CLASSIFIED SUMMARISED NOTES, SOUTH ISLAND AND OUTLYING ISLANDS, 1 JULY 2000 - 30 JUNE 2001

Compiled by GILLIAN POLLOCK

Classified Summarised Notes (CSN) are a selection of bird observations provided by members and friends of the Ornithological Society of New Zealand each year. The purpose of CSN is to record the results of bird census counts, anecdotal observations of behaviour and habitat, sightings of rare species and common species outside their normal range, and to improve our understanding of New Zealand bird distribution and regional status. No reports were received from Marlborough or the Chatham Islands. The Nelson notes include those collected from Jul 1996 to Jun 2002.

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Regional Recorders: G. Quayle - Nelson, C. Hill - Canterbury, J.Lewis - West Coast, J.Wilson - Otago, P.Rhodes - Southland.

Regional Abbreviations: [NE] Nelson, [MA] Marlborough, [WC] West Coast, [CA] Canterbury, [CI] Chatham Islands, [OT] Otago, [SO] Southland.

Abbreviations: ad adult; AF Airfield; asl above sea level; B Beach; BP Banks Peninsula; Br bridge, c. approximately; Ch channel, Crk Creek; E East; Est Estuary; fem female; grp group; Hbr Harbour; Hd Head; HQ Headquarters; ha hectare; h hours; imm

immature; incl including; I Island; Is Islands; It inlet. juv juvenile; km kilometres; L Lake; Lgn Lagoon; max maximum; m metres; min minimum; Mt Mount; Mts Mountains; NP National Park; Nth North; pr pair; Pk Peak; Pen Peninsula; Pt Point; R River; Ra Range; RM River Mouth; Rd Road; Sa saddle, SP Sewage Ponds; Sd Sound; SHW State Highway; Sth South; Stm Stream; SF State Forest; Stn Station; Str Strait; Trk Track; V Valley; W West, Wtd Wetland

SYSTEMATIC LIST

Great spotted kiwi *Apteryx haastii* [NE] L Henderson; pair called on 15/2/99 (CP).

Australasian crested grebe *Podiceps cristatus australis* [WC] L Middleton, pair on 18/4 (JB). [CA] L Aviemore, 2 on 20/11 (ARB). [CA] L Forsyth, 1 on 16/12, 86 on 23/6 (TC,CH). L Pearson, almost complete albino chick 2/3 grown, white except for dark streaking on head & coverts on 27/1 (TC).]

[OT] Otematata, pair with 3 juv on 27/2 (ARB). L Wanaka, 1 on 16/6 (NP).

Australasian little grebe Tachybaptus novaehollandiae [NE] Puponga Farm Park dune L; 1 pair on 2/2/02 UBR 4/02 (RGG).

Royal albatross *Diomedea epomophora* [WC] Westport; 1 offshore on 2/7 (BAH). Knights Pt; 1 on 5/6 (BAH).

Wandering albatross *Diomedea exulans* [WC] Knights Pt; 1 on 5/6 (BAH).

Shy mollymawk Diomedea cauta [WC] Westport; 2 offshore on 2/7 (BAH). [SO] Puysegur Pt to Bluff, Foveaux Str 13 on 19/2 (KM).

Black-browed mollymawk Diomedea melanophris [WC] Knight's Pt; 3+ on 5/6 (BAH). [OT] Mole Otago Hbr, 1 on 16/7 (K&JVM).

Grey-headed mollymawk *Diomedea chrysostoma* [WC] Knight's Pt; 2 on 5/6 (BAH). Jackson Bay; 4 on 5/6 (BAH).

Salvin's mollymawk *Diomedea salvini* [SO] Puysegur Pt to Bluff, Foveaux Str, 3 on 19/2 (KM).

Light-mantled sooty albatross *Phoebetria palpebrata* [WC] Knight's Pt; 1 on 5/6 (BAH).

Buller's shearwater Puffinus bulleri

[WC] Jackson Bay, 3 on 5/6 (BAH). [SO] Doubtful Sd to Breaksea Sd, 8 on 12/2. Puysegur Pt to Big R. Foveaux Str, 16 on 19/2 (KM).

Sooty shearwater Puffinus griseus

[SO] Seal Is. Dusky Sd, burrows in use on 13/2. Largest passage, Chalky It burrows in use on nth coast on 18/2. Chalky Is. & It, widespread colonies birds returning at dusk on 15 & 16/2 (KM, S Hooson). Oreti B c 20 000 offshore on 7/2 (LE).

Common diving petrel *Pelecanoides urinatrix* [NE] Hope; 1 in Nov 99 found dead in orchard (WC).

Westland petrel Procellaria westlandica [WC] Knight's Pt; 3 on 5/6 (BAH).

Cape pigeon Daption capense

[WC] Knight's Pt, 1 on 5/6 (BAH). [SO] Chalky It, 1 taking scraps from boat by 14/2 (KM).

Fairy prion Pachyptila turtur

[NE] Richmond township; several found alive, many beach wrecks found from Kina Beach to The Glen in Feb 00 (WC). Waimea E; many beach wrecks found Jun/Jul 02 (WC&HH).

Broad-billed prion *Pachyptila vittata* [SO] Puysegur Pt to Bluff Foveaux Str, 4 on 19/2 (KM).

Thin-billed prion Pachyptila belcheri [WC] Westport; 2 offshore on 2/6 (BAH).

Salvin's prion Pachyptila salvini

[NE] Golden Bay and Tasman Bay, c15 found with beach wrecked fairy prions in Jun/Jul 02, new record for area (OSNZ).

