SEABIRDS FOUND DEAD IN NEW ZEALAND IN 1973

By C. R. VEITCH

ABSTRACT

During 1973, 1701 miles of coast were patrolled by 104 members of the Ornithological Society of New Zealand and 6273 dead seabirds were found. Two wrecks contributed to this record total of birds. During July and August large numbers of Blue Penguin *(Eudyptula minor)*, and a few other species, came ashore on both sides of Northland. This wreck was apparently caused by starvation. During September and October high numbers of species which normally frequent seas to the south and west of New Zealand were found on the south and west coasts. These birds were probably forced towards New Zealand by bad weather. New records for New Zealand are Antarctic Petrel *(Thalassoica antarctica)* and White-tailed Tropic Bird *(Phaethon lepturus)*. A new record for beach patrolling is Fulmar Prion *(Pachyptila crassirostris)*. Third and fourth records of Gould's Petrel *(Pterodroma leucoptera leucoptera)* were obtained.

INTRODUCTION

This paper records the results of the Beach Patrol Scheme of the Ornithological Society of New Zealand for 1973. The coastline of New Zealand is divided into 15 sections of coast. During the year all sections of coast were patrolled, and an additional section OI for " Outlying Islands " has been included. This year OI includes only patrols from the Chatham Islands but in future could include other outlying islands in the New Zealand region. 447 beach patrol cards and 31 specimen record cards were filed.

Nomenclature follows the *Annotated Checklist,* OSNZ 1970, except that to save space some trinomials have not been used in the tables. However, species marked * in the text and Tables 2, 3 and 4 all have more than one subspecies which may be found on New Zealand beaches. In most cases it is not reasonable to identify these subspecies from beach wrecked specimens.

Readers are asked to remember, while reading the following results, that data for 1965, 66, 67, 70 and 71 were not available to me for comparative purposes.

RESULTS AND DISCUSSION

The numbers of birds found and miles of beach travelled and covered per month and per coast is recorded in Table 1. The miles travelled in each area is a fair indication of the numbers of people

