HISTORY AND STATUS OF THE DOMINICAN GULL IN WELLINGTON

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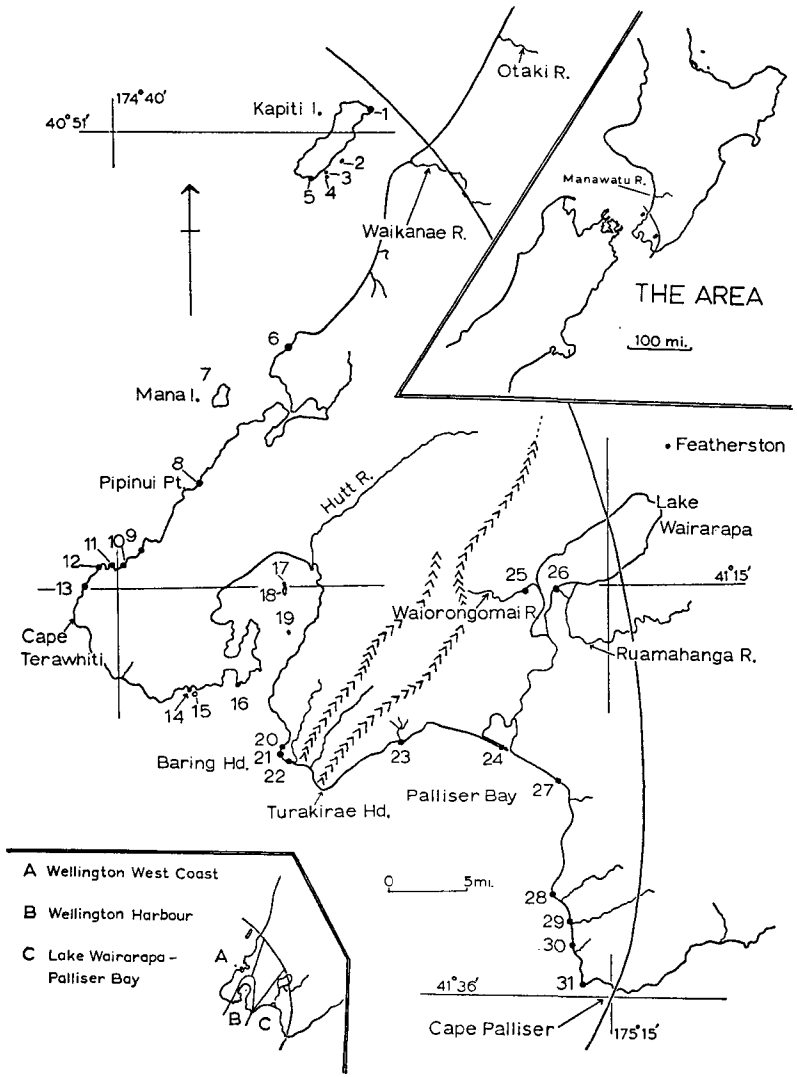
ABSTRACT

In this paper, the Wellington area is defined as south-west of a curved line from the north end of Kapiti I. through Lake Wairarapa to Cape Palliser. The Wellington population of Dominican Gulls began to increase before 1890, and has grown rapidly in the last quarter century. In this latter period, six colonies show marked increases in size: Baring Hd. x ca. 11, Somes I. x ca 9, Mana I. x ca. 8, Ward I. x ca. 5, Kapiti I. x ca. 4 and Palliser Spit x ca. 2. Kapiti I. and Palliser Spit are not near any prominent food source, and apparently have not grown as rapidly as the four other colonies mentioned, which are much closer to major feeding sites. Increase of the population has been influenced by the establishment and subsequent growth of meatworks and refuse tips. The histories of breeding colonies in Wellington are summarised. There are 31 breeding colonies in the Wellington area, 21 on the mainland and 10 on islands, which together with scattered breeding pairs, comprised ca. 5,700 ±500 pairs in 1963-64. There are 16 permanent roosting sites and possibly seven others in the area; most are at breeding colonies. The total number of birds in breeding colonies and in flocks outside breeding colonies during peak occupation of the colonies in December, 1963, is estimated at ca. 15,200 ± 1,700 birds.

