting on 3/9, 1st autumn sighting on 7/2 (MLB). Smokey Beach, Stewart I., 1 on 6/4 (AJDT).

SOUTH ISLAND RIFLEMAN *Acanthisitta chloris chloris*

Heaphy Track, recorded only from MacKay Hut to Perry Saddle on 24-29/4 (TS). L. Kaniere, common; Paringa State Forest, nest building at 1000 m asl and lower on 3/10 (NJW).

ROCK WREN *Xenicus gilviventris*

Mt Bauff, West Matukituki, 1 pr and 1 imm. at 1370+ m asl on 19/2 (PC). Milford Track, 1 on Clinton side of Mackinnon Pass on 10/3; Hollyford Valley, 1 on rocks among knee-deep snow near Harris Saddle on 26/4 (SCS).

SKYLARK *Alauda arvensis*

West Coast, common, breeding on agricultural land and pakihi (PJF *et al.*) Matiri Range, 1 on Thousand Acre Plateau on 8/4 (TS).

WELCOME SWALLOW *Hirundo tahitica neoxena*

L. Rotoiti, 6-7 at camp ground on 20/12 (DJO). West Coast, locally common, less so in winter (CSL). L. Kaniere, uncommon, 2 on 27/8; L. Ryan, maximum count of 16-20 on 23/6 (NJW). L. Sarah, 2 on 14/1 with empty nest (PL). Omarama, 2 on 2/4 (ARB). West Taieri, highest winter count of 42 on 13/5 (PS). Clinton, 1st record for area of 2 on 1/12 (MT). Haast, 3 on 18/5 (PC). Mararora Est., 1 imm. on 3/4 (KM).

PIPIT *Anthus novaeseelandiae*

Forsyth I., 3 on 11/1 (PJ). Goulard Downs Hut, 2 on 27/4; MacKay Hut, 3 on 26/4; Mohikanui Forks, 3 on 6/4; Matiri Range, 4 on 8/4 (TS). Greymouth area, no records (NJW). Kokatahi-Kowhiterangi, none on 27/4 (CSL). Mt Fyffe, several at 1600 m on 16/3; Mt Terako, 1 at 1820 m on 8/4 (BEE). Chatham I., common on south coast, South-East I. and Pitt I. during summer months (AJDT). Old Man Range, 1 taking insects from edge of a late snowbank on 5/2 (PC). Native I., 1 on 11/3 (CMM).

HEDGESPARROW *Prunella modularis*

Heaphy Track, recorded throughout on 24-29/4 (TS). Charleston, song from July to 29/1, newly fledged young 19/10 to 2/2 (DJO). L. Kaniere, song from July (NJW). Chatham I., present at Ko Oreao on 25/11 and several at Murphys Hill on 15-22/1 (AJDT).

SOUTH ISLAND FERNBIRD *Bowdleria punctata punctata*

Heaphy Track, 1 at MacKay Hut on 25/4, 5 at Goulard Downs Hut on 27/4, 2 at Perry Saddle on 27/4 (TS). Millerton, Denniston, present; Charleston, common, breeding on rough farmland and pakihi, expands range Jan-July to include logged forest and improved pasture (DJO, CSL). Cobden, 1 on 15/3, the only record (NJW). L. Kaniere, 1 pr present June-Aug (NJW). Blue Mountains, south end, 1 in scrub and tall snow tussock on 25/2 (AC), Te Anau, 1 at Ivon Wilson Park on 6/4 only (KM, JVM). L. Monowai, 2 on 16/3 (MLB). Freshwater Flats, Stewart I., saw 4 and heard many more on 8/4 (AJDT).

CODFISH FERNBIRD *B. punctata rufescens*

Sealers Bay, 3 in dunes on 28/10 (WJC).

