SEABIRDS FOUND DEAD IN NEW ZEALAND IN 1974

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ABSTRACT

During 1974, 2909 kilometres of coast were patrolled by 147 members of the Ornithological Society of New Zealand and their friends. The 24,747 dead seabirds found is a record. Two large wrecks contributed to this total. During April and May some 3,500 Blue Penguins *(Eudyptula minor)* came ashore on both sides of Northland. During June and July more than 13,000 Prions (*Pachyptila* spp) came ashore along the whole of the west coast of New Zealand. Both these wrecks were apparently caused by starvation following periods of adverse weather. Other minor, localised, wrecks are recorded. Unusual finds were one Soft-plumaged Petrel *(Pterodroma mollis)*, one Grey Ternlet *(Procelsterna cerulea albivitta)*, and two Erect-crested Penguins *(Eudyptes pachyrhynchus sclateri.)*

INTRODUCTION

This paper records the results of the Ornithological Society of New Zealand's Beach Patrol Scheme for 1974. The coastline of New Zealand is divided into 15 sections (Imber & Boeson 1969) with an additional grouping of "OI" for outlying islands which this year includes patrols from the Chatham Islands. This year patrols were carried out on all sections of coast except Fiordland. 556 Beach Patrol Cards and 25 Specimen Record Cards were filed.

Nomenclature follows the *Annotated Checklist* (OSNZ 1970), except that, to save space in the tables, some tri-nominals have not been used.

RESULTS AND DISCUSSION

The numbers of birds found and kilometres of beach travelled and covered per month and per coast are recorded in Table 1. The distance travelled in each area is a reasonable indication of the number of people patrolling in that district. Auckland West, Wellington West, Auckland East and Wellington South received the most attention whereas fewer persons did equally good work in other areas. The total distance travelled (3457 kilometres) is higher than ever before, and the total number of birds found (24,747) is some four times higher than in past years.

The average number of birds found per kilometre travelled (7.2) is more than four times higher than in most previous years. Kilometres travelled are the total lengths of coast patrolled; kilometres

TABLE 1 : Numbers of dead seabirds recorded and kilometres of beach patrolled on each coast in 1974*

COAST	CODE		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS KM	TOTALS BIRDS	BIRDS/KM/ MONTH
Auckland West	AW	Km	115	4	34	62	86	207	257	54	94	67	83	71	1134		
		Birds	149	6	36	274	588	5589	5902	408	382	54	157	107		13652	12.04
Taranaki	T	Km	2	4	1	1	4	6	18	2	1	8	-	-	47		
		Birds	6	8	4	1	6	24	89	4	1	10	-	-		153	3.26
Wellington West	WW	Km	1	5	17	28	26	106	64	13	56	19	30	-	365		
		Birds	2	13	32	42	53	2269	589	26	46	8	26	-		3106	8.51
Westland	WD	Km	-	-	-	1	-	1	-	-	-	-	2	-	4		
		Birds	-	-	-	2	-	39	-	-	-	-	1	-		42	10.50
Auckland East	AE	Km	139	55	56	137	69	61	25	19	21	17	49	60	708		
		Birds	652	215	501	2351	1089	179	31	30	33	25	200	224		5530	7.81
Bay of Plenty	BP	Km	9	2	5	-	3	9	1	11	12	8	7	7	74		
		Birds	27	4	3	-	1	9	1	2	8	11	22	35		123	1.66
East Coast NI	EC	Km	7	-	11	5	8	17	4	9	4	4	-	-	69		
		Birds	7	-	14	2	62	14	10	23	4	1	-	-		137	1.99
Wairarapa	W	Km	-	-	-	-	-	2	-	-	-	-	-	-	2		
		Birds	-	-	-	-	-	4	-	-	-	-	-	-		4	2.00
Canterbury North	CN	Km	-	16	6	24	12	12	11	3	7	5	1	-	97		
		Birds	-	49	13	50	26	20	22	0	6	3	0	-		189	1.95
Canterbury South	CS	Km	-	6	18	6	8	8	15	8	7	13	4	7	100		
		Birds	-	5	83	26	83	23	47	9	3	27	76	31		413	4.13
Otago	O	Km	-	11	3	-	-	7	1	-	-	-	-	3	25		
		Birds	-	19	6	-	-	4	0	-	-	-	-	3		32	1.28
Southland	S	Km	5	5	5	10	10	11	11	5	9	-	-	5	76		
		Birds	6	9	1	3	986	2	10	22	36	-	-	2		1077	14.17
Wellington South	WS	Km	3	5	21	19	19	26	10	13	33	12	1	-	162		
		Birds	5	10	19	36	61	24	18	21	47	19	5	-		265	1.64
North Coast SI	NS	Km	-	3	32	3	-	-	-	-	-	-	-	-	38		
		Birds	-	2	12	1	-	-	-	-	-	-	-	-		15	0.39
Outlying Islands	OI	Km	-	-	8	-	-	-	-	-	-	-	-	-	8		
		Birds	-	-	9	-	-	-	-	-	-	-	-	-		9	1.12
Total Kilometres Travelled (not listed above)			302	134	254	385	296	573	489	155	285	180	211	193	3457		
Total Kilometres Covered			281	116	217	296	245	473	417	137	244	153	177	153	2909		
Total Birds Recorded			854	340	733	2788	2955	8200	6719	545	566	158	487	402		24747	
Birds/Kilometres Covered/Month			3.04	2.93	3.38	9.42	12.06	17.34	16.11	3.98	2.32	1.03	2.75	2.63			8.51