Mottled petrel Pterodroma inexpectata

[SO] Isthmus Sd islet, calling & returning to burrows, 2200 h on 19/2 (KM et al).

Grey-backed storm petrel Oceanites nereis [SO] Puysegur Pt to Bluff, Foveaux Str, 1 on 19/2 (KM).

Yellow-eyed penguin Megadyptes antipodes

[NE] Appletree Bay; 1 on 25/11/99 (PDG). [OT] Nth Head, Waikawa Hbr, December, 3 nests (1 abandoned) each 2 eggs. Keratin etc around nests suggested at least 1 fledged from each. Curio Bay, 7 fledglings from 6 nests 2001/2002. Nests no. up from 2 in 1995/96 in spite of 4-fold increase in annual visitor nos (now 40 000 pa) (WyC).

Blue penguin Eudyptula minor

[NE] Onekaka, nest under overturned rubber dinghy, 1 black down chick on 6/10/97 (CP). [WC] Westport; 1 offshore on 2/6 (BAH).

Erect-crested penguin Eudyptes sclateri

[CA] 1 on 5/3, at Washdyke Lgn.(JD). [SO] Chalky Is, Chalky It, moulting in caves on 15/2 (KM). Clutha R, Koau Br, 1 moulting on 24/2 (PS). Smaill's B, 1 on 22/2 (CS)

Australasian gannet Morus serrator

[SO] Oreti B, sth entr, 16 diving offshore on 9/1 (PK). Papanui It, Otago Pen, 1 well up inlet on 17/6 (K&JVM).

Pied shag Phalacrocorax varius [OT] Hampden B, 1 on 2/7 (ARB).

Little black shag Phalacrocorax sulcirostris

[NE] Waimea Est; max 64 on 14/4/00, 1 on 5/2/01 (WC &GP). Nelson Haven; 60 in Jun '01 (GQ). [WC] Taranaki Ck, 1 in Little Shag colony, 20/8 (TC).

Little shag Phalacrocorax melanoleucos

[WC] Jackson Bay; 2 on 6/6 (BAH). [OT] Otago Hbr, 574 on 1/4, 522 on 19/5 (OSNZ census). Very low figures compared with previous figures of 866 in May 1989.

Spotted shag Stictocarbo punctatus

[SO] Oreti B, sth entr, 56 feeding offshore on 9/1 (PR). Clutha R, Koau Br outlet, over 5000 roosting on beach on 24/2 (PS).

Reef heron Egretta sacra

[NE] Wainui Bay; 1 on 24/3/00 (CP). [SO] Luncheon Cove, Anchor Is, Dusky Sd. 2 on 13-14/2. Great Is, Chalky It, 2 on 14/2. Chalky Is, Chalky It, 1 on 16/2 (S Hoosen per (KM).

White heron Egretta alba

[NE] Westhaven Inlet; 3 on 14/6/99 (OSNZ). Parapara; 1 on 27/1/99 (CP). Golden Bay; 5 in Jun 2000 census (OSNZ). Motueka; 2 on 16/6/99 (GP). Waimea E; 1 on 26/6/98 (HH),1 on 13/6/99 (GP), 1 on 16/2/00 (WC), 1 on 22/2/00 (GP). Tasman Bay; 3 in Jun 2000 census (OSNZ). [OT] L Waihola, 1 on 22/10 (PG). Kaikorai Est, 1 on 7/2 (PS). [SO] Tuatapere Nth, 1 in October (LE). Valley Lgn, 1 on 1/9 (ARB). Waianakarua R Mouth, 1 on 17/3 (ARB). Otakoa Marae, 1 on 8/3 (A&CW). Tomahawk Lgn, 1 on 26/4 (CS). Contour Chl, 1 on 11/5 (AN).

Cattle egret Bubulcus ibis

[NE] Puramahoi; 3 on 6/5/99 (CP). Rototai; 1 on 18/9/98, 7 on 15/7/99, 1 on 16/6/00 (CP). Appleby; 4 on 24/11/99, 5 on 16/2/00 (WC), 2 on 9/6/00 (CP). [CA] Tulls Rd, Waikuku, 9 on 16/7, 15 on 23/7 (TC). Yarrs, L Ellesmere 1 on 8/11, 2 on 25/11 (CH). [SO] Invercargill, Dunns Rd 2 in flooded paddocks, 16-18/5 (LE,PR). Stewart Island, several on 8/4. Oporo, 14 on 30/4. Round Hill, 1 on 30/10 (LE). Waitati, 1 on 16/4 (ARB). Contour Chl, 6 on 20/4 (AN).

Australasian bittern Botaurus poiciloptilus

[NE] Farewell Spit; several sightings during 97/98 (CP). Parapara, 1 on 8/4/98 (CP).

[MA] Kowai Rm,1flushed from rank vegetation, 2/1 (TC). [SO] Invercargill airport, ! being harrassed by pr Australasian harriers on 26/7 (PR). Otatara, Grant Rd, 1 on 26/3 (J Gamble per LE).