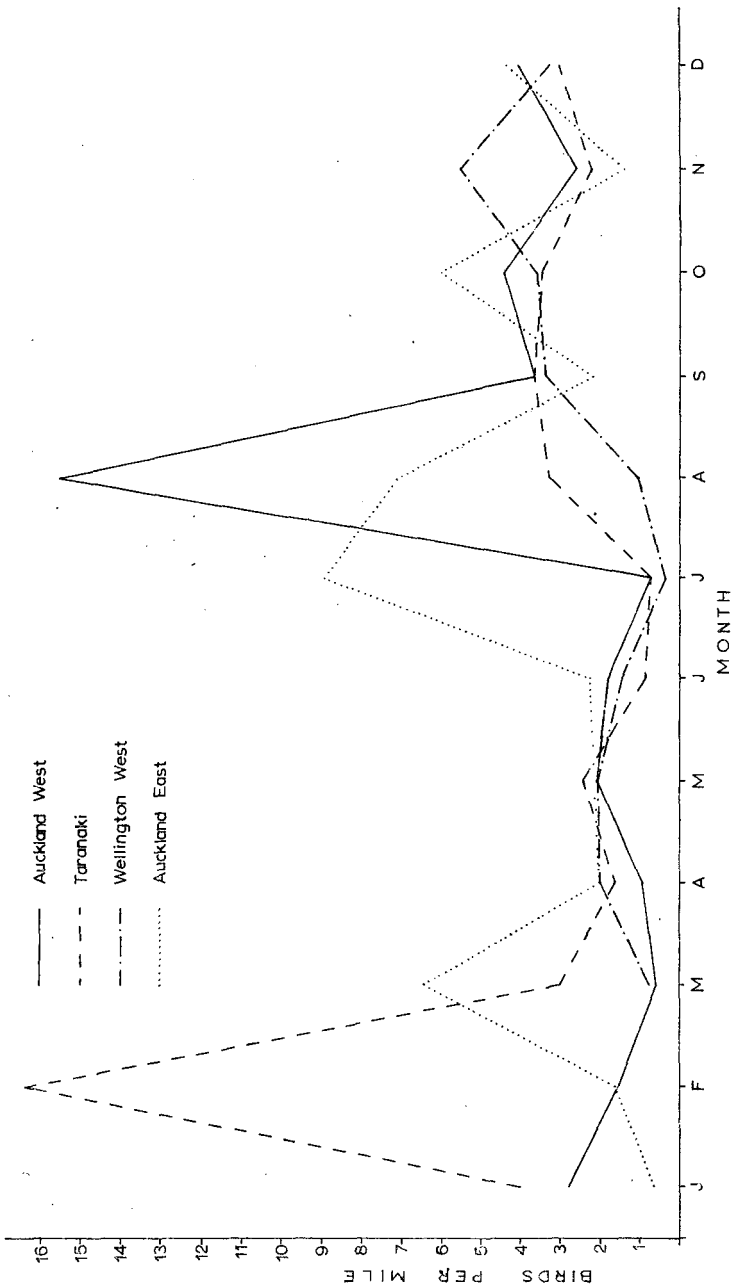

FIGURE 1 — Birds per mile per month for four regularly patrolled coasts in 1973.

patrolling. Auckland West and East, Wellington West and Taranaki received the most attention, while fewer persons did equally good work in other areas. The total miles travelled (1701) is similar to the highest previously recorded, and the number of birds found (6273) is a record. The average number of birds found per mile travelled (3.7) is higher than usual (1960, 1.8; 1961, 3.7; 1962, 1.9; 1963, 1.8; 1964, 1.2; 1969, 1.5; 1972, 2.0), with the exception of 1968 (4.0) when two extensive wrecks occurred. Miles travelled are the total distances patrolled; miles covered (see Table 1) are the lengths of coast inspected monthly. Thus if a mile of beach is patrolled three times in one month, 3 miles have been travelled, but only one mile covered. Although it is known that many patrols on one beach in one month will increase the number of birds found, it is considered that one patrol per month finds the majority of dead birds and hence, for comparative purposes, the figure of miles covered per month is used.

The basic monthly mortality pattern, as shown by birds per mile covered per month in Table 1, is a typical one of lowest mortality in late summer and autumn, but is confused by two major wrecks which occurred from July to October and minor wrecks in some areas as are discussed later.

Details of the rarer specimens found are shown in Table 2, and the monthly and coastal distribution of more common species in Tables 3 and 4. The numbers found on some coasts appears to be particularly large, but when related to miles patrolled the true relationship is shown. Data for birds found per mile covered per month are shown in Figure 1 for four regularly patrolled coasts.

The major wreck of the year, numerically, occurred around the northern half of the North Island beginning in late July and continuing well into August. There is usually a high mortality of Prions (*Pachyptila* spp.) at this time of the year. In 1973 there were more Grey-faced Petrels *(Pterodroma macroptera gouldi)* and White-headed Petrels *(P. lessoni)*, high numbers of Allied Shearwaters *(Puffinus assimilis*)*, Fluttering Shearwater *(P. gavia gavia)* and Diving Petrels *(Pelecanoides urinatrix*)*, and extremely high numbers of Blue Penguins *(Eudyptula minor*)*. The high numbers recorded may be partly due to increased patrolling in Auckland East where one would expect to find species which breed on the nearby islands and winter in New Zealand waters. A number of Blue Penguin from this wreck were clinically examined and appeared to have died from starvation. They were also examined for the presence of pollutants including lead, cadium, mercury, organochlorines, and polychlorinated biphenols but insignificant amounts were recorded (H. Black, Ministry of Agriculture and Fisheries, pers. comm.).

The second wreck occurred in September and October along the south and west coasts, and consisted of birds which normally frequent oceans to the south and west of the country. Notable among these were Kerguelen Petrel *(Pterodroma brevirostris)*, Blue Petrel

TABLE 1 — Numbers of dead seabirds recorded and miles patrolled on each coast in 1973.

