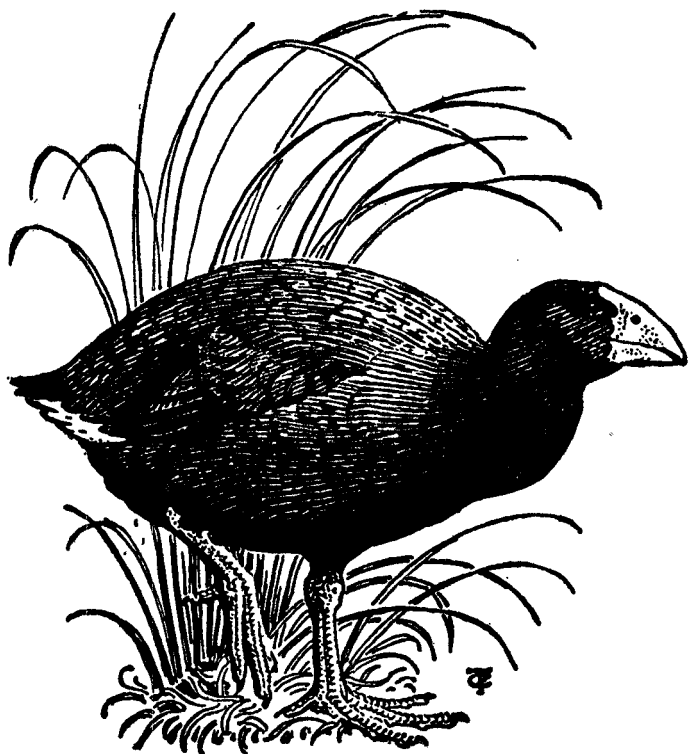


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## CLASSIFIED SUMMARISED NOTES

### 1963 - 1970



Classified Summarised Notes were published annually in *Notornis* from 1940 till 1962. In 1963 it was decided to cease publication of notes in this form, and the Recording Scheme was started to provide a central registry of unpublished ornithological information, recorded on species files which are available to members on request. In 1970 Council decided to resume publication of classified notes; the following pages contain a brief summary of selected material sent for recording between 1963 and 1970, with a list of contributors; in the text, these are identified by initials. For the future it is intended to publish in December each year a summary of notes recorded up to the previous June. The species and other files of the Recording Scheme will be maintained as hitherto, for the benefit of members who wish to consult the much fuller information contained therein.

— A. T. EDGAR, Recorder



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(E. & O. E.)

## NORTH ISLAND KIWI (*Apteryx australis mantelli*)

A common bird in every bush area I have been in, in the northern half of North Island; particularly plentiful in Northland, Coromandel, Uruwera and Taranaki-King Country areas (R.T.A., 1963). Present in and around forests throughout Northland from Awanui south; persists in scrubland and small areas of residual bush in Bay of Islands, where during dry spells kiwi visit gardens and irrigated orchards, also farmland, within a mile or more of the nearest bush. April 1968, a bird found inside a shed behind a house in Kerikeri township, caught and put in a wire enclosure but escaped during the night (A.T.E.). Waipoua, 1963, occasionally heard calling on the edge of exotic forest (R.L.). Aranga, May 1969, a very large kiwi found on farm, greyish with brown flecks on feather tips; caged at farmhouse with intention to show to schoolchildren the following day but escaped overnight by digging its way out under the cage (C.D.C.). Spring 1970, one probing for worms in a garden at Anzac Avenue, Whangarei; some bush recently felled in the area. Maunu, too much visiting caused kiwis to desert a nest. Waikiekie, a nest on a farm has been used for four successive years, each year a clutch of two eggs (K.R.). Bay of Islands, 16/9/70, adult in nest hole on a steep slope in forest near a mainroad; 22/9/70, the nest hole contained an adult, a chick and an egg; 29/9/70, adult on egg, chick had gone; 6/10/70, adult with newly hatched chick (K.R., D.E.C., A.T.E.). 1969, G. B. Rawlings examined stomach contents of a kiwi killed by a dog and found remains of moths (scales), ground beetles and 40 cicada numphs (A.T.E.).

Birds released on Ponui Island, 1964 (D.V.M.). Kawau Island, Mr Grey saw six together several years ago (A.J.G., 1962). Firth of Thames, January 1966, calls heard from Thames hospital; dogs have caught several in the last year or two (M.P.D.). Tapapakenga, east side of Moumoukai bush, one seen on bush track by bushman, 1966 (H.R.McK.). April 1964, one found by a dog in a hedge on a farm 5 miles from Hamilton P.O., far from bush (N.Z. Herald). A young bird dead near Te Kuiti, 1958. (T.A.B.).

Coromandel, Papa Aroha, 1961/62, calls heard late afternoon; one dead on track, small hole in throat may indicate attack by stoat. Te Rerenga, 13/9/62, nest, two eggs, bird sitting (C.A.McC.); 1966, one sheltering in old nest hole (A.McD.).

Bay of Plenty, not uncommon in bush on the ranges, may be increasing over the 15 years prior to 1964 (N.B.). Awakeri, Ruatoki, occasional (R.M.W.). 1962, 9 miles north of Waihi, in bush, fresh burrow, clear imprint of kiwi foot in loose soil (T.A.B.). Scattered throughout Raukumara and Huiarau ranges, reported abundant in some localities, Motu bush (A.B.). Waikaremoana, 12/10/60, young bird dead, wound at base of neck, ? stoat (A.T.E.); said to be quite common in area, April 1966 (D.G.M.). Present around Rotorua, heard about Lake Okareka, a number at Kaharoa (H.L.); damp bush gullies at Waione, south of Lake Rotoiti; reports of birds caught in possum traps in widely scattered localities in Rotorua Lakes district (F.M.). Not noted in Ruahines, no sign in Tukituki, Pohengina or Makaretu (C.N.C.); none seen or heard in Upper Ngaruroro for many years (D.E.B.); present in upper Tutaekuri catchment and off Napier-Taupo road at Te Pohue (N.B.M.).

Whareorino, north of Awakino; heard calls at Moeatoa; Mokau river, a mile upstream from New Plymouth highway bridge, several heard calling in bush adjoining river flat, April 1963 (J.L.K.). Numerous in East Taranaki bush; August 1962, plentiful at Tahora (M.G.M.). Moeroa, in forested valleys and second growth scrub (D.C.). Whangamomona, 1956, nest with two eggs on north side of hill facing Tangarakau river, deserted after birds had been disturbed by dogs; April 1957, apparently plentiful in bush in this area. Upper end of Mt Egmont road, 1970. Hutiwai valley near Tongaparutu (D.G.M.). Plentiful in Mt Egmont Park (G.G.A.). Feathers and a burrow found on a farm 5 miles from New Plymouth P.O., but the bird did not nest (A.F.B.). Wanganui area, fairly common (R.M.). None south of Lat. 40, nor in Tararua (E.D.).

#### STEWART ISLAND KIWI (*A. australis lawryi*)

January 1956, common on Mason Bay flats, also met with at Duck Creek, Martin's Creek, Freshwater River and on slopes of Mt Rakeahua (D.C.). December 1969, heard in forest between Oban and Freshwater River (R.J.P.). Abundant in its own territory; formerly found south of Paterson Inlet, now over most of Stewart Island and probably in very limited numbers even near Halfmoon Bay. Not wholly nocturnal; in August 1963 I was coming along a rough track I have cut to get to a remote bush area and saw a kiwi coming my way, probing and fossicking. As I stood quite still it brushed past my legs on the very narrow track, sniffed my pants and then, slightly disturbed, trotted quietly away. I quite often meet kiwis in daylight along this track, but I am usually alone (R.H.T.).

#### LITTLE SPOTTED KIWI (*A. oweni*)

One caught in a possum trap at Tauranga Bay, Westport, mid-May 1963; sent to Wellington zoo (B.D.B.). M. Richardson states that several times during 1961-63, while out shooting, his dogs caught "small grey kiwis" behind Cora Lynn in the forest on the cold southerly face (J.R.J.). Never seen at Jackson's Bay (D.G.).

#### GREAT SPOTTED KIWI (*A. haastii*)

Barrytown, 25/5/62, one caught in trap; these seem to be the birds mostly caught by possum trappers (P.G.). Ikamatua, 30/3/56, one caught by dog; Whataroa, about W. Gunn's house, 1954; Karangarua Valley, Cassels Flat, 15/1/55, one found; not uncommon Bealey - Arthur's Pass National Park; common in Edwards and Mingha valleys (J.R.J.). Jackson's Bay, not in lowlands but numerous at timber line on Haast Range; reported by visiting amateur ornithologists along foot of range between Waiatoto and Arawata rivers in 1960 (D.G.).

#### YELLOW-EYED PENGUIN (*Megadyptes antipodes*)

St. Andrews, May 1968, one present on shingle beach for six days before it died (R.J.P.). Shag Point, 10/10/66, ten birds, two being last year's young. Four nests, each with two eggs, birds sitting. (I.McV.) This colony is between the main road and the sea at the south end of Katiki beach. There is a steep bank of fairly coarse scrub (gorse, *Solanum aviculare*, *Coprosma*, etc.) running down directly off the road for about 30 ft, a concrete and boulder retaining wall about ten feet high and then the beach. The penguin trails run up through the scrub to the fence on the roadside and birds are occasionally

seen standing out on the edge of the road. There is a picnic place 200 yards down the road and a parking area at the immediate north end of their bank, but they seem relatively undisturbed and nest successfully (J.H.). 24/10/67, one on nest in open (H.R.McK.).

Otago Peninsula - Little Papanui: 18-21 April 1965, 20 plus birds, at both ends of the beach; three adults in moult and some chicks still being fed (A.R.H.). 9/7/66, 10 birds came out of water 1600-1700 hours, others heard rustling in bushes (R.C.). 5/3/66, 8 seen, finishing moulting (W.T.P.). Hooper's Inlet, 1/10/66, two landed on Sandymount side (W.T.P.). Boulder Beach, at the south end there are two small patches of flax on a steep hillside immediately above the beach with a bouldery little plateau above them. The penguins seem to nest very successfully in these three areas. Cattle graze the area and they make holes in some of the penguin tracks but do not seem to enter the main nesting areas. In early December 1966 G. Chance found at least 20 nests with large chicks still sitting in them. On 30/12/66 8 adults came ashore 1500-1600 hours, I saw 8 chicks all about two-thirds adult size by working round the outside edges of the nesting area; at the north end of the beach there were two other pairs about 100 ft a.s.l. on a rather exposed grassy ridge (J.H.). 30/3/68, 1330 hours, 34 birds on half a mile of beach, in three lots, others may have been moulting (D.A.L.).

Forbury Head, 18/7/64, 13 going to sea at daylight; 2/8/66, 10 landed between 1515 and 1549 hours; 15/6/67, 11 landed between 1530 and 1610 hours; all stood in an irregular line on the rocks. 12/2/69, five on rocks, some moulting (W.T.P.). Nugget Point, 17/1/66, a pair seen on the road near the Marine department houses by Mr C. Nicholls; they had come right up the cliff face and through the bush (J.H.). Jack's Bay, 2/11/67, colony above beach in thick scrub; three seen by I. McLaren on top of high cliff among dead trees (H.R.McK.). Catlins coast, 24/10/70, seven nest sites (J.H.).

January 1971, ashore in most areas from Moeraki to Catlins, all in moult. February 1971, Otago Peninsula, Papanui, Penguin, Allan's and Ryan's beaches, birds in various stages of moult; some had completed moult early in month, others just starting towards end of month; no dead birds found (A.W.). Stewart Island, Dec. 1957, nest hidden among rotten branches in an olearia grove, 40 yards from the beach (D.C.).

#### NORTHERN BLUE PENGUIN (*Eudyptula minor* ssp.)

Rangaunu Bay, March 1967, 165 dead penguins on ten miles of beach. Bay of Islands, Moturoa, 8/10/67, incubating two eggs in a nest under a house on the beach; one chick hatched 17/11/67, the other egg was infertile (A.T.E.). Poutu, 1962, a bird hatched two chicks in a wooden box in a shed behind the schoolmaster's house, about  $\frac{1}{2}$  mile inland. 11/9/63, same situation, two eggs, which hatched; 13/2/64, two adults sitting in the box, moulting (M.J.B.). Little Barrier, 16/8/62, nest, two eggs, in hollow of pohutukawa tree; two other nests under outbuildings, each two eggs, hatched 5th and 7th September; four other nests hatched by 10/9/62 (R.H.B.). South Auckland, 14/11/64, a bird seen under the bridge across Mauku stream (Waiuku-Drury road) sunning itself on the bank. The point of sighting is about three miles inland from Manukau harbour; water

would be salt, or fresh, backed up by the tide (J.L.). Gisborne, Turanganui River, one feeding on small fish below the town bridge (A.B.).

#### SOUTHERN BLUE PENGUIN (*E. m. minor*)

Stewart Island, 1955-57, common everywhere; at sea they fish in rafts of 40 or more, but in bays and sheltered inlets they feed singly or in small groups. Nesting activities well advanced in mid-January and a number of nests examined contained well grown chicks. Penguin colonies were apparent by presence of well worn tracks leading to their nests (D.C.).

#### WHITE-FLIPPED PENGUIN (*E. albosignata*)

Cape Campbell lighthouse, Marlborough, a dried skin found above high water mark, February 1964 (A.W.). Motunau Island, 24-28/10/70, all burrows inspected were occupied by adults, one or more commonly two eggs; no chicks seen. Penguins seen close inshore in late afternoon; many moved straight on to the island at dusk. Groups, some up to 20 birds, remained on the rocky beach all night and did not attempt to go above high water mark, these probably unemployed birds; some of these resembled *minor*, and two such birds were found in burrows during the day, one on two eggs and the other with a typical *albosignata* female but without eggs. 26-30/12/70, 70% of burrows inspected contained chicks, some fully fledged with no down remaining, majority partly fledged with patches of black down especially on head and back. All remained underground by day; most sat at their burrow entrance for at least part of the night; some fledged chicks wandered about the island by night but none was seen below high tide mark; no indication that any chicks had gone to sea. Adults came ashore from the beach from about 2100 hours each night and all had returned to sea by 0330 hours. Chicks were seen being fed at all hours during the night. Few adults seen ashore by day and these were either moulting or had very small chicks. Occasional nests still had eggs, usually unattended by adults which suggests that they were deserted (C.N.C.).

St Andrews, storm killed birds during winter months; April 1968, six on 1½ miles of coastline after a storm (R.J.P.). Otago, January 1971, an unusually large number of small penguins found dead between Karitane and Taieri mouth; some were *minor*, but the bulk of them were *albosignata* and young birds (A.W.).

#### ROCKHOPPER PENGUIN (*Eudyptes crestatus*)

Dr R. F. Smith reported seeing one at Puddingstone Rock, Otago, early February 1971 (A.W.).

#### FIORDLAND CRESTED PENGUIN

(*E. pachyrhynchus pachyrhynchus*)

Westland, Whakapohai mouth, south of Moeraki River, colony reported by A. B. Munden, 1963 (P.G.); 13/11/70, many nests; the Marine department ranger mentioned another colony at Murphy's Creek mouth (J.R.J.). Jackson's Head, 6/7/69, fairly large numbers found on land, singly or in pairs occupying territory, no actual breeding yet (F.C.K.). Big Bay, 15/2/62, many heard in scrub, one caught and examined (R.J.N.). Oct/Nov 1962, Blue Cliffs-Big River, Green Islets-Gates Boat Harbour, common (P.D.).



Stewart Island, 25/1/56, a small colony on the first of the Ernest Islands which is linked to the main island at the south end of Mason's Bay beach; juvenile birds noted amongst the scrub, colony otherwise deserted (D.C.).

Otago, March 1965, a bird caught at Kaka Point and later released had almost completed its moult; identified by I. McLaren (J.H.). 4/2/71, a single bird just starting moult at Papanui beach (A.W.).

#### SNARES CRESTED PENGUIN (*E. p. atratus*)

Stewart Island, 23/1/56, two birds ashore at Half Moon Bay, in a small cave formed by several large boulders; they were moulting (D.C.). Ryan's Beach, Otago Peninsula, 27/7/71, single bird ashore, moult completed (A.W.).

#### ERECT CRESTED PENGUIN (*E. p. sclateri*)

Taranaki, February 1966, a bird photographed on the coast near Tataraimaka, identified by F.C.K. (D.G.M.). Cape Turnagain, 13/2/71, one found on beach, identified by F.C.K. as freshly moulted second year bird (R.S.). Canterbury, a bird on St Andrews beach, just beginning to moult, 9-19/2/69; 16/3/69, Lake Wainono beach, a different bird; both photographed and identified at Canterbury University. 15/2/70, Lake Wainono beach, one (R.J.P.). Otago, 16/2/69, Bull Creek, one on rocks, moulting (W.T.P.); January 1971, single birds in moult at Brighton beach, Ryan's beach, Taieri mouth (A.W.).

#### SOUTHERN CRESTED GREBE (*Podiceps cristatus australis*)

Lake Hector, occasional; Lake Christobel, two, 1955 (J.R.J.). Lake Ianthe, 15/11/61, four pairs (A.B.M.); 5/7/67, one (B.D.B.). Pairs seen on Lake Poerua, Lake Wahapo, Lake Moeraki, Saltwater Lagoon; two pairs, one pair with young, on Lake Poerua October 1964, also in March 1965 (T.H.S.). Lake Mapourika, 6/7/67, two (B.D.B.). Lake Ellery, a few until float planes started landing, since when not seen (D.G., 1964); Lake Wilmot, 14/2/62 (R.J.N.). Lake Te Anau, local farmer reports that there used to be a pair along the township waterfront, but none now to be seen on eastern shore of the lake (G.C. 1967). Lakes Gunn and Fergus, 13/2/63, nine adults and four large young (H.R.McK.); Lake Fergus, 28/12/66, two (G.C.). A pair on Green Lake, 2500 ft a.s.l., and several pairs on Island Lake, near Lake Monowai (P.D., 1964).

#### NEW ZEALAND DABCHICK (*Podiceps rufopectus*)

Formerly on dune lakes in the Far North, probably not now (R.H.M.). Kerikeri, farm lake, two birds present May 2-22, 1968, not seen before or since (A.T.E.). Kaikohe sewage pond, one seen once, in 1963 (M.R.). Rehutai, Dargaville, 6/9/69, two pairs and one half grown young on a farm lake (C.D.C.). Poutu, Rototuna Lakes, April 1965, 25; Shag Lake two, East Twin Lake four (H.R.McK.); Rototuna Lake Jan 1967, 20 (J.F.B.); June 1970, 16 (A.T.E.). Muriwai Lakes, 16/2/69, 83 (S.R.).

Waikato, a nesting pair in flooded farmlands south of Lake Waikare 12/10/64 (R.T.A.). Bay of Plenty, a few pairs on lakes (R.M.W.); 1964, a few in Kaituna area (N.B.); Lake Taimaranui

(road Rotorua to Whakatane), 24/9/66, 5 (P.J.H.). Gisborne-East Coast, widespread throughout in small numbers, inhabiting several new places 1968 (A.B.). Rotorua lakes, many records; found on all lakes where there are sheltered waters (H.L., F.M.); 9/5/63, Waimangu southern crater lake, one diving and feeding along lake bottom (H.R.McK); Ohau Channel, 10/4/69, pair with two chicks, one riding on parent's back (R.W.J.). Hawkes Bay, widespread on suitable waters in small numbers (N.B.M.); Lake Opapa, Westshore Lagoon, Lake Hurimoana (K.T.); Lake Tutira, May 1965, six (A.T.E.); Horseshoe Lake, January 1962, nest, 2 eggs (R.B.S.).

Taranaki, scattered population; specimen sent to museum from Okato, May 1963; Opunake, 2/11/63, two on a coastal lagoon, one diving and offering food to the other; occasionally seen at Hawera (M.G.M.). Waitotara mouth lagoon, 1967/68, October 1969; Barrett Lagoon, June and July 1968; Bell Block oxidation pond, 8/6/69 (D.G.M.). Westmere Lake, August 1968, 2; Kaitoke Lake, 28/3/64, 8; had young in 1966/67 season; bred again in 1968 (R.M.). Near Hunterville, on a Mangahoe dam, 20/8/61, two birds; 9/12/61, they had two young, a little smaller than the parents (J.S.M.). Manawatu, present on most lakes where a good raupo covering is present, 5-6 pairs on Lake Papaetonga, 1962 (E.D.); Lake Kaikokopu, 16/7/66, 12 (E.B.J.); winter 1969, reported on a number of coastal waters including the "loop" at Foxton (I.G.A.); Lake Horowhenua, October 1969 - March 1970, small numbers, up to 12; April - July 1970, more than usual, c.50 on 9th May, 30 on 19th June; none seen August - September (E.B.J.). Paremata, 25/5/64, one in saltwater pool between road and railway (H.R.McK.). Masterton, May 1960, one on lake with hundreds of ducks (A.T.E.).

Hurunui, 8/12/62, three in old channel, under road bridge (J.R.J.). Lake McGregor, October 1962, one (B.D.B.). Lake Mapourika, September 1956, L. Angus found two men poaching dabchick (J.R.J.); Lake Gunn, March 1964, one (M.M.).

#### WANDERING ALBATROSS (*Diomedea exulans*)

Dunedin, 27/1/71, 6 plus 2 followed boats into the harbour as far as the pilot's wharf; most unusual, as they very rarely go beyond the end of the mole even when fish are being gutted. Hot dry weather, high sea temperature, fish running deep and catches poor; lack of surface feed could have caused this unusual behaviour (A.W.).

#### N.Z. BLACK-BROWED MOLLYMAWK (*D. melanophris impavida*)

Manawatu, stormy weather 16-17/6/69 brought the first wreck of this species, one of which flew inland as far as Kiwitea (I.G.A.). Southland, April 1968, a juvenile recovered on a farm at Waimatua and returned to sea had been banded on 29/1/68 as a chick at Campbell Island (R.R.S.).

#### GREY-HEADED MOLLYMAWK (*D. chrysostoma*)

April 1968, a juvenile picked up on a road near Winton, Southland; returned to sea (R.R.S.).

#### BULLER'S MOLLYMAWK (*D. bulleri*)

Near Saddleback Island, off New Plymouth, 17/6/66, two seen by V. Gaskin, who is positive about the identification. This is the first time to my knowledge that this species has been recorded from this area (D.G.M.).

### WHITE-CAPPED MOLLYMAWK (*D. cauta cauta*)

Stewart Island, 1955-57, the commonest mollymawk in these waters. Up to six birds would follow a vessel, fighting and squabbling for titbits thrown overboard when fish were being cleaned and gutted. Though sometimes called Shy Mollymawk we found this far from true as it is quite bold and cheeky, taking food from a person's hand. One bird was observed to swallow two blue cod, one after the other (D.C.). Dunedin harbour, 27/1/71, at a time of high sea temperatures and shortage of surface feed, 8 followed a boat into the harbour in the morning; in the afternoon, 53 sitting on the water from the mole to the pilot's wharf and drifting out with the tide (A.W.).

### LIGHT-MANTLED SOOTY ALBATROSS (*Phoebastria palpebrata*)

Dargaville beach, 10/4/70, one ashore alive, with a damaged leg; cared for and survived for some time but later died (C.D.C.).

### NELLY (*Macronectes giganteus*)

A white phase bird, banded at Signey Island, South Orkneys as a chick in March 1969, found dead on Omamari beach (Dargaville) on 5/7/69 (C.D.C.). A brown bird of similar age and origin came ashore in a secluded bay in Bay of Islands on 28/9/69; fed on fish and soaked bread by a lady resident in the bay, it followed her along the beach and was either unable or unwilling to take off. It seized fish by the head and either swallowed it whole or crushed it before swallowing; sometimes bit the fish and nibbled it gradually, working back from the head. Uttered a grunting note, and clapped its mandibles. After a week's stay it was taken out to open water in a dinghy and released (A.T.E.). What may possibly have been the same bird swam up to a launch on a fishing trip in Whangarei harbour not long after the date of release, clapped its mandibles and accepted fish thrown to it (K.R.).

Off Port Taranaki, 11/7/64, white phase bird caught and released (press report). Off Conway mouth, 31/12/70, 50 round a dead whale (J.R.J.). St Andrews coast, seen in every month of the year following fishing boats, flying up the coastline or feeding on refuse at meatworks; few in winter months, largest numbers October-December; maximum recorded in 1968-70 period, over 120 following a fishing boat on 29/11/70. A white phase bird, pure white except for some dusky markings, especially on underwing, seen on 24/12/69 (R.J.P.).

### CAPE PIGEON (*Daption capensis*)

Bay of Islands, occasional; 14/12/68, one off Cape Wiwiki with shearwaters at school fish; 23/7/69, one off Urupukapuka and one in Russell harbour; all three birds very unafraid. Several seen at sea outside the bay, July-August 1969 (A.T.E., D.E.C.). Mr H. Rowe, writing in 1965, states "one one occasion about two years ago I had as many as 14 Cape Pigeons in a locker, recuperating from a storm in Hauraki Gulf" (J.H.). Otago, Lawyers Head, 6/10/67, 200 plus spread out to limit of vision, flying well in strong wind (W.T.P.). St Andrews coast, 1969, September 90, October 170, November 122; appears to show more preference for fishing boats than does Giant Petrel (R.J.P.).

**GREY-FACED PETREL (*Pterodroma macroptera*)**

South Kaipara Head, breeding reported 1965 and 1966 (M.W.). North Kaipara Head, 8/11/69, two burrows each with one chick (C.D.C.). Kawerau, birds found near the mill in December 1969 and January 1970, and about the same dates in previous years. These may be young birds leaving a possible breeding colony near Kawerau, attracted by street lights and landing in the town and factory area, or young birds from island colonies blown inland by strong winds or flying inland because of faulty navigation caused by inexperience (R.M.W., F.C.K.). Manawatu, 12/12/70, one storm-cast; very rare on this coast, no recent records except after Wahine storm (I.G.A.).

**BLACK-CAPPED PETREL (*P. externa cervicalis*)**

November 1970, breeding in large numbers, Macauley Island (B.D.B.).

**MOTTLED PETREL (*P. inexpectata*)**

In late 1962 a specimen was forwarded to Taranaki Museum by a farmer in Taumaranui area. A possible breeding area east of Taumaranui is the Hauhungaroa ranges (M.G.M.).

**KERGUELEN PETREL (*P. brevirostris*)**

A bird washed ashore at Ohope in July 1965, identified by Dr R. A. Falla, was the first recorded from this area (V.D.).

***Pterodroma leucoptera* ssp.**

A bird picked up inland near Wanganui in November 1963, now in Dominion Museum (F.C.K.).

**COOK'S PETREL (*P. cooki*)**

Little Barrier Island, 1962, first calls heard 30th July (R.H.B.). Kaipara Flats, 15/10/61, a drizzly foggy night, calls of Cook's Petrels flying east between 2030 and 2100 hours; 14/12/67, very noisy tonight out in the misty drizzle (F.P.H.).

***Pachyptila* sp.**

An unidentified prion flying over Lake Taupo in January 1971, after Hurricane Rosie, seen by Simon Towle (R.B.S.).

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

Storm-blown birds found inland at Lake Waitaki power station (M.K.) and Wakatipu (M.F.S.); Rocklands, 28 miles west of Outram, February or March 1966, one seen with ducks on a pond; died next day (J.H.).

**FAIRY PRION (*P. turtur*)**

19/2/59, a fairy prion entered the outdoor station of Arapuni power house and was caught by the night watchman; it was emaciated and died soon afterwards (D.V.M.). Motunau Island, December 1964, about 25% of prion chicks were very heavily infested with fleas (*Parapsyllus jacksoni*) especially about the head and nape. On some, more than 100 fleas on top of feather remnants on the neck (J.R.J.).

**BLACK PETREL (*Procellaria parkinsoni*)**

Juvenile birds found at Tokoroa and Ohinemutu (R.M.W., 1965). Two juveniles picked up at Kinleith, about a week apart

in the last ten days of May 1965. This is the second time this has happened. The indication is that they were leaving a breeding ground and making for the coast (B.D.B.). One found alive in New Plymouth on 6/5/67 is the first known recovery from this area, but Oliver (1955) mentions a record from Stratford. See *Notornis* 9: 106. (D.G.M.).

#### WESTLAND BLACK PETREL (*P. westlandica*)

Cook Strait, present in March 1966; 11/8/66, several seen, twice seen flying in pairs. This species was not in evidence in Cook Strait ten years ago and appears to be increasing in range or numbers (H.L.S.). Voyage Wellington-Lyttleton, 31/12/70, off Seddon mouth, 5; off Clarence mouth, c.100; off Kaikoura, 4; off Conway mouth; 10 miles off Waipara mouth, 50 (J.R.J.).

#### WHITE-CHINNED PETREL (*P. aequinoctalis*)

11/5/67, at sea outside Bay of Islands, two large dark petrels with white chins (D.E.C.).

#### FLESH-FOOTED SHEARWATER (*Puffinus carneipes*)

1/1/64, large flocks close south of Little Barrier, total c.500; 12/2/64, off Mangawhai, c.250, with an equal number of *bulleri*; off Te Arai Point, 300 plus, few *bulleri* (A.J.G.). 28/11/64, outside Ponui Island, c.50, feeding on pilchards; 22/2/68, off Whangaparaoa, 100 plus (H.R.McK.). One over Lake Taupo January 1971, after Hurricane Rosie, seen by Simon Towle (R.B.S.).

#### BULLER'S SHEARWATER (*P. bulleri*)

12/12/67, twelve birds offshore from the Bluff, 90 mile beach (A.T.E.); 20/12/69, very abundant from Wellington Head at the mouth of Tory Channel to Cape Terawhiti; 23/12/70, on voyage Lyttleton-Wellington, 11, from off Waipara mouth northwards (J.R.J.). St Andrews coast, 12/4/69, 3 (R.J.P.).

#### SOOTY SHEARWATER (*P. griseus*)

Many records of vast numbers passing along Otago coastline in October and early November, and in February-March (W.T.P., R.C., H.R.McK.). 13/11/65, Shag Point, Otago, two found dead on shrubby slope 100 ft a.s.l.; one tied down by wing, twisted round with holygrass. 21/1/66, Stirling Point, Bluff, one tied down by wing, twisted in tall cocksfoot (W.T.P.). Motuara Island, Cook Strait, 23/1/71, occupied burrows in blackberry, ivy, etc., under the remains of an old house, now collapsed and reverted to bush. Motukiekie Point, 12 miles from Greymouth, 28/12/70, colony stronger than when I knew it in 1950-57 (J.R.J.). Adams Island, January 1966, a sea lion seen taking mutton birds rafting in the harbour (B.D.B.).

#### FLUTTERING SHEARWATER (*P. gavia gavia*)

15/3/51, a very large raft, several thousand birds, close inshore near the old jetty at Waiwera; some birds, borne in on wavelets, scrambled on to the beach (A.T.E.). 8/2/65, rafts totalling several thousand birds 2-300 yards offshore from Takou Bay; in the same month, large rafts between Takou Bay and Cavalli Islands (P.M.G.).

A bird found on a Taranaki beach patrol in 25/9/66 had been banded as an adult on Mercury Islands on 4/9/62 (D.G.M.). November 1965, feeding habits of a lone bird which associated with White-

fronted Terns and Red-billed Gulls working over a school of kawahai at Castlepoint were closely observed. Dives of up to 10 seconds were recorded, but usually they were of 2-3 seconds duration. The bird swam using half closed wings as paddles, sometimes diving more than three feet below the surface. Major alterations of course under the water were seen, indicating ability to see and locate prey. Another method of feeding, often seen in petrels, was to alight on the water, wings half outstretched, gathering food by dipping the head in and out of the water (J. A. Bartle).

Rakautara, 29/10/65, c.1500 close inshore and c.100 right in the kelp; Mangamaunu, c.5000 offshore (H.R.McK.).

#### HUTTON'S SHEARWATER (*P. huttoni*)

A most interesting species; it feeds in temperate waters, breeds in a sub-antarctic environment just above the bushline, and its parasites are a mixture of temperate and subantarctic species and genera (J.R.J.).

#### KERMADEC LITTLE SHEARWATER (*P. assimilis kermadecensis*)

Macauley Island, November 1970, breeding, chick in down; first record for this island (B.D.B.).

#### WILSON'S STORM PETREL (*Oceanites oceanicus*)

One on a fishing boat at Croisilles, 9/11/66, photographed and released (B.D.B.).

#### GREY-BACKED STORM PETREL (*Garrodia nereis*)

Rowallan, Te Wae Wae Bay, 2/12/64, a storm-blown bird found alive on sawmill road in forest area; photographed and released in Invercargill estuary (R.R.S.).

#### WHITE-FACED STORM PETREL (*Pelagodroma marina maoriana*)

Bay of Islands, off Black Rocks, 10/1/68, 12 storm petrels feeding on small squids, with a shoal of pilchards; white-fronted terns feeding on the pilchards. 26/12/68, 20 storm petrels off Harakeke Island (D.E.C.). Hauraki Gulf, off Leigh, 2/1/61, several rested repeatedly on water for up to 30 seconds, to feed; 30/12/61, c. 50 feeding with prions north of Little Barrier (A.J.G.); 16/1/66, 10 off Tiritiri (S.C.); 19/1/69, many nest burrows on Cow (Tuhuia) Island (H.R.McK.). Muriwai Beach, early May 1970, one alive and well on the beach (S.R.). Dunedin, 27/10/61, a bird found under a street lamp; brought to me the following day; tried to release after photographing but it could not get over the large waves and was washed ashore again with gulls following it; kept in a box overnight, it tried to escape by burrowing; released in the harbour 29/10/61 (L.E.W.).

#### BLACK-BELLIED STORM PETREL (*Fregatta tropica*)

Hinahina, Catlins River, Otago, 27/5/68, freshly dead bird found on a doorstep, probably caught by a cat; sent to Otago museum. St Andrews coast, Canterbury, April 1969, a bird considered to be this species seen flying south pursued by Black-backed Gulls; flight so fast and erratic that the gulls had difficulty getting near it (R.J.P.).

#### DIVING PETREL (*Pelecanoides urinatrix*)

11/5/69, large numbers off Cavalli Islands; 11/2/71, Bay of Islands, westerly wind, 140+ (D.E.C.). June 1963, plentiful from

Te Arai Point to Cape Brett, particularly in the area several miles north and south of Wide Berth Islands off Whangaruru (A.J.G.).

New Plymouth Port, Saddleback Island (Motumahanga) 24-25/8/63, estimated 5000 birds; came in from 1830-2200 hours (sunset 1755 hours). Landed in taupata canopy and dropped 10 ft or so to ground. 50% sat singly or in pairs on the ground, 50% singly or in pairs in burrows. Two pairs seen to copulate 0600 hours 25th August; mating well in progress, burrows being prepared but the main laying had not started. Calling continued all night from the time of first arrival to the time of last departure, both above and below ground. Departure between 0600 and 0630 hours (sunrise 0655); the birds rushed at speed down flight paths to the northern cliffs where they immediately took flight, some already flying by the time they reached the cliff. When the last birds had gone, the silence was noticeable. In the morning there was much evidence of the night's activity, freshly cleaned burrows and soil scraping. Seven burrows chosen at random were excavated; all were 2-2½ ft in length with a right angle bend to the right at about 18 inches. The nests were about 12 inches below the surface and all contained a handful of twigs and roots, some a few green taupata leaves. Of seven nests two had one egg each, with a sitting bird; the others were empty but prepared. Two deformed birds were found, one freshly dead, trapped with some others in a rua pit, the other trapped in a squashed burrow but otherwise in good health. The deformity consisted of plates of feathery scales from chin to half way along the underside of the bill and the same width as the bill (specimen in Taranaki museum). The island is difficult of access except in perfect weather (M.G.M.).

Manawatu, small numbers ashore each month August-December 1969 (I.G.A.). 24/4/67, one picked up 3 miles east of Levin; released at Lake Horowhenua, it flew low over the water, skittered along surface, flew strongly westwards and disappeared in darkness (E.B.J.).

#### AUSTRALIAN GANNET (*Sula bassana serratator*)

Late sightings of young birds — Bay of Islands, 20/8/63, one (A.T.E.). Whangapararua, 8/6/63, five juveniles among adults (A.J.G.); Wellington harbour, 18/7/51, 27/7/53, 13/8/62 (E.B.J.). Bay of Islands, appearance in any numbers in Kerikeri Inlet correlated with shoals of mullet, herrings and pilchards (A.T.E.); 28/11/64, diving for pilchards off Ponui; frequently feed up Waiuku and Pahurehure channels (H.R.McK.). Coromandel, gannets here as at Horuhoru seem to have lost nearly all chicks early owing to bad weather and laid again, many tiny young and eggs on 15/1/69 (H.R.McK.), many speckled young and two still in white down 22/2/69 (S.R.S.). White Island, in 1964 we found a number of juveniles with "yellow crowns" and this was disputed by the experts; in 1966 we again found a number of juveniles just ready for maiden flight and these, too, had "yellow crowns." We managed to band a number of these birds. The Banding Officer has all details of our banding and results and says he suspects that this may be a feature peculiar to White Island (R.M.W.). Jackson Bay, often seen in summer (D.G.). Greymouth, 1/4/62, usual seasonal build up to 100+, after which birds seem to disperse or move on (P.G.). St Andrews coast, 9/3/68, c.100 flying south into strong wind, all

adults, as were singles and twos seen from May till September; 1969, only two singles, an immature in April, adult in September; 1970, four in February, seven in March (three juveniles); 210 on 19/4/70 and 70 on 3/5/70, both groups including a proportion of young birds; only odd birds seen July-September, 3 in December (R.J.P.).

#### BROWN BOOBY (*Sula leucogaster*)

April 1969, one between Cape Karikari and Cavalli Islands; mid-August 1969, one off Redhead, Bay of Islands (D.E.C.). Raglan, one about the end of May 1968 (C.J.R.). Mount Maunganui, 27/4/68, shortly after the Wahine storm, one, very weak (A.C.). Canterbury, St Andrews coast, one on 29/3/69 (R.J.P.).

#### BLACK SHAG (*Phalacrocorax carbo novaehollandiae*)

Apparently a rare bird in Stewart Island (R.H.T., D.C.). Main islands, generally distributed on harbours, estuaries, beaches, inland lakes and rivers. Far North, breeding plumage June-September, eggs and young in nests July-October (A.T.E., R.C.). Muriwai Lakes, February 1969, 46 counted; Orakei Basin, Auckland, present in 1963 but had disappeared by 1969 (S.R.). South Auckland, large winter counts, e.g., Manukau harbour, June 1966, 193; Firth of Thames, May 1964-1967, 400-600 birds (H.R.McK., R.B.S.). Aotea, October 1963, a bird planing up in circles to 1000 ft (C.B.). Mokau, young in nest 20/4/61 (J.L.K.). Marahau Lake, Wanganui, nests in pine-wood, October 1965 (R.M.). Lake Horowhenua, July 1970, 30; August 1, 41; 4th, 50; 29th, 90; 16th September, 95. Many of these appear to be immature; thousands of carp near Lake shore from 8th August onwards (E.B.I.). Nelson, May 1969, Lake Rotoiti and Travers Valley, 6; Motueka area, 97; Motueka-Collingwood, 23 (R.J.P.). Colony at Kaikoura Lake Rotorua, May 1962; Wairau Lagoon, Blenheim, eggs and nearly fledged young, 16/3/63 (B.D.B.). Canterbury, 1964, the coastal black shags have been nesting since last autumn; they use the nests two or three times in a year so the only time they are empty is about Christmas. Inland, 50 miles up Rakaia river they are seasonal, nesting in late spring and often still with chicks at Christmas (J.R.J.). St Andrews, 1968, a few birds along the coast from May till September; Pareora lagoon, small parties present May-August (2-4) and October-December (4-6); breed in Pareora and Otaio gorges. Lake Wainono, 1969, a few usually present; 27/7/69, 53, 36 in a flock, three with white thighs; 1970, regular, small numbers except for a count of 66 in June (R.J.P.). Otago coastal counts. 7/3/64, 232; 6/6/64, 164 (J.H.). Mt Aspiring Station, seldom seen in winter, a few present October-November, 4 in January 1968 (J.A.). Mid-Nevis valley, 19/10/69, white flank patches; probable nest colony in Lauder gorge (P.C.). Birds fly up Taiari Gorge above Outram every evening, presumably to a roost. June 1966, G. Grant reports that in the last two or three weeks flocks of up to 19 have been flying; in previous years only 5-6. This ties in with the Acclimatisation Society policy of letting shags at Lake Mahinerangi multiply over the last few years (J.H.). Southland, lagoon between Awarua Bay and Lake Waituna, 9/7/64, 17 nests, 5 x c/4, 5 x c/3, 1 x c/1, 3 empty, one with a chick a few days old and one with two chicks a week old and a dead chick. 20/10/64, some young birds flying, chicks of various ages in nests, some fresh eggs in new nests. November 1967, disappointed to find that the colony had been shot up and was abandoned (R.R.S.).