Royal spoonbill Platalea regia

[NE] Whanganui Inlet; 4 on 20/6/97 (OSNZ). Farewell Spit; 1 on 13/11/96, 64 on 20/6/97, 74 on 28/6/98 (OSNZ), 83 on 2/8/98 (CP), 54 on 15/6/99, 155 on 3/6/00, 4 on 10/2/01, 110 on 24/6/01 (OSNZ). Collingwood; 12 on 9/9/98 (CP). Parapara 2 on 13/1/99 (CP). Golden Bay; 0 on 26/11/99, 0 on 24/2/00, 10 on 4/6/00, 4 on 26/11/00, 68 on 25/6/01 (OSNZ). Motueka E; 7 on 16/11/97 (OSNZ), 10 on 22/2/00, 25 on 6/6/00, 20 on 23/6/01 (GP). Waimea E; 5 on 14/11/97 (OSNZ), 5 on 26/6/98 (HH), 48 on 13/6/99 (GP), 10 on 24/11/99, 12 on 16/2/00 (WC), 16 on 27/11/00 (OSNZ), 43 on 5/6/00 (GP), 53 on 9/2/01 (OSNZ), 18 on 23/6/01 (WC). Nelson Haven; 8 on 29/7/00 (PDG). Delaware Bay; 5 on 24/6/01 (CM). [SO] Hawksbury Lgn, Waikouatii 25 on 13-15/4 (SH). L.2.river 30 on 7/9, Kaituna, 30 on 5/10 (CH). Omaui Is, 27 on 2/10 (LE). Sawyers Bay, 1 on 3/7 (ARB). Green Is Nature Res max numbers 90 adults and juveniles and still 25 occupied nests on 5/1. It appears there was a 2 to 3 weeks' delay in nesting (PS). Nuggets/Tokata, 18 in breeding plumage on 22/10 (GL)

Black swan *Cygnus atratus* [SO] Anderson's Lgn, 207 on 7/1 (A&CW)

Mute swan Cygnus olor

[SO] Anderson's Lgn, 1 on 7/1, 18/3 and 29/4 (A&CW)

Canada goose Branta canadensis

[NE] Wharariki, Island L; 45+ on 27/1/98 (CP). Farewell Spit; 6 pr and 4 goslings on 22/11/97, 15 on 20/1/99 (CP). [SO] Oreti B, sth entr, 2 flying over bch on 11/11 (PR). Anderson's Lgn, 2 on 7/1 (A&CW). Tomahawk Lgn, 3 on 29/8 (KM), 2 on 7/10 (A&CW). Sinclair Wtds, 17 on 25/1 (A&CW).

Paradise shelduck Tadorna variegata

[SO] Chalky Is, Chalky It, pr + 4 juv on 17/2 (KM). Oreti B, nth entr. pr in surf 11/11 (PR). Anderson's Lgn, 142 on 29/4 (CA&CW). Sinclair Wtds, 233 on 25/1 (A&CW).

Blue duck Hymenolaimus malacorhynchos

[NE] Aorere R, Shakespeare Flat; 3 on 20/2/00, 2 of them feeding on ripe Coprosma acerosa fruit (PDG). [SO] Milford trk, Clinton r. between Clinton & Mintaro huts 1 on 21/10 (PR).

Grey duck Anas superciliosa

[OT] Loganburn Lammermoor Ra, 7 on 15/4 (K&JVM).

Grey teal Anas gracilis

[SO] All Day Bay, 465 on 4/6, Anderson's Lgn, 186 on 29/4. Hoopers It, 747 on 4/5, (A&CW).

NZ scaup Aythya novaeseelandiae

[NE] Wharariki L; max 27 on 21/7/97, 1 duckling on

14/12/97, 24 on 28/8/98, max 23 on 1/5 & 35 on 24/6/00. Kaihoka L; 33 on 28/4/00. Druggan's Dam; 15 on 12/9/98. Freeman's Pond; max 11 on 7/4/98. Farewell Spit; max 11 on 19/10/97, 8 on 2/8/98 (CP). Totara, 7 ad + 6 juv on 14-10 (ARB). [SO] Anderson's Lgn, 3 on 18/3 (A&CW) Sinclair Wtds, 250 on 25/1 (A&CW).

Northern pintail Anas acuta

[NE] Farewell Spit; 1 male on 19/10/97 and 21/10/97 (UBR 97/20)(CP).

NZ falcon Falco novaeseelandiae

[NE] Golden Bay, Tukurua; 1 on 30/9 & 1/10/98, 1 on 29/12/99 (CP). [OT] Mt Prospect, Te Anau basin, 2 on 18/12. Cupola Sa, mid dome 2 on 29/1. Lake Ohau, 1 on 30/4 (ARB). Omarama, 1 on 30/4 (ARB). Lake Logan, 2 pair on 15/4 (K&JVM). Middlemarch, 1 flying on 31/3 (A&CW). Deep Crk, pair on 16/4 (K&JVM). Trotters Gorge, pair on 14-1 (J&PB). Hawksbury Lgn, 1 on 29/10 (K&JVM). Taieri RM, 1 on 1/10 (HS). [SO] Tomogalak R. harrassing Aust harrier on 26/7 (WyC). 1 Anchor Is, Dusky Sd, 2 on 13/2 (S Hoosen per KM). Shag R. Resolution Is, 1 on 14/2. Chalky Is, Chalky It, 1on 18/2 (M Williams per KM).

Ring-necked pheasant Phasianus colchicus

[OT] Portobello Rd, 1 male on 29/5, no reports of missing pets in area (A&CW).

California quail Callipepla californica

[SO] Rd between Athol & Garston 2 on 15/11 (LE). Nevis Rd nr Garston, 1 on 2/1 (PR). Warrington, 1 on 8/11 and 9/11 (C&CL).

Western weka Gallirallus australis australis [WC] Punakaiki RM pair with 3 chicks, 29/1 (SH).

Banded rail Gallirallus philippensis

[NE] Golden Bay, Parapara Inlet; 1 on road on 4/4/98. Milnthorpe; 1 found dead on beach on 20/9/99 (CP). Waimea E; 1 on 14/4/01 (GQ).