COAST	CODE		MONTH											TOTALS	BIRDS/MILE	
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MILES	BIRDS	/COAST
Auckland West	AW	Miles	29	30	22	28	28	52	30	138	90	31	34	86	598		
		Birds	65	46	13	26	58	92	21	2131	332	134	90	347		3355	5.61
Taranaki	T	Miles	1	3	10	12	13	8	12	8	10	14	4	2	97		
		Birds	4	49	30	20	31	7	9	26	37	48	9	6		276	2.85
Wellington West	WW	Miles	-	-	15	19	62	27	28	35	96	48	25	4	359		
		Birds	-	-	11	38	127	41	11	36	325	174	139	13		915	2.55
Westland	WD	Miles	6	-	-	-	-	-	-	-	-	-	-	-	6		
		Birds	0	-	-	-	-	-	-	-	-	-	-	-		0	0
Fiordland	F	Miles	-	-	-	-	-	-	2	-	-	-	-	-	2		
		Birds	-	-	-	-	-	-	0	-	-	-	-	-		0	0
Auckland East	AE	Miles	6	6	15	2	-	8	43	28	6	2	8	40	164		
		Birds	4	10	96	4	-	18	383	199	13	12	11	175		925	5.64
Bay of Plenty	BP	Miles	10	3	8	3	-	4	3	-	5	4	-	1	41		
		Birds	34	20	46	0	-	13	2	-	6	1	-	0		122	2.98
East Coast North Island	EC	Miles	2	-	-	2	-	-	1	-	3	-	6	-	14		
		Birds	3	-	-	2	-	-	1	-	2	-	11	-		19	1.36
Wairarapa	W	Miles	-	-	-	-	-	2	-	-	-	-	1	-	3		
		Birds	-	-	-	-	-	3	-	-	-	-	0	-		3	1.00
Canterbury North	CN	Miles	4	8	7	5	13	4	6	4	1	-	-	4	56		
		Birds	9	10	17	4	16	0	29	0	0	-	-	12		97	1.73
Canterbury South	CS	Miles	5	-	4	3	-	-	3	4	3	3	4	4	33		
		Birds	18	-	3	1	-	-	1	38	3	10	8	5		87	2.64
Otago	O	Miles	1	2	11	15	7	3	12	11	13	1	3	1	65		
		Birds	41	2	34	2	4	9	6	3	5	23	4	12		145	2.23
Southland	S	Miles	-	3	-	4	2	-	-	-	4	4	4	7	28		
		Birds	-	10	-	7	137	-	-	-	4	46	12	10		226	8.07
Wellington South	WS	Miles	-	-	-	13	10	-	11	11	12	2	3	6	66		
		Birds	-	-	-	21	14	-	12	14	4	4	3	8		80	1.21
North Coast South Island	NS	Miles	-	4	-	4	-	-	1	-	2	-	5	-	16		
		Birds	-	4	-	6	-	-	0	-	1	-	3	-		14	0.87
Outlying Islands	OI	Miles	-	-	-	-	-	-	-	-	-	4	-	-	4		
		Birds	-	-	-	-	-	-	-	-	-	9	-	-		9	2.25
Total Miles Travelled (not listed above)			64	63	99	115	146	111	133	255	288	137	122	167	1701		
Total Miles Covered			64	59	92	110	135	108	121	234	240	113	97	153	1526		
Total Birds Recorded			178	151	250	131	387	183	475	2447	732	461	230	588		6273	
Birds/Mile Covered/Month			2.78	2.56	2.72	1.19	2.87	1.69	3.93	10.46	3.05	4.08	2.37	3.84			4.11

TABLE 2 — Seabirds of which 1 to 5 specimens were found dead in 1973. Coast and month of discovery given.