PIED SHAG (*P. varius*)

Taputaputa, near Cape Reinga, small colony, June 1964 (A.W.). Henderson Bay, near Houhora, 11 nests, November 1967 (D.E.C.). Mangonui, Doubtless Bay, 22 nests with young birds, August 1970; Bay of Islands, mixed colony near Opuia; Whale Bay, colony, young ready to fly November 1963, occupied August 1965, July 1969; Urupukapuka, 28/11/70, eggs and flying young; seasonal lake about a mile inland from Kerikeri Inlet, nests on the framework of an old maimai; three nests 1964/65, young left nests in January 1965; building 1965 August, eggs September, chicks October/November; 1966, building in March, eggs April, young still on nests July, nearly ready to fly; 1968, five nests, colony occupied September to January; 1969, nests occupied August to November; north shore of Kerikeri Inlet, colony occupied November 1964, August 1965, July 1969 (A.T.E.); Tangetu, Mangonui Inlet, eggs and young 19/5/70 (B.B.); Whangamumu, 21/6/63, nesting colony on old wharf (A.J.G.). Matapouri Bay, 16/9/67, 22 nests, eggs and young; 1/1/69, only two pairs (T.R.C.). Near Poutu, seven occupied nests 12/9/63. Ninety Mile beach, flight timed from moving vehicle at 40 m.p.h. (A.T.E.) and 45 m.p.h. (J.M.S.). Cuvier Island, 30/7/61, seven occupied nests (D.V.M.). Little Barrier, nests 1962, early July, first chicks seen 4th August, all 28 pairs feeding young 10th September (R.H.B.). Ponui, one large breeding colony virtually eliminated 1963; many island breeding colonies have suffered from vandals with rifles on boats (D.V.M.). Muriwai Lakes count, February 1969, 32. Auckland, Panmure Bridge colony began about August 1967 in two pine trees; in May 1969 spread to a further two trees and on 4th May 20 nests were visible, plus 8-10 full grown immatures. Orakei Basin, prior to December 1968 numbers varied from 6 to 12 birds; none had nested there for 20 years. About 30 birds in December 1968 and up to 42 in January/February 1969; nest building began March 1969, total nests about 12, two of which contained downy chicks on 26th April. Nests in a macrocarpa tree, dead wood of which was topped by City Council workers in July (S.R.). Firth of Thames, Wharekawa, small numbers (H.R.McK., R.B.S.). Coromandel, Te Mata, August 1967, 18 (B.B.); colony in pohutukawas south of Hautapu Point, January 1967 (R.V.McL.). Bay of Plenty, recorded from many localities, breeding Rabbit Island, Mayor Island, McEwan's Bay (R.M.W.). East Coast, colony on Motuoro Island, Anaura Bay, and three small coastal colonies south of Tokomaru Bay (A.B.). Hawkes Bay, absent (N.B.M.). Inland sightings, Rotoiti, 1/8/64, one; Hamurana, 30/8/65, one (B.B.); Waikaremoana, 11/4/66, one (D.G.M.).

Wanganui, rare; one at Lake Wiritoa, 1964 (R.M.). Manawatu, probably nesting in a pinus plantation by a small lake on plateau above Turakina valley, 6/12/65 (E.D.). Marlborough, fair numbers; breeding in the Sounds, Wairau Lagoon, and Lake Rotorua, Kaikoura (S.R.K.); Wairau lagoon, eggs and young 18/3/63 (B.D.B.). Nelson, not many, most numerous in Sounds, French Pass, etc. (D.V.Z.); January 1964, 3 nests  $\frac{1}{2}$  mile up Heaphy River from mouth, in rata (D.G.D.). Westland, uncommon (P.G.). Doubtful Sound, Seymour Island, breeding colony high in totara (P.D.). Motunau Island, December 1970, 10 birds (C.N.C.). Otago, coastal counts March and June 1964, 21 birds on each occasion (J.H.); McLennan River.

2/12/67, two on sandbank (W.T.P.). Southland, resident and breeding (M.L.B.). Stewart Island, fairly plentiful; several good colonies in Paterson Inlet, breeds spring to late summer; sometimes deserts breeding site and returns after a few years (R.H.T.); Glory harbour, 25/1/64, 13 occupied nests; had been up to 40 in previous years, according to R.H.T. (M.L.B.).

#### LITTLE BLACK SHAG (*P. sulcirostris*)

Rangaunu and Doubtless Bays, Whangaroa harbour, adjacent lakes and rivers, in small numbers; dates of sightings suggest possible breeding somewhere in the Far North. Bay of Islands, Kerikeri Inlet, frequent sightings of flocks up to 50 birds May-September; smaller flocks March and April, occasional flocks October and November; absent or in small numbers December to February (A.T.E.); has bred near Opuā and in Waikare Inlet (A.B.D.). Whangarei harbour, flocks of 16-30 birds May-July 1970, 22 perched on mangroves 2/2/71 (A.M.M.). Waipu River, 13/5/62, 10 (A.T.E.), 7/4/69, 11 (T.R.C.). Spectacle Lake, Te Arai, January 1967, one (J.P.B.). Lake Taharoa, north of Dargaville, September 1969 (A.T.E.). Poutu, Rototuna Lakes, 14/4/65, 18 (H.R.McK.), 12/1/67, 21 (J.F.B.). Muriwai Lakes, February 1969, 11 (S.R.).

Ponui Island, 40; Pakihi Island, 15, 4/8/63 (H.R.McK.). Auckland, Orakei Basin, large flocks come and go in winter (S.R.). Papakura tidal area, 3/5/64, c.200 communal fishing (H.R.McK.). Manurewa sewage pond, 28/4/66, 10; 5/5/66, 80; 23/6/66, 122 (B.B.). Weymouth, 2/8/66, c.220 in a close flock (H.R.McK.). Pakuranga, in bay below Pigeon Point, May 1966, 2-300 in shallow water (D.McK.). Bottle-top Bay, Manukau, 28/4/68, 100 plus working over a shoal of fish (B.B.). Maraetai, 3/7/66, c.20 (S.R.). Waiuku sandspit, 1966, 17 (H.R.McK.). Firth of Thames, scarce (R.B.S., H.R.McK.).

Waikato, numerous records. Bay of Plenty and Rotorua area, numerous records. Hawkes Bay, breeding at Lake Hurimoana (N.B.M.); May 1965, one at Lake Tutira, 35 at Ahuriri (A.T.E.). Taranaki, Rahotu, 7/2/70, 3; 1/3/70, 5, seen by W. Cash; 15/3/70, one dead on beach (D.G.M.). Wanganui, Virginia Lake (D.C., E.B.J.), Marahau Lake (R.M.); 25/10/65, lower town, 10 in feeding flock (H.R.McK.); always in small numbers. Manawatu, Lake Horowhenua, usually appears about March and not seen after October-November, 13 in March 1964, 15 in May 1970, usually in smaller numbers (E.B.J.). Nelson, ones and twos only, usually round estuaries (D.V.Z.); Nelson harbour March 1966, two (B.D.B.). Otago, S. Sharp states that a few Little Black Shags have been about Otago Peninsula for the past 10 years, recent sighting at Pipikaretu (J.H., 1965). Southland, occasional (M.L.B.); January 1963, Waituna 5, Oreti 4. Milford Sound, 12/2/63 one, possibly three (H.R.McK.). Lake Fergus, Mr Morley of Tokanui, farmer and bird photographer, states that in a colony of breeding shags there was a pair of Little Blacks. I did not see them myself: if correct this would be the first South Island breeding record (R.B.S.).

#### LITTLE SHAG (*P. melanoleucos brevirostris*)

Parengarenga, 13/12/62, white-throated 13, little pied 20 (H.R.McK.). Random counts of c.200 birds in various localities between Parengarenga and the Bay of Islands show about 50% pied

or smudgy. Small numbers on islands in the Bay; plentiful in harbours, estuaries and lakes, odd birds on farm ponds and flooded paddocks, forest streams (Puketi and Omahuta); a few on ocean beaches. Substantial colonies in Rangaunu Bay and near Opuia; nesting season usually September-December, some young still in nests in January. Much quieter than Pied Shags, at the nest. Greeting note between an adult on the nest and one flying in, a low "kroo kroo . ." Parent to fledgling, a low "hoop hoop hoop"; the fledgling was vigorously nudged till it turned its body to squirt over the edge of the nest, and was then fed. A young white-throated in 1964 and another in 1965 had sides of head, foreneck and upper breast reddish brown instead of the normal brown tinge; one in 1970 had a reddish brown throat. An otherwise normal white-throated adult (1969) had underparts flecked white. Pied phase "smudgy" birds exhibit much variation — black breast band, with or without black flecks or smudges on the white belly; heavy black smudges on white underparts; large black spots on belly, or on breast; white underparts but black belly. A pied phase bird had the whole head and neck white except for a narrow black line up the back of the neck and stopping short of the crown, white patches on wing coverts and white flecks on upper surface. Two birds with similar pattern on head and neck, but the thin black line extending on to the crown, one bird with small white patches on the edge of the wing, the other with a dusky patch near each eye, may not have been fully mature. A pied phase bird at Kaimaumu, 1967, had deep orange rufous throat and neck and a light rufous wash over the rest of the underparts; Kerikeri, 1970, two birds with rufous on face and upper breast (A.T.E.).

Poutu, a colony at a lake, nests at varying levels in dead manuka, made of manuka and kanuka twigs. Nests built 12/9/63, many brooding birds 22/9/63; high mortality noted in 1963 season; the lake was very low, and later in strong gales a number of chicks were blown right out of their nests or hung in the rough nest material; some non-flyers were able to climb back up the tree to their nests. I gave up visiting the colony because the birds were so restless and nervous (M.J.B.). Muriwai Lakes, February 1969, white-throated 51, pied 4, smudgy 1 (S.R.). Waiheke, Koi Island, 27/11/60, 21 nests, 9 with eggs (D.V.M.). South Auckland, H.R.McK. has a comprehensive file of records of pied, smudgy and white-throated. Waikato, common, breeding Lakes Whangape and Waikare (R.T.A.) and elsewhere. Coromandel, common on coast in north (J.L.K.). Bay of Plenty, Whangamata, common (J. Lambert). Tauranga, common; c.100 nesting in Judea swamp, 1966; colony at head of tributary of Waimapu river (R.V.McL.) and other streams; breeding Kaituna river, nests in kiekie plants hanging on vertical cliff faces; Whakatane, Whale Island, Raurimu Rocks (R.M.W.); breeding Rabbit Island, Mayor Island (P. Densem).

Muriwai Lagoon, Gisborne; large breeding colony Lake Repongaere 1963 (A.B.). Rotorua Lakes, October 1963, pied: white-throated as 3:10 (A.T.E.). Very common on all lakes round Rotorua; white-throated form predominates, intermediate between the two forms noted on most lakes; breeds in upper reaches of Wahina stream S.W. of Rotorua, probably also at Okataina (H.L.). Flocks of many hundreds noted diving and feeding on smelt and inanga, Lake Rotorua;

increasing; breeds freely in gorges of Kaituna river (F.M.). Lake Taupo, 15/7/61, little pied 6, white-throated 110 (H.R.McK.). Karapiro, 1961, little pied with thin black line from chin to breast (A.T.E.). Hawkes Bay, breeding at many small lakes; little pied: white-throated as 1:10 (N.E.M.). Taranaki, occasional; breeding suspected up Waitara river (M.G.M.). Wanganui, generally abundant (R.M.). Manawatu, some big mixed colonies at Tiritea (E.D.). Lake Horowhenua, white-throated present at all times, 16 on 13/6/70; one with a white spot on forehead 13/6/70, one with some white on wings 21/7/70. Little pied, 1970, more than usual, 5 seen in June and September. 20/6/68, one with white on the left wing. 4/7/70, one with a similar white patch, but on the right wing; since then I have seen what I take to be the same bird several times, sometimes from the right, sometimes from the left. An outstanding feature is the small black crown and very narrow black line on the back of the neck; seen from the front, with its extra amount of white this bird looks plumper and whiter than usual. 2/5/70, a bird with the whole body white except for a black patch on the crown, another on the back of the neck and a third on the scapulars; possibly some dusky shading on flanks and a small black patch on rump, running up from the upper tail coverts; tail black, wings black except front edges which are white (E.B.J.).

Nelson, numerous around coast; small coastal colonies, Nelson to French Pass; white-throated seen on lakes and rivers in lake area (D.V.Z.). Pelorus Sound, 11/1/69, white-throated 8, little pied 5 (W.T.P.). May 1969, Lake Rotoiti and Travers valley 4, Motueka 7, Motueka-Collingwood 17 (R.J.P.). Marlborough, breeding in the Sounds in fair numbers, and in small numbers on Opawa river, Wairau lagoon, Lake Elterwater, Lake Rotorua Kaikoura; present on many small lakes and lagoons (S.R.K.). Motuara Island, 23/1/71, white-bellied birds common (J.R.J.). Westland, reasonably common (P.G.). Jackson Bay, fairly numerous (D.G.); Arahura coastal area, not many (G.S.C.). Okarito State Forest, 1961, c.40 nests in bush, both phases (E.W.C.); breeding colony with White Herons, Okarito, 1965 (T.H.S.). Fiordland, resident and breeding; Southland, generally abundant, resident and breeding, colonies at Awarua Bay, lower Waiau River (M.L.B.).

Lake Ellesmere, 27/10/63, white-throated 22, little pied 2 (W.T.P.). Timaru, Washdyke lagoon, in small numbers except in breeding season, mostly white-throated, a few little pied; c.60 in flight 19/6/65; hybrid, 14/5/66 (B.R.K.). St Andrews coast, 1969, only three sightings each of one bird; 1970 only one noted. Pareora river and lagoon, single birds. Lake Wainono, 1969, one to four, July-December; 1970, more regular, seen in each month, usually 2-9 birds, 19 in August. April 1969, Lake Alexandrina, 16; Lake Macgregor, 9; Lake Tekapo, 2; Cass River delta, 3; total 30; none at the above four localities on a visit in November 1969 (R.J.P.).

Otago, counts made by W.T.P. over nine years 1961-1970 indicate that 16.6% of the Little Shag population are the pied form. Otago Peninsula, 1970, three colonies at Quarantine Island, Penguin beach and Allan's beach; estimated 60 breeding pairs with about 60 juveniles, total say 180 birds. 13/8/70, 172 birds, virtually the whole population, concentrated round Hooper's Inlet, none at Papanui,

Lower Portobello or Broad Bay which they usually frequent; this concentration is a rather unusual behaviour for Little Shags in this area. The birds were sunning and fishing, presumably for small flounders (A.W.). Lake Hayes, 17/2/63, Little pied 2, white-throated 7, smudgy one (W.T.P.). Glendhu Bay, Wanaka, 1/8/65, three white-throated, first I have seen in this area; Matukituki river mouth 12/6/66, 9 white-throated (P.C.). Stewart Island, 1956/57, common; 47 on a rock off Lonnekers; most birds seen at Halfmoon Bay were immatures in black plumage, December/January; Little Glory harbour, 12 pairs in dead trees, 21 white-throated and 3 pied phase; pied phase common in January up Freshwater river to Tin Huts (D.C.). Common, wilder than other shag species; sometimes associates with Pied Shags; a fair number of colonies about Paterson Inlet in rata trees, nests often hidden by foliage whereas those of Pied Shags show up clearly (R.H.T.).

#### KING SHAG (*Leucocarbo carunculatus carunculatus*)

Marlborough Sounds, Cook Strait, breeding 1964 on White Rocks, Sentinel, Duffer's Reef, North Trio and Stewart Island (off French Pass). Slow increase in numbers of recent years apparent from extension of Sentinel and Duffer's Reef colonies and establishment of a new colony on Stewart Island. About 100 nests at the peak of the breeding season but nesting continues throughout the year so the total population may be of the order of up to 500 individuals. Observations indicate that adults are careless with their eggs and a high proportion are lost from the nest. Average breeding rate appears to be about one flying young per pair. August 1965, colonies at Duffer's Reef and North Trio depleted, Black-backed Gulls may be responsible (A.B., B.D.B.). Lake Horowhenua, Manawatu, 2/7/66, in stormy weather, a bird different from any other shag seen on this lake; head and neck like Bronze Shag, white on wings seen when it stood with wings outspread; ? storm blown King Shag (E.B.J.).

#### STEWART ISLAND SHAG (*L. c. chalconotus*)

Moeraki, 2/11/65, bronze phase 20 plus, pied phase 4; 4-5 at a time taking grass down to rocky platform and building nests. 24/10/67, 14 bronze, 2 pied, most immature; no nests (H.R.McK.). Mid-Katiki Bay, 3/11/65, one bronze. Shag Point, 14 bronze, 2 pied, not nesting, rocks too low; 24/10/67, bronze, 14 adult and 27 immature; pied, 6 adult and 15 immature (H.R.McK.); 13/12/69, 22 bronze, 8 pied (W.T.P.). Taiaroa Head, numerous records of 100-500 birds 1961-1969, c.2000 in two large flocks on 25/3/62, both forms always present (W.T.P.); 12/9/65, fetching and returning with seaweed for their nests on the cliffs (J.H.); 28/10/67, 200 nests in rows, seen from Mole (H.R.McK.). Sandfly Bay, 24/9/66, 60 nests on Gull Rock, 20 on outer rock, many carrying seaweed (W.T.P.). Catlins coast, October 1970, none seen, suggesting a gap in distribution (J.H.). Stirling Point, Bluff, 22/1/66, bronze 25, pied 18; my impression is that the proportion of pied is higher at Bluff than at Taiaroa (W.T.P.). Stewart Island, 1956/57, numerous, bronze slightly more numerous than pied (D.C.).

#### SPOTTED SHAG (*Stictocarbo punctatus punctatus*)

Hauraki Gulf, 19/1/69, Ponui roosts, 620; Tarakihi 700; Coromandel Islands, 1550, none on nests (H.R.McK.). Firth of

Thames, western shore, October 1966, 75 (R.B.S.); July 1967, over 250, 50% in full or advanced plumage, many with crests (H.R.McK.); October 1969, 460, not in breeding plumage; two hours after low tide they started to leave in groups for the islands (M.P.D.); 12/7/68, 650; 1970, c.850 (H.R.McK.); 26/7/70, five dead, all in breeding plumage, local residents report heavy mortality; Department of Agriculture states "both birds sent in were in poor nutritional condition, numerous red worms found in duodenum, no pathogenic bacteria observed" (S.R.). Girdwood Point, July 1963, a large number nesting (L.W.). 2-3 miles south of Port Waikato, January 1964, a single nest by a white-fronted tern colony, on a rock (D.W.). New Plymouth, 3/3/63, a young bird picked up at wharf; this unusual visitor was cared for and released 17/3/63 (M.G.M.). Paraparaumu, 2/11/66, one offshore; one mile south of Paekakariki, 12/7/69, one, in breeding plumage (E.B.J.). Chetwodes, July-August 1963, in fine plumage, starting to lay (B.D.B.). Cape Campbell, February 1964; dead juvenile (A.W.). May 1969, birds 15 miles offshore, two off Pegasus Bay, one off Waipara mouth; December 1970, six 15 miles offshore (J.R.J.). Motunau Island, December 1970, 60 (C.N.C.). Lake Ellesmere, 21/4/68, just before dusk on a day of drizzle, two immature birds swimming, diving and feeding (presumably on lowland bullies)  $\frac{1}{4}$  mile up from Selwyn river mouth where it empties into the Lake, approximately 10 miles from the coast; they swam to within 10 feet of me while I was trout fishing, and later flew upstream (S.C.S.). Ashburton, 120 on beach, 14/1/63, many juveniles (W.T.P.); October 1967, 300 on shingle bank (H.R.McK.). Timaru, several thousand near and on breakwater, 1964; Washdyke lagoon, fly to and from Timaru harbour where they roost in hundreds (B.R.K.). St Andrews coast, not common except in autumn; March 1969, 256; March 1970, 645 (R.J.P.). Waitaki, 1300 on beach; Oamaru beach road, 580 on a school of fish, October 1967 (H.R.McK.). Moeraki wharf, 1/4/62, 100 roosting; 30/4/66, 150 (W.T.P.). Anderson's Lagoon, Palmerston, colony discovered 1965. 21/11/65, 294 nests; December 1966, 387 nests, a fair number of which had three chicks (E.S.). Taiaroa Head, 12/9/65, many building, no eggs seen; Port Chalmers, 28/1/68, c.1000 fishing in a dense flock, most of them in a pool cut off by new wharf caissons (W.T.P.). Nugget Point, 1/2/63, many hundreds at colonies; Cannibal Bay, colony and roost (H.R.McK.). Catlins coast, October 1970, some small colonies (J.H.). Stirling Point, Bluff, 22/1/66, 9 (W.T.P.).

#### BLUE SHAG (*S. p. steadi*)

The following four records of Spotted Shags may refer to this subspecies. 13/11/62, 100 plus at mouth of Waitangi and Whataroa rivers (A.B.M.); Abut Head, 13/11/65, 11 roosting (J.R.J.); Arawata river area 15/11/65, 110 resting on sand; Milford Sound, February 1963, one young seen on shore, also feeding by wharf (H.R.McK.).

Motukiekie Stacks, 12th mile, Greymouth, nesting. Stacks north of ten mile stream, nesting, 1970 November-December (J.R.J.). Stewart Island, plentiful, especially in Paterson Inlet (R.H.T.).

#### FRIGATE BIRD (*Fregata sp.*)

Two miles off Manawatu Heads, seen in company with Black-backed Gulls by Mr T. V. O'Connor, Titahi Bay, 8/1/66. I have checked this sight record very carefully with the observer, testing

him out with a number of photographs and actual specimens and there seems little doubt that the observation can be accepted as Lesser Frigate bird, adult male, *F. ariel* (R.A.F.).

Kaipara harbour, Marcus Dill observed one raiding White-fronted Terns on several occasions in November-December 1968, Tauhoa-Hoteo channel area. He saw it settle on the same patch of wind flattened scrub as I did in 1963. He is guaranteed to be accurate (F.P.H.).

28/12/70, 1545 hours, Kahana Bay, Lake Tarawera, a frigate bird passed over at about 50 ft and as it crossed the shore line of the lake approximately 100 yards away began to circle and rise apparently on an air current; after gaining height the bird flew off in an easterly direction. It was in view for ten minutes, using binoculars. Wing span very large, wings angled, tail deeply forked; beak long, hooked, white or flesh coloured, feet not visible. Head white; front half of body underside, white; upper side of wings dark with white or light brown markings on leading edge at angle of wing. Thought to be juvenile *F. minor* (N.R.H.).

19/3/71, a frigate bird circling over Bush Island, Coromandel. A female of *F. minor* or *F. ariel*, probably the latter; some doubt whether the throat was greyish white or dark; all the light underpart appeared smudgy and the tail streamers seemed too short for *F. minor* (S.R.).

#### WHITE-FACED HERON (*Ardea novaehollandiae*)

Parengarenga harbour, March 1970, 65 at Paua on high tide roost (A.T.E.). Awanui harbour, up to 100 counted on mudflats (M.H.). Doubtless Bay, Mangonui harbour, nesting in pohutukawas 1968 and 1969 on Mr Marchant's property (E.G.T.). Bay of Islands, Kerikeri Inlet, nesting in pohutukawas and mangroves; post-breeding numbers 1968 to 1970 around 45, but increasing in Mangonui Inlet where a local farmer reports seeing nearly 100 birds on the flats, at low tide. 23/5/69, 12 herons waded out to join a party of Little Black Shags fishing close inshore, working in water as deep as their leg length would permit. Whangaruru harbour, April 1971, 45 (A.T.E.). Broadwood, nesting in willows (R.S.C.). Kohukohu, nest on an old wharf, placed in a crack between a rotting pile and girder, 3 eggs at the end of October 1967, two young fed by parent 16/12/67; site used for nesting by Red-billed Gulls and White-fronted Terns during the same season (R.S.C., A.T.E.). Whangarei harbour, 1964, three breeding colonies (K.R.); 14/4/68, 63 counted around harbour; 1/5/71, a day of strong winds, at least 80, in mangroves and on paddocks around Skull Creek (A.M.M.). Muriwai Lakes, February 1969, 21 (S.R.). Kaipara, 1963-64 season, nests robbed by magpies; two young finally flew in May 1964, and in June magpies took the first eggs from the same nest that the May young had left. 1967 season quite a number of young reared in spite of the magpies. On a hot day when sheep pack into the shade of a totara tree a heron will be with them. I think they may be after the blowflies; dead sheep also attract them (F.P.H.). Coromandel, Whangapoua 1966, 60 (A.McD.). 6/8/67, Tairua 15, Opoutere 60, Whangamata 20 (D.J.P.). Opoutere, 11/5/68, 100 plus (B.B.). East Cape, a few on rocks, March 1964 (A.W.). Muriwai Lagoon, Gisborne, 2/4/67, 46; Opoutama, Mahia, 20/1/70, 22; Whakaki lagoon, 20/1/71, 70

(A.B.). Taranaki, scarce in coastal areas round New Plymouth, 1969 (D.G.M.). Rewarewa rifle range, 58, January 1970 (Mrs Marfurt). Manawatu, rapid increase (I.G.A.); Lake Horowhenua, breeding in pine trees; 20 birds at lake 2/1/69 (E.B.J.). Westland, Harihari, nested in native bush in a gully behind township, spring 1964 (J.R.J.). Arahura, one killed by a falcon (G.S.C.). Canterbury, Motunau Island, 27/12/70, 3 on rocks (C.N.C.). Lake Wainoni, maximum counted 1968, 21; 1969, 25; 1970, 34; Lake Alexandrina, 1968, 5; Lake McGregor 1969, 3; Lake Tekapo, 1969, 5; Cass delta and river, 1969 and 1970, one and two (R.J.P.). Otago, numerous detailed records from coastal area and plains (J.H.). Matukituki valley, slight increase in numbers 1966 (J.A.). Near Lake Wanaka, 1966; Hunter valley above Lake Hawea, 1969; Upper Manuherikia and Dart Valley, 1967; all these records are of 1-3 birds (P.C.). Lake Wakatipu, 1965, 2 (J.H.). Dunedin, October and November 1967, taking goldfish from ponds; it seems likely that one bird has adopted the habit of doing over the suburbs for small fish ponds (J.H.). Otatara, Southland, 20/3/66, one feeding on flies which flew near or settled on a sheep carcase; at one stage the heron climbed on to the carcase and fed from there but most of the time it stood on the ground between the legs of the dead sheep and snapped at flies (M.L.B.). The above notes are only a small proportion of records received, some of which have been extracted in amplification of the recent survey of the species (*Notornis* 17, pages 3-24).

#### WHITE HERON (*Egretta alba modesta*)

Rangaunu Bay, regular in winter; 12 birds in 1964; 3 present on 5/10/69 and 3 on 6/9/70; local residents report up to 15 birds in 1970 winter. Kaikohe, June 1963, one. Rawene, fairly regular winter visitor (A.T.E.), one present all winter 1963, May to 1st September (D.G.McM), one arrived 12/5/71 (A.T.E.). Kaipara, fairly regular in winter; May 1962, 7 (R.B.S.). Whangarei, one at Port, April 1966 (K.R.). Auckland, 1962, northern motorway, one or two June-September (D.F.B.). Weymouth, 1962 October, 1963 September-October, 1964 April and May; 1966, one on 18th February and one from 24th April till 31st August; very tame; roosted on tall macrocarpas with Little Black Shags and White-faced Herons, and often on launches (H.R.McK., C.R.M., B.B.). Papakura Creek, two on 7/8/67 (P.J.H.), one in May 1968 (D.A.L., R.W.J.). Waimahia Creek, 26/12/67, one perched on pines, allowed close approach by boat, elongated plumes on back (M.R.). 1969 winter, reports from Papakura, Mangere and Henderson, possibly a single wandering individual; September and October, one off N.W. motorway; 14th November, one at Mangere Ponds (S.R.). Waikato estuary, one spent part of 1962 winter (R.B.S.). 1963, May, three at Port Waikato (O.H.). 1965, Lake Waikare, reports of 2-5 birds September-October (H.R.McK.); 3/10/65, Te Kauwhata-Waerenga road canal, two, one with plumes (B.B.). 1967, one at Lake Wahi (H.R.McK.). Coromandel, Whangamata, 26/4/64 (R.StP.); Opoutere, June 1964, one (H.W.); 1967 August, one; 1968, May, one (H.R.McK., B.B.). Bay of Plenty, Tauranga, 11 reported for 2-3 weeks prior to 11/4/62 (M. Hodgkins), one in May and September (R.V.McL.); 1965, single birds at Matata, May (M.G.M.); Little Waihi, June; Tarawera mouth, July (H.R.McK.); Maketu, August (B.B.). 1966, June, Matata (V.R.);



August, Waimapu estuary, Tauranga (R.V.McL.). Hawkes Bay, 1962, Bay View, one in May; Tutaekuri river, one in August; Ahuriri, May and June, 2; July, 4 (N.B.M.); 23rd October, one (A.T.E.). 1963, Ahuriri, 19th April-17th July, and until November, one; four present in October (N.B.M.). 1967 October, two at Ahuriri (M.G.M.).

Taranaki, one reported 16/2/63, not seen again; 1965 winter, one spent several months in a swamp area near main road, two miles north of Waitara (M.G.M.). Manawatu, Waikanae, May 1962, one; May-July 1963, one (C.A.F.). Koputara, February 1966, one (E.D.). Foxton and/or Lake Horowhenua, regular each winter 1963-1968, one or sometimes two (E.B.J.). Pauatahunui Inlet, 30/7/62 to 27/10/62, one seen at intervals (E.W.D.), two on 4/8/62 (E.B.J.). Somes Island, one reported 4/4/63 (F.C.K.).

Marlborough, 1962 April, single birds reported in Wairau Valley and Rainbow turnoff (J.A.C.); May, Kaikoura Lakes (B.D.B.). Blenheim, June 1963, August 1965, June-July 1966 (B.D.B.), May-September 1967, July-September 1968 (J.A.C.). Queen Charlotte Sound, 25/10/67, one (D.A.L.). Nelson, 1962, one at Westhaven in May (T.H.S.), three at Tasman Bay, Mapua in June (R.B.C.), one reported at Rabbit Island, 2nd December (F.C.K.). Nelson harbour, 1964, one to three; 1966 March, one (B.D.B.), May, 3 (A.T.E.), June, 2; October, 3 (B.D.B., A.T.E.). Parapara, May, one (A.T.E.); August, still two at Whatapu wharf, one reported dead at Rototai (F.S.). 1970, September, one perching on boatshed (F.H.B.).

West Coast, Westport, June 1962; May 1963, two at Orowhaiti, one at Totara (P.G.). Greymouth and Grey estuary, 1961; 1962 March-December, usually one, sometimes two; 1963, one in January and February, two April, one May-September; 1964, March-August (P.G., E.W.C.). Dobson, two in April 1962; Gladstone July 1963; Paroa April 1964 (E.W.C.). Arahura March 1963, Hokitika March 1963 (P.G.), April 1964 (E.W.C.). Kangaroo Lake, 16/8/64; said to be usually present spring and early summer. Haast, 4 in July 1964; June and July 1964, one on Waita river flats, one six miles up Turnbull river, one between Turnbull and Hapuka rivers; said to be found in these localities each winter (J.H.). Hollyford river mouth February 1962 (R.J.N.). Martin's Bay, August 1962 and on two previous visits (E.L.); Milford, April 1962 (K.W.) and June 1966 (J.H.A.).

Canterbury, Irwell, 5 in July 1963 (L.E.W.). Timaru, Wash-dyke Lagoon, apparently regular in season (L.E.W., B.R.K.), 5 in 1969 (R.J.P.). Pareora river, winter 1969; Lake Wainono, March 1970 (R.J.P.). Otago, Makarora station August 1963 (L.E.W.); Alberttown, two for a fortnight in July 1964 (J.H.), Wanaka, September 1967 (J.A.). Waitaki river bridge July 1963 (L.E.W.). Anderson's lagoon, Palmerston, winter 1964, and April-July 1965 one bird which died; examined by Professor J. Miles; very thin but not starving, had a fish and some green stuff in stomach, spots of blood on one lung, enlarged spleen, no worm infestation, probably died of a viral infection (E.S.). Goodwood, July 1964; Pleasant river estuary, 1964 winter and till 30th October (J.H.). Karitane and Merton mudflats, reported annually 1962-1968, many observers; Waitati and Blueskin Bay, reported annually 1961-1967 (L.E.W., W.T.P., J.H.), usually mid-April to early September (J.H.). Dunedin suburbs, many reports (Botanic Gardens, Leith valley, Woodhaugh gardens, etc.) by various observers, 1961-1968; St Leonards and Blanket Bay 1963 (L.E.W.), Portobello 1964

(J.H.). Kaikorai estuary 1964 (K.W.) and 1967 (W.T.P.); Green Island, 8/1/68, one, somewhat mudstained (W.T.P.). Brighton, all 1964 winter, regular (J.H.), 1967 (W.T.P.). Henley, June 1962 (L.E.W.), March 1965 (J.H.); Lake Waipori, June 1965 (J.H.); Lake Waiholo and surrounding area, May-October 1966 (T.M.S., A.R.H., W.T.P.). Milton, about August 1960 (J.H.). Taieri mouth March 1963 (R.V.McL.).

Southland, Lower Mataura, one or two each year 1958-1962 (S.L.L.). Mataura Island, 30/4/64 (R.R.S.); Waihopai river, Invercargill, and Otatara golf links, May 1964 (M.L.B.); Upper Waiau, January 1961 (O.A.B.S.).

Campbell Island, one seen by A. Wright, 14/11/62 (F.C.K.).

#### LITTLE EGRET (*E. garzetta immaculata*)

Kerikeri Inlet, one present 5/6/65 to 16/11/65. From June to mid-August it frequented beaches, shellbank, pools and rock shelves on the south side of the Inlet, thereafter it preferred muddy stream mouths and mangroves on the northern side. High tide perches included posts and battens of a sea fence (often on one leg), logs, driftwood and rocks; roosted in mangroves. Shy. Very active feeder, quick walk, short runs, quick turns and jumps; sometimes short runs in shallow water with wings spread and half flapping; observed "marking time" on the edge of the tide. Usually fed along tide line wading to depth of tarsal joint, sometimes in shellbank pools, occasionally in rock pools; probed clumps of seaweed washed up on beach. While fishing frequently shook its head apparently to shed drops of water. Sometimes fished with Little and Little Black Shags in shallow water. White-faced Herons took no notice of the egret; a Reef Heron was hostile at first, later became less aggressive and was on one occasion chased off by the egret. Caspian terns only squawked in passing; when buzzed by Red-billed Gulls the egret crouched, neck partly extended and bill pointing upwards. Bill black, some yellow at base of lower mandible, not always clear; facial skin yellow; legs black, yellow on soles not always visible. Direction and intensity of light affected accuracy of observation of leg colour which at times appeared to be grey, brown, or even yellowish. Breast feathers long, and in some attitudes appeared to hang like a bib. No head plumes seen, but close observations were limited to the period before mid-August. 1967, 6th-14th May, one present in the area, divided its time between the saltwater inlet and a freshwater lake  $\frac{1}{2}$  mile inland (A.T.E.).

Weymouth, 11/8/64, 3, one appeared larger than the other two; 19-29/8/64, two; on last date one had slight breast and dorsal plumes but none on head (H.R.McK.). 21/8/64, one bird, bill dark grey to black with some yellow on lower mandible, legs blackish grey below the "knee" and paler above; seen to stir with alternate feet in the soft mud. 23/8/64, two birds, one which appeared slightly larger had dark grey green bill with some yellow on the lower mandible and in front of the eye, tibia pale, tarsus black, plumes on the back; the other bird had very black bill and entirely black legs (B.B.). 24/4/66-10/5/66, bill and legs black, facial skin yellow, yellowish soles seen when it flew overhead; slight back and chest plumes. Shy; restless and disturbed by quarrelling stilts; rested at

high tide with stilts, gulls and Caspian Terns, later fed, striding rapidly with head high, pause, strike very quickly for fish, often several times in succession. Settled on tide deflector with Little Black Shags, Manurewa sewage ponds (B.B., H.R.McK.). Waimahia Creek, 1st April and 12th July 1967, one (H.R.McK.). Mangere, one on 18/7/70 and 2/10/70 (S. Reed). Meremere, in a swamp, one bird on 2/9/62, seen by Murray Williams (D.F.B.). Hawkes Bay, Ahuriri lagoon, two, 11/8/62-20/10/62; one present 1963/64 (N.B.M.). Pakipaki, 4 miles south of Hastings, 6 miles from the sea, dead bird picked up under a willow tree 25/7/67; not long dead, no marks of external violence, painfully thin; death apparently due to starvation and malnutrition; sent to Dominion Museum, F.C.K. states it was an immature male (D.A.B.). Manawatu, Lake Horowhenua, one seen at intervals March-November 1964 (E.B.J.). Nelson, Tasman Bay, 19/6/62, one (R.B.C.). 8/4/65, Westhaven; July 1965, 3 at Takaka; March 1966, one at Nelson (B.D.B.). October 1967, one at Nelson (A.T.E.). 8/8/70, two on a sandbank between Rough and Rabbit Islands (F.H.B.). Otago, Karitane, two on 26/8/62 (J.H.A.) and 3/9/62 (L.E.W.); one on 24/3/63 (R.V.McL.); 28/9/63-16/11/63 (W.T.P.); July 1964, two (H.W.M.H.). Waikouaiti, one September 1964 (W.T.P.), one fishing in river October (J.H.), one on 28/11/64 (W.T.P.). Karitane, 27/2/65, 18/4/65, one (W.T.P.), two 22/5/65 (J.H.) and on 19/7/65 (I.McV.). Merton, 16/5/55 one (L.E.W.). Kaikorai estuary, winter and early spring 1964, one (K.W.). Ram Island Lagoon, 31/5/70, one, black bill and legs (J.H.). Westland, Grey River estuary, one May-September 1964 (E.W.C.). Greymouth, June-October 1st 1965, one; back and neck plumes showing by 20th June; could not see nape plumes on 26th September, but they were visible on 9th October and several inches long on 17th October (P.G.). Two birds on rocks in Grey River in July 1965 (E.W.C.). 10/8/68 back again; we do not know where it goes in summer; usually leaves just as we await full development of nape plumes. Two birds which were here one season may have been those seen later at Westport. Absent November-May; still present October 1970 (P.G.).