* There were no patrols on the Fiordland Coast.

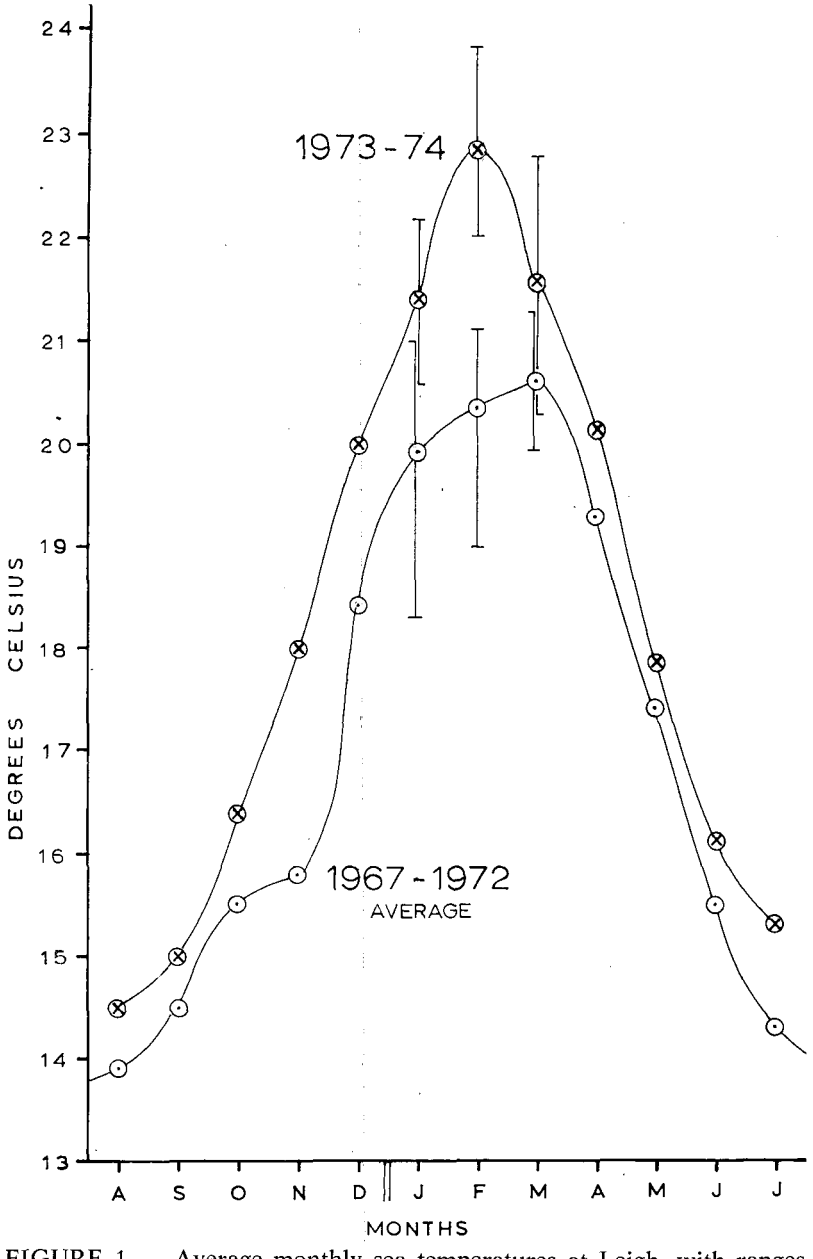

FIGURE 1 — Average monthly sea temperatures at Leigh, with ranges shown for January, February and March.

covered are the lengths of coast covered monthly. Hence, if a kilometre of beach is patrolled 3 times in one month, 3 kilometres have been travelled but only one kilometre covered per month.

The usual pattern of lowest mortality in late summer and autumn has this year been completely obscured by two large wrecks and many lesser ones.

Beginning in late March, and continuing through April and May, large numbers of Blue Penguins were washed ashore on both coasts of Northland. The largest part of this wreck was on Auckland East beaches in April when 2207 Blue Penguins were found (16 birds per kilometre covered). There is little doubt that this wreck was due to starvation and that mainly young birds were killed. It is also interesting to note that of the 15 randomly collected specimens examined by the Whangarei Animal Health Laboratory 14 were females (H. Black pers. comm.). All 15 specimens showed clear signs of starvation and high internal parasite numbers as are frequently associated with loss of healthy condition. Weather conditions at the time of this wreck were average but during the preceding summer months the weather in the Northland area had been mainly fine and calm with average air temperatures as much as 4°C above normal. This affected sea temperatures (Figure 1) and there was a subsequent lack of phytoplankton growth (W. J. Ballantyne pers. comm.). It is presumed that this lack of phytoplankton caused a breakdown in the food chain and a reduction of food available to penguins. At the same time the lack of phytoplankton clouding the water, and lack of turbidity caused by storms and flood water meant that the seawater was clearer. It might be assumed, therefore, that it was more difficult for penguins to catch their prey.

The major wreck of the year consisted of all the Prion species usually recorded, and occurred during late June and July along the entire west coast of New Zealand. Birds from this wreck continued to be found until September. In terms of total numbers of birds found, and as birds per kilometre patrolled, this was by far the largest wreck of seabirds recorded in New Zealand. In June on west coast beaches Prions were found at a rate of more than 23 per kilometre covered. This is also the first recorded occasion that all the Prion species have been found at the same time (Figure 2). At the time of this wreck weather conditions along the west coast were not unusual but in the first three weeks of June there were a number of deep depressions, down to 965 millibars, between the central Tasman Sea and Macquarie Island. These were followed by a period of light to moderate westerly winds during the last week of June and most of July. The Prions involved in this wreck showed obvious signs of starvation. A number were found alive on the beaches but did not respond to feeding. It might be assumed, therefore, that these birds were involved in the bad weather in early June and their body condition was reduced to such a level that they were not able to

TABLE 2 : Seabirds of which 1 to 5 specimens were found dead in 1974. Coast and month of discovery given.