SPECIES OR SUBSPECIES	NUMBER FOUND	COAST(S)	MONTH(S)
Megadyptes antipodes	3	O	1, 3, 3
Diomedea epomophora	3	T, WW, WS	8, 8, 11
melanophris	5	AW(3), T, WW	6, 8, 8, 9, 10
bulleri	5	AW(2), O, S, (2)	4, 5, 9, 9, 10
cauta subspp/	5	AW(2), WW(2), CN	5, 6, 9, 10, 12
cauta salvini	2	AW, WW	9, 12
Thalassoica antarctica	2	AW, S	9, 10
Pterodroma spp/	3	AW(2), WW	5, 8, 12
leucoptera	1	AW	5
hypoleuca nigripennis	2	AW(2)	4, 9
Pachyptila crassirostris	2	CN(2)	7, 7
Procellaria cinerea	2	AW(2)	9, 12
parkinsoni	1	AW	6
westlandica	1	WW	5
aequinoctialis	5	AW(4), CN	1, 11, 11, 11, 12
Oceanites oceanicus	1	EC	4
Pelagodroma spp/	1	AW	8
Phaethon lepturus	1	BP	1
Phalacrocorax spp/	1	AW	6
sulcirostris	3	AW, AE, BP	9, 9, 9
Leucocarbo carunculatus chalconotus	4	O(3), S	5, 5, 9, 12
carunculatus onslowi	1	O1	10
Stercorarius spp/	1	AW	12
skua lonnbergi	5	AW(4), WW	4, 5, 6, 6, 9
parasiticus	1	AE	2
Larus spp/	4	AW, AE, WS(2)	7, 8, 9, 10
TOTAL	65		

/ Species or subspecies could not be identified by patroller.

TABLE 3 — Coastal distribution of the more common seabirds found dead in 1973.

SPECIES OR SUBSPECIES	COAST AW	T	NW	AE	BP	EC	W	CN	CS	O	S	WS	NS	OI	TOTAL BIRDS
Eudyptula minor	1715	31	26	305	10	1	-	-	3	14	1	5	2	2	2115
albosignata	-	-	-	-	-	-	-	5	3	1	-	-	-	-	9
Diomedea spp/	5	3	11	-	-	-	1	-	-	-	3	-	-	-	23
exulans	7	2	1	-	3	-	-	-	2	-	1	1	-	-	17
chrysostoma	12	1	-	-	-	-	-	-	-	-	-	-	-	-	13
cauta cauta	8	3	18	-	-	-	-	-	-	3	-	-	-	-	32
Pheobetria palpebrata	7	-	-	-	-	-	-	-	1	-	1	-	1	-	10
Macronectes giganteus*	28	5	4	4	-	-	1	1	2	1	1	3	-	-	50
Fulmarus glacialoides	66	13	45	-	-	-	-	-	-	-	9	-	1	-	134
Daption capensis*	47	4	16	4	1	-	-	-	2	-	2	5	-	-	81
Pterodroma macroptera	32	-	-	13	6	-	-	1	-	-	-	-	-	-	52
gouldi	39	2	5	-	-	-	-	-	15	-	-	-	-	-	61
inexpectata	10	-	-	-	-	-	-	-	-	-	-	-	-	-	10
brevirostris	104	8	30	-	-	-	-	-	-	-	1	-	1	-	144
cooki	3	-	-	10	1	-	-	-	-	-	-	-	-	-	14
Halobaena caerulea	23	1	11	6	-	-	-	-	1	-	-	-	-	-	42
Pachyptila spp/	139	16	305	30	-	3	-	2	6	-	5	1	-	-	507
vittata	6	1	8	22	-	1	-	6	4	-	11	-	1	-	60
salvini	76	1	19	4	-	-	-	2	-	-	-	-	-	-	102
desolata*	52	3	4	39	-	-	-	1	-	-	2	-	1	-	101
belcheri	41	-	6	4	-	-	-	2	7	2	-	1	-	-	63
turtur	153	14	153	43	2	2	-	18	8	2	5	7	-	-	407
Puffinus spp/	19	1	6	2	-	-	-	-	-	-	-	-	-	-	28
carneipes	10	1	-	38	7	-	-	-	-	-	-	-	-	-	56
bulleri	42	1	13	35	6	-	-	4	-	-	-	1	-	-	102
griseus	216	14	55	14	9	2	-	7	1	3	145	-	1	-	467
tenuirostris	33	8	31	9	7	-	-	-	-	1	3	-	-	-	92
gavia	112	17	23	75	13	-	-	1	-	-	-	-	-	-	241
huttoni	3	1	5	-	-	-	-	2	1	-	-	-	-	-	12
assimilis*	11	-	-	127	-	-	-	-	-	-	-	-	-	-	138
Pelagodroma marina*	-	-	-	3	4	1	-	-	-	-	-	-	-	-	8
Pelecanoides urinatrix*	106	10	19	73	8	2	-	-	-	-	14	2	-	-	234
Sula bassana	82	5	-	22	5	-	-	3	-	1	-	-	-	-	118
Phalacrocorax carbo	1	4	1	-	-	-	-	2	1	-	-	-	-	-	9
varius	6	-	-	3	2	-	-	2	-	-	-	-	-	-	13
melanoleucos	1	1	-	-	2	-	-	-	-	5	-	1	-	-	10
Stictocarbo punctatus*	4	1	-	-	-	-	-	13	12	35	4	-	-	-	69
Larus dominicanus	85	42	78	17	4	5	-	12	10	28	9	34	4	5	333
novaehollandiae	6	56	4	18	27	-	1	5	5	40	-	16	3	1	182
bulleri	-	-	4	-	-	1	-	-	3	-	4	-	-	-	12
Hydroprogne caspia	2	-	3	-	-	-	-	-	-	1	-	-	-	-	6
Sterna striata	13	4	3	2	3	-	-	4	-	1	1	-	-	-	31
TOTALS	3325	274	907	922	120	18	3	93	87	138	222	77	14	8	6208