#### REEF HERON (*Egretta sacra*)

Far North and Northland, generally distributed round coasts and harbours (R.H.M., A.T.E.). Whangaruru, September 1965, two courting birds stood upright with necks extended, one stalking round the other with its dorsal plumes raised above the back; a third bird kept apart. Similar behaviour again involving three birds seen at Kerikeri. Hokianga harbour, two adults and a young bird at Kohukohu, over 15 miles from the sea (A.T.E.). Waiwera, a bird fishing with its back to the sun extended its wings to shade the sea bottom and took a small flounder: similar behaviour noted at Kaiaua (H.R.McK.), and elsewhere in Auckland province. Method of hunting varies according to situation, depth of water and state of tide. Little Huia, 1962, a bird feeding for two hours in a freshwater stream; Bay of Islands, January 1967, a bird feeding on a paddock near the edge of a mangrove area (A.T.E.). Recorded at various localities round Manukau harbour, Clevedon, western shore of First of Thames (not common) by several observers. Hauraki Gulf, Frenchman's Cap Islet, 12/1/66, 9 including two lots of flying young (H.R.McK.); Koi Island, off Waiheke, November 1963, 3 nests (D.V.M.). Coromandel, numerous

records from both sides of the peninsula (H.R.McK., B.B., et al.). Bay of Plenty, Athenree (R.W.J.), Katikati (D.J.); Tauranga harbour, common in estuaries (P. Densem), Kaituna (R.W.J.), Whakatane (R.M.W.); Ohiwa harbour, 1960, up to 11 seen together (W.P.); July 1962, 7 at Kutarere (H.D.L.); said to be decreasing 1969, with increase of White-faced Herons (R.M.W.). Breeding on offshore islands; Karewa Island, November 1963, 18 seen (D.V.M.). East Cape, 1/4/64, one near landing (A.W.). Odd pairs nesting along east coast; three pairs nesting on small island, Waipiro Bay, 1963 (A.B.). Hawkes Bay, uncommon (N.B.M.). Waikato Heads, rare but breeding (R.T.A.). 31/10/62, inland report of two on floodwater at Hinuera by W. Renouf; identification considered correct (H.R.McK.). Taranaki, scattered around coast, in small numbers; nested near Opunake 1963 (M.G.M.); Mokau, April 1961, two feeding in estuary and about a mile upstream from bridge (J.L.K.); 1967/70 reports from Mohokaiti river mouth (B.D.B.), Waiongana, Bell Block, Waiwakaiho (3) and Waitotara river mouths (D.G.M.). Wanganui, 29/3/66, one on river by new bridge, first seen for three years (E.B.J.). Manawatu, Lake Horowhenua, 5/7/69, only the third ever seen on the lake (E.B.J.). Wellington, Aotea Quay, 11/8/69, one chased two pigeons off a perch on the wharf, pursuing one over the ship (J.J.). Stephens Island, March 1961, two at 600 ft level appeared to be catching gecko and skink lizards (R. Mander). D'Urville Island, November 1969, nest 30 ft up a rock face, three young (B.D.B.). West Coast, a few seen north of Fox river (P.G.); seen Punakaiki 1963, no sighting in following two years (T.H.S.); Point Elizabeth 1964 (E.W.C.); often seen Haast lagoon, occasionally along coast at Jackson's Bay (D.G.). Doubtful Sound 1963 (W.T.P.); at ends of Fiords (P.D.). Marlborough, in small numbers in the Sounds and sparsely distributed along the rest of the coastline (S.R.K.). Canterbury, uncommon of recent years (J.R.J.). Otago, most records are sightings of single birds; Kakanui (A.N.); Karitane (W.T.P.); Waikouaiti mouth, March 1968, two; one flew with its toes spread wide apart; Blueskin Bay; Aramoana (J.H.). Otago harbour and peninsula, Green Island lagoon, Taieri mouth (W.T.P.); Catlins coast, reported present 1970 (J.H.). Southland, very rare (M.L.B.); Stirling Point, Bluff, June 1967, one (W.T.P.). Stewart Island, seldom seen (R.H.T.).

#### CATTLE EGRET (*Bubulcus ibis coromandus*)

Manawatu, 1966, one seen on 25th May, twice in June, twice in July, once in company with two White-faced Herons; on 8th October it was yellowish buff on head, neck and breast; seen again on 28th October (E.B.J.). Nelson, Swamp road, one on a fence post; six White-faced Herons on adjacent posts (F.H.B.). Westland, 13/10/69, three at Kokatahi, south of Hokitika; said to have been in the area for about three months. On date of sighting one was in full breeding plumage, one approaching breeding plumage, one in eclipse (P.G.). Southland, 16/7/65, one in a paddock at Borstal Farm, Invercargill, feeding behind pigs. Fairly quick strutting movement as it followed the pigs. Bill heavy, yellow, dark tip; feathers of chin extend along lower mandible, giving a "jowly" look. Following cows on 17/7/65; some days later among cattle at a hay feeder. Seen again three times in July, on 19th September and on 11th October; still no sign of breeding plumage. At times it associated with a flock of White-faced Herons, but always near cattle. Wing beat more

rapid than that of the herons, by about three beats to two. Leg colour grey to flesh. The final sighting, with dairy cows, was about one mile north of the original sighting (M.L.B., R.R.S.).

#### AUSTRALIAN BITTERN (*Botaurus stellaris poiciloptilus*)

Northland, widespread in suitable localities (R.H.M., A.T.E.). Seen to perch in a wattle tree; occasionally takes eels; during January and February single birds seen flying in localities where they are not usually present, perhaps post-breeding restlessness or young birds wandering; frequently seen in or on the edge of mangrove swamps (late summer, winter and spring) apparently taking crabs (T.R.C., A.T.E.). Muriwai Lakes, count of 7, February 1969 (S.R.). South Auckland, common and increasing, breeding (R.T.A.); visits saltings during autumn and winter wanderings (R.B.S.); Miranda pools, three and four birds February and May 1966 (H.R.McK., R.B.S.); one settled in a pine tree (R.St.P.). Tauranga, resident and breeding (J.M.H.); Kawerau, frequently seen, makes night flights over township (R.M.W.); fairly plentiful in Bay of Plenty swamplands (N.B.); Ohiwa harbour, 1963, 4 (A.B.). Coromandel, quite plentiful but not increasing (C.A.McC.); Te Rerenga 1962/63, at least 8 (A.McD.). Waikato, common and increasing, breeding (R.T.A.); numerous records from many localities by various observers; Port Waikato, August 1963, four,  $\frac{1}{2}$  mile from river bridge; not seen here before (O.H.). Lake Waikare, 26/9/66, in shallow pool by road, one dark and one light bird; the dark bird, large, head neck and shoulders almost black, face blue; caught a frog, mauled its head and swallowed it while the legs still kicking (H.R.McK.). Te Kauwhata, 9/6/66, early morning, beside hedge in apple orchard; about two-thirds normal size; bill short, horn colour; feet green, chin, throat and breast creamy buff with three chestnut brown markings running vertically on lower breast, the centre one straight and the outer ones crescent shaped; very tame, did not freeze (B.B.). Te Akau, a bird which landed near nesting stilts was dive bombed by them and had to duck (D.W.H.). Volcanic Plateau, breeding on most lakes and swamps (H.L., F.M.); booming 18/10/61 (J.M.H.). Tirau, February 1966, a bird in poor condition with a wound on the tarsus taken home, fed with strips of meat soaked in water night and morning, by which time it had recovered and made vicious stabs with its bill. A boy offered to keep it in his aviary till it was ready to be liberated but three hours later brought it back as it had devoured a canary and a budgerigar, feathers and all, and was trying to catch more (A.C.). East Coast, estimated between 60 and 100 on south end of Whakaki lagoon, March 1963; scattered and uncommon elsewhere (A.B.). Hawkes Bay, Tutae-kuri mouth (M.M.); East Clive Lagoon, Tukituki, Haumoana and elsewhere (N.B.M.). Taranaki, widespread (M.G.M.); not common, recent reports from areas just north of New Plymouth (D.G.M.). Wanganui, not uncommon (R.M.). Manawatu, swamps from Otaki to Foxton, population static (E.D.); Lake Horowhenua, reported each year; booming September (E.B.J.). Marlborough, in small numbers Havelock harbour, Para swamp, Lower Opawa river, Wairau lagoons and Lake Rotorua Kaikoura; otherwise sparsely distributed (S.R.K.). Nelson, breeding (M.F.S.). West Coast, reasonably common at least on coastal flats (P.G.); well spread, frequent sightings in suitable habitat (T.H.S.); not numerous Jackson Bay (D.G.); locality reports from various observers. Canterbury, Cass, 1963; Geraldine, Rangitata

bridge, December 1962; Pleasant Point, Christchurch, June and July 1964 (J.R.J.); Lake Ellesmere (W.T.P.); Washdyke lagoon, Timaru, 1966 (B.R.K.); Pareora river and lagoon, Otaio river, Lake Wainono (R.J.P.). Otago, few in Lower Matukituki (J.A.); Glendhu Bay, Lake Wanaka, October 1969, two (B.C.V.); Lake Wakatipu, present and breeding but rare (M.F.S.); Central Otago, present but not common, occurs usually in pairs in raupo swamps and similar situations; mid-Nevis valley, October 1969, 2200 ft, one in pond (P.C.); lake south of Alexandra, 4/11/65 (H.R.McK.). Oamaru, resident and breeding (A.N.); Waitati, Tomahawk lagoon, Green Island, Lake Waipori, Akatore Creek, Lake Tuakitoto (W.T.P., J.H.A. et al.); Balclutha, catching tadpoles and small frogs in stream and pond (J.H.); Inchlutha, May 1961, one, probably young, in backyard (I.G.McL); Catlins, 1970 (J.H.). Resident and breeding in many parts of central and especially coastal Southland (B.D.H., S.L.L., M.L.B., R.R.S.); Eglinton valley (P.D.). Stewart Island, a few about Freshwater plain, population apparently fairly static (R.H.T.).

#### GLOSSY IBIS (*Plegadis falcinellus peregrinus*)

A single bird in Nelson harbour in May 1964 and reported to have stayed there till October 1966 (B.D.B.); one, possibly the same bird, at Rough Island in July 1970, associating with Paradise ducks on wet boggy land at spring tide; made several quick fluttering runs as if chasing insects (F.H.B.).

#### ROYAL SPOONBILL (*Platalea leucorodia regia*)

Awanui, July 1966, one (R.H.M.). Otaika, near Whangarei, August 1968, one (J. R. Dagger). Manukau, 14/6/64, six at Puketutu and two at Puhinui (H.R.McK); one at Weymouth August (B.B.) and September 1964 (Miss Doak). 1965, Mangere, 4 in June, one in August (R.B.S.); one at Kingseat Creek, 6/7/65 (H.R.McK.). Waitemata, Meola Creek, one, 6/12/68 (S.R.); Mangere, one on 20/12/68, still present February 1969 (R.B.S.); one 30/6/69, 31/10/69 (S.R.) and in November (R.B.S.); one seen four times in July 1970 (S.R.). Port Waikato, June 1963, one (O.H.). Bay of Plenty, Whakatane, August 1966, one (H.D.L.); one at Whakatane and at Matata, January 1968 (R.M.W.). Hawkes Bay, Ahuriri, 6/5/62, nine; one was shot, the others remained till 2/10/62 (N.B.M.); 4 on 23/10/62 (A.T.E.); 7 on 20/11/62 (N.B.M.); two in January 1963 (R.B.S.) and on 6/5/63, 17/7/63; 3 in August, 4 in September, 5 in October 1963, thereafter one (N.B.M.); 14/5/65, 4 (M.G.M.). Wanganui, one on river mudflats 8/5/64 (R.M.). Manawatu estuary, regular in season. Until 1963 a regular annual increase in maximum numbers; 42 recorded in 1963. No increase observed since then in Manawatu estuary but there is evidence of increased dispersal over the country; 26/4/69, 31 (I.G.A.). Many records 1964-1968, 30 on 19/5/66 and 14/5/68; first arrivals March or April, building up to peak then settling to a winter population of about 24, usually reduced to about 10 by September and occasionally an odd bird in December or January (E.B.J., E.D., et al.).

Marlborough, Wairau lagoon, October 1961, one (J.R.E.); December 1961, 2 (R.B.C.); 3/3/62, one (S.R.K.). Nelson, Mapua, 19/6/62, 9 (R.B.C.); Nelson harbour, January 1964, 7 (L.E.W.), May 1964, 15; 8/6/66, 6 (B.D.B.). Farewell Spit, June 1966, 12 (B.D.B.). Canterbury, Lake Wainono, 10/4/62, 3 (M.K.); 23-26/12/68,

11 (R.J.P.). Otago, Blueskin Bay, 10/1/67, one (B.K.); Merton mudflat 15/1/67 to 18/1/67, 5 all apparently adult (J.H.). Southland, Waituna, one on 8/3/62, one in February 1966. From June to December 1966 several reports of a large white bird — not a heron, and from description of feeding habit apparently a spoonbill — from Riverton estuary. One observer described an orange bill the size of a banana, but this was unconfirmed and about the time the bird disappeared from Riverton M.L.B. saw a Royal Spoonbill at Waituna (15/1/67). 1969, one at Waituna in January, February and in November (R.R.S.).

#### MUTE SWAN (*Cynus olor*)

Lake Ellesmere, population 1966 estimated at 300 (M.M.D.); 1969, estimated 200 pairs (R.R. newsletter). Tomahawk lagoon, 16 reported 1964, 14 in 1965, 12 in 1966-1968; 1966, 3 at Wainono, 4 or 5 at Ashburton (W.T.P.); one at Washdyke lagoon 1964-1966 (B.R.K.).

#### BLACK SWAN (*Cygnus atratus*)

Numerous counts have been recorded from almost all regions. Bay of Islands, coition observed May and September; incubation recorded mostly June-September, but also in December, January and March. Hatching to flying period estimated at 125-128 days. Kerikeri Inlet, birds which breed on a farm dam lake sometimes walk the cygnets over hills to a seasonal lake — about  $\frac{3}{4}$ -1 mile; and when they breed on the seasonal lake sometimes walk the cygnets to the farm lake, or over a hill to the saltwater inlet and thence swim to the farm lake outlet. This movement of cygnets takes place when the young birds are about one month old, and usually they grow to maturity on the water to which they have been moved. Stripping overhanging willow branches of leaves by swans has been recorded (*Notornis* X: 189); this habit has been noted here in September 1965 and October 1966 (A.T.E.). Volcanic Plateau, breeds for nine months of the year, March-December (M.J.S.B.).

Canterbury high country breeding records from Lakes Alexandra, McGregor and Ohau (J.H., H.R.McK., R.J.P.). Otago, the tame swan at Waitati hatcheries died in February 1965; it had lived there for 25 years and was not a juvenile when it arrived (Mrs B. Kelly per J.H.). Southland, breed at all times of the year with a peak in spring and early summer (R.R.S.).

#### CANADA GOOSE (*Branta canadensis*)

North Island, reports of single birds and small parties, mainly in autumn and winter; Northland, 2 at Kerikeri 1963 (A.T.E.), 8 at Ngawha, near Kaikohe, 1968 (Acc. Soc. report) and 10 at Ahipara 1969 (H.A.F.). Single birds in Waikato at Lake Whangape 1964, Mercer 1965, Whangamarino 1966 (H.R.McK), and in Volcanic Plateau at Lake Okareka 1967 and 1968 (R.W.J.) and Whakamaru 1968 (R.B.S.). Two birds at Whatipu, Auckland west coast, on 15/10/67 (R.B.S.) and three up Ngaruroro river, Hawkes Bay in October 1962 (A.T.E.). Marlborough, one on Wairau river bed 17/12/67, two at Lake Elterwater 14/10/67 (J.A.C.). Canterbury, numerous records including autumn and winter influx at Washdyke Lagoon (B.R.K.) and Lake Wainono (W.T.P., R.J.P.). Otago, 500 over-wintering at

Lake Wanaka 12/6/66 (P.C.); breeding at Queenstown 1964 and 1965 (J.H.); coastal records of single birds at Blueskin Bay and Hawkesbury lagoon in May 1966 (J.H.), Waikouaiti May 1968 (W.T.P.); 26 at Waitaki river mouth 18/5/67 (A.N.), and two at Evansdale 16/12/65 (J.H.). Southland, 70 transported from Hunter Valley and released at Waituna lagoon in January 1962, 50 banded; some shot, and some band recoveries further north in 1962; May 1965, flocks up to 30; April 1966, 40 on sea off lagoon; June 1966, 57 on lagoon. Flocks noted only in autumn and early winter, may be an influx from elsewhere; probably less than 12 breeding pairs in 1966 from Awarua Bay to Fortrose (R.R.S.); 5/3/70, 60 (S.L.L.). December 1970, Waituna River-Awarua Bay, 40 — 19 adults about to moult, 3 breeding pairs, two broods, 5 and 7, half grown (R.R.S.). November 1960, 3 on Lake Te Anau, 2 in Eglington valley (A.T.E.); 1964-66, groups of 2-32 birds reported at six localities north of Lumsden-Mararoa highway, usually in Mararoa and Whitestone watersheds; all sightings except one (Lake Luxmore, 4/11/65) in the period March-June; unconfirmed report of breeding at Lake Thomas. Clinton watershed, June-October 1970, 25+, scattered (R.R.S.). Lake Manapouri, 14/6/70, 76 (L.E.H.); Lake Hauroko, 1/3/71, 13 (M.M.D.). Ruapuke Island, 13 birds seen May and early June 1966 may be movement from mainland during shooting season (R.R.S.). Stewart Island, Freshwater River, about 1964, flock of 7 (R.H.T.); other unconfirmed reports of odd birds (R.R.S.).

#### PARADISE DUCK (*Tadorna variegata*)

Northland liberations have been successful; occasional in 1963, widespread by 1969; breeding recorded at Houhora, 1970; Okaihau, regular since 1964 (A.T.E.); Poutu, 1963 (M.J.B.); Maungatoroto 1969 (R.B.S.) and elsewhere. Post-breeding flocks, Okaihau 1967, 50 (A.T.E.), Rototuna lakes 1967, 21 (J.F.B.). Winter flocks, Te Pahi, 1964, 18 (A.W.); Parengarenga, 1969, 18 (A.T.E.); Great Exhibition Bay, 1966, 10 (M.D.); Ohawhai, 1966, 12 (S.B.). Broods 12 (R.B.S.), 8-10 (A.T.E.). Individuals or small parties wander in winter to areas where breeding has not yet been recorded. Muriwai Lakes, none seen February 1969 (S.R.). South Auckland, odd occurrences, up to 14 (H.R.McK). Waikato, 1963, Patetonga, uncommon, nesting; also recorded Lakes Wahi, Whangape, Whangamarino swamp and Piako river; fairly common in South Waikato-King Country (R.T.A.); 1964, increasing in Glen Murray area (M.W.); upper reaches of Waikato river in Kaimanawa ranges, August, 5 (M.L.T.); first record for Waingaro, September 1970 (D.W.H.). Bay of Plenty, Tauranga, resident and breeding; increasing since 1960 in Kawerau area, 20 plus seen 1964, occasionally on lakes round Mt Edgecumbe (R.M.W.); Motu area, 1963, up to 30 reported at times on Takaputahi river bed (A.B.); 1961, Kereu, Waikura and Raukokore river — breeding (J.L.K.). Considerable flocks on all suitable river beds from East Cape to Wairoa; moulting population at Lake Repongaere (January) varies from several hundred to 2500; Whakaki lagoon, 20/1/70, at least 2000 (A.B.). Hawkes Bay, Lake Tutira, May 1965, c.40 (A.T.E.); Tutaekuri and Ngaruroro, breeding October 1960 (N.B.M.); open hill country near Kaimanawa ranges, seen frequently over a number of years, sometimes with broods of young; a flock of 24 counted on a tussock flat. A female was chased by a banded dotterel when it trespassed on territory (D.A.B.). Volcanic Plateau, 1962, formerly



common, now greatly reduced in numbers (M.J.S.B.); 1964, uncommon; a few about Waimangu and Lake Rotomahana, odd birds Lakes Okareka and Rotorua (H.L.); September 1966, two males at Lake Rerewhakaitu, reported almost shot out (H.R.McK). Waikaremoana area, small numbers (D.G.M., A.T.E.). Fairly common in north and east Taranaki (M.G.M.); Awakino valley June 1968, 50 (B.D.B.); Waitaanga river February 1967 (N.V.A.B.); Moeroa (D.C.); Whangamomona, Ratapiko (29 in early 1968), Barrett Lagoon (one), and Waitotara river, 9/3/70, 3 (D.G.M.). Wanganui, fairly common; Kaitoke lake, Spring 1967, over 200 (R.M.); Okoia, 6 pairs; nest in a cabbage tree October 1963 (D.C.). Manawatu, found mostly along Wanganui and Rangitikei rivers, where they breed; occasional elsewhere (E.D.); Lake Horowhenua, occasional; 25/7/70, 12 (E.B.J.); Waikanae, 2/7/64, 20 (E.B.J.). Marlborough, common in upper reaches of large open river valleys and also occurs in small numbers in lower country (S.R.K.). Lake Elterwater, April 1964, 300 (M.M.). Kaikoura Peninsula, 11/8/68, 2 (D.A.L.). Small flock in Nelson haven 6/7/70 (F.H.B.); rare in Golden Bay, 1963 (M.F.S.). Numerous in Murchison and Maruia district, but decreasing 1963. Moults on Lake Matiri, and on lakes in the vicinity of Tarndale station in Molesworth country (D.V.Z.); reported to have been very plentiful around Wairau-Rainbow junction in the 1930s, but very few present in the area September 1969 (D.G.M.). West Coast, were fairly common, now less so; decline may be due to action by deerstalkers, who dislike them because their loud cries alarm deer (P.G.); small numbers up most suitable rivers 1965, but declining (T.H.S.); Haast-Jackson's Bay, large numbers in 1940s, only occasional by 1964 (D.G.). Doubtful Sound 24/6/63, 22 (W.T.P.); May 1962, pairs on Lakes Hankinson, Thomson and Sutherland, 4 on Deadwood lagoon (R.W.W.).

Numerous records from inland lakes and upper reaches of rivers in Canterbury. Lake Tekapo area, a pair sitting in snow at 5000 ft (R.J.P.). Numerous autumn and winter records from coastal areas, e.g. Washdyke lagoon 12/3/66, 50 (B.R.K.); Christchurch ponds 13/6/65, 61 (J. Hilton); Lake Wainono, July 1965, 175; in 1969 a pair bred in a haystack and reared 8 young (R.J.P.). Otago, common in lower reaches of all alpine valleys; thinly scattered throughout Central Otago near dams and lakes; breeding 1964 at 4000 ft on Old Man Range; 8/10/66, Makarora, 135, still in flocks (P.C.). Very numerous at Lake Onslow, March 1968 (J.H.). Numerous inland and coastal records from various observers, most of the coastal records in autumn and winter, but breeding recorded at Outram 1967 (J.H.). Many Southland records from inland areas, and small numbers recorded from coastal areas. 1970, numerous throughout Clinton watershed (R.R.S.) and 96 at Lake Manapouri 14/6/70 (L.E.H.). Eglinton valley and Te Anau (P.D. et al.). Stewart Island, rare; breeding at Mason Bay 1964 (M.L.B.).

#### MALLARD (*Anas platyrhynchos*)

Present in Northland but still outnumbered by Grey Duck (A.T.E.). Manawatu, 17/9/68, a nest with two eggs and several old nests in a clump of old cabbage trees (E.B.J.). Dunedin Botanic Gardens, June 1965, a healthy drake in perfect plumage but bill pearly greyish blue; Cherry farm, October 1967, a nest in long grass beside the highway within a few feet of the tarseal, found by R. Gray (J.H.).

Southland, four 1968 reports of breeding in May and June. 1/5/68, brood of 16 newly hatched ducklings at Thomson's crossing; 4/5/68, brood of 2-week-old ducklings on a lagoon near Thornbury; Borstal farm, Mr McKenzie sighted a brood of six in the last week of May; a duck incubating 14 eggs in May hatched six in the first week of June, and the 6 unhatched eggs contained dead embryos (R.R.S.).

#### GREY DUCK (*Anas superciliosa*)

Northland, copulation observed April and May 1970. Pairs usually on territory by July or August. Eggs from August, 10 day old ducklings seen on 10/9/66; late broods, 10 day old ducklings on 13/2/69 and 2/3/69 (A.T.E.). Omaha forest, 24/10/66, two nests, seven and nine eggs, on a 3-foot ledge 20 ft above the water of a forest stream (R.S.C.). Grey ducks in minority cf. mallard at Huntly and Whangamarino, September-October 1966; Lake Waikare, 1967, mostly grey; Firth of Thames, 1967, only a few greys in hundreds of ducks (H.R.McK.). Bay of Plenty, 25/7/63, 12 hard set eggs in a nest on top of a scrub-covered hill far from water (R.M.W.). Hawkes Bay, Upper Ngaruroro, sometimes well upstream inside bush edge; once at Easter I came across a duck with two very small ducklings which dived at the parent's warning and were carried down stream completely submerged (D.A.B.). Many locality records from all regions.

#### GREY TEAL (*Anas gibberifrons*)

Kaitaia, Lake Tangonge, one, May 1963 (R.H.M.); Te Pahi lake, one, June 1964 (A.W.). Auckland, Mangere ponds, over 70 on 1/3/64 (H.R.McK.); February 1967, a minor invasion, probably from Waikato (R.B.S.); 25/6/67, 35 (H.R.McK.); 13/9/68, a few have stayed later than usual this season; 20/4/69, probably 100; 27/7/69, 50; November 1970, first birds of the autumn back after an interval of several months (R.B.S.). Firth of Thames, 13/2/66, 6 (R.B.S.); 3/6/68, 25 (H.R.McK.). Waikato, fairly common and showing a slight increase 1963 (R.T.A.). Bay of Plenty, rare but present (N.B.). Gisborne-East Coast, a few at Lake Repongaere and odd birds scattered throughout the region (A.B.). Hawke's Bay, Horseshoe Lake, Te Aute Lake, Ahuriri lagoon, in small numbers (N.B.M.). Volcanic Plateau, increasing on Lakes Rotorua, Rotomahana and Okareka, present Rotoiti, Rotoma, Rotoehu, Rerewhakaitu, 1964 (H.L., F.M.); Rerewhakaitu 23/8/68, 37; Reporoa, Hardcastle lagoon 1968, 2 (H.R.McK.). Sporadic in its movements (M.J.S.B.). Manawatu, rare (E.D.); Lake Horowhenua, 5/5/65, c.30, which may have come over from Wairarapa; usually 1-4, once 6, seen at long intervals (E.B.J.); February 1969, two at estuary (I.G.A.). Marlborough, in small numbers at Wairau lagoon, Lake Elterwater, Lake Rotorua Kaikoura (S.R.K.). Nelson, two at Collingwood about 1959 (D.V.Z). Canterbury, inland records from Lakes Alexandrina, McGregor, Tekapo (185 in January 1970), Godley mouth and Cass delta (R.J.P., G.C.); Lake Wainono, a few (R.J.P.), Christchurch estuary, 73 on 18/5/65 (A.T.E.). Otago, becoming more plentiful on coastal lakes and lagoons; has gone as far as Benmore; said to have bred at Omarama (M.K.); Lake Hayes (H.R.McK.); Queenstown (M.F.S.); Lake Mahinerangi (Mrs Kearns); Waikouaiti, numerous records, up to 75 birds in February 1965 (W.T.P.); Lake Tuakitoto, unusually large number present 1967; about a dozen nests, well made, snugly tucked into the bases of the crack willows, some in reed or sedge growing in the

base of the willow, others in the litter of dead leaves which accumulates between the dividing shoots; thickly lined with down which stands up in a small rim round the nest; in the later stages of incubation the duck when leaving pulls the down thoroughly over the nest, which is quite a deep bowl, so that there may be about two inches of down over the eggs. On 5th November some birds still building and none of the eggs checked on that date had hatched (J.H., G.C.). Catlins, 1/2/63, 60; reported sometimes up to 200 (H.R.McK.). Southland, Waimatuku mouth, 26/7/69, 31; frequently sighted between Waituna lagoon and Gorge Road (R.R.S.); breeds 6 miles north of Gorge Road (S.L.L.); Hamill's lagoon, Gorge Road, 3/6/69, 100 (A.J.R.); Dale Lake, 30/12/67, two broods (I.A.M.); inland reports from Lake Manapouri, June 1970, 4 (L.E.H.), Mossburn 6/10/69, 2 (I.A.M.); Lumsden, winter 1965 (R. Lander).

#### BROWN TEAL (*Anas aucklandica chlorotis*)

Northland, numbers much reduced but still widespread; near Otangaroa; Kaeo river, still in fair numbers; 20 birds feeding on spire snails (*Potamopyrgus pupoides*) on the edge of the stream on 9/3/70; Takou river, Kerikeri river (A.T.E.); bred at Matauri Bay November 1969 (J.H.S.), and on farm ponds at Kerikeri and Waipapa. Post-breeding movement brings birds to new areas (farm ponds, etc.) and some may remain to breed. Sightings at Rangiahua (A.T.E.) and a report of 17 seen on a lagoon near Kohukohu (D.V.M.). Parekura Bay, Bay of Islands (D.E.C.) and Whangaruru (D.V.M.). Two localities near Kawakawa (R.T.A.). Helena Bay, 32 on 25/4/65 (D.V.M.); two at Mokau Bay, 1965 (M.R.); the Helena Bay population seems to have decreased to a low level (A.T.E.). Breeding on man-made ponds in Russell, Waitangi and Glenbervie forest areas (R.T.A.). Waipu, small population persists (A.T.E.). Auckland, Mangere ponds, occasional (R.B.S.). Waikato, odd birds (D.V.M., M.P.D.); Firth of Thames, Waerenga, 1969, 4 (M.P.D.). Coromandel, Port Jackson, February 1970, small group, present for some years (S.R.). Fiordland, occasional records (P.D., D.G.). Southland, a few sight records (M.L.B.); Longwood, 1967, a male and possibly a pair on a new pond (R.R.S.). Stewart Island, once plentiful, now scarce; I suspect but have no proof that wekas get some of the ducklings (R.H.T.); January 1956, two adults amongst kelp on Lonneker's beach (D.C.); January 1968, decreased greatly in Mason Bay and Rakiahua-Freshwater river areas; heard at night on Freshwater river and two seen on Rakaihua; 7-10 birds seen near Oban (J.H.); Old Mill Creek, bred 1968 and 1969; Kidney Fern Arm, 28/1/69, 3 (M.L.B.).

#### N.Z. SHOVELER (*Anas rhynchosotis variegata*)

A few appear from time to time on Far North lakes (R.H.M.). Bay of Islands, uncommon; Kerikeri, 5 in January 1965, odd birds at other times (A.T.E.); Kaikohe sewage pond, 1962 and 1963; once in October 4 ducks and 2 drakes (M.R.). Near Ruakaka, 16/11/61, brood of nine (A.T.E.). Dargaville, Lake Kai-iwi (C.D.C.); Poutu Lakes (M.J.B.); Lake Rototuna, 20 in January 1967 (J.F.B.), 21 in June 1970 (C.D.C.). Muriwai Lakes, February 1969, 20 (S.R.). Auckland, Mangere Pools, 1968 October, 12-15 pairs on territory (R.B.S.). Becoming plentiful throughout South Auckland 1963 (H.R.McK.). Waikato, common and breeding; Shoveler represent 30% of the total waterfowl breeding population within the Waikato

flyway (R.T.A.). Bay of Plenty, Matata, August 1965, 50 (B.B.); 29/5/65, several hundred (H.R.McK.); May 1969, 50 drakes (M.G.M.). Gisborne-East Coast, breeding Lake Repongaere 1961; flocks of 70 on Lake Repongaere and 30 on Orongo lagoon, small numbers elsewhere (A.B.). Hawkes Bay, common (N.B.M.). Volcanic Plateau, recorded from most lakes; winter and spring flocks up to 100 on Rotorua and Rotomahana (H.L.). Taranaki, scattered in pairs or small groups (M.G.M.); Parekura Park, Barrett Lagoon (D.G.M. et al.). Manawatu, small numbers throughout (E.D.); Lake Horowhenua, usually one-three pairs; ducklings on 31/12/66; 28/7/67, 40; 1969 April, 15; May, 20; July, 70 (E.B.J.). Wanganui, fairly common (R.M.). Marlborough, in moderate numbers on Wairau lagoon, Lakes Grassmere, Elterwater and Rotorua Kaikoura (S.R.K.). Nelson, not common at Golden Bay (M.F.S.); Farewell Spit, 1962, 26 in May, 11 in September (B.D.B.). Westland, seen in small numbers over the district (T.H.S.); Arahura coastal area, not plentiful (G.S.C.); odd birds Haast-Jackson Bay (D.G.); Grey river estuary, 5 pairs on 10/10/63; coastal lagoon north of Barrytown, December 1963; 4 pairs at Lake Ryan, 2/9/64 (E.W.C.). Canterbury, St Anne's Lagoon, Cheviot, 1962 (B.D.B.); Pukaki-Hermitage, 20/11/65, 6 (H.R.McK.); Lakes Tekapo, McGregor, Alexandrina 1968 (R.J.P.); Christchurch sewage ponds, May 1965, 840 (A.T.E.); Washdyke lagoon, 29/10/63, 12 (W.T.P.), many in 1966 shooting season (B.R.K.). Pareora river, small flocks throughout year, breeding Pareora lagoon 1968 (R.J.P.). Otago, small numbers well distributed, concentrating in sanctuaries in shooting season (W.T.P.); Wakatipu, common (M.F.S.); wintering birds at Matukituki river mouth, Wanaka, 1966; scarce in Rees and Dart valleys, October 1967 (P.C.); Waikouaiti 6/6/64, 207 (W.T.P.); 11/4/65, numerous, active courting, drakes taking off in short circling flights, alone or in small groups of 3-7 after one duck, constant murmur of "tok-took-took" from the drakes; mallards, mallard-greys and grey teal showing no courting displays (J.H.); 22/5/65, 300; 5/5/68, 400 (W.T.P.). Tomahawk lagoon, numerous records, 300 on 5/5/63 (J.H.A.); Lake Tuakitoto, unusually large numbers 1967; nests found were sparsely lined with down, insufficient to cover the eggs; when the duck leaves the nest it picks at the strawy ends of the grass around it and pulls a rough network of grass over the eggs, creating at best a shadow camouflage; nests placed in the base of crack willows using live grass as a nesting medium, or in reed clumps away from the willow tree bases, or in the top of niggerheads; canopy may be very dense, totally concealing the nest, or light and open; nearly all eggs hatched by the first week in November (G.C.). Southland, present in small numbers in many places, 31 at Borstal farm 12/9/60 (B.D.H.); increasing in coastal areas 1964 (M.L.B.); resident and breeding Lower Mataura (S.L.L.); recorded at Lake Marian, Hollyford valley, one 1964 record of 7 at Mirror Lake area, Eglington valley (M.L.B.). Stewart Island, seen twice; one with ducklings in a small tributary of Freshwater river (R.H.T.); Freshwater River-Mason Bay, third week of January 1968, 2 (J.H.).

#### BLUE DUCK (*Hymenolaimus malacorhynchos*)

Numerous reports from headwaters of rivers flowing into the Bay of Plenty, in Kaimai range (R.M.W.), Mamaku range, rare (R.W.J.), Kaituna river below Okere falls (F.M.), just below Tara-wera falls (J.P.R.), headwaters of Rangitaiki, Wheao, Whirinaki,

Horomanga, Whakatane, Waikare, Waioeka and Motu rivers (various observers); Raukokore river (J.L.K.). East Coast, good populations in protected and more inaccessible waters, such as Ruatikuri river, Manganuku stream, Waitahaia and Waingata rivers; has gone from several places where it was fairly abundant a few years ago, viz. Waiiau and Kopuawhara rivers (shot out) and Upper Hangaroa river. Ruakituri river, February 1964, parties of 8, 3, 2 and a single seen in a mile of river below Erepeti bridge; New Year 1965, one parent and seven fully grown young in a tight group moving slowly upstream and feeding on the bottom just like greys; I have never seen them feed like this before (A.B.). Waikaremoana, Aniwanuiwa river and streams flowing into Lake Waikareiti (various observers). Rivers in Kaweka ranges (N.B.M.). Upper Ngaruroro, far up in beds of streams; prefer to escape by diving and swimming rather than flying; show an amazing facility for progressing upstream apparently clinging to boulders on the stream bed; usually in pairs. Marked territorial sense; I have seen a pair fly downstream till they came to the territory of another pair, when they turned right round and flew back upstream (D.A.B.). Volcanic plateau, rare; a few exist further inland from Rotorua in the central ranges; Kaimanawas, northern end, one reported from headwaters of Watahanui stream; southern end, some in headwaters of Rangitikei river (H.L.). West Taupo, Waihaha (T.A.B.) and Waihora (C.N.C.) rivers. Small numbers in scattered localities in Taumaranui-National Park area (A. Machaado); Ongarue river (R.T.A.). Taranaki, Waitaanga falls, 1967, a pair; headwaters of Tongaporutu river, 1968, two (D.G.M.); Upper Waitotara, rare (R.M.). Ruahines, a few in eastern rivers, found in most of the western streams (C.N.C.). Marlborough, found on Upper Pelorus, Wakamarina and Goulter rivers and Lee Creek on Upper Wairau (S.R.K.); Clarence river, Fidget stream, 1967, 2 (C.N.C.). Nelson, Golden Bay area, all headwaters, one or two pairs; 1964, a pair on Carr Creek, a tributary of Big River (M.F.S.); Flora and Takaka valleys (J.R.J.); odd pairs well up Travers and Durville Rivers; 5 at the forks at Sabine, 1962; 13 together, 15 miles up Aore River from Collingwood; heard in Upper Tutaki near Mt Murchison (D.V.Z.). Westland, scattered throughout, usually far up the rivers (P.G.); Upper Ahaura and Pine Creek, breeding (T.H.S.); Hokitika area, found in all rivers with bushed banks, see at least a pair a day when working in high country; August 1964, 15 seen in two hours river bank walking at head of Taipo river. Hides under banks and boulders by day, flies about a lot at night. Nest, 5 eggs, in toitoi at head of Taramakau tributary; have never seen more than 5 young in a brood, usually less (W.R.F.). April 1965, many along length of Whitcombe and Wilkinson Rivers; North Poerua valley, Harihari, 1952, a pair every 1-1½ miles of valley and tributaries (J.R.J.). Franz Josef Glacier, 1961, one in pond (H.R.McK.). Many detailed records from Waiho, Cook, Copland, Makawhia, Paringa and Landsborough rivers (per C.N.C.); Haast-Jackson Bay, not numerous but seen at times (D.G.). Canterbury, Bealey River, Arthur's Pass (P.C.); at least 8 in Eward's River (Waimakariri), 1967; Wilberforce River, 1966, one pair in creek at head of valley; January 1967, Moa stream, 3200 ft a.s.l., one adult and 5 young; Rakaia, 1966, pair in creek between Harper and Aroca rivers; pair in Louper stream, 1965; pairs in West Mathias, 1965; Cattle Creek and Lyall Glacier lake, 1965 (various observers per C.N.C.). Otago, Hunter River (P.C.); formerly in headwaters

of Matukituki, not seen recently (J.A.); Dart watershed, maximum 10 pairs (M.F.S.). Fiordland, May 1962, Deadwood lagoon, 3; singles on Lakes Hankinson and Thomson, tolerated inspection as close as 10 ft (R.W.W.); Upper Hollyford, dead bird taken from a stoat (P.D.); Lower Hollyford, Moraine Creek, pair (P.C.), river below Gunn motor camp, November 1965, pair (H.R.McK.); along Milford track, 1958, six pairs (M.P.D.); Arthur River, Milford Sound (P.C.); Eglinton valley, 4 pairs (M.F.S.); stream flowing into Te Anau north and middle fiords, and into Lake Marchant (per C.N.C.).