INTRODUCTION

Available records show that in recent years numbers of Dominican Gulls (*Larus dominicanus*) have increased markedly in the Wellington area, particularly around the harbour. The increase has been rapid in the last quarter century, but had begun before 1890 (Buller, 1888). Data summarised in this paper were collected between 1961 and 1965 during a study of the Wellington gull population, and comprise a brief record of the history of the population, and its status in 1964. The study area extends from Kapiti I. on the west coast to Cape Palliser at the south tip of the North I. and is bounded by a curved line through Lake Wairarapa (see Figure). In 1964, the nearest major breeding colony on the west coast was about 41 miles north of Kapiti I. (two miles north of the Rangitikei R.) while on the east coast there were only a few small colonies for a considerable distance north of Cape Palliser. Colonies at the north end of the South I. were not considered. As there were no major colonies immediately adjacent to the area, and as dispersal of Dominican Gulls from their natal colonies is limited (Fordham, in press), it was considered that colonies in the study area supplied the bulk of the Wellington population.


174°40'
40°51'
Kapiti I.
Otaki R.
Manawatu R.
Waikanae R.
THE AREA
100 mi.
Mana I.
Featherston
Pipinui Pt.
Hutt R.
Lake Wairarapa
41°15'
Waiorongomai R.
Ruamahanga R.
Cape Terawhiti
Baring Hd.
Turakirae Hd.
Palliser Bay
0 5mi.
41°36'
Cape Palliser
175°15'
A Wellington West Coast
B Wellington Harbour
C Lake Wairarapa - Palliser Bay

HISTORY OF THE WELLINGTON POPULATION

Few New Zealand birds have increased as rapidly in recent years as has the Dominican Gull. In Wellington, their numbers have risen noticeably in living memory. The increase has not been restricted to Wellington, however, and in parts of the country, the gull is now considered a danger by some sheep farmers and aviation authorities. Little has been published on the history of Wellington gull colonies, but information from local people provided some evidence of the increase, and suggested that some of the small colonies, e.g. Island Bay and Moa Pt., are recent in origin, comprising birds spread from larger colonies nearby. A description of the harbour wildlife in 1839 was given by Heaphy (1879). He wrote: "I remember, especially, the enormous number of water-fowl frequenting the shallows at the mouth of the Hutt River. Cormorants, ducks, teal, oystercatchers, plovers, sandpipers, curlew, and red-legged waders, were there in pairs, detachments, and masses, and so tame that it was slaughter rather than sport, to shoot them." Heaphy did not list gulls by name, yet if they had been numerous he would probably have mentioned them, so that I assume they were not as prominent as they are today. Nearly 50 years later, however, Buller (1888) noted an increase in their numbers in the harbour. Today, mammalian predation affects some mainland colonies, and hedgehogs, stoats, and ferrets may be found round almost the entire Wellington coast, while feral cats are present from Baring Hd. west to Pukerua Bay (pers. obs., J. A. Bartle, P. Chandler, B. M. Fitzgerald).

In summer 1963-64, the Wellington area contained 31 breeding colonies; 21 on the mainland and 10 on islands. These varied in size from a few scattered pairs to approximately 2,000 pairs (Mana I.) and single pairs were scattered all round the coast. Along the west coast between Ohariu Bay and Pipinui Pt., and between Oteranga Bay and Island Bay there were isolated nests (C. Summers, P. Chandler, G. Jensen); and at Tongue Pt. a mile north of Karori Stm. there were ca. four pairs (G. Jensen). On Kapiti I. nests were scattered along the north, north-west and east sides. There were two pairs on Miramar peninsula, Wellington Harbour, and one pair on the east side of Palliser Bay.

In colonies with marked nests (i.e., those visited weekly), the nests were counted at the end of season, while in others, estimates were made from one or more nest-counts during the season, or information from other persons. Allowance was made in the estimates for the seasonal spread of laying (Fordham, 1964). Other data were collected during an aerial survey of the area on 23 November, 1964, in which the extent of known breeding colonies was noted, and special efforts made to locate unrecorded colonies. In the table which follows, the colonies have been listed according to the localities shown in the figure, and note has been made of important factors (e.g., flooding) which have, or may have, affected breeding.