BROWN CREEPER *Finschia novaeseelandiae*

Nelson, 4 in suburban garden on 29/6 (PDG). Freshwater Flats, Stewart I., abundant in manuka on 8/4 (AJDT). Heaphy Track, 5 near MacKay Hut on 25/4, 2 at Blueshirt Ck on 26/4, 2 at Saxon Hut on 26/4; Matiri

Gorge, 2 on 9/4 (TS). Charleston, common, breeding (DJO). Cobden, 1-5 resident; L. Kaniere, small numbers present, full song from Aug (NJW). Mt Nimrod, 2 on 9/9 (BHS). Green Hut, Silver Peaks, 5 on 12/8 (BMcK). L. Hawea, heard in mountain beech in Timaru Ck on 6/2; Blue Mountains, in silver beech above Rongahere on 25/2 (PC). Pounaweia, present on 10/1 (KCG). L. Hauroko, 12 on 22/3 (CMM).

YELLOWHEAD *Mohoua ochrocephala*

Paringa, Mataketake State Forests, present at c. 800-1000 m asl but uncommon (NJW). Hawdon R., 3 on 17/2 (JFMF, JSF). Blue Mountains, 2 in silver beech on 25/2 (PC). Frank Stm, Catlins, 2 on 14/1 (KCG). L. Hauroko, heard on 22/3 (CMM).

GREY WARBLER *Gerygone igata*

L. Rotoiti, 1 taking insects inside house on 13/8 (PJ). Charleston, nest building started on 24/8, 1st egg on c. 12/9 (DJO).

CHATHAM ISLAND WARBLER *G. albofrontata*

South Coast, a few at Ko Orao on 13-30/11, also at Cascades on 10/11 (AJDT).

SOUTH ISLAND FANTAIL *Rhipidura fuliginosa fuliginosa*

Charleston, 1st courtship feeding on 31/8, 1st fledged on 28/10 (DJO). Greymouth area, maximum numbers in autumn and winter (NJW). L. Hauroko, 5 black, 7 pied on 22/3 (CMM).

CHATHAM ISLAND FANTAIL *R. fuliginosa penitus*

South Coast, a few near Ko Orao on 13-30/11; Pinnacles, 1 on 20/11; Cascades, common on 10/11 (AJDT).

YELLOW-BREASTED TIT *Petroica macrocephala macrocephala*

L. Rotoiti, female collecting insects on 13/10, male with Silvereyes on 2/3, more tits seen than usual (PJ). Seddon, 1 juv on 9/1 (SLK). Cobden, only record of 1 on 29/4 (NJW). Charleston, 1st egg on c. 28/8, last fledgling on c. 9/1 (DJO). L. Kaniere, song began last week of July (NJW). Mt Nimrod, 3 males on 9/9 (BHS). Dunedin Botanic Gardens, 1 on 2/2 (ARB).

SOUTH ISLAND ROBIN *P. australis australis*

L. Rotoiti, 1 in house on 23/3 (PJ). Sandy Saddle, Mt Fyffe, 1 on 16/3; Orange Grove Saddle, 1 at 928 m asl on 17/2; L. Rotorua, Kaikoura, 1 on 4/12 (BEE). Saxon R., 1 on 28/4; Mohikanui R., present during April at the forks, Hennessy Ck, Larrikins Ck, and Goat Ck (TS). Charleston, dispersal from breeding areas began on 5/11 with small numbers present until 30/7. Males sing in what are apparently winter territories (DJO). Minchin Ck, 1 male and 1 1st year bird beside track to Minchin Ck, 400 m before highest point on the track (JRJ). Fiordland, locally resident in the east, common in red beech in Eglinton Valley; rare in western Fiordland although common on Breaksea I. where Norway rats are also present (KM). Freshwater Flats, saw 5 and heard many more on 8/4 (AJDT).

SONG THRUSH *Turdus philomelos*

Greymouth, singing started mid May; L. Kaniere, singing started in Aug (NJW). Westport, 1st fledgling on 8/10 (DJO), Murphys Hill, Chatham I., 2 on 20/1 (AJDT).

BLACKBIRD *T. merula*

Charleston, song from 11/8 to 31/3 (DJO). L. Kaniere, song began last week in Sep when Hokitika birds were feeding nestlings (NJW). Murphys Hill, Chatham I., a few caught by mistnet, none seen or heard otherwise (AJDT).