Marsh crake Porzana pusilla

[CA] C.Hills Ponds, 1 on 25-29/5 (CH).

Australian coot Fulica atra australis

[CA] L Pearson, 1 on 27/1 (TC). [OT] Winton area, 1 shot on 4/5 (LE). Totara, 4 on 20/1 (ARB).

SI pied oystercatcher Haemotopus ostralegus finschi

[NE] Farewell Spit census; 4947 on 6/6/96, 603 on 13/11/96, 5687 on 20/6/97, 2185 on 16/11/97, 7209 in Jun 9, 9392 in Jun 99, 1692 in Nov 99, 8426 in Feb 00, 10595 in Jun 00, 1018 in Nov 00, 6377 in Feb 01, 5230 in Jun 01. Golden Bay census; 1226 in Jun 97, 70 in Nov 97, 1227 in Jun 98, 1808 in Jun 99, 659 in Nov 99, 4533 in Feb 00, 1708 in Jun 00, 1247 in Nov 00, 5529 in Feb 01, 1971 in Jun 01. Tasman Bay; 290 in Jul 97, 748 in Nov 97, 808 in Jun 98, 945 in Jun 99, 575 in Nov 99, 2887 in Feb 00, 1749 in Jun 00, 874 in Dec 00, 3570 in Feb 01, 3449 in Jun 01 (OSNZ). [CA] Ashley R, 3 flying inland,16/6, Hooper It, 391 on 4/5 (A&CW)

Variable oystercatcher Haemotopus unicolor

[NE] Farewell Spit census; 26 in Jun 96, 63 in Jun 97, 55 in Nov 97, 60 in Jun 98, 111 in Jun 99, 64 in Nov 99, 72 in Feb 00, 90 in Jun 00, 29 in Nov 00, 82 in Feb 01, 108 in Jun 01. Golden Bay census; 50 in Jun 97, 21 in Nov 97, 15 in Jun 98, 57 in Jun 99, 74 in Nov 99, 57 in Feb 00, 87 in Jun 00, 63 in Nov 00, 52 in Feb 01, 82 in Jun 01. Tasman Bay census; 51 in Jul 97, 261 in Nov 97, 81 in Jun 98, 363 in Jun 99, 255 in Nov 99, 295 in Feb 00, 380 in Jun 00, 319 in Dec 00, 500 in Feb 01, 371 in Jun 01 (OSNZ). [WC] Jackson Bay; 1 on 5/6 (BAH).Knight's Pt; 1 on 5/6 (BAH). Tomahawk, 35 on 26/4 (CS). [SO] Chalky Is, Chalky It, pr + 2 juv on 16/2 (KM). Oreti B, nth entr, 21 in paddock on 18/9

Spur-winged plover *Vanellus miles novaehollandiae* [SO] Orepuki, 1 + chick on 18/6 (R Duffield per PR).

Australasian pied stilt Himantopus himantopus leucocephalus

[NE] Farewell Spit census; 30 in Jun 96, 18 in Nov 96, 53 in Jun 97, 5 in Nov 97, 66 in Jun 98, 64 on 20/1/99, 15 in Jun 99, 3 in Nov 99, 25 in Feb 00, 26 in Jun 00, 10 in Nov 00, 11 in Feb 01, 29 in Jun 01. Golden Bay census; 0 in Nov 97, 87 in Jun 97, 65 in Jun 98, 50 in Jun 99, 1 in Nov 99, 98 in Feb 00, 101 in Jun 00, 3 in Nov 00, 52 in Feb 01, 82 in Jun 01. Tasman Bay census, 45 in Nov 97, 60 in Jul 97, 96 in Jun 98, 50 in Jun 98, 85 in Nov 99, 312 in Feb 00, 370 in Jun 00, 127 in Dec 00, 288 in Feb 01, 427 in Jun 01 (OSNZ). [SO] Hoopers It, 157 on 19/12 (A&CW).

Black stilt Himantopus novaezelandiae

[NE] Golden Bay, Puponga; 2 hybrids, D2, E, on 25/1/99 (CP). [CA] Hinds on farmland,1 on 0/5 (JMcC). [OT] Waitaki R, 1 hybrid, node F-H on 25/11 (PS for OSNZ survey). [SO] Wendon, nr Gore, 1 in flooded paddock 5-14/6 (I King per LE. PR.) Nr Tuatapere, hybrid nesting Oct (S Thomas per LE)

Banded dotterel Charadrius bicinctus

[NE] Farewell Spit census; 563 in Jun 96, 38 in Nov 96, 870 in Jun 97, 53 in Nov 97, 737 in Jun 98, 768 in Jun 99, 61 in Nov 1132 Feb 00, in Jun 00, 24 in Nov 00, 517 in Feb 01, 960 in Jun 01. Golden Bay census; 86 in Jun 97, 300 in Jun 98, 104 in Jun 99, 1 in 76 Feb 00, 64 in in 2 in Nov 00, 32 in Feb 01, 31 in Jun 01. Druggan's Flat; 3 on 14/9/97, 2 on 12/9/98 (CP). Tasman Bay census; 32 in Jun 97, 41 in Nov 97, 95 in Jun 98, 95 in Jun 99, 2 in Nov 99, 93 in Feb 00, 7 in Jun 00, 27 in Nov 00, 129 in Feb 01, 76 in Jun 01 (OSNZ). Motueka Sandspit; 325 in Feb 02 (WC). [CA] Ashley R,1 flying in 1/2 moon conditions at 2200hrs (TC). [SO] Spit Is. Preservation It, 1 on 15/2 (KM). Hoopers Lgn, 71 on 3/6 (A&CW).