#### NEW ZEALAND SCAUP (*Aythya novaeseelandiae*)

Far North, Te Pahi Lake, June 1964, 41 (A.W.). Bay of Islands, odd birds turn up but stay only a few days (A.T.E.). Poutu, Lake Kanono, May 1963, 240 (D.V.M.); Rototuna Lakes, 14/4/65, 29 (H.R.McK.); 20/6/70, 22 (C.D.C.). Muriwai Lakes, 1962, 18 (A.T.E.); February 1969, 3 (S.R.). Waikato river near Tuakau, Autumn 1963, 40 (R.T.A.); Karapiro (various observers). Volcanic Plateau, 1964, common and increasing on all lakes, winter flocks of several hundred at Hamurana and Sulphur Point (H.L.); Mokoia, 24/9/68, 600; Hamurana, 23/9/68, 500; Rotoaira, 6/12/67, 306; Okareka, 22/8/68, 16; Hardcastle lagoon, Reporoa, 23/8/68, 50 (H.R.McK.); Mangakino lake 28/10/68, 30 (R.W.J.); Whakamaru dam lake 2/6/66, 110 (H.R.McK.). Bay of Plenty, lakes near Mt Edgecumbe, 1964, 20 plus (R.M.W.); Matata lagoon 19/8/68, 32 (H.R.McK.), 17/5/69, 30 (M.G.M.); Kaituna area, rare 1964 (N.B.); reported Ohiwa harbour (R.M.W.). Gisborne-East Coast, a few at Waikaremoana and Waikareiti, not reported elsewhere (A.B.); Waikareiti, 13/4/69, 25; reports of up to 100 (D.G.M.). Hawkes Bay, Lake Tutira, various observers; Lake Hurimoana, August 1963, 24 (K.T.). Taranaki, December 1967, two near Awakino river may be first record for this area; June 1963, Barrett lagoon, 3, Lake Mangamahoe, 3; 2 present for some time in Pukekura Park (D.G.M.). Wanganui, rare; one regular on Kaitoke lake 1964 (R.M.). Manawatu, not seen for many years (E.D., 1963); Lake Horowhenua, 1964, 30; 1965, August, 60; 1966, April-May, up to 60; 1967, lake low, very few seen; 1968, 80 in May, up to 150 in June; 1969, many in February; 1970, up to 100 in February, 12 in March, 7 in April (E.B.J.). Marlborough, Lake Rotorua Kaikoura (S.R.K.). Nelson, Cobb Lake (M.F.S.); up to 30 on Lake Rotorua, summer only; seen on Lake Daniels near Lewis Pass and Lake Matiri (D.V.Z.); Lake Rotoiti, 19/9/69, 3 (D.G.M.). Westland, on main lakes (P.G.); Lakes Kaniere, 6, 1955; Mapourika, 1956; 1957, Paringa, 80, and Ianthe, 12 (J.R.J.); 1963, Lakes Brunner 12, Poerua 24, Haupiri 6 (E.W.C.); Lake Wai-una near Big Bay, August 1962, 200 (E.L.); Saltwater lagoon at Okarito, Lake Kaniere, Lake Rotokino (T.H.S.). Canterbury, Lake Heron 26, Lake Evelyn 15, January 1963 (W.T.P.); December 1969, Lake Alexandrina, 297; Lake Tekapo, 38; Lake McGregor, 146 (R.J.P.), brood of 3, November 1965 (H.R.McK.), 200 in November 1966 (G.C.). Not reported on east coast of Otago in recent years, but April-July 1970 present on a fairly remote lagoon surrounded by willow, reed and niggerhead swamps, 12-15 in May. Hunter road swamp near Arrowtown, 1955 and 1966, about 20 on a small pond, November (J.H.). A few round lakes in Matukituki valley (J.A.); small numbers at Wanaka (P.C.); estimated population on Lake Wakatipu, 15/2/63, 260; Lake Hayes, 18/2/63, 45, brood of six diving

freely though less than half grown (H.R.McK.); January 1967, 120 adults, females with 3 and 5 small chicks; Lake Johnston, 24/9/67, 5 (J.H.). Abundant in Fiordland in certain localities, sheltered waters of main lakes, occasional pairs up to 3000 ft on smaller lakes; population stable (P.D.).

#### AUSTRALIAN HARRIER (*Circus approximans gouldi*)

Three Kings, January 1963, a pair, and a single bird; a nest of the season (R.H.M.). Cape Reinga, May 1964, one killed a hen pheasant which was feeding in a wired-in vegetable patch (A.W.). Feeding on dead fish, 90 mile beach 1969; Bay of Islands, adult birds seem to prefer carrion when available, young birds are hopeful though often unsuccessful hunters of live prey; one picked up a juvenile stilt from mud flats but dropped it, apparently unharmed, when mobbed by gulls and Caspian Terns; chased off by parent grey ducks and pukekos; standing in shallow water trying to catch small fish; eating turkey eggs from an abandoned nest; tearing to pieces a myna nest in a pohutukawa tree (A.T.E.). Kirikopuni, 1964, Muscovy duck with 13 ducklings in a farm pond fought a harrier, forced it under water and held it there till it drowned (K.R.). Waikato, 23/8/69, bird bringing biggish stick to a raupo swamp (R.B.S.). Auckland, young birds seen 1/9/69 by Mrs Prickett (S.R.). Firth of Thames, Piako, 1/12/63, nest, 3 eggs; 16/5/64, a bird bathing for 15 minutes (D.J.). Tauranga, carrying food to nest in swamp November 1962; pair in same area, aerobatics and screaming, July-September 1963 (M. Hodgkins). Gisborne-Tikitiki, July 1965, 20 in 84 miles (H.R.McK.). Waikaremoana, occasional round cleared areas (D.G.M.). Kaimanawas, a startled harrier dropped from its talons a Grey Warbler's nest which contained only desiccated remains of a fledgling Shining Cuckoo (D.A.B.). Manawatu, Lake Horowhenua, usually one or two; 12 on 31/3/66, 9 on 11/4/67; one chasing a hare, without success (E.B.J.); hunting territory of each harrier in Opiki district estimated as a roughly circular area  $1\frac{1}{2}$  miles radius (A.A.S.). Marlborough, Cape Campbell, increased over past few years, 11 seen on 12/2/69 (A.W.); Kaikouras, March 1970, remains of their meals common on ridges 1000-2000 ft above valley floor (J.R.J.). Tasman River near foot of glacier, 18/5/70 (R.J.P.); Wainono lagoon, 12/3/66, 13 (W.T.P.); Otaio river, 25/8/68, 14 in 5 miles (R.J.P.). Otago, Mt Aspiring, numbers much reduced since rabbits taken off (J.A.); October 1967, Rees, 9 in 8 miles; Dart, 8 in 11 miles; Hunter valley above Lake Hawea, 12/9/69, 4; one harassing a flock of pigeons above forest; October 1969, mid-Nevis valley, 2200 ft, 6 in 6 miles; Lower Manuherikia, 16 in 20 miles (P.C.). March 1966, 44 seen on journey Dunedin-Middlemarch-Maniatoto-Palmerston; 1968, only 9 seen in an 80 mile car journey in Otago (W.T.P.). Karitane, 13/6/67, one struck, killed and ate a White-faced Heron which was standing on the flats (Mrs N. Hannah). Southland, report of a white harrier at Tussock Creek, 18/5/67; this may be the same bird that was banded and photographed by B.D.H. at Spring Hills in October 1963; Mervyn Jukes has seen it once between these dates (R.R.S.).

#### N.Z. FALCON (*Falco novaeseelandiae*)

Great Barrier, 1960, one reported flying into a house at Whangaparapara (A.T.E.). South Auckland, very rare; Moumoukai, one in bush, 1970 (H.R.McK.); Papatoetoe turnoff, Auckland motor-

way, one on 6/6/68 (B.D.B.). Waikato, September 1960, one flew over Te Kuiti township, first seen here in 23 years, though often seen in the country (T.A.B.); June 1961, Whareorino (J.L.K.); October 1963, pair recorded at Bombay (R.T.A.); 1964, Mt Pirongia (M.L.T.); July 1966, Te Maika, Kawhia harbour, two over sandhills, dived on a harrier; there are high cliffs further along the coast (M.M.N.). Tauranga, June 1963, five sightings of a bird within city limits (D.C. Smith); Kaimai ranges, 1300 ft, 5/6/63 (N.B.M.); Matata, 22/10/61 (J.M.H.); Kawerau, four sightings 1956-64; Whakatane, rare (R.M.W.); 1961, Easter, Haparapara valley; December, Raukokore river (J.L.K.). Gisborne-East Cape, one or two frequently in Gisborne suburbs, odd birds elsewhere; Waingake; Paheri, April 1969, one mobbed by 25 yellowhammers; breeding observed in a high clump of astelia, dead cabbage tree stump, hollow base of tree; twice on high dead trees and twice on ground under totara logs (A.B.); East Cape, March 1964 (A.W.); Waikaremoana, 1960 (A.T.E.); Aniwanui valley (A.B.); near Ruatahuna, March 1962 (R.M.W.). Hawkes Bay, very rare; Kaweka and adjacent ranges, occasionally at Pakowhai (N.B.M.); Upper Ngaruroro, seen on trips over many years (D.A.B.). Volcanic Plateau, rare, occasional stragglers close to townships (H.L.); Mamaku, January 1962 (M.J.S.B.); Wairapukao, 1962; Rotorua and Whakarewarewa 1960-62, 1964, 1968 (R.W.J.); West Taupo, frequently seen at Pureora (A.E.B.); Matea, July 1968 (R.S.C.); 23/3/65, on a crag above the bush line above Chateau (H.R.McK.). Taranaki, Moeroa, odd birds on bushed ridges (D.C.); Scattered localities including Mt Egmont (M.G.M.); Waitaanga ranges 1967 and 1968; Whangamomona, not rare in dense bush (D.G.M.). Manawatu, occasional in ranges, odd birds Bulls and Marton areas (E.D.); Pukerua Bay, over coastal cliffs 6/5/62 (R.R.W.); Wanganui, not uncommon (R.M.). Wairarapa, fairly common from Pahiatua to coast; nests in patch of bush on hill; one morning, three in Makuri gorge, east of Pahiatua (E.D.). Ngaio, 8/4/63, one (E.B.J.). Marlborough, small numbers throughout, generally avoiding populated areas; Seddon, odd birds all year (S.R.K.); Awatere valley, 1962 (B.D.B.); Lake Rotoiti 1966, Ward 1967 (J.A.C.); Kowhai Valley 1968 (B.D.B.) and 1970 (J.R.J.). Nelson, confined to limited bush areas (D.V.Z.); Mangarakau, May 1966 (B.D.B.); Golden Bay, present and breeding but rare (M.F.S.). West Coast, scattered throughout, not common; first sighting at Greymouth August 1968 (P.G.); Arahura, struck and killed a White-faced Heron (G.S.C.); Upper Grey Valley, Lake Brunner (T.H.S.); Douglas Lake (J.R.J.); inland from Hokitika (W.R.F.); Jackson Bay-Haast (D.G.). Canterbury, Arthur's Pass area (J.R.J.); Cass, Mt Misery, Cora Lynn 1964 and 1965 (P. Crozier); Mistake River, Lake Tekapo, December 1969, two (R.J.P.); Lake Sumner (B.D.B.); Lake Lyndon (H.R.McK.). Otago, Shag River, September 1959 (A.T.E.); Wakatipu, present and breeding, not common (M.F.S.); Matukituki, a few pairs (J.A.); Central Otago proper, occasional; more often on edge of forest areas (M.L.B.); Thomson Hut, Lake Hankinson, May 1962 (R.W.W.); Malaspina Sound (M.P.D.); Eglinton Valley 1965 (H.R.McK.); May 1968, Mr H. Jukes reports that on Waiiau river between Lakes Te Anau and Manapouri a falcon came down on to the swift water in midstream, thrust its legs into the water and lifted a fish more than a foot long to a height of 12ft above the water before dropping it (R.R.S.). Stewart Island, rare (R.H.T.).



### NANKEEN KESTREL (*Falco cenchroides*)

Lake Wainono, 19/12/70, one flying with the wind over rough pasture land about a mile north of the lake repeatedly turned into the wind and hovered, looking at the ground below (R.J.P.).

### CHUKOR (*Alectoris chukar*)

Marlborough, well established north of Wairau River and breeding down to sea level at Cape Campbell (S.R.K.), where a single bird was flushed from scrub near the rubbish tip, February 1964 (A.W.). Canterbury, reported seen several times near Cass (J.R.J.); covey seen briefly on summit of Mt John, Lake Tekapo, August 1965 (B.R.K.); Sealy Range, above Sealy Lakes, 3500-500 ft, 19/5/70, 5; above Hermitage, 3500-6000 ft, 17/5/70, 8; Lake Alexandrina, April 1969, six; January 1970, nine young on track near lake shore; near head of Hakataramea valley, July 1970, two (R.J.P.). Makarora station, reported at 4000 ft; Lindis Pass, 23/2/63, 4 (H.R.McK.); Queenstown area (M.F.S.); Matukituki valley, Mt Aspiring Station area, present, mainly at or above snow tussock level, 2500 ft (J.A.); Cardrona, 12/1/68, chukor feathers identified at a hawk's dinner table (W.T.P.); Lower Lindis river from Cluden Creek to Clutha confluence, 6/10/68, 3; becoming scarce in some areas (P.C.); Cromwell, 1964, calling at dusk on barren hillside across the Clutha river from the town (M.M.).

### BROWN QUAIL (*Synoicus ypsilophorus*)

Great and S.W. King, 1963 (R.H.M.). Numerous records throughout Far North and Northland, including islands in Bay of Islands (various observers). South Auckland, not plentiful except in tall fescue, wet country (H.R.McK.); Kingseat Hospital Farm, covey of 14, always some about (R.C.P.); Firth of Thames, small numbers at Whakatiwai, Kaiarau, Miranda, Kairito (H.R.McK. et al.) and Ngatea (A.W.). Coromandel, Papaaroha (C.A.McC.), Colville (J.L.K.), Kennedy's Bay, Coromandel, Whitianga (J.M.H.), Opoutere (H.W.). Mayor Island, 31/12/61, two on headland, Opo Bay (P.R.). Waikato, fairly common (R.T.A.); Kokopu-Waerenga road, 9 in covey (H.R.McK.); Churchill, 16/1/68, two adults, 5 young (D.A.L.); Waingaro, only one seen in 2½ years to April 1969, on rough metal road between Waingaro and Raglan, had a small chick on 11/1/69 (D.W.H.). Bay of Plenty, resident and breeding Tauranga, Te Puke, Kaituna, Whakatane, Kawerau (various observers). East Cape, about 100 in valley in lighthouse area, March 1964 (A.W.); Gisborne-E. Coast, increasing in Otoko district and fair numbers a few miles north of Tolaga Bay; elsewhere small scattered population (A.B.). Hawkes Bay, many localities, in small coveys of 3-7 (N.B.M.). Volcanic Plateau, small coveys in farm country at Waiohe, south of Lake Rotoiti, also at Tarawera and Waimangu; being so unobtrusive it may be more abundant than is apparent (F.M.); not at all common near Rotorua (H.L.); one seen Rotoehu State Forest 1960 and 1964; one near Wairapukao 1962 (R.W.J.). Taranaki, occasional coveys near New Plymouth (R.T.A.). Wanganui, not uncommon in coastal areas; Pipiriki (R.M.). Manawatu, occasional sightings (E.D.); one picked up dead in city street, Palmerston North; not uncommon near coast, but not known to occur wild in city area; may have been an escape (I.G.A.).

### CALIFORNIAN QUAIL (*Lophortyx californica*)

Reported from many localities in both North and South Islands. Auckland, Cornwall Park, February-March 1970, up to 80 feeding on acorns crushed by motor mower, with Malay Spotted Doves (S.R.). Ardmore, 30/12/64, C Graham found a nest with 20 eggs; bird sitting on 31/12/64; eggs all gone on 3/1/65 (H.R.McK.). Waingaro valley, Waikato, seem to be late breeders; still in coveys October-November 1967; 11/2/68, nest, 10 eggs, which hatched 20/2/68; small chicks seen 21/2/69 (D.W.H.).

### PHEASANT (*Phasianus colchicus*)

Common in the north; such records as have been received indicate that it is less common south of Volcanic Plateau in North Island and uncommon in South Island. Cape Reinga, pheasants frequently seen in vegetable garden at lighthouse; scatch away the soil for 12-18 inches to get at kumara tubers (A.W.). Kerikeri, eggs normally October-January, but young birds just able to fly seen on 22/4/66 and 14/3/68 (A.T.E.).

### PEAFOWL (*Pavo cristatus*)

Okoia, east of Wanganui, 1963, in scrub and open hill tops (D.C.).

### BANDED RAIL (*Rallus phillipensis*)

Far North, once fairly common near swamps and streams, now seldom except in rush country bordering tidal streams (R.H.M.). Mangrove fringes of streams and harbours at Mangonui, Whangaroa, Kerikeri, and south of Russell (A.T.E.); Punaruku (M.R.); Waiotu (north of Hikurangi), in a swamp, two adults and three chicks on 4/2/70 (Euan Moore); mangrove areas round Whangarei harbour, and along Hatea river; often caught by cats (C.W.D.). Tinopai, Kaipara harbour, 1965 (B.B.). Huia (north Manukau harbour), (A.T.E.). South Auckland, fairly plentiful throughout (H.R.McK.); plentiful on Manukau (Awhitu) peninsula (R.T.A.); Drury, 13/4/70, one dead on road (T.H.); Kawakawa Bay, 16/6/68, one crossed a busy tar-sealed road (B.B.); Firth of Thames, Clevedon launch landing, Miranda bridge; Kaiuaa, 13/4/66, pair and three three-quarter grown chicks (H.R.McK.); 10/1/65, pair with seven black downy chicks at Pukorokoro creek (R.B.S.). Ponui Island, seen at odd times in mangroves (H.R.McK.). Coromandel, a dead bird reported at Papaaroa (H.R.McK.); Opoutere, a good population (B.B.). Waikato, common; recorded a brood of nine chicks at Te Kohanga, October 1963 (R.T.A.); Waingaro, January 1967, one came out on to road, from fern (D.W.H.). Tauranga, resident and breeding (M. Hodgkins); Waimapu Inlet, one flew 100 yards to cover (R.V.McL.); Te Puke, rare (N.B.); Whale Island, November 1963, two dead (D.V.M.); Ohiwa harbour, eastern end, March 1970, four (A.B.); Kereu river mouth, 1961 (J.L.K.). Gisborne-East Coast, one killed at Whatatutu some years ago; two on crest of Tatapouri hill, six miles north of Gisborne, near a small dam, 1963; no other reports (A.B.). Hawkes Bay, present (N.B.M.). Taranaki, specimens sent to museum from Okato and Aria, near Ohura; suspected widely distributed (M.G.M.). Wanganui, rare (R.M.). Marlborough, one record from Picton,

November 1955 (S.R.K.). Nelson, common in suitable localities around Golden Bay (M.F.S.). Stewart Island, birds have been seen and caught in most unlikely places from time to time (R.H.T.).

#### WEKA (*Gallirallus australis*)

Birds released at Rawhiti, Bay of Islands, in 1967 appear to be doing well and have been seen and heard in 1969 and 1970 in areas some distance from the point of release (A.T.E.). Birds liberated at Parahaki (Whangarei) some years ago are apparently maintaining and have been heard and seen (including chicks) 1965-1968 (C.W.D., A.M.M.). Birds liberated in Dome Valley (south of Whangarei) in 1964 appear to have spread; newspaper reports of sightings of adults and young in 1968 and 1969, from near Kaiwaka and from Maungatoroto (A.T.E., E.G.T.). Bay of Plenty, released at Waimana gorge about 1965; Mt Manganui, caretaker of hot pool at foot of Mount reports 1967 that two often come out of the scrub at the back of the baths (R.V.McL.). Gisborne-East Coast, 1964, extremely common over an area limited by Anaura (north of Tolaga Bay) to the north, Matawai to the west, Hangaroa river and Wharerata hills to the south; occasionally observed outside this restricted range (A.B.); present on Taumotu island, Poverty Bay, March 1964 (D.V.M.). Volcanic Plateau, birds liberated on Mokoia island (Lake Rotorua) survived; noted as plentiful, May 1964 (M.P.D.). Some liberated on Mt Ngongotaha (H.L.). Authenticated sightings of single birds in Kaituna gorge several miles below Okere falls (F.M.); released in Tairua State Forest (R.W.J., 1965). Several reports of sightings near Aniwanuiwa where birds were apparently liberated some years ago (D.G.M.). Taranaki, birds released in Tangarakau area reported thriving, 1964 (M.G.M.); Wanganui, some birds liberated in recent years (R.M., 1964).

Marlborough, common on D'Urville Island and in French Pass-Tennyson Inlet area; in small numbers elsewhere north of the Wairau river and west of the Blenheim-Havelock road (Kaituna valley). Establishing south of Wairau river in the Branch river, Wye river and Bounds Range area (S.R.K.). Opouri valley, Mrs N. M. Young reports that a weka regularly visited Mr Carpenter's shed at milking time and had become quite tame. One evening as it was busy scratching a thrush approached and began gathering titbits from the weka's scratchings. The weka at first took no notice but suddenly pounced on the thrush, killed it and dragged it away. A few weeks later another thrush suffered a similar fate (B.D.B.). Nelson, Mt Maud and the mineral belt at the source of Roding river, 1968; December 1969, Weka stream, Roding Valley, wekas common especially after the climb beyond Hackett hut over Mt Starveal; Lowther saddle, Weka saddle, Weka-Serpentine divide, Serpentine stream (J.R.J.). Abundant around Golden Bay (D.V.Z.). Heaphy track, January 1964, seen at each camp — coast, down, bush (D.G.D.). October 1967, Pupu springs, Pohere bush, Punakaiki rocks (D.A.L.); Seddonville, Cape Foulwind (J.R.J.); Karamea and Inangahua valley, common (T.H.S. et al.); Ahaura, numbers much reduced 1964 (P. Allan); Grey valley, common (T.H.S.). Coal Creek, Greymouth, 17/5/69, one caught in possum trap; 5/12/70, odd birds crossing road between Westport and 10 miles north of Greymouth (J.R.J.). Taramakau-Hokitika, none (W.R.F.). South Westland, 1964, on hillside above

the lateral moraines alongside Balfour Glacier and La Perouse Glacier, in alpine scrub by Cook river as far down as Tony's Rock, but not in rata forest below Tony's Rock. 1965, Cassels Flat, Horace Walker moraine, Douglas Lake, Troyte junction with the Karangarua and Lame Duck Flats (J.R.J.). Absent in Jackson Bay district for many years (D.G.). Formerly occurred from Martin's Bay to South coast, but decreasing; a few on Solander Island (P.D.). Milford Sound, 1964, calling day and night in forest (M.M.). Milford track, 1963, common Glade House-Pompalona, a few at McKinnon Pass and Quintin Huts (H. M. McKenzie). Lower Hollyford, present 1965; much reduced in this area by big influx of stoats about 1937; stoats still numerous 1965 (H.R.McK.). May 1962, common from Deadwood lagoon to Lake Hankinson; successfully dismantled climatological equipment at Lake Thomson; one lone bird in scrub at 3500 ft (R.W.W.). Secretary Island, Doubtful Sound, common (P.C.). Wilmot Pass, 25/4/63, three (W.T.P.).

#### MARSH CRAKE (*Porzana pusilla*)

Kaipara South Head, 11/5/63, seen at a pond near woolshed; permanent habitat probably a larger swampy pond near sandhills (M.W.). South Auckland, very rare (H.R.McK.). Waikato, common, breeding (R.T.A.). Gisborne-East Coast, reported Lake Repongaere 1962, and observed at Tiniroto and Patutahi some years earlier (A.B.). Hawke's Bay, rare and occasional (N.B.M.). Unconfirmed report from Reporoa (F.M.); Rotorua, 27/2/66, a bird captured in a Rimu Street garden was sent to Mt Bruce (R.W.J.). Piopio, May 1963, watched feeding in a willow swamp for 30 minutes, at one stage only two feet away; specimen sent in from Uruti; one caught at Lake Ratapiko, Inglewood, 1965 (M.G.M.). Wanganui, rare (R.M.). Marlborough, found in small numbers in Para swamp south of Picton, Wairau lagoons and Lake Rotorua Kaikoura; four birds at Ward in winter 1961 (S.R.K.); April 1967, Havelock, a bird caught by cat, another photographed (J.A.C.); Lake Rotorua Kaikoura, 8/1/70, adult with three chicks 3-4 days old, in swamp (P.C.). Richmond, April 1963, four on mudflat (D.V.Z.); reliably reported from Golden Bay (M.F.S.). Westland, reported from Cobden in 1953 and Ross swamps in 1955 (J.R.J.); one caught, photographed and released at Greymouth about August 1959 (P.G.). Christchurch, Pleasant Point, 21/3/65 (J.R.J.). Lake Ellesmere, about 15 sightings, most of them in vegetation alongside freshwater streams flowing into the lake; rarely found where there is no raupo (G.A.T.). Pareora river, 8/7/67, one with a party of 7 pukekos; 1969, located in five parts of riverbed, habitat includes no raupo or rushes, only short swamp vegetation, lupins, and debris around willows. Lake Wainono, reported in fair numbers; February 1970, two individuals seen in different parts of the swampy lake margin (R.J.P.). Otago, Kakanui, one caught by a cat (A.N.); Lake Hayes, January 1962, 10 seen one afternoon; present at other small lakes in this area (M.F.S.); September 1963, Waitati Game Farm, one reported seen several times in patches of raupo swamp; Tomahawk lagoon, one, 7/3/64 (J.H.). Evidently quite common in Southland coastal areas and in many inland places; apparently present in peat bogs and margins of many ponds in farm country; there seems to be some local movement, as birds turn up in places where they have not been seen before (B.D.H.); sightings at mouth of Waiau River,

Eastern Bush; frequently seen about ponds at Ian Mathieson's farm at Longwood; lower reaches of Oreti river, lagoons at Thompson crossing and Centre Bush, Lake Waituna and Lake Murihuku, where broods of chicks were seen in November 1958 and 1959 (R.R.S.); dead bird at Otatara, May 1966 (L.E.H.); swamps at Tussock Creek and Lochiel (B.D.H.).

#### SPOTLESS CRAKE (*Porzana tabuensis*)

Kerikeri mooring basin, January 1965, seen at a few feet, feeding on mud at low tide (K.R.). Kiripaka, near Whangarei, 1964, a dead bird (H.R.McK.). Common in hills east of Clevedon, known in Ness valley and perhaps in gullies opposite south end of Ponui Island; one caught by cat on Ponui Island, 14/6/62, photographed and released; the cat had killed one a few days earlier (H.R.McK.). Waikato, Meremere, purring note (J.L.K.); 4 chicks reared on farm pond, Lake Whangape (R.T.A.). Bay of Plenty, Pukehina, 1964 (N.B.); Tarawera valley, June 1964, three seen in different areas (R.M.W.). Hawkes Bay, rare; one specimen at Pakowhai (N.B.M.); Haumoana, June 1965, one watched for half an hour at a distance of 20 yards, looking down from a stop bank to the muddy area where it was feeding; it kept returning to the cover of rushes and reappearing (B. D. Hankins). Lake Tarawera, May 1962, two seen at the outlet (F.M.). One killed by a cat in a swamp on Matarawa road four miles south of Tokoroa, 1966 (A.C.). Taranaki, specimens from Uruti, Manaia, Tarurutangi, 1963-1965 (M.G.M.); Spring 1966, K. Pomeroy found two nests, one at Mr Barwell's property at Junction road and the other near Waiwakaiho river mouth; 19/6/66, one killed by cat at Barwell swamp area; 9/5/67, same cat caught a crake at the same place, uninjured and released (D.G.M.); February 1969, one at Junction road (C. Paulin). Wanganui, Matatara valley, August 1962, one; specimens from Mangaweka, 1961 and Ohingaiti, 1963; rare (R.M.). Westland, Alexander river, Ikamatua area, one captured, identified and released by deerstalkers, February 1966 (P.G.). Canterbury, Pareora river, 8/10/67, midday, one ran from a small secluded stream; 18/6/68, early morning, two feeding at same stream; one reported by ranger, Lake Wainono, 1970 (R.J.P.).

#### PUKEKO (*Porphyrio porphyrio melanotus*)

A considerable volume of information on this species has been recorded and most of it has been summarised in *Notornis* 16: 101-120.

#### AUSTRALIAN COOT (*Fulica atra australis*)

Tiniroto, 40 miles from Gisborne, two arrived in September 1967 on Mr Coleman's property; 18/3/68, five birds on the lagoon; this was a useless patch of raupo-choked swamp which we improved by damming 5 years ago and it became a fine area of water with good cover for waterfowl (A.B.). Lake Tutira, 1964/65 season, 21 (N.B.M.). Horeshoe Lake, April 1964, 18 (B. D. Hankins); 21/6/64, 9 (N.B.M.). Lake Okareka, 22/8/68, 77 (H.R.McK.). Palmerston North Centennial Lagoon, 17/8/70, two; 1/9/70, one present, north end (I.G.A.). West Coast, one reported from Haast some years ago (P.G., 1964); Lake Poerua, 27/10/64, certainly one, possibly three; not seen in March 1965 (T.H.S.). Lake Tekapo, April 1969, 6; January 1970, breeding (R.J.P.). Lake McGregor, November 1960, 20; none found October 1966 (G.C.); 30/3/68, 10; 28/12/68, 16;

1969 April, 24; November, 13; 1970 January, 11 (R.J.P.). Lake Alexandrina, November 1960, 8 (G.C.); 1969, two in April, and in December (R.J.P.). Lake Waipori, 20/5/66, one shot (J.H.).

## SOUTH ISLAND PIED OYSTERCATCHER

(*Haematopus ostralegus finschi*)

Up to 100 may winter at Parengarenga and small numbers in Rangaunu Bay (A.T.E.); up to 470 in Whangarei harbour (A.M.M.). Many counts from the main wintering grounds in Kaipara, Manukau and Firth of Thames. Only small numbers recorded from other North Island localities. Kawakawa Bay, May 1969, 97 (T.H.); May 1970, 70; a big build up since they began at Mataitai in 1953 (H.R.McK.). Waikato Heads, 6/6/67, 77 (B.B.); 11/1/69, 37 (H.R.McK.). Kawhia, 31/1/62, 56 (M.L.T.). Few Taranaki records; 1963, February, two at Waitoetoe, two near New Plymouth, 13 at Tongaporutu (M.J.W.); August, one at New Plymouth (M.G.M.); January 1967, one at Waiongona; February 1968, 11 at Waiwakaiho mouth (D.G.M.); February 1969, 2 at Oakura (C.P.), 9 at Tongaparutu (F.F.). Wanganui, Turakina river mouth, 22/2/62, 11, probably on northward journey (D.C.). Manawatu estuary, 1967, 100 in March, 60 June, 12 September; 1968, February 100, March 204, June 60, September 12; 1969, 70 in April and June, 8 in September; 1970, January 12, February 70, March 60, few in April, May 40, June 60 (E.B.J.). Bay of Plenty, Athenree, winter 1966, 40 (R.St.P.); 25/2/68, Athenree, 36; 25/4/69, Little Waihi, 2 (R.W.J.). Muriwai lagoon, Gisborne, none in October 1966 or March 1967, 3 on 2/4/67 (A.B.). Ahuriri lagoon, Hawke's Bay, small numbers, 2-6 (N.B.M.). Nelson, numerous winter coastal records. Not known to breed (M.F.S.); a few in Buller Valley and Wairau river, September 1969 (D.G.M.). Westport, 18/10/61, 30 (E.W.C.), 16/7/69, 3 (F.C.K.). Dobson, 24/12/62 one; near Poerua river, 10/9/63, 2 (E.W.C.); Rotomanu, 10/8/64, two in a paddock; this is the earliest date R. A. Webber has seen them in this district; usually frequent Crooked river beaches but in the last year or so have been seen more in paddocks (P.G.). Okarito, 20/11/61, 20 (E.W.C.), 13/7/69, 25 (F.C.K.). Turnbull-Okuru mouth, 20/2/63, 12 (H.R.McK.). Marlborough, central Wairau valley, flock of nine on 17/7/69 (F.C.K.); 1962, first chicks found in third week of September (J.A.C.). Motunau Island, December 1970, one definitely identified (C.N.C.). Springfield, 26/7/70, one in a paddock (J.R.I.); numerous records from inland Canterbury in breeding season; Lake Wainono, common in late winter and spring when birds returning to breed (1970 July 100, September 124, October 128), few in summer and early winter. Pareora river, only one pair breed on the riverbed within two miles of the coast; most go more than 10 miles inland to breed, and begin to move down the riverbeds to the coast by late November or December, where they form flocks, which leave about February (R.J.P.). Ahuriri river, chicks by 6/10/62 (B.D.B.). Otago, numerous inland breeding records, birds arriving on territory second half of July to early August; numerous coastal records of post-breeding flocks. Queenstown, a well grown juvenile with adult held a submissive posture, head low and dipped in little jerky bows; it followed the parent closely, taking food from under the adults bill as it grubbed in the mat of plants on a gravel flat and occasionally taking food from the adult's bill also. Doctor's Point, April 1965, a bird watched opening and eating a pipi

(*Amphidesma australe*); it pressed the beak of the pipi into the sand and levered the opposite side with its bill, which it used like a chisel till inserted into the pipi. It picked up the pipi several times and worked on it in several places, perhaps succeeding when it found a sufficiently firm patch of sand to work on; it did not at any time use its foot to hold the pipi, which was a good sized one (J.H.). Lake Taakitoto, February 1963, two taking large freshwater mussels (*Hydridella menziesi*) out of the water on to land, to open and eat them. Many such empty shells were scattered along the muddy shore (H.R.McK.). One seen at Alexandra on 2/7/66, one reported the previous week; possibly over-wintering birds and if so, the first such recorded in this area (P.C.). In February 1965 birds began to feed on Dunedin city parks and similar open spaces (W.T.P.); in subsequent years increasing numbers are coming in to roost on such areas in winter, especially on cold wet days (J.H.). Southland, Oreti river, a few always winter in Winton district; numbers build up during late July, flocks and pairs everywhere on riverbed and farmlands August, laying and incubation principally during September and most chicks are reared October-November (B.D.H.). Stewart Island, Paterson Inlet, 14/1/64, 360 (M.L.B.). Chatham Islands, recorded in summer 1968 (B.D.B.). Partial albino, Manukau 1964; body white with slight black mottling on throat and shoulders, at eye, on some primaries, and tip of tail (B.B.); Southland, May 1967, one white but for a few slight brown smudges; apparently solitary (R.R.S.).

#### VARIABLE OYSTERCATCHER (*Haematopus unicolor*)

Numerous records from coasts of North, South and Stewart Islands, and from Great Barrier and Great Mercury Islands. Nesting in the far north may be rather earlier than elsewhere; eggs recorded from October to January.

#### SPUR-WINGED PLOVER (*Lobibyx novaehollandiae*)

All available information on this species has been sent to M.L.B., who is preparing a paper for publication.

#### GREY PLOVER (*Pluvialis squatarola*)

Farewell Spit, December 1968, one flew alongside the Land Rover for about a mile to show its axillaries and rump (D.D.B.). Manawatu estuary, 18/1/67, probable sighting; I was unable to note the axillaries or rump, but the single bird was larger than 11 Golden Plover which were present for comparison, general colour lighter, head larger and broader, broad pale band over forehead (E.B.J.).

#### PACIFIC GOLDEN PLOVER (*Pluvialis dominica fulva*)

Macauley Island, November 1970 (B.D.B.). Northland, Mimiwhangata, 17/10/66, 4 on beach near stream mouth (A.T.E.); Whangarei harbour, 24/10/70, 18 (A.M.M.). Lake Rerewhakaitu, November-December 1967, 6 (R.W.J., M.G.M.). Bay of Plenty, Old Kaituna lagoon, 11/2/67, 2 (R.W.J.); Tauranga harbour, Carter's Point, 27/10/68, 44 on mudflat (J.H.S.). Gisborne, Muriwai lagoon, 2/10/66, 9; 14/3/67, 26; 2/4/67, 14; 21/1/70, 16; Mahia, Opoutama, 20/1/70, 4 (A.B.). Hawkes Bay, Ahuriri, January 1963, 26 (R.B.S.). Taranaki, Waitotara mouth, 11/10/69, 2 (D.G.M.). Manawatu estuary, 31/12/68, 16 (E.B.J.); 30/1/71, 15 (I.G.A.). West Coast,

one found dead at Arawhata river, 1961 (D.G.). Lake Ellesmere, 18/2/64, 16 (B.D.B.). Lake Wainono, 7/12/69, one, probably the first record for this area (R.J.P.). Otago, Aramoana, 2/1/62, one (L.E.W.); one in February-March 1964 (W.T.P.); 1966, February, 2 (W.T.P.); October-November, 2; December 1966-March 1967, 3 (J.H., W.T.P.). Invercargill estuary, 1/2/70, 45 (P.M.).

#### NEW ZEALAND DOTTEREL (*Charadrius obscurus*)

Evidence gathered since publication of Estimated Population of New Zealand Dotterel (*Notornis* 16, pp 85-100) indicates that dotterel numbers in Northland may be somewhat greater than was supposed at that time, and will in due course be presented for publication. The following records are a selection of those received from areas south of Kaipara.

Auckland Airport, 13/9/69, 6; 4/2/70, 8; 12/4/70, 13 (T.H.). Kidd's, Karaka, 24/3/68, 22; 6/4/68, 24 (T.H.); 3-4 pairs (H.R.McK.). Whatipu, 1/12/68, 4 (M.R.). Miranda, 4/1/70, 12 adults, 2 chicks (S.C.); 4-6 pairs (H.R.McK.). A female banded at Karaka on 7/12/61 when about one month old and seen in May 1966 and January 1968 (*Notornis* 16, 99) was netted at Miranda on 7/3/70, re-banded and released (H.R.McK.). Coromandel, Omaro Spit, Whangapoua harbour, January 1969, 27 (John Drew). Bay of Plenty, Bledisloe Beach, Little Waihi, 14/3/70, 2 (R.W.J.); Kaituna cut, 15/2/70, 10; Maketu harbour 8/2/70, 2 and 20/4/70, 3 (R.S.C.). Rurima rocks, 7/11/69, one pair with nest on beach, 3 eggs; one pair apparently not breeding. Whale Island, one pair with a nest; eggs still not hatched on 22/12/69 (M. J. Imber). Muriwai lagoon, Gisborne, 21/1/70, one (A.B.). Otago, Matukituki river valley, Boil the Billy Creek, one seen on 25/10/69 (B.C.V.). Southland, Awarua Bay, 6/5/69, 17; 2/5/70, 32; 14/6/70, 39 (R.R.S.); Invercargill estuary, 27/3/70, 7 (P.M.); 7/2/71, 3 (M.L.B.). Stewart Island, 1969, Cook's Arm, up to 40 on mudflat, many in full breeding plumage; nesting dotterel found on the bare top of one of the granite knobs at 1274 ft a.s.l., 10 miles from Cook's Arm (A.B.). Mason Bay, 6/11/68, 11, full breeding colour (R.R.S.).