SILVEREYE *Zosterops lateralis*

Heaphy Track, many birds flying north along coast on 24/4, some heading east over Perry Saddle on 28/4 (TS). Charleston, 1st nest building on 21/9, 1st fledgling on 10/11 (DJO). L. Kaniere, few birds in Sep (NJW). L. Rotoiti, feeding young on 24/2 (PJ). South Coast, Chatham I., common in summer; South East I., several on 30/1 (AJDT).

BELLBIRD *Anthornis melanura*

L. Rotoiti, young calling for food on 13/10 (PJ). Charleston, a very successful breeding season, 1st fledgling on 24/10 (DJO). Rangiora, 1 heard on 25/2 (RVM). Mataketake State Forest, nest building on 7/10 (NJW). Mt Nimrod, several heard on 9/9 (BHS). Blue Mountains, 1 albino above Rongahere on 25/2 (PC).

TUI *Prothemadera novaeseelandiae novaeseelandiae*

Greymouth, feeding on kowhai Aug-Sep (CSL); only other records Dec, 21/5 and 16/6; L. Kaniere, highest numbers in Nov when feeding on kamahi and Quintinia flowers (NJW).

CHATHAM ISLAND TUI *P. novaeseelandiae chathamensis*

South Coast, a few at Ko Oraeo on 13-30/11 and at Cascades on 9/1; South-East I., flock of c. 20 rising high above Woolshed Bush for several minutes until 11 flew off towards Pitt I., on 5/2 (AJDT).

YELLOWHAMMER *Emberiza citrinella*

Buller, common, breeding on drier coastal areas, some movement during winter (DJO).

CIRL BUNTING *E. cirrus*

Ward, 1 pr with young on 1/3 (TJT). Hapuka, several birds seen on 20/1 (BEE). Nelson Haven, c. 8-12 on salicornia flats during winter months (GDQ, JMH).

CHAFFINCH *Fringilla coelebs*

L. Rotoiti, c. 20 eating Coprosma fruit on 24/2 (PJ). Charleston, song 7/8 to 1/2 (DJO). Greymouth, song stopped by mid Jan, no large winter flocks this year; L. Kaniere, 1st song on 31/8 (NJW). Chatham I., a few at Ko Oraeo in Nov (AJDT). South Westland, most widespread finch (NJW).

GREENFINCH *Carduelis chloris*

West Coast, less numerous than other finches (CSL, NJW). Charleston, last fledgling on 11/3 (DJO).

GOLDFINCH *C. carduelis*

Ward, 100+ on rape paddock on 10/5 (TJT). West Coast, present in native forest and tussock; Mohikinui Forks, 2 on 6/4; Heaphy Track, c. 20 on 25-29/4 (TS). Little Totara R., very few in winter, then 12 singing on 24/10 and up to 15 until Jan (DJO). L. Kaniere, c. 50 on 27/4 (CSL). Courtenay, 400+ on 14/4, more than usual (JFMF, JSF).

REDPOLL *C. flammea*

Perry Saddle, 8 on 27/4; Goulard Downs, 1 on 27/4; Matiri Range, 62 on 8/4 (TS). Ward, 100-200 on fathen paddock on 20/7, 1000+ in March (TJT). Little Totara R., most numerous from late Oct, when 30 were singing, to Feb, maximum count of 50 on 10-15/1, 1st fledgling not until 10/1 (DJO). Greymouth, uncommon until a few birds in Jan (NJW). Courtenay, 200+ from Feb-April, fewer than usual (JFME, JSF).

STARLING *Sturnus vulgaris*

Ward, 1 cream bird in March (TJT). Greymouth, large roost at Point Elizabeth (NJW); smaller local roosts such as grove of bamboo in Moana St (CSL). Little Totara R., almost absent from breeding sites Dec-Feb (DJO).

MAGPIE sp. *Gymnorhina tibicen*

Cobden, 1 on 22/6 (NJW). Ngahere, 2 on 18/8; Matai, 2 on 18/8; L. Kaniere, 3 on 27/4; Kokatahi, 4 on 27/4 (CSL). Inchbonnie, very common (PJF).

BLACK-BACKED MAGPIE *G. tibicen tibicen*

Hapuku, 2 on 3/2 (BEE).