/ Species could not be identified by patroller.

* See text.

TABLE 4 — Monthly distribution of the more common seabirds found dead in 1973.

SPECIES OR SUBSPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL BIRDS
Eudyptula minor*	26	19	39	12	21	10	90	1724	73	26	13	62	2115
albosignata	3	2	1	-	1	-	-	-	-	-	-	2	9
Diomedea spp/	-	1	1	-	3	2	2	4	7	3	-	-	23
exulans*	4	-	-	1	3	1	-	3	1	4	-	-	17
chrysostoma	-	-	-	-	-	1	-	4	4	4	-	-	13
cauta cauta	-	-	3	-	9	7	1	2	2	6	2	-	32
Phoebetria palpebrata	1	-	-	-	1	1	-	1	2	-	3	1	10
Macronectes giganteus*	-	-	3	-	3	7	1	26	5	2	1	2	50
Fulmarus glacialoides	-	-	-	-	-	1	-	-	51	60	13	9	134
Daption capensis*	-	3	-	-	-	2	5	20	24	11	9	7	81
Pterodroma macroptera	4	-	4	-	1	5	10	7	14	2	1	4	52
lessoni	1	-	-	1	3	3	2	21	9	10	5	6	61
inexpectata	1	-	-	-	-	1	-	-	-	-	1	7	10
brevirostris	-	-	-	-	-	-	1	-	123	19	-	1	144
cooki	1	-	2	1	-	-	-	-	-	-	1	9	14
Halobaena caerulea	-	-	-	-	-	-	6	4	27	5	-	-	42
Pachyptila spp/	6	-	1	-	13	10	30	114	172	99	54	8	507
vittata	9	2	-	-	2	1	22	4	2	11	2	5	60
salvini	1	1	-	-	4	3	7	60	22	4	-	-	102
desolata*	-	-	1	1	4	1	38	43	8	4	-	1	101
belcheri	-	-	-	-	-	3	8	44	5	2	-	1	63
turtur	4	12	3	14	19	5	40	86	55	56	59	54	407
Puffinus spp/	-	-	1	-	-	17	-	4	2	1	-	3	28
carneipes	2	9	29	1	-	-	-	-	-	-	7	8	56
bulleri	8	6	14	6	7	5	-	-	6	6	10	34	102
griseus	13	20	7	7	171	18	4	5	13	13	49	147	467
tenuirostris	9	9	5	-	36	9	-	2	1	3	3	15	92
gavia	5	9	28	11	8	10	13	73	14	8	7	55	241
huttoni	1	-	1	-	1	-	-	1	2	6	-	-	12
assimilis*	-	-	-	-	-	-	119	11	-	-	2	6	138
Pelagodroma marina*	4	-	1	-	-	-	-	-	1	-	-	2	8
Pelecanoides urinatrix*	12	9	7	8	8	4	23	103	10	15	3	32	234
Sula bassana	6	13	3	8	3	7	8	22	11	6	3	28	118
Phalacrocorax carbo	-	1	1	-	3	1	-	-	-	1	1	1	9
varius	1	3	-	-	1	1	1	1	2	-	-	3	13
melanoleucos	2	-	1	-	1	-	1	2	1	-	1	2	10
Stictocarbo punctatus*	9	3	11	4	1	3	6	5	1	20	1	5	69
Larus dominicanus	13	10	37	31	39	21	20	32	34	31	21	44	333
novaehollandiae	26	11	39	15	9	13	11	11	11	10	10	16	182
bulleri	-	2	-	-	2	1	-	-	-	3	4	-	12
Hydroprogne caspia	-	-	1	-	-	2	1	-	2	-	-	-	6
Sterna striata	3	5	4	6	3	1	1	1	1	4	-	1	31
TOTALS	175	150	248	127	379	177	472	2440	718	455	286	581	6208