#### BANDED DOTTEREL (*Charadrius bicinctus*)

Breeds in small numbers around the coasts of Northland, on beaches and dunes. An autumn influx starts about January and reaches peak numbers about March, when there may be 1500-2000 birds around Parengarenga harbour, smaller flocks in Kaipara and Whangarei harbours, and on airfields; Parengarenga flocks dwindle during July and are gone by August (A.T.E.). Scattered breeding population in South Auckland and a winter population of up to 2000 (H.R.McK.). Small numbers reported around Coromandel coast (H.R.McK., D.J.P., B.B.). Bay of Plenty, 10 pairs on Matakana Island, 1967 (P. Densem); breeding reported from Whangamata, Waihi beach, Tauranga harbour, Mt Maunganui, Maketu-Otaramakau, Whale Island (various observers); Kawerau and Tarawera valley (R.M.W.); March 1962, 100 in Tauranga harbour (M.H.). Gisborne-East Coast, breeding Raukokore spit (J.L.K.) and river bed, Tolaga Bay, Pouawa, Orongo, Muriwai and Whakaki lagoons; January 1970, 23 at Muriwai and 32 at Opoutama, Mahia (A.B.). Breeding abundantly on riverbeds in Hawkes Bay (N.B.M.). Not common on Volcanic plateau but breeding on Rotorua racecourse and airport in 1968 (R.W.J.). Waikato Heads,



6/2/65, 41 (H.R.McK.). Taranaki, small scattered breeding groups in two confirmed localities (M.G.M.); Waitara beach 8/12/68, 2; Waiongona mouth, January 1967, 22; present on 6/10/69; Waiwakaiho, 3/11/69, 2; Rahoitu, 30 on 31/3/68, 9 on 7/2/70; Pungaereere-Okahu mouth, 12 on 25/2/68, 27 on 10/3/68; Waitotara mouth, 52 in January 1967, 8 on 12/10/69 (D.G.M. et al.). Wanganui, breeds south of airport near Kaitoke gull colony, and elsewhere (R.M.); Turakina river, 9/11/63, 30 (D.C.). Manawatu, Hokio Beach 16/9/67, 5; Otaki beach 3/12/67, 3 (A.A.S.); late inland record, Lower Mangahao 30/3/70; post breeding assembly at estuaries, e.g., 100 on 30/7/61 (I.G.A.), 60 on 4/3/70 (E.B.I.). Marlborough, common throughout on sand and shingle beaches, stony river beds and flat open poor pasture country (S.R.K.); Upper Wairau, chicks in January 1969 (W.T.P.); winter inland record from Wairau valley near Wye river, 14/6/67 (J.A.C.). Nelson riverbeds, breeding (M.F.S.); May 1965, 50 at Pakawau, 75 at Westhaven, large flocks at Farewell Spit (B.D.B.). West Coast, not uncommon; a flock always winters on parks near Greymouth (P.G.); July 1969, Haast airstrip, 3, and Waiata river mouth 10 (F.C.K.); breeding reported from near Barrytown (E.W.C.), Arahura (G.S.C.) and Okarito (A.B.M.); Haast-Jackson Bay, plentiful on spits and riverbeds (D.G.); breeding above Taramakau-Otira junction (W.R.F.). Canterbury, many at Selwyn Huts, Lake Ellesmere, February 1964 (B.D.B.); Opihi river mouth, present September-December 1970, 7-14 birds (R.J.P.); Washdyke lagoon, present throughout the year, at times up to 80-100 (B.R.K.); Pareora, present all 1970, usually 3-8 birds, but 18 on 31/1/70 and 21 on 24/8/70; Lake Wainono, present all year, commonest in summer; 1970, January 228, February 194, December 143; winter birds invariably round lake shoreline, summer flocks prefer dry paddocks south of lake; several pairs nest in rough pastureland, especially south of lake (R.J.P.); Glenavy, 12/1/66, 3 (W.T.P.). Breeding around Lake Tekapo, Cass delta and Godley mouth; some birds over-winter in this area (R.J.P.). Breeds on Otago coast at Waitaki river mouth and Waianakarua (J.H.); two at Blueskin Bay, 25/10/64 (I.McK.). Numerous records of inland breeding on river beds, stony paddocks and high in the ranges; 13/12/68, a nest 5400 ft a.s.l. (P.C.). Arrives on inland breeding stations during August; Mt Aspiring Station, 3 on 27/8/66, 25 the following day; 2 on 20/8/67 (J.A.); an early arrival at Matukituki river mouth, 1/8/65 (P.C.). Tucker's Beach, Shotover river, at least seven pairs on 27/9/65, one pair with two eggs; none on 8/9/67, pairs all over the nesting area on 23/9/67 (J.H.). Generally the main egg laying period seems to be October, and birds leave about January. Mt Aspiring station, flock of 50 on 27/2/66, 30 on 20/2/68, ready to go (J.A.). 12/6/66, Matukituki river mouth, 28 plus 5, evidently over-wintering (P.C.). Numerous detailed records of post breeding concentrations on the coast at Aramoana, Blueskin Bay, Hooper's Beach, counts in June 1964 respectively 358, 113, 60 (J.H.); 50-60 at Karitane on 14/5/66 (H.W.M.H.). Odd birds turn up at Aramoana in November, a few more in December; population fairly steady January-July, leaving in August; once 61 birds in September, and a single bird turned up with godwits on 1/10/67 (J.H.). Southland, common and breeding at Mataura estuary (S.L.L.); common throughout the district, breeding in large numbers all along riverbeds, occasionally on nearby paddocks, also extensively in some coastal areas, particularly in the sandhills behind Oreti beach; some still present

inland in winter; moderate flocks on coast (B.D.H.); 110 at Invercargill estuary on 31/3/64 was a large count; 2/5/65, 50 at Invercargill airport; 1/8/70, census, 82 (M.L.B.). Stewart Island, small numbers, at times up to 100 in sea level areas (R.H.T.).

#### MONGOLIAN DOTTEREL (*Charadrius mongolus*)

Karaka, South Auckland, one seen on three occasions in April and May 1965; 7/5/66, one, going into breeding plumage (H.R.McK.), seen again 2/6/66 (B.B.). One at Miranda, in a paddock with other dotterel; smaller than the banded dotterels, typical smooth grey upper surface, blunt ended shoulder tabs like *leschenaulti*, white face, clean grey and white, no buff (H.R.McK.).

#### LARGE SAND DOTTEREL (*Charadrius leschenaulti*)

Karaka, winter record, 21/6/70; Miranda, 12/1/70 to 12/4/70, singles (H.R.McK.); 14/8/70, one (S.R.). Lake Taupo, Waitahanui, a single bird stayed two weeks in October 1970 on a pumice flat (C. D. Blomfield). North Canterbury, Waipara river mouth, 19/10/68, one (S.C.S.).

#### BLACK-FRONTED DOTTEREL (*Charadrius melanops*)

Mangere ponds, Auckland, one present May-August 1970 (S.R.). Wairau river just above Picton-Blenheim road bridge, May 1969, 5 (C. Smuts-Kennedy).

#### NEW ZEALAND SHORE PLOVER (*Thinornis novaeseelandiae*)

Chathams, South-East Island, estimated population summer 1968 c. 100 birds (B.D.B.).

#### WRYBILL (*Anarhynchus frontalis*)

Many records from main winter quarters at Firth of Thames, Manukau and Kaipara, and a few annually at Parengarenga. A partial albino was recorded at Firth of Thames in three successive years 1968-1970 (R.B.S.). Ninety Mile beach, 44 in June 1969, 28 in May 1970 (A.T.E.); Rangaunu Bay, November 1969, 17 (J.H.S.). Mitimiti beach, Hokianga, odd birds in June 1965 and September 1966 (R.S.C.). Whangarei harbour, 1970 and 1971, maximum c. 100 (A.M.M.). Bay of Plenty, Kaituna cut, 19/5/69, 15 (M.G.M.), 15/2/70 and 22/2/70, 5 (R.S.C., R.W.J.). Gisborne, Muriwai lagoon, 21/6/69, 10; 21/1/70, 6; Whakaki lagoon, 20/1/70, 1 (A.B.). Waitotara mouth, Taranaki, 12/10/69, 2 (D.G.M.). Manawatu coast, 18/10/69, 40 (I.G.A.); 1/7/70, 19; 2/9/70, 10 (E.B.J.); 30/1/71, 10 (I.G.A.). South Canterbury, post breeding flocks at Lake Wainono, 1969, October 81, November 13, December 12; 1970, September 74, October 43; 18 at Ophi river mouth on 4/10/70 (R.J.P.). First record for Central Otago, a single bird on 2/9/69 near Matukituki river mouth (P.C.). Invercargill estuary, 3 on 9/11/69 (M.L.B.) and 1 on 5/9/70 (R.R.S.).

#### LONG-BILLED CURLEW (*Numenius madagascariensis*)

Parengarenga, regular in season; Rangaunu Bay, 26/12/64, 15 (M.R.), 5/11/67, 12 (T.R.C.). Single birds in Kerikeri Inlet 16/12/63, 14/3/65, September 1968, January and April 1969, October 1970, usually only for a day or two at a time (A.T.E.); Portland, one on 14/3/70 (A.T.E.); Waipu, one on 18/2/68 (J.F.A.), one on 2/1/69

(T.R.C.). Kaipara, two on 29/3/70 (R.B.S.). Karaka, one on 8/10/67 (B.B.); Mangere, 8/2/70, 5; 27/2/70, 16 (S.R.). Firth of Thames, February 1970, 19 (R.B.S.). Wanganui, single birds seen 3 miles south of Wanganui river mouth 22/12/61, Waitotara mouth 15/2/62, Turakina mouth 23/11/63 (D.C.). Manawatu coast, one on 15/12/65 and on 26/3/68 (E.B.J.). Farewell Spit, 10 over-wintering June 1966 (B.D.B.). Nelson, Rough Island, two on 23/4/70, one or two present till 4/5/70 (F.H.B.). South Canterbury, one reported December 1970 (R.J.P.). Otago, Aramoana, one on 14/9/62 (L.E.W.); one on 19/2/66 (W.T.P.), and at intervals between 17/7/66 and 22/1/67; two in March and April 1967 and for a short period, three (J.H., W.T.P. et al.). Southland, 4 at Waituna 1967/68, two at Awarua Bay and Invercargill estuary 1969/70, one at Waituna 1/3/71 (R.R.S.). Bravo Spit, Stewart Island, one on 25/1/64 (M.L.B.).

#### ASIATIC WHIMBREL (*Numenius phaeopus variegatus*)

Macauley Island, November 1970, one (B.D.B.). Kerikeri Inlet, a whimbrel has been present during the season each year from 1961 to 1970, sometimes for a long period, sometimes for a few days; *variegatus* has been definitely identified on several occasions (A.T.E.). Whangarei harbour, July and September 1970, one (A.M.M.). Moko-hinau, one present from 22/9/63 till found dead on 6/10/63; one on 27/10/63 (D.V.M.). Manukau, 3/11/63, one; March 1964, a very light coloured bird present at Kidd's paddock for over a week (H.R.McK.); 22/11/64, one (Mrs Urquhart); 12/9/65 one (H.R.McK.); 4/8/67, one (D.A.L.); 3/1/68, three whimbrel, one certainly *variegatus* (B.B.); 15/10/68, one (R.B.S.); 15/11/70, 4 (H.R.McK.). Firth of Thames, one on 28/4/63 (R.B.S.); 22/11/63, 1/8/65; 5 on 5/11/67, one on 16/11/69 (H.R.McK.). Gisborne, 2 at Muriwai lagoon, 210/66; 5 ?sp. at Opoutama, Mahia, 20/1/70 (A.B.). Manawatu, 1967/68, one; whimbrel sp., one in April and October 1969; 14/3/70, one definitely identified; one ? sp, 30/1/71 (I.G.A., E.B.J.). Farewell Spit, June 1966, 3 over wintering; Autumn 1968, 34 (B.D.B.). One reported Okarito beach, 5/10/65 (P.G.). Otago, Aramoana, 7/11/65, one (W.T.P.). Southland, November 1966, 6 at Waituna; December 1967, 5; Invercargill estuary, 2 on 15/2/70 and 25/9/70 (R.R.S.). Chatham Islands, summer 1968 (B.D.B.). South Canterbury, one at Lake Wainono January 1969 (R.J.P.).

#### AMERICAN WHIMBREL (*N. p. hudsonicus*)

Manukau, one on 21/6/70 and 15/11/70; Miranda, 16/11/69 (H.R.McK.). Manawatu estuary, 1/11/67, one, continuous rich brown of back and rump clearly seen (E.B.J.). Farewell Spit, April 1965, one (B.D.B.). Southland, Waituna, 2/2/71, one, possibly 5 (R.R.S.).

#### ASIATIC BLACK-TAILED GODWIT (*Limosa limosa melanuroides*)

Kerikeri Inlet, one well seen, December 1963 and January 1964 (A.T.E.); three ? sp., January 1967 (D.E.C.). Manukau, Karaka, 17/3/65 (B.B.); ? sp., 12/12/65, 1/6/69 (H.R.McK.). Firth of Thames, single birds identified 1962, 1963, 1965 (R.B.S.). Gisborne, Kopuawhara river mouth, 26/1/64, one (A.B.); Ahuriri, Hawkes Bay, 2 in 1963/64 (N.B.M.); Manawatu estuary, one ? sp. on 15/12/66, 18/1/67 (E.B.J.); Southland, Waituna, 6/12/64, ? sp.; Woodend, one on 15/12/63 and one on 6/2/66 (M.L.B.).

#### HUDSONIAN GODWIT (*Limosa haemasticta*)

Manawatu estuary, 23/9/70, one; dark colour of underwing noted (E.B.J.). Lake Ellesmere, 18/2/64, one (B.D.B.). Southland, December 1967, one at Woodend, also on 4/12/68; January 1969, one; October 1969, one sighted at Waikawa (M.L.B.) and at Awarua Bay, two (R.R.S.); November 1969, one at Woodend (M.L.B.).

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

Copious notes have been recorded from many localities in North, South and Stewart Islands.

#### GREENSHANK (*Tringa nebularia*)

Auckland area, February 1966, December 1967 (R.B.S.). Mahia, Mangawhio lagoon, 20/1/70, one (A.B.). Manawatu, unconfirmed report of wintering birds, June-August 1965 (E.B.J.). Westport, Orowaiti lagoon, November 1969, one (P.G., J.J.). South Canterbury, Ophi river mouth, 20/12/70-12/1/71, one, with Pied Stilts (B.R.K., R.J.P.). Southland, Oreti estuary, 22/1/63, one (B.D.H.); Awarua Bay, 29/1/71, one with Pied Oystercatchers (R.R.S.).

#### MARSH SANDPIPER (*Tringa stagnatilis*)

Bay of Plenty, Kaituna cut, 5/4/69, 4 (R.W.J.); 25/1/70-4/2/70, J.H.S. (see *Notornis* 18: 132); 15/2/70 and 15/3/70 (R.S.C.). Whakaki lagoon, Gisborne, 20/1/70, one with Curlew Sandpiper and Wrybill, in a tight group well away from other birds (A.B.).

#### WANDERING TATTLER (*Tringa incana*)

Macauley Island, November 1970 (B.D.B.). Gisborne, Muriwai lagoon, one on 14/3/67 and 2/4/67 (A.B.). Woodside Creek, Marlborough, January 1969, a tattler, probably this species; fairly large, dark, call of several notes, falling at end; noticeable tail dipping and head bobbing (W.T.P.).

#### SIBERIAN TATTLER (*Tringa brevipes*)

Waipu, April 1968, one (I.G.A.). Sulphur Point, Tauranga, 19/1/67, three tattlers; present till 16/2/67, with Pied Stilts; two-note call (R.V.McL.). Muriwai lagoon, Gisborne, 12/7/66, one (A.B.). Waiongona mouth, Taranaki, 9/4/67, Nicholas Banks and others saw a tattler which appeared identical to the bird seen at the end of 1966 and described in *Notornis* 15: 38 (D.G.M.). Farewell Spit, Autumn 1968, 4 (B.D.B.). Aramoana, 2/2/69, a tattler chased by godwits when it fed near them (W.T.P.); Catlins Lake 26/10/70, one at Cabbage Point (J.H.). Southland, 8/1/70, one at Awarua Bay with Pied Oystercatchers; 7/3/70, two at Invercargill estuary with N.Z. Dotterel and Turnstones, nasal groove seen; 4/6/70, Awarua Bay, two with dotterel, turnstones and Sharp-tailed Sandpipers (R.R.S.).

#### TEREK SANDPIPER (*Xenus cinereus*)

Whangarei harbour, 1970, two in April, one in July and September, two in February 1971; associated with wrybill; one seen to perch on a low mangrove bush the base of which was submerged at high tide (A.M.M.). Kaipara, one on 27/10/69, 29/3/70 (S.R.). Firth of Thames, sightings of one or two birds, October 1969-May 1970 (H.R.McK.); Kairito 10/4/66, just as a flax leaf suddenly bends back in the wind, so did the upper mandible of a Terek, about half way back from the tip (R.W.J., A.J.G., H.L.). Opoutama, Mahia, 20/1/70,

one (A.B.). Manawatu 30/1/71, one (I.G.A.). Southland, Waituna, 25/4/69, 2; 6/5/69, 1; Awarua Bay 2/11/69 and Invercargill estuary 6/3/70, one (R.R.S., P.M.).

#### TURNSTONE (*Arenaria interpres*)

Published records from Parengarenga harbour and Southland coast, where maximum numbers may exceed 1000; Kaipara harbour, up to 165; Firth of Thames and Manukau (*Notornis* 15: 238); Farewell Spit, where 800 have been recorded, and Lake Ellesmere, c. 100. Kaikoura, 19/1/62, 30 (W.T.P.); 26/10/64, 70 (B.D.B.). Stragglers and flocks may appear on beaches and inlets north of Auckland, usually on passage; elsewhere in New Zealand turnstones are relatively scarce. Bay of Plenty, Kaituna cut, 22/2/70, 4 (R.W.J.). Taranaki, one south of Rahotu, November 1967; one at Waitotara mouth 11/10/69 (D.G.M.). Wanganui, Turakina river mouth November 1963, one (D.C.). Manawatu, occasional; two at Waikanāe 23/11/66, one at estuary 19/3/68 (E.B.J.), and two on 30/1/71 (I.G.A.). Westland, one at Hokitika mouth, 1962 (A.B.M.). Canterbury, Opihi river mouth 20/12/70, one; Lake Waiono, 1970, one in October, 25 in November, 3 in December and 4 in January 1971 (R.J.P.). Waitaki river mouth, 20/10/63, 16 (W.T.P.); 1962-64, maximum 19; 6 in June 1964 (Mrs A. M. Smith). Otago, Aramoana, October 1962, one (L.E.W.); Catlins Lake, 26/10/70, 2 (J.H.). Stewart Island, 7 on Freshwater mudflats, January 1956 (D.C.).

Macauley Island, November 1970. Auckland Islands, Enderby Island, Derry Castle Reef, December 1962, 60 (B.D.B.).

#### AUCKLAND ISLAND SNIPE (*Coenocorypha aucklandica aucklandica*)

Adams Island, January 1966, snipe are everywhere from sea level to the summit and can easily be caught by hand (B.D.B.).

#### KNOT (*Calidris canutus canutus*)

Published records show that the greatest concentrations of knots in New Zealand are at Farewell Spit (27370 in January 1961, *Notornis* 10: 59), followed by Firth of Thames and Manukau harbour where numbers can build up to 8500 and 700 respectively (*Notornis* 14: 154), and Kaipara harbour (4342 in January 1965, *Notornis* 12: 76). In harbours of the Far North numbers fluctuate greatly during the season. At Parengarenga 2100 on 4/10/69 but less than 100 on 27/10/69; Houhora, 500 in November 1967 and March 1969 but 2750 in January 1971 (A.T.E.); Rangaunu Bay, 2000 on 1/11/69, 1000 on 3/11/70 (I.H.S.). Whangarei harbour, a build up to 2870 on 14/3/70 and 2500 at Whangarei Port roost on 1/2/71, but normal numbers are x 100 (A.M.M.). Waipu, 255 in January 1965 (A.T.E.), 110 in March 1969 (E.G.T.). Odd birds and small parties turn up on 90 mile beach, Great Exhibition Bay and (usually in September-November) in Kerikeri Inlet (A.T.E.). Clevedon, Mataitai, 19/11/62, 22; 30/9/68, three, feeding avidly (H.R.McK.). Occasional at Kaituna cut, Bay of Plenty (R.W.J.). Muriwai lagoon, Gisborne, 24 on 9/12/62 (A.B.). Ahuriri, Hawkes Bay, 17/3/68, 12 (B.D.B.). Waitotara mouth, 11/10/69, 2 (D.G.M.). Turakina mouth, 23/11/63, 8 (D.C.). Manawatu estuary, 19/3/68, 17; 9/10/69, 19 (E.B.J.); 14/3/70, 21 (I.G.A.). Westport, 20/4/68, one with godwits and avocet (P.G.). Lake Waiono, November 1967, one (H.R.McK.); December 1968, one; 1969, 4 in

October, 7 in December; November 1970, 19 (R.J.P.). Southland, January 1969, 188 (*Notornis* 16: 36). Stewart Island, January 1957, 7 in Freshwater Inlet (D.C.).

#### SHARP-TAILED SANDPIPER (*Calidris acuminata*)

Parengarenga, regular 1968-1971; 15 on 26/12/68 (A.T.E.). Rangaunu Bay, 5/11/67, 12 at a stream mouth (T.R.C.); Rangiputa bank, one on 1/11/69 (J.H.S.). Kaipara, two on 13/4/63 (R.B.S.). Manukau and Firth of Thames, regular; 16 at Manukau, January 1965; 35 at Firth of Thames December 1964, 9 in May 1965 (H.R.McK.). Kaituna cut, Bay of Plenty, 11/2/67, 7; 22/2/70, 4 (R.W.J.). Muriwai lagoon, Gisborne, 9/12/62, one (A.B.). Ahuriri, Hawkes Bay, 30/10/64, 12 (H.R.McK.); 17/3/68, 3 (B.B.). One on mudbanks in Wanganui river October 1967 (R.M.). Manawatu estuary, 30/1/71, 3 (I.G.A.). Wairau lagoon, Marlborough, 28/12/67, 4 (B.D.B.). Recorded from Farewell Spit. Lake Ellesmere, 18/2/64, 12 (B.D.B.). Lake Wainono, 12/3/66, 2 (W.T.P.); December 1969-March 1970, two, one in April and in November-December 1970. Opihi river mouth, 20/12/70, one (R.J.P.). Karitane, 1966/67, one (J.H.). Southland coast, regular 1958-1971; 40 at Invercargill estuary on 19/12/64; winter census 1/8/70, 4 (M.L.B.).

#### PECTORAL SANDPIPER (*Calidris melanotos*)

Kerikeri, January 1965, one present for ten days on a freshwater swamp  $\frac{1}{2}$  mile from saltwater Inlet (A.T.E., T.R.C.). Manukau, one on 14/11/64, 20/3/65 (H.R.McK., B.B.); two on 8/2/70 (S.R.). Waitotara mouth, one on 29/1/67 (D.G.M.). Manawatu, 6 in 1968/69 season (I.G.A.). Marlborough, one in a pond at Kaikoura January-February 1966 (J.A.C., B.D.B.). Ikamatua, March 1966, one (T.H.S.). Lake Ellesmere, 10/2/64, 2 (B.D.B.). Lake Tuakitoto, February 1963, one (H.R.McK., D.V.M., I.G.McL.). Lake Waituna, 15/2/71, 3 (R.R.S.), 1/3/71, one (A.B.).

#### CURLEW SANDPIPER (*Calidris ferruginea*)

Whangarei harbour, 23/1/71, one (A.M.M.). Lake Ellesmere, Kaitorete Spit, 12/5/70, 2 (R.J.P.). Lake Wainono, 28/6/70, one with banded dotterels (R.J.P.). Southland winter census, 1/8/70, 8 (M.L.B.).

#### RED-NECKED STINT (*Calidris ruficollis*)

Whangarei, March 1970, one (A.M.M.). Hawkes Bay, one stayed at Ahuriri till the end of May 1967, coming into breeding plumage (N.B.M.). Wanganui, Turakina river mouth 23/11/63, 3 (D.C.). Lake Ellesmere, 18/2/64, 33 (B.D.B.). Lake Wainono, 13 on 24/11/70, 5 on 7/12/70, one on 30/12/70; 1970, two in January, one February-March, one October-November (R.J.P.). Otago, 26/10/66, one with two golden plover (R. F. Smith). Southland, Lake Waituna, 23/12/64, 24 stints, one of which had head and neck bright chestnut, nape and sides of neck rufous, extending under chin to throat — the whole looked like a chestnut balaclava; crown brownish buff, broadening behind; buffy orange edges to back and wing feathers, wing coverts showing black blobs surrounded by buffy rings (M.L.B. Note — a Manawatu stint which assumed out of season breeding plumage is described in *Notornis* 9: 169). Woodend, 9/11/69, 43 (M.L.B.), 5/2/70, 35 (P.M.); winter count, 1/8/70, 18 (M.L.B.).

SANDERLING (*Calidris alba*)

Opoutere, 8/1/71, one beginning to assume summer dress (B.B.).  
Lake Waituna 2/2/71, 4; 1/3/71, one (M.L.B., R.S.S.).

BROAD-BILLED SANDPIPER (*Limicola falcinellus sibirica*)

Parengarenga, 12/2/70-9/3/70, one (A.T.E., A.J.G.). Firth of Thames, one 23/11/70 (R.B.S.).

PIED STILT (*Himantopus himantopus leucocephalus*)

Though Northland figures for post-breeding and winter flocks are small compared with the vast numbers recorded from Firth of Thames and Manukau and the large concentration at Kaipara, up to 689 have been counted at Parengarenga (February 1968, A.T.E.), 610 in Whangarei harbour March 1970 (A.M.M.) and up to 200 on one occasion in Kerikeri Inlet, May 1967. Few on 90 mile beach, but 352 on Dargaville beaches, May 1969. Considerable numbers breed in Hikurangi swamp and inland from Dargaville beaches; individual pairs and small colonies at a number of inland localities in all six northern counties, and a few pairs on beaches in the Far North and south of Reef Point on west coast beaches. From available records egg-laying inland is usually August-October, and on the coast September-November. At Kohukohu, Hokianga, stilts use old jetties as a high-tide roost (A.T.E.). An almost pure albino at Puketutu, December 1963 (R.B.S.). Waiheke, 29/12/62, 19, including 5 juveniles (A.J.G.). Many breeding records from Waikato (various observers). Coromandel, December 1964, recorded in small numbers from a number of bays and estuaries on both coasts, c. 100 in Tairua estuary (B.D.B.); 30/11/61, 50 at Colville (J.M.H.). Bay of Plenty, abundant and breeding Tauranga and Whakatane districts (R.M.W.), reasonably plentiful at Te Puke (D. Jenner); April 1969, 350 at Little Waihi, 3-400 at Kaituna lagoon (R.W.J.). Gisborne-East Coast, common and breeding in swampy areas and open paddocks near water; January 1970, 61 at Muriwai lagoon, 150 at Opoutama, 1160 at Whakaki (A.B.). Hawkes Bay, abundant, breeding on rivers and marshy lakes (K.T.). Volcanic Plateau, breeds around many lakes and swampy areas (H.L.); flocks of 100 and 125 near Lake Rerewhakaitu in May 1963 and 1965 (H.R.McK.) and birds at Hamurana in May 1968 (R.W.J.). Taranaki, widely distributed, small groups (M.G.M.); small numbers in coastal areas, e.g. Waiongona 8/1/67, 25; Rahotu 25/2/68, 58; Opunake 31/3/68, 35; Waitotara 29/1/67, 63 (D.G.M.). Wanganui, generally distributed; 43 at Turakina mouth 23/11/63 (D.C.); 25/10/65, 23 at Wanganui lower town (H.R.McK.). Manawatu, plentiful inland in spring, leave for estuaries about January (E.D.); Manawatu estuary, 14/5/68, 200 (E.B.J.), 30/1/70, 230 (I.G.A.); Lake Horowhenua, once 150 (E.B.J.). Marlborough, common on rivers, lagoons and wet pastures (S.R.K.). Nelson, breeding, not common (M.F.S., D.V.Z.); harbour mudflats 4/5/70, 13 (F.H.B.). Westland, scattered throughout, not numerous (P.G.); Westport lagoon November 1969, 20; February 1971, 71, of which 22 were young birds, three not yet flying; the parents mobbed a harrier till it left the area (I.J.). Plentiful on rivers in South Canterbury; 19/1/66, 230 at Washdyke lagoon (B.R.K.). Plentiful at Lake Ellesmere February 1964 (B.D.B.). Lake Wainono, 1970, 1031 in January, c. 300 February-April, under 200 May-July, about 300 August-October, 1392 in November, 598 in December. Pareora, 1967/68, about 15 pairs breed

up river within two miles of the coast; most move to the coast in January; the riverbed is deserted by April and birds reappear July and August. Opihi river mouth, 1970, 45 in October; December, 52, plus 27 in 4 miles upstream, some breeding. November-December 1970, breeding birds around Lake Tekapo area (R.J.P.). Otago, coastal count 7/3/64, 922; 6/6/64, 250 (J.H.). Waikouaiti, 1/2/62, 1415 (W.T.P.); Taieri lake, January 1969, c. 2000 (R.B.S.). Anderson's lagoon, Palmerston, prior to 1964 stilts departed from the area for the winter, first birds returning about mid-August; in July 1966 2-6 seen on lagoon (E.S.). Numerous breeding records from coastal areas and plains (various observers) and from inland areas far up rivers and around lakes, including mid-Nevis, 2200 ft a.s.l. (P.C.). Central Otago, none recorded as wintering; main exodus January-early February, usually all gone by the end of February, last seen once on 20/3/64; an early arrival at Galloway, 13/7/65; no others till 1/8/65; eggs generally about October (P.C.). Southland, occurs throughout in suitable localities, generally isolated pairs, seldom in colonies (B.D.H.); population stable, fairly abundant (M.L.B.); common in Lower Mataura (S.L.L.); occasional in Fiordland (P.D.). Stewart Island, rare; a pair for several years between Freshwater River and Mason Bay (R.H.T.).

#### BLACK STILT (*Himantopus novaezealandiae*)

Numerous records of full black or smudgy birds from Tekapo in the north to Omarama in the south — Godley, Cass and Macauley rivers, Lake Alexandrina; Tasman river; Lakes Ohau and Omarama, Pukaki, Ohau, Waitaki and Ahuriri rivers. Makarora river, one smudgy 17/11/65 (H.R.McK.). Manuherikia river, seen by local fishermen in 1964; one smudgy near Alexandra 12/10/69 (P.C.). Black and Pied apparently mated at Cass river 8/11/69 (R.J.P.); Ohau, 1963, Black and Pied paired and by their actions had a nest; the pied bird appeared to be the female (M. Keillor). Cass river December 1970, two pairs known to be nesting but only one nest was found; it contained 6 eggs (R.J.P.). Southland, indefinite reports of nesting from Waiau river near Clifden (B.D.H.); Ian Mathieson reports finding a smudgy stilt breeding on Oreti river bed near Centre Hill, northern Southland; this follows a similar report from the same area in January (R.R.S., July 1968). One bird at Gorge Road September 1963 (S.L.L.); one smudgy at Oreti health camp 6/7/68 (R.R.S.). Some black stilts remain on their breeding grounds over winter; in July 1967 B.D.B. found a little group of blacks at Pukaki; April 1968, George Grant found two pairs at the mouth of the Ohau, one pair had with them a "ragged" looking juvenile (J.H.). Black or near-black stilts appear in autumn and winter far north of their breeding area. Marlborough, Dillon's Point near Blenheim, August 1964 (S.R.K.). Manawatu, Whirokino, 1/2/70, 4 reported by E.B.J. who last saw one 15 years ago at Rangiotu (I.G.A.). Lake Rotomahana, a smudgy bird present for about a month, October 1967 (M.G.M.). Firth of Thames, 1962-1965, several sightings; Manukau harbour, many records 1962-70, up to 6 birds at times (H.R.McK., B.B.). Kaipara, several records Mairatahi-Waioneke (H.R.McK.). Pawarenga (Whangape harbour) September-October 1966, one all black except for a little white under tail (R.S.C.). Numerous descriptions of near-blacks have been recorded by various observers at breeding grounds and winter quarters.



## SOUTHERN SKUA (*Stercorarius skua lonnbergi*)

*Note* — A series of observations of this species and of the Antarctic Skua has been deposited with the Recording Scheme by J.J., and is out on loan to a member at the time of writing (A.T.E.).

Stewart Island, offshore islands and bold headlands (R.H.T.). Puysegur Point, not often seen but in November 1953 visited daily, feeding on prions which had struck the lighthouse panes during the night (W. D. Kemp). 5/11/62, on a tussock plateau about 1000 ft a.s.l., about 5 miles from the open sea and 2 miles from Kisbee Bay in Preservation Inlet, a skua rose from a nest, which was little more than a depression in the grass and contained two eggs; it hovered about 10 ft above us for some time. Bones and feathers of small birds (believed to be land birds) were found nearby. Some time later the bird returned with its mate, both flying much higher, at great speed and performing remarkable aerobatics (P.D.). Otago heads, 9/11/63, one; Lawyer's Head, 29/11/66, one flying south (W.T.P.). Blueskin Bay 28/9/63, one standing on mud flats; white wing patch seen when it flew (J.H.); March-May 1965, one seen off and on with black-backed gulls at Orokonui; looked sick when it first arrived. Stocky, heavily built dark brown bird with white patches on wings, which easily dominates the gulls (Mrs B. Kelly). Anderson's lagoon, Palmerston, 23/5/65, one about for a fortnight; a beautiful flier with rapid wing beats (E.S.). St Andrews coast, May-June 1968, one seen attacking white-fronted terns, black-billed gulls and once a black-fronted tern; Lake Wainono 1/6/69, one flying north (R.J.P.). Houghton Bay, Wellington, 16/4/70, one, apparently fully adult, came into the bay from the south-east and following a low sweep along the beach flew off to the open sea in a southerly direction (F.C.K.). One reported from Awhitu, South Auckland (H.R.McK.).

## POMARINE SKUA (*Stercorarius pomarinus*)

Cable Bay, Northland, 26/3/67, 12 skuas with a large flock of White-fronted Terns; ten of these certainly *parasiticus*, but two distinctly larger, one with a white rump, the other with noticeably large white wing patches (A.T.E.). Hauraki Gulf, Tarakihi Island, 1/1/63, one, fairly light in colour; special note made of size and tail (A.J.G.); off Ponui, 12/1/66, one, with Arctic Skuas, identified by Roger Tory Peterson; 2/1/66, one seen by three members, had by their description pomarine tail feathers (H.R.McK.). Off Saddle Island, Mahurangi harbour, one clearly seen at close range, tail well seen, 31/12/64 (A.J.G.). Clark's beach, S. Auckland, 18/8/68, one, light phase, whitish rump, light collar, lightly barred underneath; projecting tail feathers not seen; somewhat smaller than Black-backed Gull (D.A.L.). Tory Channel, 26/1/67, one; distinguishing field characters clearly seen (B.D.H.). Aramoana, Otago, 20/12/61, dark phase, blunt twisted tail feathers (W.T.P.).

## ARCTIC SKUA (*Stercorarius parasiticus*)

Rangaunu Bay, 25/1/62, chasing Black-backed Gulls; Bay of Islands, regular in season, 1961-1971 (A.T.E.); one on 4/8/63, probably a young bird (P.M.G.); 12 in the Bay in February 1971, six on 10/5/68, one on 18/5/69 (D.E.C.). Several reports from Kaipara and Auckland West coast. Regular in Hauraki Gulf, Firth of Thames

and Coromandel, in season (H.R.McK.); 9/5/63, 4 off Waiheke (A.J.G.) and one on 4/5/68 in the same area (M.D.). Reported from Bay of Plenty (M.H.) and Hawkes Bay (N.B.M.). Gisborne, Aerial reef, 20 miles offshore from port, one on 12/12/64 (A.B.). Rare on Wanganui coast (R.M.). Offshore from Paraparaumu and Otaki beaches February 1969 (E.B.J.). Small numbers off Nelson coast (D.V.Z.); Westland, common in summer months to end of March (P.G.). Small numbers off Marlborough coast (S.R.K.); Lake Grassmere, 1962 (W.T.P.). Washdyke lagoon 18/4/64, a bird flying along the shore line harrying White-fronted Terns; two, several miles north, 28/1/66 (B.R.K.). St Andrews coast 23/12/68, three; birds seen at intervals between January and April 1969, 8-11 individuals; two in December, 5-9 in January-April and one on 3/5/70; Lake Wainono, 1970, one in January, 2 in March (R.J.P.). Catlins coast, Otago, two chasing terns, October 1970 (J.H.).

#### SOUTHERN BLACK-BACKED GULL (*Larus dominicanus*)

Many records of breeding colonies or small groups from coastal and inland localities. Population density on 90 mile beach is variable — birds per mile, February 1961, 44; December 1967, 18; July 1968, 21; May 1969, 44; June 1969, 28; May 1970, only 16. Dargaville beaches December 1967, 18 p.m., May 1969, 21 p.m. In May 1969 the gulls must have been particularly hungry, in spite of the presence of a decomposing dead whale on which many were feeding; storm-cast shearwaters and mollymawks were being eaten more voraciously than I have noticed at other times during beach patrols; dead gulls and gannets were left untouched (A.T.E.). Shells smashed by Black-backed Gulls on hard wet sand are always large, lying in a patch of sand well clear of other shells and with footprints and faecal splashes left by the bird around them. At Warrington beach there are never many gulls doing this and they are always well spread out, up to 100 yards apart. The birds patrol slowly up and down the edge of the tide, looking down into the smooth water between waves; drop on a bivalve (in this case *Amphidesma forsteriana*) and pick it up as the wave retreats; laboriously climb and stall; just as they start to drop let go the shell, so that the bird lands only a second or two behind the shell, which does not always break on the first drop but generally on either the second or third drop (J.H.). Pakiri beach, Northland, June 1962, a gull picked up a piece of old driftwood, flew up, dropped it, and repeated this performance several times (R.W.J.). Matukituki river mouth 12/6/66, 12; 9/7/66, 36 on paddocks around the lake at Makarora; these are evidently overwintering birds which have not returned to the coasts, as do the majority; none have so far been recorded from Alexandra area in winter (P.C.). Boulder Bank, Nelson, December 1969, several nests built of tussocky grass with roots attached; in each case roots placed to bottom centre, stalks pointing anti-clockwise outwards (F.H.B.).