WHITE-BACKED MAGPIE *G. tibicen hypoleuca*

Blenheim, 1 in May (TJT).

ROOK *Corvus frugilegus*

Ward, 1 pr in May (TJT). L. Rotoiti, Kaikoura, 9 with magpies on 4/2 (BEE). Earnsclough, 2 in Oct; Keyburn, 1 resident in pines near bridge in Nov; Sutton, 150+ on 9/12 (PC), 108 on 22/3 (KM, JVM).

REVIEWS

Check-list of North American birds: The species of birds of North America from the Arctic through Panama, including the West Indies and Hawaiian Islands, prepared by the Committee on Classification and Nomenclature of the American Ornithologists' Union. Sixth edition, 1983. Publ. American Ornithologists' Union. 877 pages.

Considerations of utility — a primary requirement in any checklist — were responsible for the main innovation in this edition, the omission of separate listings of subspecies. It was decided to expand the scope of the North American checklist to include the Hawaiian Islands, Middle America and the West Indies. These avifaunas, together with the already substantial temperate mainland list, required the treatment of more than 2000 species; hence the decision on practical grounds to restrict the list to the species level. Yet the Committee emphasises in its preface its strong endorsement of "the concept of the subspecies and the continued use of trinomials to express it. . . it is the Committee's hope and intent that the species-level sixth edition will serve as a framework for future publications that will carry the taxonomy of the avifauna within the Check-list area to the subspecies level". (For the many workers requiring an authoritative subspecies list in the meantime, reference is recommended to the fifth edition plus supplements or, for Middle America and the West Indies, to Peters' *Check-list of Birds of the World* and to "those regional works that have critically evaluated subspecies included in their areas".)

The outcome is a highly usable and reasonably compact 877-page single volume, with excellent end-paper maps; it provides, incidentally, a model for any checklist in practical layout and clear typography. Fossil records are not included (available for North America in Pierce Brodkorb's *Catalogue of Fossil Birds*, 1963-78, Bull. Florida State Museum). Species entries are not numbered, but a list of "A.O.U. Numbers" is given at the end of the volume.

The criteria for inclusion are clearly stated in the preface: the main body of the work comprises species for which there is a published record of occurrence within the Check-list area (up to 31 December 1981). Unpublished records new to the area have been included if the Committee was able to verify them. (It is interesting to note that "much of the distributional data for species whose occurrence in the Check-list area is well documented is based on sight records".) There are four appendices:

1. Species recorded in the Check-list area only on the basis of observation;
2. Species no longer accepted in the main text (mainly rejected as erroneous);
3. Forms of doubtful identity or of hybrid origin that have been given a formal scientific name; and
4. Deliberately introduced species or escaped captives not satisfactorily demonstrated to have become established.

The contrast with the size of the avifauna involved in the preparation of our own forthcoming revised checklist (under 300 species) is obvious — it is to be hoped that we can safely spread ourselves to subspecies without the fear, as was the case with the A.O.U. checklist, that “if [the Committee] had emulated previous committees by evaluating critically all of the described subspecies within the Check-list area, there would be little hope of publishing the work before the 21st Century”!

The entries in the North American checklist are basically the same as will be provided in the revised New Zealand checklist: scientific name, preferred English name (and where applicable Maori), original citation and type locality, a general summary of habitat(s) occupied, the geographical distribution, and, where necessary, notes on relevant matters not covered by the foregoing. The New Zealand checklist, however, will differ in having no formal “habitat” paragraph, habitat and distributional information being combined in a single general paragraph. Habitat information is necessarily on the broadest lines in the North American checklist, where a wide range of highly diverse habitats is involved, whereas in New Zealand, where there was less diversity in the original habitats, more emphasis is required on habitat changes (especially in the forest cover). An attempt is being made in the New Zealand checklist to indicate changes in status due to man’s modification of the environment. In addition, the revised New Zealand checklist will incorporate — listed in the main body of the text in systematic sequence — subfossil (and the few fossil) forms and will include information on subfossil distribution from recent palaeontological and archaeological research.