SPECIES OR SUBSPECIES	NUMBER FOUND	COAST(S)	MONTH(S)
Megadyptes antipodes	4	CS,O(2),WS	2.2,7,11
Eudyptes p. sclateri	2	CS,WS	4,6
Phoebetria palpebrata	4	AW,AE,CS,WS	3,6,7,7
Pterodroma mollis	1	AE	12
pycrofti	1	AE	1
h. nigripennis	2	AW,AE	4,6
Procellaria spp	1	AW	12
cinerea	1	WS	8
parkinsoni	2	AW,WS	1,5
westlandica	1	AW	11,
aequinoctialis	2	AW(2)	3,11
Garrodia nereis	1	WW	6
Phalacrocoracidae	1	AW	11
sulcirostris	1	CN	6
melanoleucos	3	WW,EC,CN	4,6,6
Leucocarbo c. chalconotus	4	O(2),S(2)	2,2,9,9
onslowi	1	OI	3
Stercorarius s. lonnbergi	4	AW(2),AE,WDI	1,4,4,9
parasiticus	1	AW	6
Procelsterna cerulea	1	AE	1
TOTAL	38		

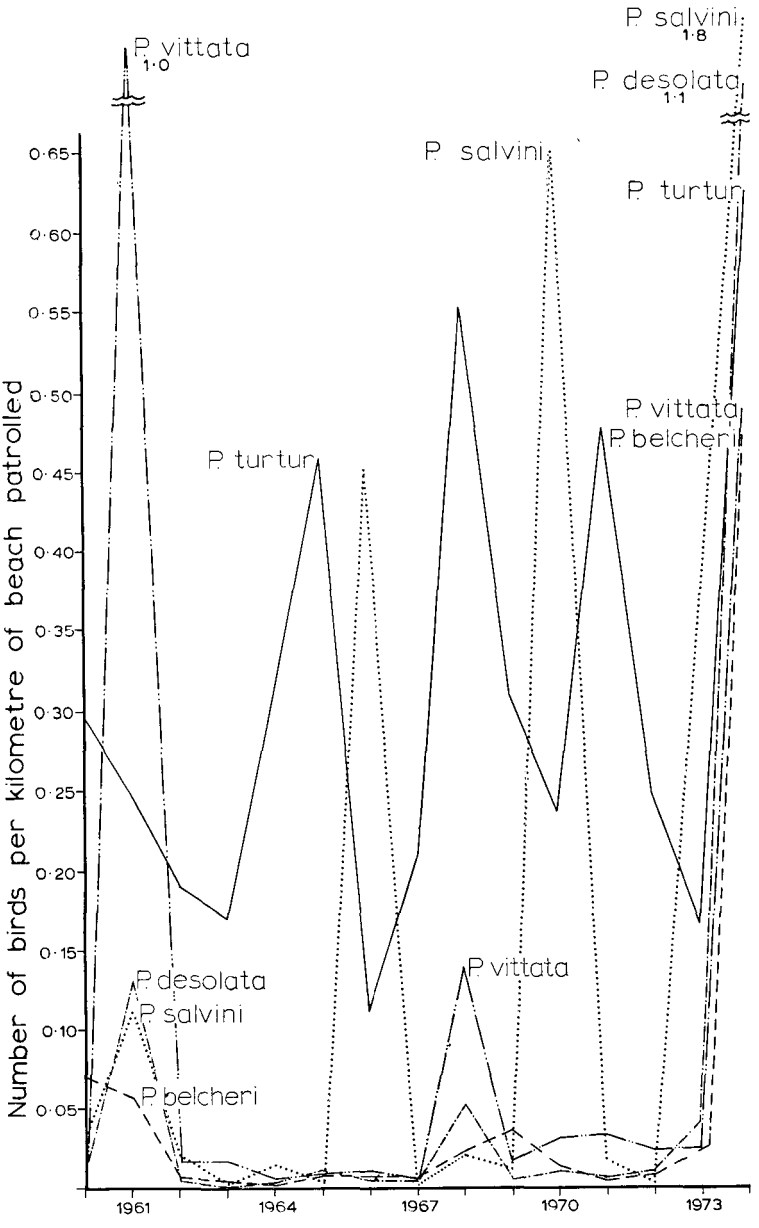

FIGURE 2 — Fluctuations in the number of Prions found on New Zealand beaches.

recover in the better sea conditions later in the month or closer to New Zealand.