#### RED-BILLED GULL (*Larus novaehollandiae scopulinus*)

Refer to list of Red-billed Gull colonies, *Notornis* 12: 223-240. 90 mile beach, 35 birds per mile in February 1961 when gulls were returning from breeding grounds; June 1969, 45 per mile, plus thousands on paddocks from Awanui to Pua. Late August 1962, a constant stream of several thousand flying north over the water parallel to the beach, presumably on the way to Three Kings. Dargaville

beaches, May 1969, 33 birds per mile. A small colony on a sandbank at Paua, with White-fronted Terns, 1970 (A.T.E.). Kaimaumau colony now on Rangiputa bank, with Caspian and White-fronted Terns; November 1969, c. 100 nests; November 1970 c. 200. Most nests had two eggs, some three; in both years one nest with 4 eggs. Birds sat very close; much clamour but no tendency to attack observers. Unemployed birds predated eggs of Caspian Terns (J.H.S., A.T.E.). Tauranga Bay, Whangaroa county, c. 50 nests 1966 and 1967 on a small island (new record). Bay of Islands, 1968, Black Rocks, c. 100 nests, Tapeka Point c. 100, over 2000 at small island off Cape Brett; 1970, rock off Urupukapuka, over 50 nests, birds very aggressive; new records, small colony on a rock north of Moturoa and 19 nests on Motutapu reef. Kerikeri Inlet, few birds February-April, big influx May, 6000 or more July, breeding excitement and movement to breeding grounds August. Woolleys Bay, Matapouri, 1967, c. 100 on nests, new record (A.T.E.). Whangarei Port, winter, up to 8000; a few nests on dredge "islands." North of Bream Head, 1970, c. 1000 birds at colony, with White-fronted Terns (A.M.M.). Whangarei harbour 1969, none this year at Frenchman, 40 pairs Reotahi; Macleod's Bay, Kennyrob's island, fully occupied (K.R.). Palliser Spit, 5/11/61, 79 nests; as far as I know did not nest on the Spit 1962/3 season (C.N.C.). Jackson Bay-Arawhata area, colony of 70 birds, 1963 (D.G.). Otago, 1964, Potato Point, 80 pairs; Rerewahine (north) 50 pairs; (south) 100 pairs; Rerewahine-Taiaroa, 125 pairs (J.H.A.). 1967, large colony, cliffs along from Taiaroa Head, up to 4000 birds (J.H.). Southland, breeding colonies at Riverton back beach; the Narrows, Pourakino mouth (47 nests 1963/4), Mullet Bay, Pahia and Shades Beach (M.L.B.). Stewart Island, many small scattered colonies (R.H.T.). Whangarei harbour, gulls feeding on figs in March/April when they arrive back from breeding grounds (C.W.D.). Feeding on tadpoles at Rotorua (R.W.J.); one with a dragon fly; feeding on sand hoppers on beach; 10 birds hawking high flying moths over Kerikeri Inlet, February 1965; in April 1970 and 1971 when swarms of black beetles were flying, gulls hawking like swallows over the shore of the Inlet and over farmland (A.T.E.). Papanui Inlet, 4/7/65, a number of birds stamping their feet up and down rapidly on the edge of the receding tide; they work themselves in quite deep, and only in water, so that they have to step out of the holes made by their paddling, leaving circular marks up to a foot in diameter (J.H.). Similar behaviour observed on several occasions in Bay of Islands, in shallow water at the edge of the tide and on wet sand. The same "marking time" has often been noticed on paddocks in winter, probably to bring up worms; a flock of birds so engaged leave a green paddock brown and muddy (A.T.E.). Suspected *novaehollandiae-bulleri* hybrid at Maketu February 1967; its bill was blackish and intermediate in shape; I made it fly and its mirrors confirmed our suspicion (R.W.J., H.L.).

#### BLACK-BILLED GULL (*Larus bulleri*)

Auckland west coast, Whatipu, one on 10/11/68 (R.B.S.). A few records from Manukau harbour, one at Clark's beach 18/11/65 (D.A.L.). Mataitai, Clevedon, 3/5/65, 14 (A.J.G.); 22/7/65, 4 at Mataitai, 8 at Kawakawa Bay (H.R.McK.). Firth of Thames, winter flocks for many years, c. 1000 in 1964 and 1965 (R.B.S.); June 1965;

one rosy pink on whole breast, some others showing a trace of pink; this is common in the south but the first I have seen here (H.R.McK.). 14/12/68, two nests found by Susan Fogarty and checked by H.R.McK. Nesting birds photographed 1969/70 (R.B.S.). Bay of Plenty 8/8/66, 4 at Little Waihi (R.V.McL.); 4/6/66, Kaituna, 1000 in a paddock (R.W.J.); 1967, nesting on Matakana Island (P. Densem). Waikato, 14/12/66, one at Huntly bridge, 2 at Lake Hakanoa (H.R.McK.). Gisborne, Muriwai lagoon, Black-billed Gulls have nested for many years, usually in association with White-fronted Terns. For some years past the number at Muriwai has not exceeded 40, due obviously to poor breeding success; on 4/10/68 there were 103, indicating good success last season. January 1970, 5 at Muriwai, 255 at Whakaki lagoon (A.B.). Volcanic plateau, numbers at Whakarewarewa greatly reduced in 1969, thought to be due to pressure from Red-billed and Black-backed Gulls (R.W.J.). Waiongona river mouth, Taranaki, 2 on 30/10/66 (D.G.M.). Manawatu, irregular at Horowhenua; becoming more common on coast; 1968, 60 at estuary, 50 at Hokio beach, February-March (E.B.I.). Numerous notes from South Island; in the breeding season non-breeders not quite mature had small dark bars on upper wing which fully adult birds have not (H.R.McK.). Nelson, nesting on Boulder Bank (D.V.Z.). Marlborough, breeding on Wairau river from Renwick to the Rainbow river, Saxton river at Molesworth, Waihopai; Waima, Kowhai and Conway rivers. In small numbers in coastal areas, but more numerous in winter (S.R.K.). Westland, not particularly numerous; colonies at Millerton and Hokitika (P.G.); a few nest at mouth of Whakapohai river with White-fronted Terns (A.B.M.); February 1961, 10 adults with flying and non-flying young and a small chick (H.R.McK.). Breeding on Canterbury riverbeds and found around inland lakes; 300 at Lake Wainono all 1969 season; two pairs attempted to breed but were not successful (R.J.P.). Otago, breeding in large colonies along Clutha, Cardrona, Dart, Rees, Manuherikia, Makarora, Matukituki and other river beds; main body moves to coast (chiefly east coast) in autumn and first birds begin to return in late July. Small numbers spend the winter at Lake Wanaka and Alexandra (P.C.) and around Queenstown (J.H.). 19/10/63 c. 1000 birds at Waitaki mouth, breeding in progress (W.T.P.). Evansdale flats, 14 nests with eggs 14/12/63; January 1967, unusually large flocks at Waikouaiti and Karitane and many thousands at Aramoana (J.H.). 11/2/67, over 100 in a row "marking time" on fine patches of river bottom, Manuherikia (W.T.P.). Detailed records of nesting on Shotover flats (J.H.). Southland, resident and increasing (M.L.B.). Breeding colonies at frequent intervals up Oreti river, usually several hundred pairs, but sometimes up to 1000 pairs; generally they breed well up river, but this is only because the best shingle beds do not occur near the coast. They nest near the mouth of Mataura river and there was a colony of several hundred pairs on the shingle bank at the mouth of Waiau river; winter flocks are common on farms (B.D.H.). Gore, 8/5/66, 400 in two parks (W.T.P.). Thornbury, 5-6 years ago 500-1000 followed the plough with 12-22 black-backed gulls; in 1966 the latter are up to over 100, the former much less than previously (O. Linscott). Stewart Island, by no means plentiful (R.H.T.).

### BLACK-FRONTED TERN (*Chlidonias hybrida albostratus*)

South Auckland coast, a few winter reports; not every year (H.R.McK.). Hawkes Bay, small numbers in winter (N.B.M.). Two at Haumoana, June 1963 (K.T.); Porangahau, April 1967 (H.W.). Bay of Plenty, Tarawera river mouth April 1968, 6 (R.W.J.). Manawatu estuary, 7 in October 1969; 1970, 3 in February, one in March; Hokio beach, one in April 1969 and January 1970; Lake Horowhenua 1970, 1-3 in February-March, 21 in June, 20 in August; November records, single birds at Waikanae 1966, Waitarere 1969 (E.B.J.). Marlborough, breeding on Wairau river from Renwick to Tardale, also on Conway and Kahutara rivers; absent from Wairau valley in winter (S.R.K.). Nelson, September 1969, several in Buller valley and three at Wairau-Rainbow junction (D.G.M.). Westland, normally uncommon, but 15 at Karangarua mouth May 1957 (J.R.J.); Arawata mouth, 10 feeding just beyond breakers with gulls 7/7/69 (H.R.McK.); May 1964, Big Bay (P.C.). Abundant on Canterbury riverbeds up to the glaciers; one 10 miles offshore, May 1969 (J.R.J.); numerous coastal records, mostly in winter, only odd birds at other times. Otago, common on riverbeds spring and summer, arriving about mid-August, returning to the coast about March; numerous coastal records from various observers; only odd birds recorded September-December, a few in January-February, main numbers March-July. Southland, breeding on river beds, most birds move to the coast in autumn and winter but a few remain inland about Winton (B.D.H.) and one at Lumsden in May (A.T.E.). Stewart Island, sightings of one or two birds January 1956 and 1967 (D.C.); 3 in January 1965 on mudflats (M.L.B.); larger numbers, up to 10, seen in May (R.H.T.).

### WHITE-WINGED BLACK TERN (*Chlidonias leucopterus*)

Kerikeri Inlet, January 1965, one over a freshwater lake for a few hours (A.T.E.). Whatipu, December 1966 (R.B.S.). Firth of Thames, April 1964, one over mangroves; 1965 one in January, March and in November, breeding dress: 1966, a pale bird in July; one in December; 1967, February one, May two; one in November 1969 and February 1970 (R.B.S., H.R.McK.). Muriwai lagoon, Gisborne, one dipping over salt water 3/1/69 (A.B.). Ahuriri, Hawkes Bay, one in July 1963; two in different stages of immature plumage present for several weeks in early 1967; hesitant fluttering flight inches above the water, frequent dipping to water level (N.B.M.). Manawatu, 3 in 1968/69 and in March 1970 (E.B.J., I.G.A.). Orowaiti lagoon, Westport, one in juvenile or winter plumage hawking and hovering, taking small food particles from the surface of the water in flight (F.C.K.); in November 1969 (P.G.), January 1970 (R.B.S.); one in full breeding plumage with the exception of a few white feathers about the sides of the head, June 1970 (J.J.). Lake Ellesmere April 1962 two, one in breeding plumage (D. Graham); December 1962, one at Hawdon-Waimakariri confluence (J.R.J.); Lake Wainono, one in breeding plumage December 1968; Cass river, one in breeding plumage January 1970, and one on 26/12/70 (R.J.P.). Three in Otago harbour autumn 1968 (D.A.L.). Oreti beach near Waimatuku mouth, breeding plumage January 1963 (B.D.H.); July 1966, one seen at Taramoa and at Waimatuku lagoon, transient plumage (R.R.S., M.L.B.); October to December 1967 one seen on Waiarau river near Lilburn valley by Bruce Campbell, who reports odd birds in this locality over many years (R.R.S.).

### GULL-BILLED TERN (*Gelichelidon nilotica*)

Invercargill, one on 13/11/65, in loose association with gulls and Caspian Terns; may be the same bird as described in *Notornis* 12: 54 (M.L.B.). Auckland, May 1968, Mrs Panther saw one perched on bollard, Birkenhead wharf; well described (H.R.McK.).

### CASPIAN TERN (*Hydroprogne caspia*)

Fairly plentiful in Northland; breeding colonies in sandhills behind 90 mile beach (A.T.E.); colonies at Rangaunu Bay, 58 nests in 1969, about half that number in 1970, predation of eggs in unattended nests by Red-billed Gulls (J.H.S.), Kerikeri Inlet 60 nests 1970 (A.T.E.), Whangarei harbour 37 nests 1969 (A.M.M.), Kaipara South Head, large long-established colony washed out by high tides 1969 (M.W.), and Mangawhai. Isolated nests sometimes found, as at Takou Bay 1965 (T.R.C.). Post-breeding gathering of 109 birds at Paihia (A.T.E.). Winter counts, 305 in Manukau harbour June 1967, 438 in Firth of Thames May 1967 (H.R.McK., R.B.S.). Nest at Te Matuka Bay, Waiheke (A.J.G.). A small colony on Coromandel (H.R.McK.). Bay of Plenty, breeding Matakana (P. Densem), Tauranga (J.M.H.), Ohiwa (R.M.W.); sightings from many localities. Gisborne, small breeding population, perhaps 5 pairs (A.B.); small numbers in Hawkes Bay (N.B.M.). Sometimes fishes on freshwater lakes in the north (A.T.E.), in Hunua ranges (R.St.P.) and on Volcanic plateau (F.M.). Frequent inland sightings in Waikato (H.R.McK. et al.); 31 nesting in 1964 on a sandbank south of Mere-mere (P.J.H.). Joins other birds to feed on young crickets (A.T.E.). Scattered along Taranaki coast, may breed near Waitara (M.G.M.), small flock at Urenui (S. Hodder). Flying up and down Wanganui river near city (R.M.). 12 at Turakina mouth 1963 (D.C.). Manawatu coast frequent sightings, up to 30 at estuary in winter (E.D.). 20 at Hokio beach August 1968; occasional at Lake Horowhenua, 15 once, 20/7/66 (E.B.J.). 1962, common at Pauatahanui (E.W.D.), nesting Palliser Spit (C.N.C.). Marlborough, breeding at Wairau lagoon, Lake Grassmere, and a pair at Long Point; seen 50 miles up Wairau river (S.R.K.). Nelson, not numerous (D.V.Z.). Westland, widespread but not numerous (P.G.), pairs nesting near river mouths at Whataroa and Arahura (A.B.M.) and Saltwater lagoon (J.R.J.). Canterbury, 10-20 at Opihi river mouth, Temuka (J.H.), small numbers at Washdyke (B.R.K.) and Pareora; December 1968, one at Lake Tekapo 2300 ft a.s.l. (R.J.P.). Widely reported in small numbers along Otago coast; 9 birds, two juveniles, at Blueskin Bay 28/2/65, 20 at Aramoana 7/3/64 (J.H.). Detailed records of a colony at Invercargill estuary, 77 nests October 1964 (M.L.B.); frequent inland sightings on Oreti river as far as Winton and Dipton (B.D.H.).

### FAIRY TERN (*Sterna nereis*)

Pawaranga, Whangape harbour, 10/12/66, a tiny tern with yellow bill and orange yellow feet, thought to be *nereis* (R.S.C.). Whangarei harbour January-February 1971, several seen at Portland and Skull Creek; Little Terns also present; at least 8 birds on one occasion definitely *nereis* (A.M.M.). January 1968, two nests at Waipu; two adults and one chick January 1971 (J.F.B.). A pair at Waipu Cove January 1970, actions indicating presence of a chick (D.W.H.). Two pairs showing nesting behaviour at Kaipara South Head December 1969 (S. Reed). Young bird at Ahuriri in 1964/65

season is first record for this area (N.B.M.). Having seen Fairy Terns at Pakiri and Te Arai I have re-checked with Murray Williams his sightings near New Plymouth — 16/12/62, one flying at Schnapper; 1/1/63, two on sand at Waiwakaiho river mouth — and am sure he was correct in his identification (M.G.M.).

#### LITTLE TERN (*Sterna albifrons*)

Kohukohu, Hokianga, 1/3/67, one (R.S.C., A.T.E., E.G.T.). Whangarei harbour, January 1971, 10 plus (A.M.M.). Waipu, January 1971, 4 (J.F.B.). Kaipara harbour, 4 in January 1969 (R.B.S.), 4 in November 1969 (J.H.S.). Manukau harbour, 1962, 1965, 1966, 1968 (H.R.McK. et al.); 23/3/69, 4 (T.H.). Firth of Thames, regular each year 1963-1970, 13 on 4/12/66 (H.R.McK. et al.). Canterbury, Lake Wainono, one on 23/11/67 (H.R.McK.) and one on 24/11/69 (R.J.P.). Otakou, Otago, 17/3/68, 3 (D.A.L.). Southland, several sightings in 1963 and 1964; Pourakino, 4/1/67, one (I.A.M.).

#### WHITE-FRONTED TERN (*Sterna striata*)

Sight records from Wanganui and Manawatu, from which region some birds were noted inland in 1968 (I.G.A.) but no breeding records from these two regions. Numerous records of colonies from all other regions and from some offshore islands. The breeding range as given in the Field Guide requires northern extension (see *Notornis* 18: 128). In Doubtless Bay two breeding areas have been used for many years; long ago terns nested on the coast at the eastern entrance to Rangaunu Bay and since they left that site breeding has been regular on Rangiputa bank; nesting has previously been recorded from the entrance to Parengarenga harbour and at one time there was a colony on a shellbank in the dunes behind 90 mile beach (R.H.M.). Kerikeri Inlet, March 1969, one bird of a small party of 16 White-fronted Terns resting on a shellbank with Pied Stilts moved along the line of stilts, pinching the stilts' tail feathers with its bill and making the stilts jump (D.E.C.). Castlepoint, November 1965, kahawai feeding on plankton attracted a flock of terns; the terns were frequently submerged to a depth of 18 inches by the impetus of their dive (J. A. Bartle).

#### SOOTY TERN (*Sterna fuscata*)

Off Paraparaumu beach 23/11/66, two flying south; identification checked with F.C.K. (E.B.J.).

#### WHITE-CAPPED NODDY (*Anous minutus*)

Spirits Bay, January 1965, one with a group of White-fronted Terns: was able to approach within 5 yards (M.G.M.).

#### NEW ZEALAND PIGEON (*Hemiphaga novaeseelandiae*)

Numerous locality records. Eating acmena berries (B.B., A. Prickett), privet berries, dry kowhai seed (H.R.McK.); lancewood leaves (R.St.P.), elderberries and buds of lime tree (W.T.P.), plums (C.A.McC.); becoming troublesome in some orchards in Nelson (D.V.Z.) and in Westland, where large flocks are reported from some inland localities (P.G.). Taranaki, incubation started 25/9/67; Tuai, Lake Waikaremoana, Mr Byford has a colour transparency of an albino, November 1964 (D.G.M.). One perched on the cross tree of a telephone pole, Nelson (F.H.B.). Normally rare or absent in

beech forests (J.R.J., D.A.B.); two in beech forest at Rotokohu, March 1964 (P. Crozier). Sometimes attacked by falcons, as at Aspiring station (J.A.) and Puysegur Point, where one was forced down into the sea (W. D. Kemp). Fiordland, seasonal migration from higher altitude forests in winter, may leave the forest altogether on the eastern side of the Park; from late May till November many about Te Anau township (P.D.).

#### ROCK PIGEON (*Columba livia*)

Marlborough, established in Lower Awatere valley and Cape Campbell (S.R.K.). Motunau island, nests October and December 1970, two among heaps of boulders within 10 ft of high tide mark (C.N.C.). Otaio river, August 1968, 8; Cass river delta, November 1969, one (R.J.P.). Nesting on cliffs at Galloway and railway bridge at Lauder, October 1969 (P.C.); Tuapeka, 11/2/67, one walking across road bridge carrying a 15 inch straw in its beak; 50 on cliffs at Stony Creek, 18/10/69; Tomahawk beach 3/1/62, 48 feeding on tide line (W.T.P.).

#### MALAY SPOTTED DOVE (*Streptopelia chinensis tigrina*)

Hobsonville, 11/12/68, one (H.R.McK.). Two young on 7/9/69, Auckland North shore; February-March 1970, gradual build-up to over 100 in Cornwall Park, feeding with Californian Quail on acorns crushed by motor mower (S.R.). One shot at Karaka, May 1968; 1969/70, about Clevedon, Takanini, and six miles from Clevedon on North Road (H.R.McK.).

#### WHITE COCKATOO (*Cacatua galerita*)

South end of Muriwai beach, 23/9/63, one seen by Mrs Burns (H.R.McK.). Flocks of up to 40 reported near Glen Murray, 1963 (R.B.S.). Onewhero, June-July 1964, flock of c. 200 on farm was the largest number seen flocked in this district (D.W.). Port Waikato, two flying over pine trees towards estuary; Waikaretu, 12/10/69, 130 flying over in small groups during half an hour in the evening, towards the coast; this is said to be a frequent occurrence; Waingaro, occasional; up to 5 seen regularly December 1969-February 1970, not seen in March (D.W.H.). Wanganui, often visits Okoia district (D.C.).

#### NORTH ISLAND KAKA (*Nestor meridionalis septentrionalis*)

Present in Northland forests, Puketi, Omahuta, Russell (A.T.E.) and Waipoua (H.R.McK.). Occasional at Whangarei heads (C.W.D.). Waitakere ranges (A. Prickett). Three Kings, Auckland city, September 1969 (S.R.). Hen and Little Barrier Islands; Great Barrier, feeding on kowhai nectar (A.T.E.) and pohutukawas (A.J.G.). Hunua ranges; occasional round Clevedon, whistling and screeching at night, February 1964, two in Thorp's bush 1967 (H.R.McK.). Ngatea, April 1961 (A.W.). Coromandel bush behind Papaaroha and Colville (C.A.McC.). Bay of Plenty upland bush (N.B., R.M.W.); Motu bush, December 1962, about 20, noisy on a misty evening (A.B.); Raukokore saddle, 1961 (J.L.K.). Gisborne-East Coast, decreasing; scattered population in most high forested areas; flock of 11 Maungahaumi 1960, 8 near Toatoa 1963, 8 inland from Tokomaru Bay 1958 (A.B.). Volcanic Plateau, not common around Rotorua (R.W.J.), one in grounds of Boys' High School 18/7/62 (M.J.S.B.); found near Waiouru (H.L.); south-east of Lake Okataina (F.M.); Kaingaroa, well inside forest;



one in D. Bartram's garden feeding on apples 1970 (R.S.C.). Te Whaiti 1961 (F.M.). Upper Whirinaki river, Minginui, 20/3/62, 12 in party (R.St.P.). Waikaremoana area (D.G.M., M.G.M.). Maungataniwha forest (N.B.M.). West Taupo, always in evidence in dense virgin podocarp forest at Pureora; flocks of 12 or more birds can be seen daily from the village. In podocarp-tawa forest at Pouakani they are less common, not in flocks. Rotten stumps and over-mature podocarps are good sources for extracting grubs; often seen eating podocarp and astelia fruit; green miro berries are cracked across and the seed contents extracted (A.E.B.). Pureora forest, January 1964, about 1900 hours, a total of 93 kaka flew overhead in an easterly direction in pairs and parties up to six, evidently heading for a roosting place. I have never seen such a large number together (G. F. Yerex). Whareorino, 1961 (J.L.K.). Kaweka range 1969 (R.S.C.). Kaimanawas, not common; usually a few birds in late evening, flying high to a roost; a flock of 8 seen on Tauranga-Taupo saddle (D.A.B.). Taranaki, inland records between Okau and Waitaanga in the north and Whangamomona in the south (M.G.M., D.G.M.); New Plymouth city, one present 1968 and till May 1969 (D.G.M.); Hawera, one in gardens June-August 1965 (F.F.). Occasionally in Ruahines and Tararuas (E.D.).

#### SOUTH ISLAND KAKA (*N. m. meridionalis*)

Inner Chetwode, July 1962, whistling day and night (A.B.). Marlborough, report of 4 birds from Mt Robertson, September 1960; probably still in the bush areas of the Sounds (S.R.K.); Mt Riley, 12/1/69, one (W.T.P.). Reports of single birds and pairs in Nelson lake district, most abundant in bush areas north-west of Nelson; Patarau, Mangarakau and Westhaven Inlet (D.V.Z.). Canterbury, uncommon in Bealey valley; 3 in Hawdon valley November 1962. Present in the red/mountain beech forest of Canterbury but not as common as in Westland (J.R.J.). Feeding signs in Lake Sumner area October 1964 (B.D.B.). Westland, present in the forest on the flats and terraces and also the alpine fault face; not in the valleys of the Southern Alps proper in South Westland (J.R.J.). Reasonably common (P.G.). Locality reports recorded from about 30 areas from Barrytown south to Jackson Bay. Otago, a few in some but not all alpine valleys (P.C.); Mt Aspiring station, Matukituki, a few in bush; Fleming river, October 1970 (J.H.). Fiordland, in all tall forest, seldom in pure beech forest (P.D.); records from Eglinton, Routeburn and Dart Valleys (M.F.S.), Hollyford valley (R.J.N.), Lakes Fergus and Lochie, Milford track, Murray Gunn's camp (H.R.McK., A.T.E.), Lakes Howden and Manapouri (D.A.L.) and Lake Hauroko (R.R.S.). Stewart Island, kakas became rather scarce but seem to be making a good recovery; each year when Australian gums are in bloom they feed on nectar; much noise morning and evening. Always some on Ulva island and about the country south of Paterson Inlet (R.H.T.); January 1964, flocks up to 15 (W.T.P.).

#### KEA (*Nestor notabilis*)

Common in mountainous country in Marlborough and in high altitude tussock grassland, occasionally straggling to lower levels; Stirling brook, Seddon, May 1968 (S.R.K.). Two birds flying near Wairau-Waihopai confluence below the 500 ft contour, April; Upper Kowhai valley 1968 (B.D.B.) and 1970 (J.R.J.). Nelson, not numerous;

flocks of up to 12 birds seen in back country, usually singles or pairs (D.V.Z.). J. Haldane saw a kea at Bainham, 11/7/59; uncommon in the surrounding mountains; one or two recorded from Dun Mountain 1968, Mt Gale 1969; occasional about Seddonville; said to be not uncommon in northern Paparoas (J.R.J.). Black Cow mountain, Goulard Downs, Perry's Pass 1968 (M.D.); Rotoiti Lodge 1969 (D.G.M.). Fairly common in Westland; come down to coastal flat and even Greymouth after heavy snowfalls, one on outskirts August 1968 (P.G.). Two at Dobson township 0545 hours on 3/2/64, heavy mist down to 500 ft a.s.l. (E.W.C.). Mt McHardy, Ikamatua; Mt Ryall, Barrytown; common in Southern Alps certainly from Maruia to Big Bay, less common in the granite mountains west of the Alpine fault (J.R.J.). Forest round Lake Ahaura and cleared ground above 900 ft, Wallaby Creek (P. Allan). 23 together at head of Hokitika river May 1962 (W.R.F.). Franz Josef Glacier (M.M.). Quite a number at the head of Karangarua river November 1963 (W.R.F.) and common up Douglas river Xmas 1965 (J.R.J.). Haast-Jackson Bay, numerous in mountains, often seen in lowland forest (D.G.). Arthur's Pass (M.M.), Cora Lynn 1965 (P. Crosier); Springfield, two reported October 1957 during heavy snowfall (J.R.J.). Mt Cook area (various observers). Lake Tekapo camping ground 14/3/64, six (H.R.McK.). A few in nearly all Otago alpine valleys, usually near or above bush-line; Hunter valley September 1969 (P.C.). Cameron's flat, Makarora, two low down in bush, November 1965 (H.R.McK.). Matukituki valley and Mt Aspiring station, often seen (J.A.). Present in high country around Wakatipu, nowhere common (M.F.S.). Rees and Dart valleys 1961, Caples and Hollyford valleys 1962, nowhere in large numbers (R.J.N.). Hollyford, November 1965, ones and two low down in bush by roads (H.R.McK.). Fiordland population stable; above timber line, but descending into forest in poor weather, often to low levels, even on fiord shores. Keas constantly around camp at Dusky Sound March 1963. A fisherman told me that when he beached his ship for repairs in one fiord he and a crew member had to take turns at keeping keas from tearing the canvas covering of the wheelhouse. Apparently keas did not make their presence felt when Captain Cook was in Dusky Sound; is this descent to the shoreline perhaps a recent adaptation? (P.D.). Manapouri, 5 around huts at West arm (M.M.), on tops at Hope arm October 1968 (D.A.L.). Milford track, McKinnon Pass (M.M. et al.). Thomson Hut May 1962 (R.W.W.); Lake Howden 1968 (D.A.L.); Eglinton Valley, Knobs flat and Cascade Creek (H.R.McK.); Homer, six crawling over bus January 1970 (W.T.P.).

#### CRIMSON ROSELLA (*Platycercus elegans*)

Wellington Botanical gardens, on the ridge between the Glen and Glenmore valleys, 30/12/70 (J.R.J.).

#### EASTERN ROSELLA (*Platycercus eximius*)

Has spread as far north as Ngataki on Aupouri peninsula; present in native forest at Puketi, Omahuta and Waipoua (A.T.E.). Woodhill pine forest, in *P. radiata* 1963 (H.R.McK.) and 1968 (R.W.J.). Seen or reported feeding on grass seeds, newly sown pasture, thistle heads, gum tips, wattle shoots, oak buds, tender shoots of mangroves, apples and oranges in orchards, hawthorn berries, *Phormium* seeds (A.T.E.), fruit of totara and kahikatea (S.B.) and

rewarewa (R.S.C.); June 1970, feeding on case moths; the tapering brownish cases were hanging on wattles; the rosellas were holding the cases in their feet, tearing them open with their beaks and eating the contents, females, or eggs, or both (D.E.C.). Aotea to Whatawhata 1964 (H.R.McK.); said to be present near Mt Pirongia; reported near Hamilton (R.T.A.); two at Te Kowhai, September 1969; increasing in Waikato (D.W.H.). Tahora, and reported from near New Plymouth (M.G.M.). Makomako area 7/3/64 (N.B.M.). Report of sightings in Mt Holdsworth area, Wairarapa, 1964 (K. Cairns). Tararuas, in the foothills at Otaki and elsewhere, reaching their limit at the confluence of Wakatikei and Hutt rivers and Whiteman's valley (H.L.S.). Otago, sightings Dunedin, Ross Creek, Puketeraki (W.T.P.); used to breed extensively in Leith and Waitati valleys some years ago (L.E.W.); Broad Bay, Mrs Anderson reports common about 1940 but not seen since about 1950 (J.H.).

#### RED-CROWNED PARAKEET

(*Cyanoramphus novaezealandiae novaezealandiae*)

Report of small numbers in Warawara forest, Hokianga, probably correct but not yet confirmed (R.S.C.). Good sightings of up to 6 birds in and around Puketi and Omahuta forests (J. Don, R. Lawn, Wesley Sanderson, R.H.M.). A single bird seen on Piercy Island, Cape Brett, on 15/3/69 by R. Booth, well described, appears to have been this species; parakeet sp. reported occasionally on north shore of Kerikeri Inlet and at Opuawhanga, north of Whangarei, by observers well acquainted with rosellas (A.T.E.). Occasional around Whangarei Heads and Parua Bay (C.W.D., K.R.). Volcanic Plateau, feeding on seeds of pine cones (C. D. Blomfield). Kaimai Range (M. E. Fitzgerald). Waikaremoana, Mr Byford states that birds he has seen between 1953 and 1963 were red crowned (D.G.M.). Kaweka range 1969 (R.S.C.). Kaimanawas (D.A.B.). Ruahines (N. Elder). Westland, Lake Hochstetter, Snowy-Alexander river, 1965 (T.H.S.). Malaspina Sound (M.P.D.). Dunedin, Ross Creek, two on 2/9/61 (W.T.P.). Occasional in bush near Mt Aspiring station (J.A.). Stewart Island (W.T.P.).

#### YELLOW-CROWNED PARAKEET (*Cyanoramphus auriceps auriceps*)

Little Barrier, 20/10/61, one in beech tree, 400 ft; 9/8/62, two feeding on old fruit of *Neopanax arboreum* (R.H.B.); February 1962, one at 500 ft, one at 1000 ft, seen at ranges of 6 and 10 ft; one rose from the ground beside the track (A.T.E.). Motu bush, Bay of Plenty, 3200 ft, flock of 6 settled within a few feet, 8/1/63 (A.B.). Kaimanawas, less yellow-crowned than red-crowned (D.A.B.); January 1969, forest on both sides of Tongariro river, entering from Desert road; many parakeets heard and seen; on a dull morning on the western edge of the park 5 birds spent much time pecking at branch tips on the top of beech trees, sometimes flew down to the manuka and dracophyllum scrub outside the forest; seen clearly through binoculars (R.W.J.). Outer Chetwode July 1962, abundant (A.B.). Nelson, Dun Mountain-Mt Maud, common December 1968; Weka stream, Roding river, common in the lower mixed red beech-podocarp and silver beech, especially by the pakihis on the ridges. Ikamatua, in islands of bush near the pakihis 1956 and 1958 (J.R.J.). Near Springs junction, 26/1/62, two feeding on silver beech, probably eating seeds (E.W.C.). Found in beech forests beside the pakihis in

north Westland; uncommon beside the pakihis in south Westland (J.R.J.). J. Gardiner, Forest Service, had a clear sighting at Randall Creek which runs from road Ahaura-Kopara to Ahaura river, 3/1/64; he has seen birds there on previous occasions (P.G.). Haast-Jackson Bay, fairly numerous in swampy forest areas, especially in silver pine belts (D.G.). Canterbury, Lake Sumner area, 3 in October 1964 (B.D.B.). In the upper Waimakariri it lives about the upper edge of the red beech where the mountain beech displaces it. Hawdon valley, several sightings 1961/62, 9 on 10/11/62. Arthur's Pass, Rough Creek, one on 8/1/62; June 1964, one killed by flying into window of school; these are my only records from Bealey valley over 15 years (J.R.J.). Haast Pass 20/10/67 (D.A.L.). Papatowai Forest Reserve, October 1970, 4 (J.H.). Eglinton valley November 1965, four feeding low down (H.R.McK.); Eglinton valley and forest around shores of Lake Te Anau, 1961, associates with yellowheads in winter (A.T.E.). Stewart Island, definite identification January 1964 (W.T.P.). Ulva, 1956; appears to be the predominant species on the islands around Stewart Island, while red-crowned is predominant on the main island (D.C.); 21/4/62 (W.T.P.).

#### SHINING CUCKOO (*Chalcites lucidus*)

Early calls have been recorded from Kerikeri, 20/9/68 (A.T.E.), South Auckland 13/9/61 (J. W. St. Paul), Firth of Thames 29/9/65 (S.C.), Aotea harbour 25/9/61 (C.B.), Waingaro 12/9/70 (D.W.H.), Tauranga 26/9/61 (R.V.McL.), Volcanic Plateau 20/9/69 (R.W.J.), Taranaki 26/9/67 (D.G.M.), Manawatu 29/9/62 — two weeks earlier than usual (E.D.); Marlborough 20/10/67 (J.A.C.), South Canterbury 28/9/69 (R.J.P.), Greymouth 2/10/61 (P.G.), Otago, Shag valley 20/9/64 and Broad Bay 4/9/64 (J.H.), Mt Aspiring station, 15/10/67 (J.A.). At Kerikeri it has been noticed that after the first calls there is a period of two weeks or so when none are heard, then regular calling begins (A.T.E.); Waingaro, first call 22/9/68, called for a day or two then nothing heard for a week and till mid-October very little regular calling (D.W.H.); observations around Clevedon suggest that waves of migrants passing through may be indicated by song (H.R.McK.). The "tsiu" call note may often be the only sound uttered by early arrivals, and may easily be missed (A.T.E.). Singing usually ceases in late January or early February but song has been recorded on 1/3/69 at Whangarei (A.M.M.), 30/3/68 at Kerikeri (A.T.E.) and by a ranger at Egmont National Park on 8/4/62 (M.G.M.). Nelson, one feeding in kowhai, banksia, buddleia, lacebark, cork elm and savoy cabbages in a garden, last seen 18/4/70 (F.H.B.); Kerikeri, one on 20/4/68 and one feeding on insects and caterpillars around a kowhai tree till June 1965 (A.T.E.). Birds on passage fly into windows — Kawakawa, September; Kerikeri, October (A.T.E.); one flew into a house in Taranaki 1/10/67 (D.G.M.); young birds are sometimes killed by flying into plate glass — 15/1/61 and 11/12/63 (A.T.E.); Tauranga, Xmas 1962, two killed together flying into a window (M. Hodgkins). Flying young being fed Kaitaia, early November 1965; one left nest in Kerikeri 2/1/69 (A.T.E.); 1/2/65, one in mangroves attended by 5 Grey Warblers; 7/12/65, five in willows attended by 8-10 Grey Warblers (T.R.C.); Motumaoho, 8/2/64, one being fed by warbler (D.J.); 19/2/58, Kerikeri, a young bird on wattles and oleander, sometimes

descending to the ground, able to feed itself but still being followed round by two Grey Warblers (A.T.E.). Canterbury, 15/11/70, excited Tomtits chased one as it flew slowly past a nest they were building; when the cuckoo had gone the hen returned to the nest and broasted it, but did not subsequently lay in this nest (J.R.J.). Waingaro, February 1968, a friend told me that the sparrows nesting in a corner of his workshop were having a bad run with their chicks as he found them at intervals dead beneath the nest. One day he found a young shining cuckoo flying round inside the workshop, having apparently emerged from the sparrow nest; I am confident the facts given are accurate; the conclusion, though likely, may not be correct (D.W.H.). Post-breeding congregations of cuckoos have often been reported; from Mt Aspiring homestead, Matukituki, a report of a flock as early as October 1964, probably migrants recently arrived; 30-50 birds in two rowan trees, stayed only a short time and then flew off; cuckoos are around every season but this was the first time that any large numbers had been seen (J.A.). Rotorua, November 1968, a Grey Warbler had built a nest close to the homestead; some days later a cuckoo flew towards Mr Bodley and settled on the ground two yards ahead of him; when he extended his arm the bird perched on his hand; in January 1960 another cuckoo, probably an immature of the year, appeared at Mr Bodley's feet, perched on his shoe and finally on his hand; it remained long enough for a camera to be fetched and eight exposures obtained (M.J.S.B.).

#### LONG-TAILED CUCKOO (*Eudynamis taitensis*)

Locality records from almost all regions, usually from bush areas; arrival dates during October. In Northland it appears to be a bird of passage; Mangamuka 5/10/69 (A.T.E.), Broadwood 9/10/65 (R.S.C.), Whangarei 24/2/62 (H.R.McK.), 22/2/70 (A.M.M.); Kerikeri 7/4/65; 19/2/65, a young bird stunned by flying into a window, as was one at Russell in April 1965; Okaihau 22/2/64 (A.T.E.) and 5/4/70 (G. Wightman); Parengarenga, one dead after collision with a wire 25/2/70; a late bird at Bayly's beach, Dargaville, found dead on 17/6/70 having been around the area for some days previously (A.T.E.). One taken from a cat in Manawatu 3/5/68 (E.D.). A freshly dead fully adult male found at Timaru on 1/6/67; most over-wintering records are of birds of the year (F.C.K.). Paringa, Westland, August 1957, one heard screeching when disturbed by spot-lighting for deer (S.C.S.). Hen Island, 1962/63, calls heard on two occasions corresponded exactly with those heard elsewhere (J. A. Bartle). Moko-hinau, one dead 20/2/64, one alive 3/3/64 (D.V.M.). Tauranga February 1963, killing and eating young birds (M. Hodgkins). Pursued by Tui and Bellbirds, Upper Ngaruroro (D.A.B.); Canterbury, Otaio Gorge, mobbed by six Bellbirds January 1968 (R.J.P.); chased by Bellbirds several times in 1970 (J.R.J.). Near bush line, 2500 ft, Mt Aspiring (J.A.).

#### MOREPORK (*Ninox novaeseelandiae*)

Holding its own in the Far North; Great King, New Year 1963, two fluffy young on a low tree, close to parents (R.H.M.). Reasonably common in Northland, Auckland area (A.T.E.) and Waikato where there are patches of bush (H.R.McK.); more common in Te Kuiti town area in winter (J. Lambert). Plentiful in Coromandel (C.A.McC.); may be decreasing in Tauranga (R.V.McL.) and Kawerau (R.M.W.);

fairly plentiful Te Puke (N.B.). High population Raukumara and Huiarau ranges; frequently heard and seen in Gisborne-East Coast cleared land and urban areas (A.B.). Common in bush areas, Hawkes Bay (N.B.M.); present but not common in upper Ngaruroro (D.A.B.). Volcanic plateau, common; appears in Rotorua city in increasing numbers March-September (M.J.S.B.); hawking ghost moths (*Hepialus*) at the forest edge, Pureora (A.E.B.). Taranaki, common in bush areas, found in residential areas (M.G.M., D.G.M.). In bush remnants at Okoia (D.C.). Manawatu, not many; possums compete for breeding holes (E.D.). Marlborough, common north of Wairau and south of Clarence rivers, elsewhere small numbers in bush patches, scrub and exotic plantations (S.R.K.). Nelson, confined to limited areas (D.V.Z.). Common in Westland (P.G. et al.). Otaio Gorge, Canterbury 8/9/69 (R.J.P.). A few in most Otago alpine valleys, not abundant (P.C.); uncommon at Queenstown (M.F.S.); regular round Mt Aspiring Station (J.A.). Southland, bush areas; settled areas, much less than formerly, occasional in settled places in winter (B.D.H.), M.L.B.). Occurs throughout Fiordland forest (P.D.). Stewart Island, less plentiful than it used to be, probably more back in deep bush (R.H.T.).