NZ dotterel Charadrius obscurus

[SO] Awarua Bay s. 59 on 22/5 (highest no on record), 55+ on 22/6. Mason Bay, 120 on 24-26/4. Est southern pop now 205 from c 65 in 1990s (WyC). Tiwai Br sandspit 12 on 19/8 (PR).

Wrybill Anarhynchus frontalis

[NE] Farewell Spit; 1 on 19/10/97, 27/12/97, 1 on 1/1/98, 17/3/98, 1 on 13/1/99, 3/2/99 (CP). Totora Ave;

1 on 11/2/01 (OSNZ). Marahou; 1 on 12/2/01 (DM). Motueka Sandspit 1 on 16/11/97 (JL), 10 on 5/6/00 (DM & JM), 25 on 25/6/01 (RS). Waimea E; 19 on 26/6/98, 33 on 13/6/99, 1 on 24/11/99, 1 on 19/2/00, 37 on 5/6 00, 75 on 4/8 with max 101 in Aug/Sept 00, 83 on 9/2/01, 23 on 22/6/01 (WC). [CA] L Ellesmere, 63 on5/10, 112 on 27/11, 100 + 8/4 (CH). [OT] Karitane mudflats, 1 on 1/4. Very unusual site (PS).

Black-fronted dotterel Charadrius melanops

[NE] Nelson Haven; 1 juv on 23/4/99, 1 ad & 1 juv 5/5 – 22/5/99 (GQ). [CA] Washdyke Lgn, 6 on 3/7 (CH). Bowalley Lgn, 1 on 27/2, 2 on 28/2 & 2 on 1/3 (ARB). [OT] DCC Landfill, Green Is, 1 on 28/9 (PS). Allanton, 2 on 1/3 & 1 on 25/3 (K&JVM).

Pacific golden plover Pluvialis fulva

[NE] Farewell Spit; 2 on 13/11/96, 8 on 16/11/97, max 11 on 17/12/97, 53 on 6/1/99, 57 on 3/2/99, max 23 on 25/1/00 (CP), 45 on 24/2/00, 32 on 26/11/00, 12 on 10/2/01 (OSNZ). Parapara, 4 on 21/6/99 (KS). Waimea E; max 8 from 10/1 – 25/3/00, 11 on 30/10/01 (WC). [CA] Clarkes Rd (L.E.).12 on 19/10, 35 on 30/10, 47 on 2/3 (CH).

Lesser knot Calidris canutu

[NE] Farewell Spit census; 185 in Jun 96, 5632 in Nov 96, 330 in Jun 97, 8308 in Nov 97, 194 in Jun 98, 199 in Jun 99, 6749 in Nov 99, 6663 in Feb 00, 319 in Jun 00, 5975 in Nov 00, 6795 in Feb 01, 184 in Jun 01. Golden Bay census; 39 in Dec 99, 66 in Feb 00, 220 in Nov 00. Motueka Sandspit; 10 in Nov 97, 2 in Nov 99, 148 in Nov 00. Waimea E; 150 in Nov 97, 15 in Jun 99, 390 in Nov 99, 240 in Feb 00, 400 in Nov 00, 351 in Feb 01, 1 in Jun 01 (OSNZ). [CA] Awarua Bay sth, 63 on 22/6 (WyC) [SO] Embankment Rd 3 on 7/9, 9 on 8/3 (LE). Kaitorete Spit (tip)11 on 27/11 (CH).

Curlew sandpiper Calidris ferruginea

[NE] Farewell Spit census; 6 in Nov 96, 4 in Jun 97, 10 in Nov 97 (OSNZ), 8 on 6/1/99 (CP), 2 in Feb 00, 2 in Jun 00, 3 in Feb 01, 1 in Jun 01 (OSNZ). [CA] Embankment Rd, 3 on 7/9. Kaitorete Spit (tip) 4 on 5/10 11 on 27/11 (CH).

Turnstone Arenaria interpres

[NE] Farewell Spit; 2 on 16/11 and 2/12/97 (CP). [CA] Kaitorete Spit (tip end) 51 on 5/10, 3 on 27/11 (CH). [SO] Awarua Bay s. 8 on 22/6 (WyC). Oreti B nth entr 32 on 9/1 (PR)

Terek sandpiper Tringa terek

[CA] Embankment Rd, 1 on 23/9 (CH &SB).

Sharp-tailed sandpiper Calidris acuminata

[NE] Farewell Spit census; 2 in Nov 96 (OSNZ), 3 on 19/9/97, max 5 on 1/1/98, 2 on 6/1/99, 3 on 25/1/00 (CP). [CA] Clarkes Rd, 3 on 19/10, 3 on 4/11. Kaitorete Spit, 4 on 27/11. Embankment Rd, 1 on 20/2, 1 on 8/3, 1 on 22/3 (CH).

Pectoral sandpiper Calidris melanotos

[NE] Farewell Spit census; 2 in Nov 96, 3 in Nov 97 (OSNZ), 1 on 9/3/98 (CP), 3 in Nov 99, 3 in Feb 00 (OSNZ), 2 on 25/3/00 (CP). [CA] Clarkes Rd, 2 on 4/11, 3 on 27/11, 4 on 22/3. C.Hills Ponds, 4 on 20/2, 1 on 13/4 (CH).