HISTORY OF DOMINICAN GULL COLONIES IN WELLINGTON

Figures represent nests counted or estimated.

— = no data. Superscript numbers refer to the list of references

COLONY	1900–20	1921–40	1941–50	1951–60	1961–65	NOTES
WELLINGTON WEST COAST						
1. Kapiti I.	present[4]	nested[37]	129+25[17] 120[17]	–	600 (estimate on 23/11/63; 19 with chicks, 455 with eggs, 115 empty)	Maoris & whalers present before 1900. Norwegian rats now common.
2. Tokomapuna I.	–	<50[37]	54[17]	–	35[41]	
3. Fisherman's I.	–	–	–	–	5?(1963-64)	
4. Brown's I.	–	–	–	–	5?(1963-64)	Rats present
5. Wharekohu Bay Kapiti I.	–	–	16[17]	–	10–20[23]	
6. Pukerua Bay	–	"Nested for a long time"		7+[24]	7(1963-64) unsuccessful	1½ miles S. of Pukerua Bay. Wildcats & mustelids present (B.M. Fitzgerald)
7. Mana I.	"A small number nested" S.W. end[45]	–	250[19&20]	Nested on most slopes and beaches[30]	2,000 (1963-64) Estimate partly based on a comparison with the Baring Hd. colonies	Farmed for many years. No mammal predators.

COLONY	1900–20	1921–40	1941–50	1951–60	1961–65	NOTES
8. Pipinui Pt.	–	–	–	nested[22]	31[23]	ca. two miles N. of Pipinui Pt. Wildcats & probably mustelids present
9. Opau Bay	–	–	6[13]	6[35]	5[44]	
10. Te Ikaamaru Bay	–	–	–	20[32]	20[32]	
11. Ohau Bay	–	–	–	nested[32]	12[32]	
12. Ohau Pt.	–	–	–	–	4[32]	
13. Cape Terawhiti	–	–	–	–	40[32]	
WELLINGTON HARBOUR						
14. Island Bay	–	–	–	–	6[43]	S.W. edge of Island Bay
15. Taputeranga I.	n e s t e d[31]			nested	135 (estimate on 30/11/63) 118 nests found	Norwegian rats common
16. Moa Pt.	–	–	–	–	15(1963-64)	Cats and possibly rats present
17. Leper I.	–	–	increased[46]	26[14]	25 (estimate 1963–64)	Possibly no mammal predators
18. Somes I.	Present before 1914, absent 1914–18[40]	1938 occupied part of S end.[26] Nested S.E.pt[46]	nested[46]	1953 most nests S.E pt[36] 1959 nests all round I.[46]	1,419[5] 1,475 (estimate 1963–64)	Occupied by man for more than 100 years including periods of great activity. Now largest colony in the harbour. No mammal predators
19. Ward I.	–	–	20+[21] 45[11]	–	110 (estimate on 5/12/63; 77 nests found with chicks or eggs; none empty)	Was once main harbour colony[29], possibly no mammal predators

COLONY	1900-20	1921-40	1941-50	1951-60	1961-65	NOTES
20-22. Baring Hd:	-	-		-	Estimated on 29/11/63;	Northern colony may be recent. Lagoon subject to flooding. Wildcats & stoats present
20. Northern					80 (71 counted)	
21. Lighthouse			)) ?50-60[12]		250 (231 counted)	
22. Lagoon			))		310 (279 counted)	
LAKE WAIRARAPA-PALLISER BAY						
23. Mukamuka R. mouth	-	-	-	nested[38]	45 (1963-64); 25 (1964-65)	Stoats & wild pigs present
24. Palliser Spit	"Small no." nested[33]	present[33]	Gulls moved ca. 300 m. west[33] 137[3]	35[11] 209[2]	220[24] 265 (estimated on 9/11/63; 210 with eggs or chicks & 43 empty	No evidence of mammal predators
25. Waiorongomai R.	-	-	-	nested[39]	75 (1963-64); 5 (1964-65)	Subject to total flooding. Ferrets present
26. Ruamahanga R. mouth	-	present 1935[34]	present[34]		24(1963-64)	Subject to total flooding
27. Whangamoana cliffs	-	-	"present"		12(1963-64)	Nests scattered
28. Te Humenga Pt.	-	-	nested[27]	42 (18 empty)[28]	50+[28] 58 (1963-64); 1 (1964-65)	Wild pigs ate eggs during breeding ca. 1952 & 1953 (N.Crew)
29. Otakaha R. mouth	-	-	-	ca. 7[28] 10[28]	6 (1963-64); 10 (1964-65)	
30. Whale Pt.	-	-	-	-	8 (1963-64)	½ mile N. of Waiwhero Stm.
31. Ngawihi Pt.	-	-	-	4[28]	6[24] 4 (1963-64); 6 1964-65)	Stoats present