#### LITTLE OWL (*Athene noctua*)

Wanganui, reported present but rare (R.M.). Marlborough, well established by 1962 (S.R.K.). Nelson, can be seen and heard round Waimea plain (D.V.Z.). Rotokohu March 1964, 2 (P. Crozier). One killed north of Reefton saddle August 1959; Totara flat, 1963; said to have been fairly common in Te Kinga area (Lake Brunner) some time before 1964 (P.G.). Taipo (A.B.M.). July 1969, one well seen in headlights just south of Barrytown (F.C.K.). Long established in Canterbury; report of Little Owl killing stoats around grain and hay stacks (M.J.S.B.). Otaio river 25/8/68, two (R.J.P.). Breeding North Otago (A.N.). Central Otago, breeding in small numbers, nests in willows and rock crevices; perhaps more numerous in Lawrence-Beaumont area; very little value for controlling finches in orchards; Lower Manuherikia, one in a willow 12/10/69 (P.C.). Wakatipu, common and breeding, absent from bush areas (M.F.S.). Dunedin, present but not plentiful; November 1966 one on runway, Momona airport; February 1967, Milton, one on a wire at dusk (W.T.P.). East Taieri, often seen in daylight on power lines along the main south road between Allantown school and Riverside road; daily sightings reported between Dunedin and Momona (J.H.). Two perched on a crane jib on 2/12/67 and again on 16/1/68 (W.T.P.). Inchclutha, 1960, 4 chicks in a nest between bales of hay in barn; looked at them several times and one day found three dead; they seemed to be fed mainly on mice and skylarks, bodies of which were found with the heads removed (I.G.McL.). Southland, common in settled areas, where they may have replaced moreporks; their presence seems to make little difference to the presence of other birds (B.D.H.). Lilburn valley near Lake Hauroko; do not appear to enter bush (P.D.). Manapouri, 11/1/70 (W.T.P.). Stewart Island, sightings 1956 and 1957 (D.C.); have not seen or heard one lately, 1964 (R.H.T.).

#### SPINE-TAILED SWIFT (*Chaetura caudacuta*)

Southland, Bluff Hill, 18/2/68, six; 16/8/69, one (R.R.S.).

### FORK-TAILED SWIFT (*Apus pacificus*)

Two possible sightings. Karoro, Greymouth, 11/2/61, a bird flying over property; a sketch made at the time tallied very closely with the photograph of the Southland bird (*Notornis* 11: 109). There was an unconfirmed report of swifts seen at Kokiri on 20/12/60 by J. Penniket (P.G.). Hawkes Bay, Cape Kidnappers, 19/11/67, weather overcast, strong southerly wind accompanied by mist squalls. As we approached Black Reef at 1130 hours I noticed four dark birds swooping about 100 ft above the cliffs; with binoculars I could see that they were larger than swallows, with long narrow curved pointed wings; keeping binoculars trained on one bird I noticed that the tail was forked to a depth of about one inch but the bird was moving so fast that I could not see whether it was forked all the time or just now and again during the flight: I also noted a short flutter of wings from time to time between the swooping. I could see no details of plumage, only that they were dark, because they were against the sky and did not come down below the cliffs. On our return an hour later there was no sign of the birds; the wind was still strong and gusty (K.T.). Note: From my experience of this species in S.E. Asia, I suggest that the identification is probably correct; the description of flight agrees with my observations of birds flying over a hilltop in windy conditions; the tail fork, easily seen when the bird is in direct flight, is less easy to pick up in fast swooping flight, but shows up at the turns (A.T.E.).

### NEW ZEALAND KINGFISHER (*Halcyon sancta vagans*)

Three Kings (R.H.M.). Far North and Northland, plentiful throughout; found in native forest at Waipoua, Puketi and Omahuta where on 21/9/63 seven in one tree, calling excitedly and chasing rosellas. Abundant in Auckland, South Auckland and islands in Hauraki Gulf (A.T.E. et al.). Waiheke, a pair dug 12 holes in a bank and eventually eggs were laid in one of the holes (D.R. Burke). Common Firth of Thames, particularly large numbers round coast in winter (D.J.P.) and all round Coromandel (H.R.McK., C.A.McC.). Waikato, generally common; literally hundreds seen during a canoe trip down Mokau river, April (J.L.K.). Bay of Plenty, abundant (R.M.W. et al.). Gisborne-East Coast, very common in all lower country and frequently seen on the edge of forested country and clearings (A.B.). Hawkes Bay, common (N.B.M.). Found at Waikaremoana (D.G.M.). Volcanic Plateau, throughout; population round Rotorua increases in winter (M.J.S.B.); generally common but not many south of Lake Taupo (H.L.); West Taupo, common by streams at the edge of high forest and in cut-over forest at Pouakani (A.E.B.). Reporoa, one wintered 1966; one with a fluttering Silvereye in its bill, August (M.G.M.). Scattered throughout Taranaki (M.G.M.) and Wanganui (R.M.), where it is most numerous in coastal areas in winter; feeding on worms, and taking worms from the beaks of Blackbirds as they were pulled out of the ground (R. Brockie); similar piracy recorded from Waingaro (D.W.H.). Manawatu, common inland in summer, frequents coastal crab grounds in winter (E.D.); Levin district, counts over several years for the periods April-September and October-March show the proportion of sightings to be about 6½:1 (E.B.J.). Common throughout Marlborough at streams, lakes, rivers and coastal areas (S.R.K.); May 1962, many on the coast Blenheim-

Kaikoura and a few up Awatere valley (A.T.E.). Nelson, reported fairly common (M.F.S., D.V.Z.); plentiful around harbour in May 1966, scarce or absent in October (A.T.E.); one dived from a clothes line, returned with a worm and went through the motions of beating it on a perch, though neither worm nor bill made contact with the wire (F.H.B.). Not uncommon in Westland (P.G.); uncommon in forest areas but seen in forest country at Whakapohai mouth (J.R.J.) and Taverner's flat, Taramakau river (W.R.F.); 16/4/65 seen in Upper Taramakau and Hokitika gorge, well inland for this late date (J.R.J.); Lake Paringa 11/4/66, one made repeated flights from a perch, apparently feeding on flies (P.C.). Canterbury, present all year at Horseshoe lake and Kaituna (D.G.D., M.M.D.); winter records around Waimakariri mouth (D.G.D.) and Akaroa, May 1965, 16 (L.E.W.); from Ellesmere-Rakaia, leaving early spring (W. Mason) and from Pareora, Otaio, Lake Wainono (R.J.P.). Nowhere in large numbers but widespread breeding inland as far as the high country and lakes and a few pairs breed in coastal areas (various observers). Feeding on a gecko (R. Scarlett); eating a Grey Warbler after pounding it (W. Mason). Formerly rare in North Otago but some increase in 1960 when birds appeared in places where none had been seen before; up to 10 counted at Moeraki (S. I. Anderson). Dunedin area coastal counts, 15/6/63, 90; 14/12/63, one; 6/6/64, 34 (L.E.W.); winter records from many localities from Waikouaiti to Taieri and at Balclutha, usually one-five birds but 10 recorded at Purakanui and 23 at Hooper's Inlet; summer records from Waikouaiti, Karitane, Blueskin Bay, West Harbour, Hooper's Inlet, Taieri (various observers). Occasional Mt Aspiring (J.A.), one in Makarora valley (D.A.L.), rare at Queenstown and Routeburn valley (M.F.S.), very rare in Central Otago, one at Alexandra March 1965 and July 1966 (P.C.). Scarce in Southland, breeding in small numbers at a few points on the coast and some remaining on the coast in winter; unusual to see birds inland except in winter when individuals are widely reported in farmland (B.D.H., M.L.B., R.R.S.). Eglinton valley, rare but breeding (M.F.S.); Fiordland, forest margins and valleys, by lakes, rivers and fiord shores, never abundant (P.D.). Stewart Island, found in most shallow bays and along banks of larger streams (R.H.T.).

#### KOOKABURRA (*Dacelo gigas*)

Kaipara Flats, July 1969, a pair dug a play nest in a rotting willow; they did the same thing last year in October. A week later a hole was dug in another tree and one infertile egg laid and incubated for a month (F.P.H.). Dome Valley, Warkworth, 1955/56 season, one on a pine tree (H.R.McK.). Waiwera, August 1969, two, (I. Hardie). Spotswood, Taranaki, reported sighting June 1970 (D.G.M.).

#### N.I. RIFLEMAN (*Acanthisitta chloris granti*)

Northern slopes of Mt Pirongia above 1400 ft, up to six seen together, shy compared with those in Kaimanawas and Urewera (M.L.T.). Bay of Plenty, fairly common Motu Bush (A.B.); Kereu river, 2000 ft, and Raukokore saddle; foot of Mt Hikurangi (J.L.K.). Well distributed Gisborne-East Coast area in higher level beech forest (A.B.). Common round Waikaremoana (M.G.M., D.G.M.). Volcanic Plateau, Okataina, Hongi's Track, Rotoma (H.L.); occasional Mamaku (A.E.B.); Paeroa range near Reporoa, common at all levels 1967



(M.G.M.); reliably reported, Kaingaroa pine forest (R.S.C.); Taupo, Tauhara and Opepe (Dr Armstrong); Mt Pureora (A.E.B.); Pouakani forest (R.W.J.); Lake Rotopounamu (M.R.); beech forest, Tongariro National Park, 1967 (G. D. Leitch); plentiful Te Iringa, Taupo-Napier road, 1968 (D.A.L.); Kaimanawas, everywhere in the beech forest (D.A.B.); Kaweka range (R.S.C.); Black Birch range, Hawke's Bay (N.B.M.). Ruahines (N. Elder). Egmont Park, numerous (G.G.A.). Small numbers Manawatu gorge (E.D.). Wanganui, Waitahinga (B. Tucker), Waipakahi valley and surrounding area (R.M.). Tararua, not uncommon Tauherenikau, Waiohine, Mangahao, uncommon Waitotara, Otaki, Wangawa, Ruamahanga valleys (D. A. Franklin).

#### S.I. RIFLEMAN (*A. c. chloris*)

Common in Marlborough beech forest, occasionally in other forest and scrub; reported behaving like Rock Wrens in inland Kaikouras (S.R.K.). Flaxbourne river, Ward, 30/11/67, pair nesting under top edge of 4 ft bank, concealed by overhanging danthonia grass (J.A.C.). Kaikoura, May 1962, two in a mixed flock with Fantails, Grey Warblers and Brown Creepers (A.T.E.). Nelson, common in drier areas, large numbers Takaka hill (M.F.S.); numerous in bush areas, especially so at Lewis Pass, Maruia (D.V.Z.); Dun Mountain-Mt Maud, December 1968, common, feeding fledglings (J.R.J.); Heaphy track, Goulard Downs, January 1968, 14 (M.D.); Richmond, March 1970, one on a kowhai tree in Mrs Grew's garden (F.H.B.). Westland, common in beech forests; Douglas-Karangarua valley, a few, Xmas 1965 (J.R.J.); a few parties in mixed bush, Whitcombe river, 1962 (W.R.F.); Lake Kaniere 30/12/63, six plus (L.E.W.). Haast-Jackson Bay, unknown to me except one many years ago near Wills river, Haast Gorge (D.G.); top of Haast, 17/11/65, 4; one hopped on road and under the car (H.R.McK.). Canterbury, common in beech forest (J.R.J.); fairly common Lake Sumner area 1964 (B.D.B.); Otaio gorge, March 1969, 50 (R.J.P.). On Otago peninsula and around Dunedin (W.T.P.). Central Otago, unknown outside forested areas of the alps (P.C.). Odd pairs Mt Aspiring station (J.A.); Rees, Dart, Caples, Hollyford and Pyke valleys 1961/62, few in Takatimu mountains (R.J.N.); common in bush areas, Wakatipu (M.F.S.); in a valley just north of Lake Kirkpatrick, near Moke lake, 23/4/65, three birds in a row of stunted pines beside a hut; a few briar and gooseberry bushes round the hut and along the nearby watercourse, but otherwise the valley is open, tussocky and very bare of trees or even tall scrub; the birds must have crossed much open ground to reach these trees from the nearest small patches of beech forest which are in corners of gullies up the mountain side (J.H.). Common in Southland beech forests, a few in Forest Hill reserve (B.D.H.); Longwood range, plentiful (M.M.); Eglinton valley, Cascade Creek (H.R.McK.). Fiordland, at all levels in forest (P.D.). Stewart Island, one at Rakeahua landing in 1957, working up a kamahi trunk (D.C.); now rare, not seen by me for many years (R.H.T.).

#### SOUTH ISLAND BUSH WREN (*Xenicus longipes longipes*)

January 1966, Little Waininihi river headwaters, 2800 ft, two singles reported sighted by Ray Forsyth, who is familiar with Rifleman and Rock Wren; the birds were about three miles apart, quite tame,

seen at 15-18 ft; reported to have none of the hurried nervous movements of Riflemen but moved from branch to trunk in a positive manner, searching for insects all the time (P.G.).

#### ROCK WREN (*Xenicus gilviventris*)

Recorded in Goulard Downs and Tutoko valley (R.T.A.); four reported on Victoria range between Murchison and Lewis Pass; one in Cobb Lake catchment (D.V.Z.). Arthur's Pass, moderately common on steep faces and avalanche gullies above the bush line; seen only in summer, in autumn it can be found in alpine scrub. Cook River. Common on face of Copland range. Xmas 1965, common Douglas Lake and Harper Rock. 13/2/66, feeding on nectar of *Phormium colensoi* at Agility creek, Mingha valley; common Edwards valley, gullies on west side above bush line (J.R.J.). Franz Josef Glacier 17/1/62 (E.W.C.). Sealy range above Hermitage, 17/5/70, 2 (R.J.P.); Makarora station, two reported at 4500 ft by Mr C. Pennycook; Homer tunnel, 9/11/65, 2 (H.R.McK.). Still numerous in high country, Haast-Jackson Bay (D.G.).

#### SKYLARK (*Alauda arvensis*)

Firth of Thames, 31/3/62, loose flock of about 60 in a turnip field (H.R.McK.); small winter flocks on Northland paddocks, usually not more than 15 (A.T.E.). Singing in high wind and rain, Motu-maoho, 31/5/62 (D.J.). Singing on ground, Rotoehu, January 1961, late evening; on a post, Puaa, January 1969; body horizontal, wings drooped, body quivering. A few birds feed along the shore, in a situation where one would expect to find Pipits, on Northland beaches; Great Exhibition bay and 90 mile beach, on both dry and wet sand (A.T.E.).

#### WELCOME SWALLOW (*Hirundo tahitica neoxena*)

Still extending its range in Northland, Whangarei and Dargaville districts (A.T.E., A.M.M., C.D.C.). Multiplying in Kaipara, several parties of 10-12 on wires at Jordan's, May 1970 (R.B.S.). September 1968, reported breeding at Helensville. October 1969, nest at the old bombing range, Muriwai (R.B.S.). Nests at Waimaiku 1969 and 1970 (S.R.) and at Albany 1970 (R.B.S.). Sightings reported 1968-70 at Waitoke, Coatesville, Lake Pupuke, North Head, Long Bay (R.B.S. et al.). Bred at Karaka and near Clevedon 1969 (H.R.McK.) and at Otatau 1970 (R.B.S.). 15 birds at Miranda 18/1/70 (H.R.McK.). Bred at Mangatangi August 1970 (S.R.). Mangatarata, 12 in June 1970 (S.C.). One found dead at Tiritiri island August 1970; nest under hydrofoil pontoon at Waiheke 1970 (E.G.T.). Sighting of 3 at Whitianga 30/3/68 (R.B.S.). Waikato breeding records, Lake Waikare, regular; between Pokeno and Mercer 1970 (R.B.S.), Huntly Golf course, 1968; Gordonton 1967 and 1968 in the same nest, Waingaro 1968 and 1969, Waingaro-Matira turnoff 1968 (D.W.H.); Waimai valley 1969 (R.B.S.). Good winter flocks at Mercer and over Waikato Lakes. Two birds at Lake Ngaroto, Te Awamutu, 1970 (H.R.McK.). Bred at lagoons between Whakatane and Thornton 1967 (H.D.L.). Winter flocks of 30-40 at Matata 1967 (R.M.W.), 20 at Tarawera mouth 1968 (H.R.McK.), 5 at Kaituna 1969 (M.G.M.). Sightings at Muriwai lagoon, Gisborne, 1968, 1969 and 1970; Opoutama, Mahia, 1970 (A.B. et al.). Rotorua, Ohau channel, 4 on 16/3/69 (N.R.H.), said to have been present since January (R.W.J.). 1970

sightings at Okareka, Kuratau hydro (R.B.S.); and in Wairoa sub-district 5 at Jobson's swamp and 30 at Lake Ohuia in May 1970 (Fisheries Field Officer). A pair nested under a bridge on road Turangi-Taupo, November 1970 (C. D. Blomfield). Hawkes Bay, increasing; more than 12 nesting localities recorded by 1967 (N.B.M.); 30-40 birds over Lake Hatuma October 1967 (M.G.M.). Taranaki, December 1968, nest under a jetty, Waiwakaiho river; frequent sightings of small numbers at localities north of and around New Plymouth city; 4 at Waitotara March 1970 (D.G.M.). Manawatu, 1968 population estimated 200; a remarkable increase in 1969, large flocks at Himatangi and smaller groups in Manawatu-Horowhenua coastal zone; inland records at Kakariki and at Palmerston North, where increasing numbers reported 1970 (I.G.A. et al.). General increase reported from Wairarapa, 1969. Marlborough, sightings at Lake Grassmere 1966, 1968; Pelorus river, Canvastown, 1967; Taumarina, 1968 (J.A.C.). Winter 1969, 15-30 over Wairau river (R. N. Holdaway). Marfell's beach and Blind River junction 1970. Lake Elterwater, sightings 1967 and 1968; 28/12/70, one egg in a nest in a railway culvert, but the nest later fell down. An attempt to breed at Ure River bridge was also unsuccessful (J.A.C.). Nelson, 4 nests at Farewell Spit, 1969. Rough Island, 10-12 birds seen on several occasions in May 1970; in August two appeared interested in a concrete drainage pipe (F.H.B.). West Coast, 1965, 6 near Ikamatua and 2 between Totara Flat and Reefton (P.G.). 1968, May, one in Okarito township (C. R. Veitch); report from Ikamatua, and 24 birds seen near Westport. 1969 and 1970, 3 birds at Okarito lagoon (P.G.). Canterbury, one at Ashley mouth 1/3/69 (S.C.S.); Washdyke lagoon, Timaru, Feb. 1970, a nest attached to an old 400 gallon tank contained one egg (H. W. Washbourn). Lake Wainono, 29/8/68, 12; 8/4/69, 14; winter flocks April-September 1970 varied between 24 and 77 birds. Sightings 1969 and 1970 between St Andrews and Matakahi; bred at Otaio and near St Andrews in September 1970 (R.J.P.). Otago, Hooper's Inlet 22/7/70, 4 (P.C.). Lake Waipori October 1967, 8; 15-17 at Ram Island lagoon March-June 1968; a group by Waipori river October 1968; fewer about during 1969 duck shooting season; 1970, seen every week-end in May, up to 25 birds, particularly large number on 1/6/70; they favour the smooth water in the lee of Ram Island (J.H.). Clutha mouth 19/7/70, 18, fluttering over lupins and beach debris and occasionally over the water (P.C.). Southland, June 1968, sightings of 2-6 birds recorded at eight coastal localities; 7/7/68, 21 feeding and resting near dunes on Oreti beach, slight easterly wind; 12 at Waimatuku lagoon 27/7/68 (R.R.S.). 1969, March, sighted at Oreti (2), Gorge Road, 1 (R.R.S.) and inland at Lochiel bridge, 6 (L.E.H.). April, flocks of 25 and 67 at Gorge Road (F. Hamill); 30 on a lagoon, Aparima river (O. J. Linscott). June, 8 at Thomson's Crossing, north of Lochiel (M. R. Thomson). September, two sightings near bridges at Waimatuku and Awarua Bay; December, two at Waituna (R.R.S.); one at Lake Hayes, September (M. M. Small). 1970 winter, almost daily sightings in coastal districts (R.R.S.); flocks of 20 at Thornbury, April (O. J. Linscott), 40 at Makarewa effluent pond, May (R.R.S.) and 40 at Borstal farm, July (M.L.B.). Inland sightings, April, two miles above Wyndham, 30 (T. Smith); May, Mt York, Mararoa river, 2 (I.A.M.); Charlton, 22 and Mataura township 40. Also at Mataura, 40 in June, 16 in August, 26 in September (A.J.R.). Other spring sightings, September, 2 at Gummies Bush,

one at New River Ferry; October, 5 at Thornbury, one at Gorge Road, 6 at Glenham, 2 at Waikini creek, West Plains; November, 2 at Awarua. Some of these late birds seen around bridges and culverts; no nest yet found. First autumn sighting 1971, 2 at Ferry bridge March 2nd (R.R.S. et al.). Stewart Island, Halfmoon Bay, 6/6/70, 2 (Mrs Fife).

#### N.Z. PIPIT (*Anthus novaeseelandiae*)

Three Kings, January 1963 (R.H.M.). Still plentiful in Northland in uncultivated scrubland and rough pasture, persists in grassland but greatly outnumbered by Skylarks; on forest tracks; sometimes on beaches, particularly at Dargaville; a partial albino reported and photographed at Kerikeri; one perched on a gorse bush, September; courting birds on Kaimaumau beach fluttered together over the sand, or one fed while the other tried to attract its attention with a series of upward jumps, sometimes a short hovering flutter (A.T.E.). Cuvier, not recorded 1964 or recent visits (D.V.M.). Whatipu beach, 20 pairs October 1961 (A.T.E.). Moumoukai, road on abandoned farm, 50 in a mile, 1967, the highest density yet observed (H.R.McK.). Common in country areas, Bay of Plenty (R.V.McL.). Coromandel (C.A.McC.), and Gisborne-East Coast high country; frequent many beaches (A.B.). Mt Hikurangi, East Cape, 5400 ft, December 1960 (J.L.K.). Common in open land, inland Taranaki (D.G.M.); Mt Egmont, 5500 ft (M.G.M.); on 11/6/61, clear sunny weather, snow down to 4000 ft, a pipit flew up to 6000 ft and after a few minutes flew back to lower levels (G.G.A.). Volcanic plateau, common; likes cut-over forest areas up to thicket stage (R.W.J.); groups of 20 on pumice forest roads (A.E.B.); 5000 ft on Tongariro and Kaimanawas (F.P.H.). Present in Hawkes Bay (K.T.); Manawatu, a few inland, especially in autumn; more plentiful on dunes (E.D.). Abundant Wanganui (R.M.). Marlborough (S.R.K.) and Nelson (D.V.Z.). Canterbury, Southern Alps above bushline, present round Lake Ellesmere in winter but not in summer (J.R.J.); Lake Wainono, winter only (R.J.P.). Common throughout Otago farm and tussock country from sea level to 6000 ft or more in the alpine regions; one of the most widespread birds in Otago, with a greater altitudinal distribution than any other and breeding within this range on both sides of the divide (P.C.). Rare at Queenstown (M.F.S.). Apparently becoming scarcer round Dunedin (W.T.P.); 1968, still common in open scrubland Flagstaff-Silver Peak area (D.A.L.). Papanui Inlet 4/7/65, cold frosty morning, at sunrise 0845 hours, four birds chasing each other over lupins and bracken adjoining a saltmarsh "chee-cheeing" actively; at 1115 hours five birds squeaking and chasing in the same place, two rising to sing, making noises of the "cork-on-a-wet-bottle" variety (J.H.). Southland, plentiful along coastal area, not many inland on farms (B.D.H.); flock of 20 21/4/58 (S.L.L.). Fiordland, all tussock areas in summer including those above timber line, probably move to lower open country in winter. At low levels about Te Anau seem to be partly replaced by Skylarks in summer (P.D.). Stewart Island, sometimes at Halfmoon Bay, plentiful in open land and sandhills (R.H.T.). A bird with a white band above its bill on the forecrown was present at Waitakaruru, Firth of Thames, from winter 1967 until December 1969 (S.C.).

## HEDGE SPARROW (*Prunella modularis*)

Recorded from all regions. Kerikeri, 3 chicks hatched 22/11/68 were found dead and headless below the nest on 30/11/68; predator unknown, could have been a myna (A.T.E.). Singing at 2230 hours 11/1/62, Clevedon (A.J.G.) and about the same time of night in Waikato, 16/12/62 (D. Jenner). Levin, has a habit of flicking leaves sideways; watched on lawn going through the same motion even when no leaves are present (E.B.J.). Marlborough, Kowhai valley, bush edges up to the bush line (J.R.J.). Near Hermitage, September, 4500 ft a.s.l. (A.T.E.). Heriot, almost as soon as a Goldfinch had vacated a nest in an apple tree after rearing a family the nest was occupied by a Dunnock, which successfully reared 4 young; plenty of other nest sites were available in the area (J.H.). Southland, a bird re-trapped by S.L.L. in 1966 had been banded six years and three months previously (R.R.S.).

## N.I. FERNBIRD (*Bowdleria punctata vealeae*)

Three Kings, not seen of recent years (D.V.M.). Northland, widely distributed but not common except in restricted areas; Bay of Islands, in manuka-rush fringe of mangrove areas (A.T.E.). Waipoua, in scrub on coastal side of exotic plantation, some in manuka inside plantation (R.L.). Kaipara, Poutu (M.R.) and Tinopai (B.B.). Auckland west coast, Waitakerei swamp (A.T.E.). South Auckland, Pollok Spit, Karaka, Manukau South Head, Waiuku peninsula (D.A.L. et al.). Great Barrier 1968, in manuka scrub between Mt Young and Whangaparapara harbour (M.D.). Waikato, common in reverted peat swamps (R.T.A.); tidal estuaries, Aotea harbour; were numerous in Tuatamoana swamp near Hamilton (M.L.T.); Motumaoho swamp (D. Jenner); Waingaro valley, in gorse, sedge and manuka round a pond on a farm (D.W.H.). Opoutere, in scrub round estuary (H.W.). Whangamata; Waitawhata, near Waikino, in swamp and on a high fern ridge (R.St.P.). Around Tauranga harbour (M.H.); Te Puke, not plentiful, but occasionally seen even in town area (N.B.); Cheddar valley, Wainui, Whakatane area; limited areas of swamp round base of Mt Edgecumbe and in Tarawera valley (R.M.W.). Minginui, in bracken on hillside (A.T.E.); Waikaremoana area, reported from Tuai (A.B.). Hawkes Bay, not uncommon in suitable localities (N.B.M.); near Lake Tutira (A.B.); Mohaka forest February 1971, near a stream, plots of *Pinus* sp. and *Larix decidua* 3-5 metres high, patches of bracken and manuka between the plots; birds calling all day; two approached me to within 6 ft while I was cutting a path through heavy bracken (R.S.C.). Volcanic Plateau, recorded round Lakes Rotoiti, Okareka and Rotorua (within city limit); at the buried village (R.W.J., F.M.); Lake Rotoaira, Pohanga saddle, Turangi, two in scrub and bracken at 3000 ft a.s.l. (M.B.); Waimiha stream, West Taupo, in boggy areas (A.E.B.); in a partially cleared area in Kaingaroa forest (R.S.C.); Reporoa, 1967 (M.G.M.). Taranaki, common in swamps, Piopio area; scattered reports elsewhere (M.G.M.). Wanganui, local; Matatara and Waitotara valleys, Waverley, Wanganui airport to Kaitoke (R.M.). Manawatu, not now; much of the area was burnt over in the past (E.D.).

### S.I. FERNBIRD (*B. p. punctata*)

Marlborough, north bank of Wairau river from Goulter river to St Arnaud range (S.R.K.). Nelson, generally fairly abundant; numerous from Collingwood to Takaka; Bainham, Rockville (D.V.Z.). Heaphy track, in open country between Lewis hut and county boundary, on the downs, all open country to Perry's Pass (D.G.D., M.D.); Charleston, Cronadun (J.R.J.). Westland, common in suitable habitats (T.H.S.); Nelson Creek, Greymouth (J.R.J.); Kaihinu (G.S.C.); Marsden, Kokatahi, Harihari (E.W.C.), Ross (B. Detlaff), Okarito (W.R.P., A.B.M.) and Okarito Forks (J.R.J.); Paringa, 1967, steadily colonising thickets of blackberry on bush edge and marginal country paddocks (S.C.S.); Haast-Jackson Bay, numerous (D.G.). Not seen in Central Otago until a sighting in bracken and manuka scrub at the neck between Hawea and Wanaka on 11/7/64, but may be more widespread in that type of country bordering the lakes region (P.C.); one sighting at Akatore; plentiful in reed beds at Tuakitoto; quite widely distributed in Catlins coast area (J.H.); Tautuku, Fleming river valley, in an area isolated from any large suitable habitat, being a small valley of coprosma, rush and bracken in heavily forested ranges; compared with birds seen in Invercargill the Tautuku birds appeared larger, lighter in colour with an olive green tinge in the plumage and with the superciliary streak less pronounced (L.E.H.). Southland, abundant in coastal areas between Oreti and Mataura rivers (M.L.B.); the main stronghold is the large area of swamp stretching from Bluff to Mataura river (L.E.H.). Not found at Wakatipu or Eglinton valley (M.F.S.); reported from Greenhills, Home Creek near Manapouri; from Lilburn valley, Tuatapere district (L.E.H.), Eastern Bush (M.L.B.); Tussock Creek; Titipua stream near Hedgehope (B.D.H.); sighted by M. Jukes in October 1966 near Otamita stream, Hokonui ranges (R.R.S.). Confined to limited areas in Fiordland, not above 700 ft a.s.l.; most records from swamp with scattered scrub, just outside the Park boundary (P.D.).

### STEWART ISLAND FERNBIRD (*B. p. stewartiana*)

On open lands at Freshwater and Rakeahua rivers, also open valleys up high hills (R.H.T.). January 1968, found only in scrub; at Freshwater flats the manuka had been burned over about 10 years ago and was mostly 4-7 ft high but evidently good cover for fernbirds, which were relatively common; not seen in tall stands of pole manuka. These birds appeared darker on the back and had breast more firmly pencilled with dark streaks than Tuakitoto birds (J.H.).

### BROWN CREEPER (*Finschia novaeseelandiae*)

Marlborough, well distributed in scrub, native and exotic forest (S.R.K.); larger flocks at Kaikoura lakes than in Nelson (D.V.Z.); Kowhai valley March 1970, common; bushline at *huttoni* colony (J.R.J.). Nelson, Spooner range (A.T.E.); Dun mountain-Mt Maud, December 1968, not common; Weka stream January 1970, in mountain beech near bushline (J.R.J.); small flocks at Mt Misery and at Connor's Creek, Wairau river (D.V.Z.); at Gunner river and Downs hut, Heaphy track (D.G.D.). Dobson, Marsden, small numbers (E.W.C.): not abundant in valleys near Hokitika, always in small groups (W.R.F.); 8 miles north of Hokitika, plentiful in cut-over bush (G.S.C.); present but not common in Westland forest except in coprosma scrub and

regrowth on river banks (J.R.J.); fairly numerous Haast-Jackson Bay (D.G.). One of the more common birds in Canterbury beech forests (J.R.J.); Lake Sumner area October 1964 (B.D.B.); Okuti valley, Banks Peninsula, 26/2/63, 5 (H.R.McK.); not plentiful round Timaru but on 15/8/62, Claremont bush, 15 birds very noisy just before sunset (B.R.K.); Otaio river, occasionally down to sea level in gorse and willows; Otaio gorge, 50-60 in 1968, 76 in September 1969 (R.J.P.). Dunedin area habitats, Pinus and Douglas Fir plantations, inside and on the edges; mature podocarp-broadleaf forest; shrubby second growth bush; mixed tangles of exotic and native scrub, e.g., broom, elderberry, fuchsia, whiteywood, manuka, etc.; manuka and kanuka scrub and gorse-broom tangles over 6 ft; I have seldom seen Brown Creepers below 6 ft from ground level; generally abundant in all these habitats except for the pure gorse-broom stands; in winter small groups will be found in urban areas where there are a few fairly large trees (J.H.). Ross Creek, in a mixed flock with warblers and Whiteeyes (W.T.P.). Waianakaru, 18/10/65, a nest in a kanuka, 15-20 ft up in the small branches, both birds carrying material (I.McV.); Herbert forest 6/12/69, 2 (W.T.P.); Warrington, 12/7/65, 4 birds in broom and scrub 15 ft high, in rough dairying country with small patches of bush in gullies and heavier bush half a mile away (J.H.); Mt Aspiring (J.A.); Routeburn, Lower Dart (M.F.S.). Southland, common Forest Hill, present Bluff Hill, Greenhills, Hokonui; Pebbly Hills forest, Hedgehope in pinus (B.D.H.); Longwood range (L.E.W.); Manapouri-Hope Arm, common October 1968 (D.A.L.); Eglinton valley (M.F.S.); Milford Sound road, the Chasm, 1963 (H.R.McK.); headwaters of Aparimu river, Takatimu mountains (R.J.N.); all tall forest in Fiordland, generally more abundant than Yellowhead, numbers decreasing in far south-west (P.D.). Stewart Island, numerous on Ulva and some offshore islands; west of head of Paterson Inlet (R.H.T.).

#### WHITEHEAD (*Mohoua albicilla*)

Pirongia (R.T.A.); Ngutunui 21/9/64, 4 (D. B. Jenner). Kereu river, 1961; Raukokore river 4/1/62, very numerous (J.L.K.). Gisborne-East Coast, common in flocks in some parts, e.g., Motu bush, Ruakituri river upstream from Papuni, upper Waimana river; scattered population Raukumara and Huiarau ranges; decreasing; many places where they were formerly common now hold only scattered pairs (A.B.). Volcanic plateau, regular in most areas of native bush, distributed from Rotorua south along the Kaimanawas; found in isolated patches of beech forest at Waiouru. The greatest number I have seen in one place was in exotic forest at Whakarewarewa (H.L.). In this forest it appears to frequent stands of larch and even Douglas Fir round the F.R.I.; in Kaingaroa forest it is common in old stands of *P. radiata*, sometimes entering younger (5 year) stands (R.W.J.). Exotic forest between Tokoroa and Whakamaru (M.G.M.). State Forest 90, Te Iringa, Taupo-Napier road, May 1968, one pair seen, others heard (D.A.L.). Taupo, common at Tauhara January 1967 (M.G.M.); Opepe bush 30/11/65, two seen, others heard (H.R.McK.); Pureora forest, 1964 (G. F. Yerex); not common West Taupo (A.E.B.); Paeroa range near Reporoa, common January 1967 (M.G.M.). Pohanga saddle, Turangi, 11/8/68, two flocks each of 12 birds; others heard (M.R.). Occasional in Kaweka range (N.B.M.). Ohakune bush road, October 1965

(H.R.McK.). Taranaki, plentiful at Tahora August 1962 (M.G.M.); not common at Whangamomona, December 1965; Hutiwai valley July 1967, 3; North Mt Egmont December 1968, a few about 1800 ft (D.G.M.). Wanganui, upper Waitotara valley, probably in other areas (R.M.). Small flocks in Ruahines and Tararuas (E.D.); one bird in a small stand of old trees on the bank of Ohau river, 4 miles from Levin, was the first I have seen in this district for many years (A.A.S.). Days Bay, Wellington (B.D.H., A.T.E.).

#### YELLOWHEAD (*Mohoua ochrocephala*)

Nelson, reported upper Cobb valley (M.F.S.); Merrijigs road, Reefton and at Maruia (J.R.J.); Durville, Travers and Sabine rivers, Lake Daniels area, never more than 20 in a flock (D.V.Z.). Westland, reported near Punakaiki (P.G.); occasional records in beech forest Grey, Blue Grey and Upper Grey (T.H.S.); abundant in mixed beech forest on river flats and lower slopes, spreading into mountain beech from neighbouring mixed beech forest; old records from tributaries of Ahaura river and Robertson valley; Westland forest at Wanganui valley, Harihari (J.R.J.). Canterbury, Lake Sumner area October 1964 (B.D.B.). Reported Waiiau valley; abundant on flats along Hawdon river and northerly face beside Sudden stream, where in 1971 they seem to have extended their altitudinal breeding range 500-100 ft up; nesting Bellbirds will leave a nest and single out a Yellowhead from a flock of creepers, to chase it. Reported common Poulter and Hurunui river flats; regular on Mingha flats by Edwards junction; Arthur's pass town March 1964 and October 1970 (J.R.J.). Lake Wanaka, a pair in Young valley, apparently rather uncommon (P.C.); Caples valley 1962 (R.J.N.); common Routeburn, Paradise, Lower Dart (M.F.S.). Southland, Upper Windley river, Eyre mountains (R.R.S.); common in Eglinton valley and beech forest near Te Anau (B.D.H. et al.); Princhester stream, Takitimu mountains, October 1962, 2 (R.J.N.); outlet of Lake Monowai 1961, 2 (R.R.S.). Generally abundant in Fiordland in tall forest, less in far south-west (P.D.).

#### GREY WARBLER (*Gerygone igata*)

None seen or heard on Three Kings, New Year 1963 (R.H.M.). Locality reports from all regions. South Auckland, Mangatarata, August 1969, 5 old nests, three made of wool with a little moss on outside, two made entirely of thistle-down (S.C.). 24/1/65, male singing as he fed 4 fluffy young, which were fearless and hopped on to our hands (B.B.). Singing on wing for two chains or more, May 1967 (H.R.McK.). Canterbury, both sexes helping in building, 11/9/65; at Coutts Island, Waimakariri, nesting is two-four weeks behind nesting in Christchurch Botanical gardens; interesting to find so great a variation in a few miles; a nest 40 ft above ground, on top of canopy (J.R.J.). Dunedin, a bird feeding flying young, hovering under large broadleaf branches, body nearly upright, legs dangling; one feeding in a basket willow chased away redpolls and whiteeyes (W.T.P.). Mt Aspiring, nest in a staple tin in implement shed (J.A.). Homer, 6/2/63, 3000 ft, in first trees below scrub line (H.R.McK.).

#### N.I. FANTAIL (*Rhipidura fuliginosa placabilis*)

Occasionally descends to ground level; seen feeding on a lawn, apparently on sandflies; feeding along tide washed debris on the shore line; dipping to feed from the surface of the water and the scum



of green pondweed on farm dams (A.T.E.). Flock of 18 on a windy day, 23/5/66, Broadwood (R.S.C.); Kaharoa, 16/7/62, flock of 30 feeding on small insects 50-80 feet above ground (M.J.S.B.); West Taupo, abundant at margin of high forest; after rain, scores on the edge of an "island" of podocarp forest by the forest nursery (A.E.B.). Kerikeri, 1964, a normal pair produced two young, creamy white, with a light brownish wash on upper surface of wings, lores, line through eye, upper breast and central tail feathers (A.T.E.). South Auckland July 1965, partial albino seen for several weeks; wings and tail totally white, back and head slightly dark overlaid with white, chin whitish, faint darkish strip across throat, underparts buffy, bill creamy white, legs light brown (H.R.McK.). Black fantails reported from Tahere, east of Whangarei, September 1969 (A.M.M.); Clevedon, June 1965 (H.R.McK.); Volcanic Plateau June 1967 (P.C.H.); Urewera May 1959 (D.F.B.); Kaimanawas, only one in many years (D.A.B.); Belmont, Wellington, 1967, pair (P.C.H.).