Red-necked stint Calidris ruficollis

[NE] Farewell Spit census; 16 in Nov 97, 1 in Jun 99, 13 in Nov 99 (OSNZ), 19 on 25/1/00 (CP), 18 in Feb 00, 19 in Nov 00, 20 in Feb 01, 3 in Jun 01 (OSNZ). [CA] Kaitorete Spit (tip) 50 on 5/10, 12 on 27/11. Yarrs, 45 on 22/3, 115 on 8/5 (CH).

Long-toed stint Calidris subminuta

[CA] Clarkes Rd, 1 on 6-7/12 (CH) (UBR 48/01), 2nd sighting for NZ, 1 on 16/12 (CH,SW).

Broad-billed sandpiper Limicola falcinellus

[CA] Embankment Rd, 1 on 18/1-1/2 (JaW,RS,SP,CH), 2nd sighting for L Ellesmere (UBR 46/01). 1st sighting was in 1962.

Eastern curlew Numenius madagascariensis

[NE] Farewell Spit census; 11 in Nov 96, 7 in Oct & Nov 97, 4 in Jun 98, 4 in Jun 99, 9 in Nov 99, 4 in Feb 00, 10 in Nov 00, 11 in Feb 01 (OSNZ). Waimea E; 1 on 5/1/00, 1 on 9/2/01, 1 on 31/10/01 (WC). [SO] Oreti beach 1 flying in Feb (LE).

Whimbrel sp Numenius sp.

[NE] Farewell Spit census; 2 in Jun 96, 1 in Nov 96, 27 in Nov 97 (OSNZ), 14 on 1/1/98 (CP), 2 in Jun 98, 7 In Nov 99, 23 in Feb 00, 2 in Jun 00, 33 in Nov 00, 13 in Feb 01, 4 in Jun 01 (OSNZ). Waimea E; 1 in Nov 97, 1 on 20/10/99 (WC).

Eastern bar-tailed godwit Limosa lapponica baueri

[NE] Farewell Spit census; 1691 in Jun 96, 7627 in Nov 96, 1236 in Jun 97, 11360 in Nov 97, 2087 in Jun 98, 2039 in Jun 99, 11541 in Nov 99, 14029 in Feb 00, 2114 in Jun 00, 15236 in Nov 00, 18336 in Feb 01, 1832 in Jun 01 (OSNZ). Golden Bay census; 136 in Jun 97, 30 in Nov 97, 2 in Jun 98, 184 in Jun 99, 4315 in Nov 99, 1683 in Feb 00, 48 in Jun 00, 2645 in Nov 00, 1027 in Feb 01, 376 in Jun 01 (OSNZ). Tasman Bay census; 80 in Jul 97, 4300 in Nov 97, 133 in Jun 98, 422 in Jun 99, 3015 in Nov 99, 3272 in Feb 00, 185 in Jun 00, 3204 in Nov 00, 3128 in Feb 01, 538 in Jun 01 (OSNZ). [CA] Embankment Rd, 3 on 7/9, 4 on 5/10, 86 on 8/3 (CH). Omaui It ,16 on 18/6 (PR). Hoopers It, 500+ on 4/3 (A&CW).

Tattler sp Tringa sp.

[SO] Awarua Bay, 1 on 27/1 (PR). Awarua Bay sth, 1 on 22/6. Mason Bay, Stewart island, 1 on 24-26/4 (WyC).

Red-necked phalarope Phalaropus lobatus

[NE] Farewell Spit; 1 on 26/11/00 (CP)(UBR 4/01). [CA] Kaitorete Spit (tip), 1 on 16/12 (UBR 36/01). 2nd sighting for L Ellesmere, 1st in 1929. (NA,JW&RN).

Arctic skua Stercorarius parasiticus

[NE] Golden Bay, Tukurua; 3 on 10/12/98 (CP). [WC] Westport; 1 offshore on 2/6 (BAH). [SO] Waipapa Pt, 1 in April (LE). Off St Kilda B, 1 on 17/1, (JVM)

Brown skua Catharacta skua lonnbergi

[SO] Puysegur Pt to Big R. Foveaux Str, 3 on 19/2 (KM). Oreti B, sth entr, 2 on 9/1 (PR), 1 on 9/3 (R Macfarlane per LE).

Black-billed gull Larus bulleri

[NE] Farewell Spit; 42 in Jun 01 (OSNZ). Takaka, Rototai; 6 on 9/12/98, nesting evident, c10 pr nesting '99 (CP). Waimea E; 63 on 17/7/99, 3 on 9/2/01 (WC). [OT] Ranfurly Oxidation Ponds, 150 adt + 2 downy Chicks on 27-12 (JAW).

Caspian tern Sterna caspia

[NE] Farewell Spit; 2 in Jun 96, 28 in Nov 97, 22 in Jun 98, 11 in Jun 99, 2 in Nov 99, 18 in Feb 00, 46 in Jun 00, 5 in Nov 00, 11 in Feb 01, 20 in Jun 01 (OSNZ). Golden Bay; 11 in Jun 97, 4 in Nov 97, 16 in Jun 99, 63 in Nov 99, 20 in Feb 00, 30 in Jun 00, 104 in Nov 00, 53 in Feb 01, 24 in Jun 01 (OSNZ). Rototai; 52 ad & c20 chicks in 9/12/98, c50 pr nesting 99/00 (CP). Tasman Bay; 1 in Jul 97, 58 in Nov 97, 5 in Jun 98, 8 in Jun 99, 40 in Nov 99, 8 in Feb 00, 8 in Jun 00, 13 in Feb 01, 13 in Jun 01 (OSNZ). [CA] Kaitorete Spit (tip) 160 on 27/11, 10 on 26/5 (CH). Lower Waitaki R, at least 2 breeding pairs, one chick each on, 25/11 (PS for OSNZ survey). [OT] Hawksbury Lgn, 3 ad & 1 juv on 11/3 (K&JVM). Hoopers It, 28 on 17/3 (A&CW). Catlins R, 7 on 14/0 (A&CW).