The lesser, more localised, wrecks occurred in most months of the year. There are four major likely causes of such wrecks being recorded by patrollers:—

1. An increase in patrolling activity in a particular area.
2. Local weather patterns causing birds which might normally drift away to be washed ashore. This is particularly likely on east coast beaches.
3. The presence of local seabird breeding colonies and their success or failure in any one season.
4. The fluctuation of local food supplies — particularly for penguins and other less mobile species.

As not all of the above factors are known to me, it is not reasonable to try to explain all the following wrecks.

In January there were larger than usual numbers of Blue Penguins and Fluttering Shearwaters *(Puffinus gavia)* on both Auckland West and Auckland East beaches. There were also extra numbers of Fairy Prions *(Pachyptila turtur)* and Diving Petrels *(Pelecanoides urinatrix)* found on Auckland East beaches. Weather records for this month show a high frequency of south and east winds. The amount of patrolling on Auckland East has also increased considerably.

In February Auckland East continued to have higher than usual numbers of Blue Penguins and Canterbury North had extra Spotted Shags *(Stictocarbo punctatus)*. Extra north-east winds were recorded during this month.

In late April, following a period of southerly storms, South Canterbury beaches received a high number of Spotted Shags.

In May there was the expected mortality of Sooty Shearwaters *(Puffinus griseus)* at the time when the young leave their nests, but this year the number found (1154) was considerably higher than usual. 972 birds of this total were found on 10 kilometres of Southland beach. Patrols at the same time in past years have produced much lower numbers of birds. This Sooty Shearwater wreck was also recorded, but not so marked, on Canterbury and Wellington South beaches. The number found on East Coat (N.I.) beaches was higher at 5.5 per kilometre.

Throughout the months of May, June and July Canterbury South received higher than usual numbers of Spotted Shags.

In August strong south-east winds and extra numbers of Fluttering Shearwaters caused the high total for East Coast (N.I.). In Southland during August and September there were extra Diving Petrels.