/ Species could not be identified by patroller.

* See text.

(Halobaena caerulea) and Antarctic Fulmar *(Fulmarus glacialoides)*. Information supplied by the New Zealand Meteorological Service indicates that there were gales along the Antarctic coast followed by strong southerly winds from 7 to 9 September which may have brought these birds northward. There was no noticeable increase in numbers of more common species found during this period except in some localised areas which are discussed later.

With this influx from the south came three specimens of Antarctic Petrel *(Thalassoica antarctica)*. Two of these, from Auckland West (Crockett 1975, *Notornis* 22 (3): 249) and Southland (Barlow 1974, *Notornis* 21: 183-4) in September and October respectively, are recorded in this scheme and both specimens are now in the National Museum. The third was reported from the Cape Kidnappers area in December (F. C. Kinsky pers. comm.). These are the first confirmed records of this species in New Zealand coastal waters. It has previously been recorded as rarely ranging north of 60°S (*Annotated Checklist,* OSNZ 1970: 121).

There were other unusual finds apparently not related to these wrecks. Most notable was the White-tailed Tropic Bird *(Phaethon lepturus)* found near Whakatane in January 1973. This was a new record for New Zealand (Brown 1973, *Notornis* 20: 380-1). The two specimens of Fulmar Prion *(Pachyptila crassirostris*)* found on Canterbury North beaches in July are new records for beach patrolling. The Gould's Petrel *(Pterodroma leucoptera leucoptera)* found in May and another taken live to the Wellington R.S.P.C.A. in the same month are the third and fourth records of this species in New Zealand (*Annotated Checklist, OSNZ* 1970: 23).