White-fronted tern Sterna striata

[NE] Takaka, Rototai; c670 on nests on 9/12/98. c250 pr nesting 99/00 (CP). [CA] Kaitorete Spit (tip), 40 on 26/5 (CH).

Eastern little tern Sterna albifrons sinensis

[NE] Waimea E; 3 in March-April 00, 2 on 9/2/01 (WC).

Black-fronted tern Sterna albostriata

[NE] Farewell Spit; 21 in Jun 96, 26 in Jun 97, 17 in Jun 98, 16 in Jun 99, 47 in Feb 00, 39 in Jun 00, 3 in Feb 01, 53 in Jun 01. Rototai; 14 on 22 /6/01 (OSNZ). Motueka Sandspit; 5 on 12/7/97 (JL). Waimea E; 31 in Jan 00, max 103 in Feb, max 60 in March, max 22 in April, max 17 in May, 3 in Jun, 0 in Jul, 95 in Feb 01 (WC). [CA] Ashley R. 89 on 13/8.(TC). Kaitorete Spit, 100+26/5 (CH). [SO] Sandy Pt c20 hawking nr flax swamp, 6 on 11/2, Oreti B, 200 on 11/2 (LE).

White-winged black tern Chlidonias leucopterus

[NE] Waimea E; 2 juv in Dec 99 – March 00, 2 ad in Feb – Jul 00, 1 on 5/8/00 (WC). [CA] Kaitorete Spit (tip) 1 on 26/5, in breeding plumage (CH).

Kea Nestor notabilis

[WC] Jackson R, Ellery Stream confluence; 1 on 6/6 (BAH).

SI kaka Nestor meridionalis meridionalis

[NE] Cobb Dam; 4 flying overhead on 15/10/97, 3 on 15/2/98, 1 on 8/2/00, 1 in Cobb Valley on 9/2/00 (CP). [SO] Cormorant Cove, Resolution is, 1 on 13/2. Kisbee, reservation I, 2 on 15/2 (KM).

Eastern rosella Platycercus eximius

[OT] Taieri Plains, 4 on 11/2 (K&JVM).

Parakeet Cyanoramphus sp.

[SO] Anchor Is, Dusky Sd, 5 heard on 13/2 (KM). Longwoods forest, Riverton heard on 13/1, seen on 2/2 (PR).

Shining cuckoo Chrysococcyx lucidus

[NE] Golden Bay, Milnthorpe; first call of spring 19/9/98 (CP). [SO] Sandy Pt, Invercargill, 1 being chased by small bird on 7/10 (PR).

Long-tailed cuckoo Eudynamys taitensis

[SO] Longwoods forest, Riverton, 1 heard on 13/1. Moores res, 1 heard on 19/1 (PR). Borland Lodge, 3 on 18/1. Sandy Pt. Invercargill, 1 on 9/10. Otatara, Invercargill, 1 on 1/10 (LE).

Oriental cuckoo Cuculus saturatus Glenfalloch, 1 on 24/3, (A&CW)(UBR 31/01).

Little owl Athene noctua

[SO] Wakari, 2 calling 18/5 (PG). Castlewood Rd, 1 on 23/8, 2 on 29/4, 1 on 8/2 (K&JVM). Inchclutha, 1 roosting in hay barn on 24/2 (PS).

Morepork Ninox novaeseelandiae

[SO] Preservation It, 0310 h, 1 on 15/2 (KM). Seaward Bush nest on 28/11 (LE). Wakari, heard on 19/1, 25/2, 26/2, 1/4, 2/4, 4/4, 12/5, 13/5, 15/5 (JAW)

NZ kingfisher Halcyon sancta vagans

[OT] Merton, 4 on 25/7 (K&JVM). Warrington, 3 on 25/8 (K&JVM). Aramoana, 5 on 16/7 (K&JVM). Wakari Rd Dunedin, 1 on 13/5 (PS). Wakari Rd Dunedin, 1 on 27/8 (JAW). Wallace St Dunedin, 1 on 19/8 (J&PB).

SI rifleman Acanthisitta chloris chloris

[OT] Larnach Castle, 1 on 26/11, 2 on 30/12 (JVM). Catlins R walk, common in silver beech on 23/12 (K&JVM).

Rock wren Xenicus gilviventris

[NE] Golden Bay, L Henderson area; 1 male & 2 juv on 28/3/98, c12 in Feb 99, c6 on 8/2/00 (CP).

Silvereye Zosterops lateralis

[SO] Waikaia forest, 1 albino in April (LE).

SI fernbird Bowdleria punctata punctata

[NE] Farewell Spit; heard calling in 97/98 (CP). [SO] Powder Hill, Chalkies Trk, 1 on 31/3 (ARB). Taieri Ferry, 2 on 14/10 (K&JVM). Taieri R, 2 above R Mouth Br on 31/12 (K&JVM). Sinclair Wetlands, 1 on 25/1 (A&CW). Akatore Crk, pair on 22/10 (J&PB). Akatore Crk, 2 on 31/12 (K&JVM).

Yellowhead Mohoua ochrocephala [OT] Catlins R, pair on 23/2 (K&JVM).