#### S.I. FANTAIL (*R. f. fuliginosa*)

Marlborough, black:pied estimated as 1:8 (B.D.B.). Nelson, black:pied estimated as 1:8 or 9 (D.V.Z.). Westland, a count from 17 areas gave black:pied as 1:11 (J.R.J.). Haast-Jackson Bay, fantails may have suffered from seven months of constant rain in 1956/57; had almost vanished 1957/60 but numerous again since 1960 (D.G.). Canterbury, common in mixed forest, uncommon in beech forest (J.R.J.); South Canterbury, common in bush, plantations and wooded areas, enters Timaru in winter (B.R.K.); Otaio river, August 1968, 50 in 5 miles; Otaio gorge, 40 (R.J.P.). Central Otago, common in gullies and forested areas, occasional in and near towns; proportion of blacks less than that west of the divide (P.C.). Around Dunedin, counts over 6 years 1961/67 gave a black:pied ratio of 1:8 (T.W.P.). 1965/66, all broods of three pairs followed up. Black female, pied male; first nest destroyed by wind, second nest by predator; third nest, one black three pied fledglings; fourth nest abandoned after heavy rain; fifth nest, one black and one pied fledgling. Black male, pied female; first nest, chicks died after snow; second nest, 4 pied; third nest, 3 black one pied. Pied male, pied female; first nest, 3 pied; second nest, 4 pied; third nest, 3 pied, one addled egg. The two black and pied pairs produced 5 black and 9 pied fledglings. Nestlings were fed up to 25 times per hour, fledglings about 50 times per hour. All 24 fledglings survived the first fortnight up to the stage when their tails were fully grown and they were feeding themselves or at least chasing insects very actively (J.H.). Black form rather rare in Southland (B.D.H.) and not many in Fiordland (various observers). Stewart Island, never very plentiful, numbers fell to a low level in a few years prior to 1963 but again fairly plentiful about Halfmoon Bay in 1964; a black fantail seen on 6/5/64; proportion perhaps as low as 1% of pied (R.H.T.).

#### PIED TIT (*Petroica macrocephala toitoi*)

Scarce in Northland; individuals seen in forest at Maungataniwha range (R.H.M., A.T.E.), in Hokianga (R.S.C.), Omahuta, Tutamoe (R. Lawn), Waipoua (A.T.E.), between Pakotai and Pipiwai (R.T.A.). A few in Hunua ranges and a fair number in Coromandel (H.R.McK.). Many locality reports from Bay of Plenty southwards, probably commonest in Urewera and parts of Volcanic plateau. Seen at 3867 ft

near Waikaremoana (D.G.M.). Numerous between Lake Okareka and Lake Okataina, and in beech forest north-east of Waiouru (H.L.). Exotic forests at Kaingaroa and Whakarewewa. A nest with three young under the overhang of a clay bank (R.W.J.) and in the hollow base of a massive kahikatea (A.E.B.). A male bird picked up on a farm 7 miles out of Gisborne, about 30 miles from the nearest normal habitat (A.B.).

#### YELLOW-BREASTED TIT (*P. m. macrocephala*)

Numerous locality reports from all regions, in and around native forest and in exotic forests and scrub. One in a garden at Richmond March 1970; a patch of residual forest nearby had recently been burnt off (F.H.B.). First seen in Ward district January 1967 (J.A.C.). Comes into gardens in Greymouth, autumn and winter (J.R.J.). Stewart Island, numbers reduced; rare at Halfmoon Bay (R.H.T.).

#### N.I. ROBIN (*Petroica australis longipes*)

Waikato, French Pass, Whitehall, December 1961, one (D.J.). Bay of Plenty, Oropi bush (M. Peace); bush west of Te Puke (R.V.McL.); 1965, two seen at Kiwinui, Whakatane west (R.M.W.). Gisborne-East Coast, generally scarce; Mt Hikurangi 1963; Aniwanui valley, Maungapohatu and Toatoa 1964 (A.B.). Waikaremoana area, Hopuruahine hut and Aniwanui valley 1966; Mr Byford reports sightings at Panekiri ridge, Waikareiti track, on Ruakituri river and on top of Whakataka, 4142 ft (D.G.M.). Minginui 1962 (R.St.P.); 1964, numbers appear to be dwindling in Te Whaiti bush (F.M.). Hawkes Bay, Black birch range (N.B.M.). Volcanic plateau, a heavy population near Mamaku station April 1965; appears to be decreasing in South Mamaku 1966. First seen in Whakarewewa forest winter 1965. Kaingaroa exotic forest, common in 1964 at Flaxy Creek, 10 miles beyond Wairapukao, and about 4 miles south of Lake Rere-whakaitu; an amazing spread and increase in numbers 1964/67; tomtit numbers may have somewhat declined (R.W.J.). Taupo-Napier road, Te Iringa, one in State forest May 1968 (D.A.L.). Frequent in Pouakani forest, occasional in Pureora forest (A.E.B.). Kaimanawa ranges, Waipakihi valley, song heard daily Easter 1963 (A. R. Lacey); one or two seen on every trip for many years (D.A.B.); upper reaches of Waikato river, in snow, 3000 ft, August 1964 (M.L.T.). Taranaki, not on Mt Egmont (M.G.M.); Manga-Awakino stream near Awakino, May 1968; 30 miles up Motu river, 1967; Tongaporutu valley and Okau road near Kiwi turn off, Waitaanga saddle, Waitara river and tributaries, Moki track, Marco, Whangamomona, Tangarakau river and tributaries, Hutiwai valley, 1965-1967 (N.V.A.B., D.G.M.). Ruahines (N. Elder). Upper Waitotara valley (R.M.). Not recorded in Manawatu for 50 years (E.D.).

#### S.I. ROBIN (*P. a. australis*)

Marlborough, fair numbers in tall scrub and forest, apparently not in coastal forest (S.R.K.); Upper Kowhai valley, Kaikouras, 1968 (B.D.B.); 1970, common (J.R.J.). North-west Nelson, occasional (D.V.Z.); Takaka hill (M.F.S.); Heaphy track 1964 (B.D.B.), 1968 (M.D.); common near Karamea 1955 (J.P.). Dun Mountain-Mt Maud, December 1968, abundant about Third house and on descent to Roding river; 1969, about Weka stream; common near Starveal hut, several on Mt Starveal where red beech comes within 500 ft of the bushline,

not in pure mountain beech on the divide (J.R.J.). Plentiful in most bush areas round lakes to Lewis Pass (D.V.Z.); particularly numerous Durville valley April 1965 (B.D.B.); St Arnaud township, one, September 1969 (D.G.M.). 1955/56 sightings at Maruia, Maruia Springs, Matakītaki river, Rainy Creek (Reefton), Bullock Creek (Punakaiki) and near Ikamatua (J.P., J.R.J.). Rotukohu, 1964, in thick beech forest milled 35 years ago (P. Crosier). Westland, mainly found in fairly damp river flats in beech forest, sometimes in Westland forest (J.R.J.); common in old beech forests, particularly Upper Grey (T.H.S.). Numerous locality records from Grey to Karangarua valleys (various observers); Haast-Jackson Bay, none seen in 24 years, perhaps due to stoats; formerly numerous (D.G.). Hawdon valley, seen at the foot of Walker Pass in 1958 but not since (J.R.J.). Dunedin, Three Mile Hill plantations, May 1963, 2 (J.H.A.); Paradise, Dart, Routeburn, Caples and Greenstone valleys (J.A., P.C., R.J.N., M.F.S.). Hollyford valley, apparently wiped out by stoats (H.R.McK.); Eglinton valley, common and confiding (many observers); Manapouri to Hope Arm (D.A.L.); Milford and Doubtful Sound tracks, Malaspina Sound (M.P.D.); Mavora lake (P.C.); Lakes Hauroko and Monowai (W.T.P.).

#### STEWART ISLAND ROBIN (*P. a. rakiura*)

Moderately plentiful round Freshwater river country, Rakeahua, etc. (R.H.T.).

#### BLACK ROBIN (*Petroica traversi*)

Little Mangere, summer 1968, estimated 15 pairs (B.D.B.).

#### SONG THRUSH (*Turdus philomelos*)

Peria, 18/12/65, a nest placed on a flat beam under a bridge, in a situation where one would expect a swallow nest (T.R.C.). Whatipu, feeding on hawthorn berries (A.T.E.). Clevedon, full song 13/4/62, 13/4/63 (A.J.G.); 9/2/64, feeding newly fledged young on fruit of *Coprosma robusta*; 27/3/66, quite good song heard, then daily till 8/4/66 when it was reduced to part song (H.R.McK.). Rotorua, F.R.I., nest in a young macrocarpa, lined with wood chips (R.W.J.). Queenstown, full song 19/4/65; Milton, 19/5/65, on 4½ miles of road along main highway counted 14 thrushes using telephone poles and wires as song posts; there is a lack of suitable trees in this pasture country (J.H.).

#### BLACKBIRD (*Turdus merula*)

Kerikeri, January 1963, male bird taking bits of meat put out for cat; December 1964, male bird with a white cap; August and September 1964 and September 1965, nests placed on ground, one of them in grass; each had three eggs; all were predated; October 1965, another nest on ground, hatched 3 chicks. November 1970, bird stamping on lawn to bring up worms (A.T.E.). Clevedon 30/3/64, part song; 31/3/64, whisper song; odd songs throughout winter; unusual. Full song 23/1/67 till 19/3/67, presumably the same bird, at same place near house. Karaka, for some time previous to 2/10/66, a white bird with very few quite black spots (H.R.McK.). Kereta, June 1962, a bird all white (I. James). Near Meremere, 3/10/65, a male with white wings (B.B.). Waingarō, 2/10/67, a nest, 18 ft in a kahikatea, 4 eggs, two normal, one much elongated, one quite small (chaffinch size); two days later the small egg had disappeared (D.W.H.). Coromandel, several in full song 22/1/67

(S.C.). Volcanic plateau, an albino observed daily for 18 months 1961/62 (R. Swift). Kaingaroa forest early June 1970, D. Bartram saw a flock of male blackbirds on a firebreak (R.S.C.). Gisborne, 5/7/66, a bird with white scapulars, a white line across hind neck joining them, white stripes above and below eye, scattered white feathers on back (A.B.). Hawera, 22/9/64, full moon, a bird singing from 0120 hours for some time, two or three other birds kept up a constant clucking (F.F.). Levin, anting in garden 1/4/64; 1969, male with large white patch and several small white spots on back; female with white outer tail feathers; January 1970, female breaking snail shells, like a thrush; in one nest the last egg was a very pale blue with reddish spots (E.B.J.); 20/11/68 Palmerston North, a female fell out of a palm tree and landed on its back on the grass; at first appeared dead but later opened its eyes, stood, fluttered to a hedge then flew back to the palm; it was a very hot day. Levin, a bird with a white patch on its crown is at least 8 years old (A.A.S.). Nelson, a blackbird exhausted with bill firmly held in a cockle shell, flew off when released (F.H.B.). Road Otira-Whakapohai, 13/11/70, several birds seen feeding on carrion, dead possums (J.R.J.). Dunedin, November-January, a bird eating meat put out for cat (L.E.W.); Hooper's Inlet 20/10/64, partial albino (W.T.P.); 1967, a pair raised a brood, then built almost a complete second nest on top of the first; at least one fledgling left from the second nest (J.H.).

#### SILVEREYE (*Zosterops lateralis*)

Northland, on flax flowers and red hot pokers, kowhai flowers; willow catkins, flowers of black wattle; berries of coprosma, totara, five finger, inkweed, cotoneaster, *Cestrum nocturnum*; pecking hawthorn berries, figs, oranges; feeding on small insects on the scum of *Lemna* pondweed; flicking off pieces of bark and investigating the boles. Whakapirau, 11/4/60, a flock of 80 flew across the water from the south, settled in a copse with much calling, and almost immediately broke up into parties to feed in a pinewood and in mangroves (A.T.E.). Working over a paddock with yellowhammers, winter (T.R.C.). Poutu, one flew to a tin, kept filled with syrup or honey, dunked a young grasshopper and flew with it to a nest where the brood was almost fledged; this was repeated three times in 30 minutes, first the grasshopper, then bread, then a grub (M.J.B.). East coast, foods noted, inkweed, coprosma, figs, grapes, feijoa flowers (R.St.P.). Whangamomona, April 1957, feeding on berries of *Helicytus ramiflorus*, *Coriaria arborea*, *Nothopanax arboreum*, *Coprosma* spp., nectar of *Hoheria* sp. (D.G.M.). Kaimanawas, Easter, in flocks; one night high up the mountain we found a flock sheltering in a large clump of red tussock (D.A.B.). Clinton and Eglinton valleys, winter, in mixed flocks with fantails and warblers, and with yellowheads and parakeets (A.T.E.). Dunedin, several hawking flies, rising off bushes like a Fantail (W.T.P.); Silvereyes usually come to Dunedin gardens in April or early May; in 1965 they did not appear till late May or June, and in 1966 till June, suggesting that food elsewhere was plentiful in early winter in those years (J.H.). Auckland Islands, January 1966, relatively numerous down to the southern end of the main island but not recorded on Adams Island (B.D.B.).

## BELLBIRD (*Anthornis melanura*)

Three Kings, January 1963, represented 50% of the bird population; song from sunrise to sunset, not before sunrise or after sunset (R.H.M.). Very rare in Northland; sighting in Tapawau forest, Hokianga, 1958 (R. Lawn); almost annual sightings of odd birds on the north side of Whangarei harbour, at the Heads, Parua Bay and Tamaterau (C.W.D.). Helena Bay, one chased a Goldfinch; Opuawhanga, one chased a sparrow, January 1970 (A.M.M.). One on flax north of Mangawhai heads 20/9/62 (A. Prickett). South Manukau head, one on 11/12/63, the first for many years (J. E. Coulthard). Moumoukai, Clevedon, one on 8/1/67; very rare here now (H.R.McK.). Uncommon in settled areas of Waikato, sightings of one at Waingaro October 1967; Waitomo, Mapiu and Aotea harbour (H.R.McK.). Whareorino and Mokau river (J.L.K.), occasional in Te Kuiti town area and much less common than Tui in the bush (J. Lambert), seen on every trip to Hakarimata and Pirongia ranges (M.L.T.). Papa Aroha, many about garden and patches of bush on farm, go away for breeding (C.A.McC.). Bay of Plenty, numerous in forest, the predominant bird in Motu Bush (A.B.); numerous on Mayor Island (D.G.D.); not many round Kawerau (R.M.W.); Raukokore river, January 1961, unusual song like chatter of Budgerigar (J.L.K.). Gisborne-East Coast, many in bush; not in Gisborne town area but 3 miles out on Cook Hospital hill (A.B.). Abundant records from Volcanic plateau, native and exotic forests and scrub; from Hawkes Bay, Taranaki, Wanganui, Manawatu. Common in Marlborough except in high altitude tussock grassland and mountain tops (S.R.K.); generally abundant in Nelson (D.V.Z.); West Coast, common in mountain beech, mixed beech and Westland forest and alpine scrub, comes into Greymouth, etc., to feed on nectar (J.R.I.); moves to low altitudes in winter (W.R.F.); inland Canterbury, as in Westland (J.R.I.); Peel forest, many in January 1967 (W.T.P.); occasionally seen on ground when extracting nectar from flowers (S.C.S.); Otaio, common in winter in riverbeds and plantations down to the coast but retreat to bush in summer (R.I.P.). Never common in Central Otago but widely distributed; in all forested alpine valleys and seen or heard even in and around settled towns (P.C.); population round Dunedin may be increasing; heard more frequently and stay longer in the spring; much song in spring and early summer along edges of conifer forests near Dunedin and in small patches of bush and exotic trees: Macandrew Bay, bellbirds are generally away during summer and arrive back in March, but in 1966 they were here all summer and so have been around continuously for about 15 months (J.H.). Southland, abundant in all bush areas and in city parks; a common visitor to town gardens in winter (B.D.H.). Stewart Island, plentiful (R.H.T.). Auckland Islands, Adams Island, January 1966, numerous and ridiculously tame; came inside the tents to catch blowflies and even sat on some members of the party (B.D.B.).

## TUI (*Prothemadera novaeseelandiae*)

None seen on Three Kings January 1963; a rare bird north of Kaitaia (R.H.M.). Umawera, a stoat took eggs from a Tui nest 20 feet up a tree (J. A. Lees). Kerikeri, eating berries of acmena and spitting out the seed, berries of inkweed and privet (D.E.C.). Kerikeri, a regular visitor to feed on flax nectar, but in 1970 suffered much

competition from Starlings, Mynahs, Silvereyes, Rosellas and Chaffinches; seven birds feeding on flowers of a winter-flowering prunus; flowers of gums; damaging peaches in an orchard. Not often seen on ground; on Raoul Island and elsewhere seen searching for insects on the forest floor and flying to a nest; 1/8/69, two courting birds chased away a third, then a period of excited chasing during which first one and then the other landed on the ground, fluttered up and down again, then flew to a perch. Near Kawakawa, an albino Tui present at least from March 1963 till November 1964; entirely creamy white, iris dark crimson, feet flesh, bill flesh with a strong tinge of yellow (A.T.E.). Clevedon, 1966, eating ripe holly berries in July, green ones in December (H.R.McK.). Plentiful in Waikato, eating privet berries (W. L. Moisley), on kowhai, gums, tree strawberries and bottlebrush (J. Lambert). Coromandel, plentiful (C.A.McC.); puriri berries (J.L.K.); Bay of Plenty, fairly plentiful in bush areas (J.L.K.) and around Tauranga; not many on Mayor Island (R.V.McL.); quite a number in Te Puke town area in spring (N.B.), not numerous Whakatane and Kawerau (R.M.W.). East Cape, not seen March 1964, thought to have been driven away by Magpies (A.W.). Gisborne, common in bush, frequents suitable town areas; 1962, a bird with a white terminal band on its tail (A.B.). Volcanic Plateau, common in native forest and Whakarewarewa exotic forest (R.W.J.); in May 1960 and 1962 hundreds gathered to feed on heavy kahikatea seed crops, and suddenly dispersed about mid-May leaving a few (A.E.B.); visits town areas for nectar-bearing flowers (M.J.S.B.); 12 flying together at Tauhara January 1967 (M.G.M.); fighting with a Morepork, the two birds locked together, each holding the other with its claws, both died (W. P. Mead). Waikaremoana, 12 flew over Hopouruahine landing April 1966; seen at 3867 ft a.s.l.; appears less common than Bellbird (D.G.M.). Common throughout Taranaki, up to a dozen in Parekura park when kowhai is in bloom (M.G.M.); outnumbered by Bellbirds on Mt Egmont (G.G.A.); imitating a duck in Parekura Park, four melodious quacks in quick succession, pause, quacks repeated in the same manner a number of times (J. Coles). Abundant Wanganui (D.C.). Occasional in Central Manawatu (E.D.); one on kowhai in Levin garden October 1968, first seen here; Lower Hutt, 1/7/67, two flying slowly side by side, wing tips only inches apart (E.B.J.). Marlborough, common north of Wairau and south of Clarence rivers, odd occurrences elsewhere (S.R.K.). Nelson, generally abundant (D.V.Z.); less common than Bellbird at Golden Bay (M.F.S.); Heaphy, mainly in mixed bush (D.G.D.). Westland, common in mixed Westland forest, as in rata at Otira; generally not abundant in Westland though widely distributed and coming into Greymouth in autumn; very common in certain localities; outnumbered by Bellbirds (J.R.J.); Haast-Jackson Bay, numerous 1964 but numbers greatly diminished since 1940 (D.G.). Mahitahi, December, Tui feeding from white clover flowers in a well-grazed paddock; it would feed within a radius of about 8 feet for about two minutes, then fly to a patch of second growth, possibly to feed nestlings, and return in about half an hour; the bird fed in this manner regularly for about five days; it seemed to have difficulty maintaining its balance, rocking forwards on to its beak and backwards on to its tail, feeding all the time (S.C.S.). Canterbury, reported in small numbers from Lewis Pass, Kiwi saddle, Hope River, Lewis Pass, Lake Sumner-Hurunui river, Harper Pass (P. Crozier, M.M.D.); 4500 ft on ridge above Arthur's Pass and one in Bealey valley, the first seen

here, 1968; mixed beech forest near Oxford (J.R.J.); Kowai bush (M.M.D.); Banks Peninsula, Price's valley, 1964 (W. Chapple); Peel Forest (W.T.P.). Not present in Central Otago; not common in the eastern forested areas of the lakes district, in fact usually absent; on kowhai Rees and Dart valleys October 1967, numerous and approachable (P.C.); Lake Wakatipu, one singing lustily and hawking insects over the road; identical song in beech forest; 1965, Paradise Flats, Dooley's Creek, Mt Creighton station (J.H.); in some years two at Mt Aspiring station, reported plentiful at times; Chaslands coast, reported in bush; Tahakopa Bay, one seen pecking grit on road (H.R.McK.). Throughout Southland in suitable bush areas and in Invercargill parks and reserves, visiting town gardens particularly in winter; less numerous than elsewhere in New Zealand and very much less numerous than Bellbirds (B.D.H.); November 1965, Eglinton river roadside lookout, 17 on kowhai, 3 hawking insects; parties of 7 and 5 flying at Cascade Creek; a few on road to Milford, one at Lake Gunn upper end; none in 5 miles below Murray Gunn's camp, where stoats are plentiful (H.R.McK.). Fiordland, not plentiful; present when flowers of flax, rata and mistletoe are available, disappears in winter (P.D.). Generally abundant on Stewart Island, concentrate about Halfmoon Bay in spring; attracted to flowering native fuchsia (R.H.T.). January 1966, relatively numerous down to the southern end of the main Auckland Island, none recorded on Adams Island (B.D.B.).

#### YELLOWHAMMER (*Emberiza citrinella*)

Hovering and perching on thistle seed heads, Kerikeri, January (A.T.E.). Clevedon, first songs 30/8/62, 14/8/63, 24/8/64; last song 24/2/64 (A.J.G.). First songs at Thames 10/8/65 (S.C.), Motumaoho 19/8/64 (D.J.). Hamurana, singing from a wire perch 12/2/66 (R.W.J.); Crown Range, 3500 ft (W.T.P.); Sealy Range above Hermitage 5500 ft (R.J.P.). Uncommon in Stewart Island, seen at times in summer (R.H.T.).

#### CIRL BUNTING (*Emberiza cirrus*)

Three birds seen near Tauranga about 1954 (H.L.). Manawatu, one at Massey College 1958 (L. Gurr); one reported 4 miles east of Levin, 1967 (A.A.S.); 1970, several sightings by various observers in and around Palmerston North, July-November (I.G.A.), and a probable sighting at Waitohu rivermouth, Otaki (A.A.S.). Hawkes Bay and south of Titahi Bay, Wellington (P.C.B. per I.G.A.). Marlborough, west of Waihopai river bridge, Blenheim-West Coast highway, flock of nine August 1965 (B.D.B.); J. Taylor's farm at Ward, seen 1967-1971, breeding; 1968, pair at Ward beach and one near Seddon (J.A.C.). Canterbury, Summerhill, Rangiora, 1964; Fendalton, 1965; Hoon Hay, 1970 (J.R.J.); 1968 November, near Otaio river mouth and in a plantation near St Andrews, two (R.J.P.). Present in Central Otago in fair numbers, especially in autumn seen among other finches feeding (P.C.).

#### CHAFFINCH (*Fringilla coelebs*)

First full song in the north usually July; occasional song April and June (A.T.E.), Thames, song in April (S.C.). Timaru, first song 3/8/62 (B.R.K.). Feeding on flax flowers November, flax seed June; getting food off pondweed layer on a farm dam (A.T.E.) and off

floating weed on the edge of Waikato river (D.W.H.). Still flocked in Hokianga as late as 17/10/65 (R.S.C.). In dense bush in Taranaki (D.G.M.) and Kaimanawas (D.A.B.). Feeding along beaches, Manawatu (E.B.J.) and Otago (W.T.P.). Marlborough, partial albino in a large mixed finch flock, winter 1962; most of the front half of body white, very broad white wing bar and some white on quills (B.D.B.). Gatherings of Chaffinches hawking insects like flycatchers on water edge at Waikaremoana (A.T.E.), at Clutha river and Lake Lochie (H.R.McK.) and at Eglinton valley (A.T.E.). Tomahawk lagoon, one flying over and against lupins as though brushing off insects which it then caught (W.T.P.). Sealy Range above Hermitage, seen at 5500 ft (R.J.P.).

### GREENFINCH (*Carduelis chloris*)

Uncommon in Northland (A.T.E.). Auckland Museum domain, flocks of 140-180 August-September, late winter 1968 about 700. Summer and autumn flocks at Karaka 40-140; Miranda, 11/3/70, 800 feeding on *Echium vulgare*; also seen on amaranthus (H.R.McK.) and cotoneaster (A. Todd). Cambridge, pairs still building in January; feeding on grass seed, insects, seeds of sunflower, lawsonia, pansy; one fed for ten minutes on a pumpkin seed, leaving it unfinished (R. Shanks). Waingaro, small numbers; one bird seen to jump off the ground, grab a thistle head, drop to the ground and eat it; this was repeated several times (D.W.H.). Bay of Plenty, more plentiful than Chaffinch, 1961 (R.V.McL.). Rotorua, winter flocks up to 200 (M.J.S.B.); a marked increase in wintering Greenfinches at Rotorua and Taupo in 1965 (R.W.J.). Not many in Manawatu (A.A.S.). Nelson and Marlborough, large numbers in sole or mixed winter flocks (A.T.E.). Canterbury and Otago, generally distributed; rather sparse on Catlins coast October 1970 (J.H.). Southland, huge flock of Greenfinches with Redpolls and Goldfinches at Waituna in April 1968 (M.L.B.).

### GOLDFINCH (*Carduelis carduelis*)

Feeding on thistle heads, fireweed (*Erechtites*), fleabane (*Erigeron*), zinnia, alyssum, once on a bulrush head (A.T.E.). Auckland, late winter 1968, flock of 300 round museum; Firth of Thames, flocks up to 1000; 5/6/67, flock of 500 on salicornia flats (H.R.McK.). Waiuku area, feeding on beach 23/7/61, on wet sand right down to the windblown line of spume (A.T.E.). Kaimanawas, February c. 5000 ft, flock of 200 moving north to south, thistle seed blowing through the air with the flock as it moved (F.P.H.). Manawatu, numbers in 1963 much lower than they used to be (E.D.); young birds eating hawkweed on lawn, not pecking at seed but eating from the tip of the leaf (E.B.J.). Cape Campbell, much the commonest bird in the area, February 1964 (A.W.). West coast, not as common as elsewhere (J.R.J.). Plentiful Marlborough (A.T.E.), Canterbury; April 1964, Fairlie to Geraldine, flocks all along the road, more than I have ever seen before (M.M.). Sealy range 19/5/70, 2 at 4500 ft (R.J.P.). Plentiful in Otago; Green Island, 30/9/64, flock of 37 feeding on tideline (W.T.P.). Southland, plentiful (M.L.B.).



## REDPOLL (*Acanthis flammea*)

Not common, but widespread in Northland. Flock of 30 at North Cape in 1962 (H.R.McK.); small parties on west and east coast beaches and at various inland localities (A.T.E.); Kaipara, Taporā (H.R.McK.); Tinopai, January 1965, large flock in scrub and scattered pines (B.B.). Moumoukai, Clevedon, 15/7/69, flock of 150 (E. W. Betts); Waitakaruru, August 1968, 20 (S.C.). Lake Waikare 7/4/69, 600 on maize crop (H.R.McK.). Kaingaroa, 1966, in 8-year-old and 30-year-old *P. radiata*; also in Mamaku forest. One flew up, circled, landed on top of a pine, then flew to a spider web on the leading shoot of another pine, where it hung like a Whitehead, apparently feeding; another was seen to land on a web (R.W.J.). Near Lake Rerewhakaitu, 7 flocks in 10 miles, total about 350 (H.R.McK.); flourishing in National Park January 1971 (R.B.S.). Kaimanawas, August 1964, in heavy snow at 2500 ft (M.L.T.). Taranaki, Waitotara mouth; Whangamomona, present in fair numbers in manuka-covered side valleys of Tangarakau river (D.G.M.). Manawatu, hundreds in 1961, numbers reduced 1963 (E.D.); two at Lake Horowhenua, the first I have seen near Levin, 4/6/70 (E.B.J.). Reports of flocks from many parts of Marlborough, Nelson and Westland, and from Canterbury; 17/5/70, Sealy Range, 5500 ft (R.J.P.); plentiful everywhere I have been in Otago and Southland (W.T.P.); south of Frankton, November 1965, 2500 in a weedy field (H.R.McK.). Stewart Island, widespread (D.C.). Adams Island, present January 1966 (B.D.B.).

## HOUSE SPARROW (*Passer domesticus*)

Ngataki, Northland, sparrows nesting in holes in banks; Kerikeri, many sparrows on pohutukawa flowers (A.T.E.). East Coast, eating fruit of *Coprosma robusta*, taking seed from pine cones (R.St.P.). Auckland, Hillsborough, June-August 1970, many sick and dying in one area, several cared for, none recovered; affected by a kind of enteritis which caused discharge from eyes and nostrils, staggering and blood in the droppings. From 12 specimens examined only two had traces of salmonella infection; in two later specimens the livers were found to be black (S.R.). Levin, a pinkish cinnamon bird seen many times from August 1966; after a moult in 1967 it was a darker cinnamon, still far from the normal colour of a female; tail and wing tips almost white in 1968; February 1969 after moult, rich golden buff, whitish band on back of neck, whitish tail; later reverted to pinkish cinnamon. Moulded April 1970, once again from a pale nondescript colour to rich cinnamon, this time with no white on tail and very little on the wings; bred; the young a little paler than usual. Still present September 1970 (E.B.J.). A cream coloured sparrow seen December 1968-February 1969 (A.A.S.). Sparrows seen pecking the empty shell of eggs of domestic fowl and of Starling (E.B.J.). Southland, an adult sparrow banded by S.L.L. was released 4½ miles from banding station on 3/8/66, back at banding station June 1967; retrapped and released 15½ miles away 25/8/67, retrapped at banding station 22/10/67 (R.R.S.).

## STARLING (*Sturnus vulgaris*)

Northland, hundreds feeding on green grapes of a vine which had grown over a deserted house; regular on pohutukawa flowers, some probing flax flowers, once seen eating cotoneaster berries; congregates to feed on army worm and crickets; imitating calls of Californian Quail, Fantail, Morepork; many nests in holes in clay banks; 20/11/65, Kingfisher found dead beneath nest hole, which was immediately taken over by a pair of Starlings (A.T.E.). Partial albino, Firth of Thames 31/8/65, back dark buff, underparts pale buff (H.R.McK.). Bay of Plenty, December 1962, many Starlings flying to Rabbit Island to roost were caught by a storm and washed up on Tauranga beach (M.H.); population decreasing 1964, perhaps too many Mynas (N.B.). Many nest in holes in cliffs, Taranaki coast; August 1963, thousands roosting in taupata, Motumahanga Island (M.G.M.). Manawatu, roosting in Palmerston North square (I.G.A.); flock of young birds on flowering flax, some with rusty red caps, January 1969 (A.A.S.); anting 10/12/63, 27/4/64, 22/3/65, 22/9/68, when they paid more attention to tail than wingtips; picked up ants by pecking once, twice or up to six times, quite a beakful; became more active as the operation continued (E.B.J.). Nesting on cliffs, Motunau island (C.N.C.). Westland, northernmost Motukiekie stack black with roosting Starlings in winter; Otira, Starling feeding on dead possum (J.R.J.). Nesting on cliffs at Galloway (P.C.); feeding on rata flowers and flowering gums; Hooper's Inlet, a pair, one normal, the other light brown underneath and white above (W.T.P.); anting 2/10/64, two birds (L.E.W.). Awarua Bay, Southland, December 1964, flock of 3000, swooping and skeining out like a swarm of bees (M.L.B.).

## INDIAN MYNA (*Acridotheres tristis*)

Northland, one pair nested in a pohutukawa tree, nest attacked by a Harrier; nest in woolshed, chicks 2/3/70, one which fell out of the nest was covered with lice; feeding among seaweed washed up on the beach; probing flax flowers, and pulling them to pieces (A.T.E.); Poutu, destroyed nests of Fantail and Grey Warbler; killed a Kingfisher (M.J.B.). South Auckland, pair feeding young in nest 20/3/64 (H.R.McK.); Firth of Thames, raiding Starling and sparrow nests (A.W.). Seen anting, Bay of Plenty, 2/2/62 (R.V.McL.). West Taupo, eating kahikatea fruit on forest edge (A.E.B.); sometimes perches on a wire at Rotorua (R.W.J.). Almost or completely disappeared from Manawatu, 1963 (E.D.). Occasional appearances in Marlborough, 1961, 1962, 1967 (S.R.K., B.D.B.).

## N.I. KOKAKO (*Callaeas cinerea wilsoni*)

Clevedon, Moumoukai, heard 1968-1970, few now (H.R.McK.). Bay of Plenty, Ngamuawahine stream, four seen 1966 (R.M.W.). Waikaremoana, Mokau falls, sighting reported January 1966 (Royal F. and B. journal, August 1966). Volcanic plateau, new colony in 1965 near Mamaku station (R.W.J., H.L.); above Soda springs (H.L.); Rotoehu forest 22/11/70, magnificent dawn chorus, 7 seen (S.R.). Mangakino-Pureora, 27/7/69, four pairs and a group of four (A.C.). Taranaki, Marco road near Whangamomona 1966 (D.G.M.), Moki road September 1968 (N.V.A.B.), Tahora August 1970 (D.G.M.).

## BLACK-BACKED MAGPIE (*Gymnorhina tibicen tibicen*)

Kerikeri, December 1969-June 1970, an apparent hybrid, narrow black band on upper back; Albany, 17/10/63, one, black back seen (A.T.E.). Many at Hawkes Bay (N.B.M.). Manawatu, sightings 1965 and 1966; apparent hybrids 1966 and 1967; 1968 one black-backed near Himatangi and one north of Levin; 1969, one north of Levin (E.B.J.). Nesting reported Wairarapa 1969 (B. A. Ellis). Clarence river, one 7/1/69 with a *hypoleuca*; Domett, North Canterbury 15/1/69, one flying (W.T.P.).

## WHITE-BACKED MAGPIE (*G. t. hypoleuca*)

North Auckland, not uncommon south of Hokianga and Bay of Islands. Stray birds turn up in the Far North e.g., Awanui 1962 (M.H.), Victoria Valley 1969, and in most years since 1962 in different parts of Bay of Islands, but do not stay; there appears to be a small resident population in Hokianga (A.T.E.). 4 at Whangamumu 19/4/69 (D.E.C.). Robbing nests of White-faced Herons in Kaipara (F.P.H.). Numerous reports of small numbers round Auckland and South Auckland (H.R.McK. et al.). Firth of Thames, inland from Kaiaua 1963 (A.T.E.); Mangatarata, appeared spring 1963, nested 1965 (S.C.). Opoutere, 1967 (H.R.McK.). Bay of Plenty, Ruatoki 1961 (R.M.W.); 1964, very few have been seen at Te Puke (N.B.); Tauriko and Omokoroa, fear they are spreading (R.V.McL.). Waikato, 1963, confined to several scattered areas, some increase (R.T.A.); plentiful in sheep country, Mokau river 1961 (J.L.K.); uncommon Te Kuiti 1964 (J. Lambert); Waingaro 1969/70, a pair every one or two miles (D.W.H.). Gisborne-East Coast, widespread, numerous, increasing in all cleared country (A.B.); Waikaremoana 3, Onepoto one, April 1966 (D.G.M.). Hawkes Bay, common, probably more *tibicen* than *hypoleuca* (N.B.M.); penetrating Ruahines (C.N.C.); Kaimanawas, two chased a Long-tailed Cuckoo but could not keep up with it (D.A.B.). Common in Wairarapa (A.T.E.). Volcanic Plateau, 1964, established at Putaruru across the Mamakus; seen at Waiouru and Tarawera (Napier-Taupo road); not yet established at Rotorua; a pair seen at Kaharoa (H.L.). Kaingaroa, one 1965, two 1966 (R.W.J.), a few 1968 (R.S.C.); 1968, seen at Woodhill forest, Blue Lake, Highlands road on Rotorua-Taupo highway (R.W.J.). Taranaki, 1964, widely scattered throughout province generally in small numbers (pairs or groups up to 6); extending into partly cleared bush country; apparently increasing in Opunake-Okato-New Plymouth area (M.G.M.); Whangamomona 1966, quite plentiful in bracken-manuka country (D.G.M.). Generally abundant in Wanganui (R.M.). Manawatu, in 1950s flocks of 30; 1963, small parties and pairs, scattered (E.D.); 1968, 14 at Shannon, 2 at Konitere forest, 2 at Otaki beach (A.A.S.). Marlborough, common Kaikoura district Waiou-Kaikoura road, Clarence Bridge; isolated birds in scattered areas elsewhere, 1964; several seen Seddon-Ward, October 1968 (S.R.K.). Nelson, 5 on Matakītaki station for a number of years; have not spread, nor have they increased near Murchison, 1963 (D.V.Z.). Reports in Westland of isolated birds or small groups at times; some could be escapes (P.G.); 1964, Haupiri (J.R.J.), Kowhiterangi, Rotomanu (P.G.), Kaihinu (G.S.C.); 1965, Upper Ahaura (T.H.S.). Canterbury, very numerous on the plains; Lake Sumner October 1964 (B.D.B.), Cora Lynn 1965 (P. Crosier), Arthur's Pass and Bealey valley (J.R.J.). Springfield-

Coalgate road 31/10/65, one overall off-white, eye honey brown (H.R.McK.). Building by 28/7/64 (J.R.J.). Common in North Otago; at Lake Hayes and Wanaka 1965 (H.R.McK.). Seems to have spread in small numbers over the last 20 years up the Waitaki river to Omarama, thence through Lindis to Wanaka from which now slowly spreading down the Clutha; a few at Pisa flats above Cromwell, 1964; a few around Alexandra area in 1961-64; also in Upper Manuherikia, Lauder, probably spread from Omarama over the northern end of Hawkdun range. Three above lake head, Lake Hawea, September 1969 (P.C.). A comprehensive series of observations has been recorded by J. H. Numbers building up round Dunedin — Waikouaiti/Karitane, Evansdale/Waitati, North Taieri and hills above road to Taioma, Momona/Allantown and around Milton. Spreading south; reports from Milton and Balclutha commonplace by 1967, in which year reports from Chaslands and Owaka; first sighting at Tapanui, 1966 (J.H.). Not noted in Fiordland or Stewart Island. Southland, only occasional reports of stragglers (B.D.H.).

### ROOK (*Corvus frugilegus*)

South Kaipara Head, two flying 12/8/70; one stayed for a week mixing with Magpies in September, and seen on 23/9/70 (S.R.). Westland, Mr R. W. Griffin saw three large black birds flying up Rough river in 1963, and on 30/3/64 a large black bird with a whitish face three miles north of Fox River. 28/2/64, Mrs P. Grant saw three large black birds flying over Karoro, Greymouth; calls heard were identical with those of Rooks at Christchurch. One reported from Rotomanu, 17/9/64 (P.G.). 10/5/65, Totara flat, south of Ikamatua, solitary bird feeding in paddock, seen with telescope; had feathers along top of bill which seemed heavy for a Rook; "pants" to knees or lower; probably immature; 7/11/65, Hokitika, positive identification (bare face patch) by R. Forsyth; mobbed by a flock of starlings; settled in a tall gum tree, observed at close range with x8 binoculars (P.C.). Near Arrowtown, 19/3/64, while walking on wide shingle beds covered with high broom and young poplars, disturbed about 50 big heavy looking birds which went in all directions from one large thick patch of broom; they were a shiny purple-black colour with a light patch above their thick beaks; call a deep "caw caw" (B. and V. M. Adams, per H.R.McK.). 6/9/65, one bird flew over Washdyke lagoon, my first personal record of the species in the vicinity of Timaru (B.R.K.).