To conclude this review, some excerpts from the A.O.U. Committee’s Preface will serve to emphasise the background and problems inherent in the preparation of any biological checklist. “The continuous flow of new information on avian relationships and distribution renders any checklist instantly obsolete in at least some respects, and the need for revision and addition inevitably increases through time . . . the Committee feels a special responsibility to avoid introducing sweeping changes in taxonomic concepts that would drastically affect the form and content of the list unless such proposed changes have been adequately debated and widely accepted on the basis of published evidence . . . (under “Higher Categories”) our interpretation of the original charge that the Check-list should represent ‘a classification as well as a nomenclature of the birds’ is that it should constitute both a workable and a working hypothesis of avian systematics . . . We wish to have our classification regarded and evaluated as a working hypothesis — a set of proposals to be challenged and vigorously tested, then supported, modified, or rejected and replaced, all to the ultimate advancement of ornithological knowledge.”

Finally, all checklist users (and compilers!) should note well the “banner” across the A.O.U. checklist title page: “Zoological nomenclature is a means, not an end, to Zoological Science”.

E. G. Turbott

Mr Turbott is Convenor of the OSNZ Checklist Committee, which is currently well into its revision of the New Zealand checklist — Ed

Birds of the Fiji Bush by F. Clunie, illustrated by P. Morse. 1984. Fiji Museum, Suva. 160 pp, 54 colour plates and 13 drawings. 75 species identified. F\$6.50 p & p. F\$2.50.

The past three years have seen two new books on Fiji birds written by local ornithologists. Their up-to-date accounts emphasise the lack of basic biology of most species, which includes a high percentage of endemics (40%). Such books illustrate the scope for amateurs, including visitors, to contribute some useful new information which warrants publication in some form. Dick Watling's *Birds of Fiji, Tonga and Samoa* (1982, reviewed in *Notornis* 30(1): 77-79) provided a valuable compendium of birds of the region, including much new data and a comprehensive bibliography. The colour illustrations were a marked improvement on those provided in J. du Pont's *South Pacific Birds* (1976), where many inaccuracies arose from lack of local knowledge. The *Birds of Fiji in Colour*, with 24 illustrations by W. Belcher and text by R.B. Sibson, was mainly for tourists and is now out of print, as is the very cheap pocket guide by R. Mercer. E. Mayr's valuable *Birds of the Southwest Pacific* (1945, reprinted by Wheldon & Wesley 1968) lacks the few colour plates it had in the original.

Fergus Clunie has provided a much-needed field guide which not only complements Watling's book but is also inexpensive. Although a second volume is in preparation on Fijian sea and shore birds, the present one is more valuable, filling an important gap. It avoids the pitfall of providing maps of distribution, dubious because many tropical birds have patchy distributions. Patricia Morse's illustrations are perhaps the best yet of Fiji birds, at least for a field guide. Another advantage is that they are interspersed in the text close to the written description. Species without colour plates are generally familiar ones: mynas, magpies, House Sparrow, Starling, Jungle Fowl and White-faced Heron.

The brief introduction on conservation and the impact of introduced mammals is a familiar picture to New Zealanders. The map and index are sufficient for most users, but I question the inclusion of the section on Fijian bird names by Paul Geraghty. Although it may be useful in indicating past distributions, the complexity of using map and table, not to mention pronunciation, would defy most users. I think a separate expanded museum guide by both authors on this topic should be provided. Anyone wanting a local name and its correct pronunciation would simply show local people the illustration. From my experience, many Fijians are ignorant of the names and identification of the less familiar species that are likely to interest birdwatchers.

Clunie has taken the liberty of changing the familiar English names for something more appropriate, although West Polynesian Ground Dove is a bit of a mouthful. In the section on further reading, he mentions the recent journal *Domodomo* of the Fiji Museum for articles on Fiji birds but fails to mention *Notornis*, which has been the main source of most recent observations, including Clunie's.

The descriptions are interspersed with chatty observations on behaviour, as well as descriptions of subspecies, and male, female and juvenile where necessary. Breeding knowledge, where it exists, has often been gleaned from the author's own notes, which I am pleased to see in published form. The relatively low price of this book is very much a plus, and I hope it will find its way into many local hands and schools as well as the increasing tourist market.

Nigel Langham