TABLE 3 : Coastal distribution of the more common seabirds found dead in 1974

SPECIES OR SUBSPECIES	AW	T	WW	WD	AE	BP	EC	W	CN	CS	O	S	WS	NS	OI	TOTAL
Eudyptula minor	954	3	18	-	3729	13	5	1	1	3	7	1	5	1	-	4741
albosignata	-	-	1	-	-	-	-	-	4	21	-	-	1	-	-	27
Diomedea spp *	18	2	3	-	-	-	-	-	4	1	1	4	3	-	-	36
exulans	3	-	1	-	1	-	1	-	-	2	-	-	-	-	-	8
epomophora	1	-	2	-	-	-	-	1	-	-	-	-	2	-	-	6
melanophris	4	-	1	-	-	-	1	-	-	-	-	-	2	-	-	8
chrysostoma	36	-	2	-	-	-	1	-	-	-	-	-	1	-	-	40
bulleri	2	-	1	-	-	-	-	-	-	2	-	-	1	-	-	6
cauta subspp *	6	-	-	-	1	-	1	-	-	3	-	-	1	-	-	12
cauta	5	-	1	-	-	-	-	-	1	-	-	-	1	-	-	9
salvini	-	-	-	-	2	1	-	-	1	2	-	-	-	-	-	6
Macronectes giganteus	30	1	4	-	4	1	2	-	2	1	-	2	3	-	-	50
Fulmarus glacialoides	15	-	-	-	-	-	-	-	-	1	-	2	1	-	-	19
Daption capensis	105	5	12	-	7	1	4	-	4	2	-	1	20	-	-	161
Pterodroma spp *	2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	8
macroptera	17	-	-	-	35	2	-	-	-	-	-	-	-	-	-	54
lessoni	45	-	5	-	1	-	-	-	-	-	-	-	1	-	-	52
inexpectata	9	1	-	-	1	-	-	-	-	2	-	1	-	-	-	14
brevirostris	41	-	4	-	2	-	-	-	-	-	-	-	2	-	-	49
cooki	9	-	-	-	46	-	-	-	-	-	-	-	-	-	-	55
Halobaena caerulea	11	-	3	-	-	-	1	-	-	-	-	-	1	-	-	15
Pachyptila spp *	1563	30	245	14	24	1	4	-	2	11	-	4	7	1	1	1907
vittata	196	17	935	4	11	-	2	-	1	1	-	2	6	-	-	1175
salvini	4481	27	696	4	1	-	4	-	-	1	-	10	4	-	-	5228
desolata	2956	9	188	11	5	1	7	-	-	4	-	-	4	-	1	3186
belcheri	1092	4	222	3	2	-	-	-	-	2	-	-	1	-	-	1326
turtur	1034	12	488	-	139	2	7	-	6	11	9	8	21	2	6	1765
Puffinus spp *	4	-	1	-	22	-	-	-	-	-	-	-	-	-	-	27
carneipes	14	1	-	-	163	1	2	-	-	-	-	-	-	-	-	181
bulleri	32	-	9	-	143	5	1	-	-	2	-	-	1	-	-	193
griseus	161	4	55	-	143	40	48	1	29	43	6	977	51	-	-	1558
tenuirostris	40	-	2	-	43	4	-	-	1	1	-	-	2	-	-	93
gavia	280	12	58	-	243	10	18	-	2	2	-	-	11	-	-	636
huttoni	4	-	2	-	-	-	-	-	7	6	-	-	2	-	-	21
assimilis	2	-	-	-	31	15	5	-	-	-	-	-	-	-	-	53
Pelagodroma marina	6	-	-	-	8	2	1	-	-	4	-	-	-	-	-	21
Pelecanoides urinatrix	171	8	63	3	444	9	12	1	1	2	-	36	7	1	-	758
Sula bassana	90	-	2	-	131	3	3	-	-	2	-	-	-	2	-	233
Phalacrocorax carbo	2	-	1	-	-	-	-	-	1	2	-	-	1	-	-	7
varius	4	-	-	-	10	-	-	-	-	-	-	-	-	-	-	14
Stictocarbo punctatus	3	-	1	-	-	-	-	-	56	243	1	2	-	1	-	309
Larus dominicanus	130	7	53	1	32	4	5	-	32	18	3	18	57	5	-	365
novaehollandiae	26	7	11	-	34	6	-	-	22	10	1	1	39	-	-	177
bulleri	-	-	7	-	-	1	1	-	6	2	-	6	1	-	-	24
Hydroprogne caspia	10	-	5	-	1	-	-	-	-	-	-	-	-	2	-	18
Sterna striata	25	3	3	1	19	1	-	-	4	3	-	-	-	-	-	59
TOTALS	13641	153	3104	41	5524	123	136	4	187	410	28	1075	260	15	8	24709

* Species or subspecies not identified.

The expected northern wreck of Sooty Shearwaters came in November this year to Auckland West, Auckland East and Bay of Plenty beaches. At the same time and during December, there were large numbers of Spotted Shags on South Canterbury beaches.

During December a period of north-east winds brought extra numbers of many species to Auckland East. Bay of Plenty beaches also received these extras while continuing to receive high numbers of Sooty Shearwater.