SI tomtit Petroica macrocephala macrocephala [SO] Camp Rd, 1 male on 25/5 (JVM). Wakari, 1 male on 10/6 (JAW).

SI robin Petroica australis australis

[SO] Piano Flat, Waikaia forest, many more birds than usual 7/3 (WyC).

Tui Prosthemadera novaeseelandiae

[OT] Will St, Green Is, 1 on 23/8 (JAW). [SO] Chalky Is, Chalky It, 1 on 15-16/2 (KM).

SI saddleback Philesturnus carunculatus

[SO] Breaksea Is, 1 on 12/2. Largest Passage Is, Chalky It, s e coast, intro Jul 2001, 7 ad + 3 fledglings, 1 banded jackbird. 1 fresh empty nest on 18/2, (S Hoosen per KM).

Cirl bunting Emberiza cirlus

[OT] Waianakarua, 2 on 14/10 (ARB).

Rook Corvus frugilegus

[NE] Golden Bay, Onekaka; 2 on 6/10/97, 2 in Sept 98, 2-3 during 99/00 (CP). [OT] Berwick, 2 on 6/10 (AN).

E & OE

SHORT NOTE

Retention time of beads in captive Torres imperial pigeons, Ducula spilorrhoa spilorrhoa

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The retention time of ingested seeds through the gut of frugivores can have important implications for seed dispersal. Theoretically, the longer the retention time, the more likely a seed is to be widely dispersed (Murray et al. 1994). Ducula pigeons are considered to be "true" frugivores and excellent seed dispersers in tropical rain forests where they occur in Asia, Australia and the Pacific (Leighton & Leighton 1983; Lambert 1989; Healey 1992; Whittaker & Turner 1994; Corlett 1998; Steadman & Freifeld 1999; McConkey & Drake 2002), although nothing is known about the retention time of the seeds they have ingested. Retention time is defined as the time from the eating of a fruit to the depositing of its seed(s) (Fukui 1996). The aim of this research was to measure the retention time of beads, as surrogate seeds, in the digestive tract of the Torres imperial pigeon Ducula spilorrhoa spilorrhoa.

Torres imperial pigeons migrate each year from New Guinea to northeastern and eastern Australia to breed (Goodwin 1970). In Queensland, large breeding roosts are established typically in mangroves on small offshore islands where they are relatively free from human influences (Crome 1975a,b). Pigeons breeding on these islands make daily flights to the Australian mainland to feed exclusively on fruits and berries in lowland rainforests (Crome 1975a; Frith *et al.* 1976; Frith 1982; Healy 1992). Pigeons have thin-walled gizzards and short wide guts that allow large seeds to pass intact (Cadow 1933; Lambert 1989).

Feeding trials were conducted consecutively on 4 mature Torres imperial pigeons (weight before: pigeon 1, 423 g; pigeon 2, 451 g; pigeon 3, 443 g; pigeon 4, 463 g). Birds were transferred to a 3 m³ cage the afternoon before their trial. There was no food in the cage from the time of transfer to when the trial started, but water was available ad libitum. At 0800 h on the morning following the transfer, each bird was presented with 10 pieces (1 cm³) of apple, each containing a single plastic bead $(4 \times 3 \text{ mm})$, in its feeding bowl. Beads were used to simulate the retention time of seeds. The bird was allowed to feed freely for 10 min, after which the remaining experimental fruits were removed. Experimental fruits closely matched the regular diet of the captive birds, which consists of chopped apple and pear, and sultanas, peas, and banana. A closedcircuit camera system allowed the observer to view and record the time of 1st and subsequent ingestions, and the time of each defaecation or regurgitation. The cage floor was covered with white plastic to make beads in defaecations and regurgitations easy to see and count. The bird was observed continuously until all ingested beads were expelled. Retention time was calculated as the time period between ingestion and defaecation or regurgitation (Fukui 1996).

Four beads were regurgitated (each 15 min after ingestion), and 11 beads passed through the entire gut and were voided by defaecation (Fig. 1). Beads appeared in the faeces between 45 and 260 min after being ingested (median retention time 85 min; mean \pm SD = 94.5 \pm 59.6). Sample sizes were insufficient to compare retention times between individual pigeons.

The use of beads to simulate seeds, and testing their retention time on captive birds is a common

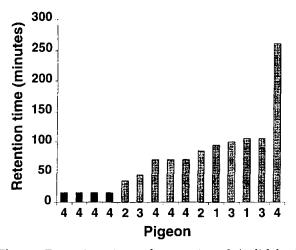


Fig. 1 Retention time of regurgitated (solid bar) and defaecated beads (shaded bars) in 4 Torres imperial pigeons (Ducula spilorrhoa spilorrhoa).

method (Murray et al. 1993; Nogales et al. 2001), however it may not accurately reflect true retention times of seeds in the wild, for 2 reasons. Firstly, seeds are more likely to be firmly encased in their pericarp than beads were in their experimental fruit; secondly, confinement of these pigeons may have restricted their food consumption and digestion rate relative to their wild counterparts.

The dispersal distance of a seed is a function of its retention time within its disperser and the disperser's range and rate of travel (Hoppes 1987; Fukui 1996; Westcott & Graham 2000). Wideranging daily disperser movement patterns from breeding islands to feeding sites on the mainland, involving return flights of up to 30 km (Crome 1975a,b; Frith *et al.* 1976; Frith 1982; Healy 1992) and the reasonably long seed retention times presented here, suggest that Torres imperial pigeons may frequently disperse seeds some distance from their sources.

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