A study of Tables 1, 2 and 3 and Figure 1 show a number of minor localised wrecks around the New Zealand coast. In Otago during January, October and December local gales and patrols on beaches near breeding colonies contributed to higher than usual numbers of Blue Penguins, Spotted Shags *(Stictocarbo punctatus*)*, and Red-billed Gulls *(Larus novaehollandiae)*. Also some beaches on the Otago Peninsula appear to have an ability to collect sea borne flotsam. The high return for Taranaki in February, which consisted of a normal variety of species, appears to be entirely due to frequent patrolling of one good beach. Also in February northerly winds brought a relatively high number of birds to the Bay of Plenty among which were three Short-tailed Shearwaters *(Puffinus tenuirostris)*. Easterly winds and an increase in the amount of patrolling on previously unvisited beaches resulted in a high number of birds per mile to Auckland East in March and October. The high number of birds recorded for Southland in May is due to one person who patrolled 2 miles of Masons Bay on the west coast of Stewart Island and found 134 Sooty Shearwaters *(Puffinus griseus)*. Auckland West in December received 115 Sooty Shearwaters for no obvious reason, and there was a minor wreck of Fairy Prions *(Pachyptila turtur)* on Wellington West beaches in

November. There was also an unexplained large increase in the number of gulls *(Larus dominicanus* and *L. novaehollandiae)* found throughout the year. Other high figures of birds per mile per month can frequently be attributed to diligent searching of new areas as cards from such areas record many old specimens; and sometimes to frequent patrols of a good beach.

There have also been a few unusual records filed of seabirds found inland. These were:— 4 Fairy Prions in Nelson City, a Black-browed Mollymawk *(Diomedea melanophris*)* and an Antarctic Fulmar at Appleby, Nelson, and an immature Bullers Mollymawk *(Diomedea bulleri)* near Alexandra in Central Otago.

Miscellaneous birds recorded but not considered to be seabirds totalled 127. These were 19 Magpie (both subspecies), 18 Blackbird, 16 Rock Pigeon, 13 Mallard Duck, 11 Grey Duck, 5 each of Pied Stilt, South Island Pied Oystercatcher, Harrier and Pukeko, 4 Black Swan, 3 each of Starling, Bar-tailed Godwit, and Chaffinch, 2 each of Song Thrush, Myna, Goldfinch, Yellow Hammer and Pheasant, and one each of House Sparrow, Knot, California Quail, New Zealand Dotterel, Eastern Rosella, unidentified Oystercatcher and unidentified Passerine.

Among the 31 specimen record cards filed for 1973 were 18 for Kerguelen Petrels. To this I have added data from 6 specimen record cards filed between 1954 and 1972, 10 specimens in the National Museum, and 2 in the Auckland Museum. A summary of measurements is given in Table 5.

TABLE 5 — Summary of measurements (in mm) of Kerguelen Petrel *(Pterodroma brevirostris)*

	BILL Length	BILL Depth	BILL Width	Mid Toe & Claw	Tarsus	Wing	Tail	Total Length	Span	Weight
Number of Specimens	36	20	23	33	36	36	36	15	4	11
Mean	26.63	12.20	9.95	49.29	37.48	260.2	106.1	335.2	834.0	272.9
Range	25.2 29.7	10.5 13.0	9.4 11.9	46.0 53.0	32.7 41.7	241 275	92 120	315 345	790 876	240 340

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We are very sad to have to announce the passing of Mrs Hetty McKenzie, a much loved and valued member of the Society. An appreciation will appear in the next issue.

NEWLY PUBLISHED

Gardening with New Zealand Plants, Shrubs and Trees by Muriel E. Fisher, E. Satchell and Janet M. Watkins has been established for a number of years as an indispensable reference book for New Zealand gardeners, especially those concerned with the native flora and its relationship to abundant bird life. Many members of the OSNZ know and value the first edition of this book which, although now issued as the third printing, is virtually a new book since in the main sections Muriel Fisher has given full information on 37 new plants, as well as additional information on 16 plants already in the book. Janet Watkins has added step-by-step advice on how to start planning a garden, a piece on Home Units, and four new garden plans. Two completely new sections have been included — on Orchids by Stephen King, and on Water Gardening by Janet Watkins. Both Glossary and Index have been revised and enlarged; there are 23 new colour plates; and a new feature has 11 wash drawings by L. Ward, with three black and white photographs.

The publishers are Collins and the price is $12.50. It can be thoroughly recommended as the first printings have proved.