The Soft-plumaged Petrel *(Pterodroma mollis)* found on Ruakaka Beach, Auckland East, is the most unusual find of the year. This is the third record of this species for mainland New Zealand and the second record for Beach Patrolling.

This year is the first time a Grey Ternlet *(Procelsterna cerulea albivitta)* has been recorded in the Beach Patrol Scheme although others have been found on beaches (F. C. Kinsky pers. comm.) and four should have been recorded in 1973 Beach Patrol data (D. E. Crockett pers. comm.). This species is known to be present in low numbers on a few rock stacks between the Poor Knights and White Islands.

Also of interest are the two Erect-crested Penguins *(Eudyptes pachyrhynchus sclateri)* found in early winter on South Canterbury and Wellington South beaches. This species has been recorded only once before on Beach Patrols; 3 birds in 1963. The *Checklist* (OSNZ 1970) records this species as ranging as far north as North Cape.

Other species not commonly found on Beach Patrols were:— One Pycroft's Petrel *(Pterodroma pycrofti)*, two Black-winged Petrels *(P. hypoleuca nigripennis)* and one Grey-backed Storm Petrel *(Garrodia nereis)*.

The apparent increase in a number of other species found can be related to an increase of patrolling in some areas. For example, in Auckland East the length of beach covered almost doubled during this year. This has produced good data and an increase in recorded deaths of species which frequent waters off that coast e.g. — Cook's Petrel *(Pterodroma cooki cooki)*, Flesh-footed Shearwater *(Puffinus carneipes hullianus)*, Buller's Shearwater *(P. bulleri)*, Fluttering Shearwater, White-faced Storm Petrel *(Pelagodroma marina maoriana)*, Diving Petrel and Australian Gannet *(Sula bassana serrator)*.

Miscellaneous birds recorded, but not considered to be seabirds, totalled 158. These were:— 23 Magpies (both sub-species), 22 Blackbirds, 17 Mallard Ducks, 16 Rock Pigeons, 8 Pukekos, 7 Starlings, 6 each of S.I. Pied Oystercatchers and Mynas, 5 each of Harriers, Black Swans and Pheasants, 4 Grey Ducks, 3 each of Tuis, Pied Stilts, Silvereyes, Song Thrushes, Chaffinches and unidentified Passerines and Ducks, 2 each of Variable Oystercatchers, Reef Herons and Domestic Geese and one each of Knot, Bar-tailed Godwit, House Sparrow, White-faced Heron, California Quail, Shining Cuckoo and Long-billed Curlew.

TABLE 4 : Monthly distribution of the more common seabirds found dead in 1974

SPECIES OR SUBSPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL BIRDS
Eudyptula minor	137	106	455	2437	1158	251	137	13	14	4	10	19	4741
albosignata	1	1	14	3	1	1	1	-	-	3	-	2	27
Diomedea spp*	-	2	-	1	-	15	4	3	4	2	4	1	36
exulans	-	-	1	2	1	1	1	1	-	-	1	-	8
epomophora	-	1	-	-	1	1	-	1	-	1	1	-	6
melanophris	1	-	-	2	1	2	1	-	1	-	-	-	8
chrysostoma	1	-	-	-	-	2	12	10	12	1	2	-	40
bulleri	-	2	-	-	1	1	1	-	1	-	-	-	6
cauta subspp*	-	-	2	-	-	3	2	-	3	-	1	1	12
cauta	-	1	-	-	2	1	-	2	1	-	1	-	8
salvini	1	1	2	1	1	-	-	-	-	-	-	-	6
Macronectes giganteus	1	-	-	3	2	6	15	4	8	5	4	2	50
Fulmarus glacialoides	1	-	-	-	-	1	4	4	5	2	2	-	19
Daption capensis	-	1	1	-	2	44	43	18	29	12	10	1	161
Pterodroma spp*	5	-	-	2	1	-	-	-	-	-	-	-	8
macroptera	22	3	-	3	5	7	2	-	2	3	3	4	54
lessoni	2	-	-	1	4	17	17	1	1	1	6	2	52
inexpectata	1	1	-	1	3	1	-	-	-	-	3	4	14
brevirostris	-	-	-	-	-	3	12	8	23	-	3	-	49
cooki	14	-	5	4	1	-	-	-	-	2	8	21	55
Halobaena caerulea	-	-	-	-	-	2	4	7	1	-	1	-	15
Pachyptila spp*	19	6	20	8	11	589	952	93	178	9	13	9	1907
vittata	1	1	-	2	13	830	294	20	12	1	1	-	1175
salvini	-	-	-	1	31	3113	2027	41	12	2	-	1	5228
desolata	-	-	10	1	5	1619	1487	47	14	1	2	-	3186
belcheri	-	-	-	1	3	703	573	35	8	-	3	-	1326
turtur	113	38	19	16	28	541	754	125	61	19	34	17	1765
Puffinus spp*	13	3	-	-	-	6	1	1	-	-	2	1	27
carneipes	32	13	20	22	13	7	-	1	4	1	39	29	181
bulleri	37	11	15	17	39	21	3	-	-	6	29	15	193
griseus	21	16	16	42	1154	76	28	1	1	5	98	100	1558
tenuirostris	15	2	2	1	15	11	1	-	-	1	10	35	93
gavia	134	29	26	43	54	78	109	41	53	14	37	18	636
huttoni	3	6	5	-	1	1	2	-	1	-	-	2	21
assimilis	3	-	-	7	4	16	3	3	-	1	7	9	53
Pelagodroma marina	3	-	1	1	1	-	1	2	1	2	4	5	21
Pelecanoides urinatrix	133	12	6	10	248	105	110	30	39	7	22	36	758
Sula bassana	51	17	21	23	10	8	21	6	21	9	22	24	233
Phalacrocorax carbo	-	1	3	-	1	1	-	1	-	-	-	-	7
varius	-	-	-	6	-	2	1	1	1	1	-	2	14
Stictocarbo punctatus	2	19	28	33	62	24	22	6	2	18	73	20	309
Larus dominicanus	26	13	22	53	48	52	51	16	35	20	16	13	365
novaehollandiae	42	14	19	22	19	22	16	-	12	3	5	3	177
bulleri	3	6	2	6	2	3	-	-	-	-	-	2	24
Hydroprogne caspia	2	-	7	-	-	3	2	1	2	-	1	-	18
Sterna striata	10	10	8	8	8	2	2	1	1	2	5	2	59
TOTALS	850	336	730	2783	2954	8192	6716	544	563	158	483	400	24709

* Species or subspecies not identified

ACKNOWLEDGEMENTS

The success of the Beach Patrol Scheme in 1974 is due to the 147 people who are known to have taken part and all the others who took part but did not enter their names on the cards.

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SHORT NOTE

FURTHER RECORDS OF THE GREY PETREL ON CHATHAM ISLAND

In *Ibis* 109: 3, Bourne (1967) listed 5 humeri and 2 coracoids of the Grey Petrel, *Procellaria cinerea* Gmelin, from the Forbes collection of Chatham Island bones in the B.M.(N.H.).

From the many thousands of bones collected by myself and others from Chatham Island dunes in 1972-73, a few more bones of this bird have been identified, thanks to the kindness of Dr John Warham in presenting, recently, a skeleton of the Grey Petrel, which our reference collection had lacked. This enabled confirmation of the identification of bones which both John and I had regarded as probably of this species. The localities are: Dunes at the northern end of Long Beach, dunes at Te One, and dunes at Waitangi. 4 humeri (2 left, 2 right), 3 ulnae (2 left, 1 right) from a minimum of 4 individuals. It is probable that other bones of the Grey Petrel will be found among the many hundreds of Chatham Island bones yet to be identified.

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