Four small colonies in Wellington have become defunct; two in Wellington Harbour, and two in the Lake Wairarapa-Palliser Bay area. A colony ca. two miles north of Pencarrow (R. A. Falla) dispersed before 1960 following road works. About 1960, gulls began nesting on a roof in Eastbourne, Wellington, and by 1963, there were five pairs (Miss M. Wood). This colony was then removed by the authorities. From about 1925 onwards, there was a colony one mile north of Turakirae Hd. in Palliser Bay from which eggs were collected (R. C. Nelson), but no gulls were seen during an aerial survey in November, 1964, and it therefore appears that this colony dispersed before 1964. There was a small colony in Hopai Lagoon at the north end of Lake Wairarapa but it dispersed when the lake level rose sometime after 1950 (J. Luttrell & E. Holmes).

To summarize: The Wellington population has grown rapidly since 1900 and some of the small colonies for which there are no early records may be of fairly recent origin. Further, six colonies show a marked increase in the numbers presumed breeding up to the 1963-64 season.

Colony	*Approximate Rate of Increase*	*Period Involved*
Baring Hd.	x 11	since 1943, 20 years
Somes I.	x 9	since 1938, 25 years
Mana I.	x 8	since 1944, 19 years
Ward I.	x 5	since 1949, 14 years
Kapiti I. (north end)	x 4	since 1941, 22 years
Palliser Spit	x 2	since 1948, 15 years

The first four colonies are close to Wellington City, or other centres of human population with major feeding sites such as refuse tips or meat-works, but the other two (Kapiti I. and Palliser Spit) are a greater distance from any prominent food source and apparently have not grown so rapidly. The two meat-works on the edge of the harbour began operations in 1883 and 1889 respectively and the city council abattoir opened in 1909. Since 1905, at least 13 refuse tips have opened in the Wellington area, 10 of these have been in the last 20 years, and seven of the nine still operating are now major tips. Four sewers have also been built this century but do not attract many birds. The scavenging habits of Dominican Gulls are well known, as is their attraction in large numbers to refuse of various kinds and effluent from meat-works. Almost 86% by volume of the food eaten by Wellington gulls in 1961 and 1962 was offal and refuse (Fordham, in prep.). Unlike in the northern hemisphere, the expansion this century of the fishing industry in New Zealand has not been on a large scale and has apparently not affected gull populations significantly. Analysis of mortality and production of young (Fordham, in prep.) shows that since at least 1961, production of fledged young in Wellington has been about twice that required to maintain the population, and the annual growth rate of the population has been not less than 7,2%. Although the change in numbers of birds in this period has been dramatic, the events in Wellington are not unique, for Dominican Gulls, aided by an enlarged food supply, have increased in other parts of New Zealand (c.f. Stead, 1927). In other countries, gull populations have also expanded as a result of freely available food of human origin (Sparck, 1950; Gross, 1955; Vermeer, 1963; Murray and Carrick, 1964).

ROOSTING FLOCKS

There are at least 16 permanent night roosting sites in the area, and possibly seven others. Eight permanent flocks are much larger than the others (in particular, Kapiti, Mana and Somes Is. and Baring Hd.) and between them provide for the bulk of the Wellington population. At these places there may be one or more flocks comprising several hundred to over a thousand birds. Flight movements of gulls at dawn and dusk suggest the existence of one or more roosting sites on the south-west coast, and the most likely places are Cape Terawhiti and Karori Stm. mouth. Roosting flocks are listed below; figures in parentheses refer to localities in the figure. Other sites used for roosting include Tokomapuna I. (2), Fisherman's I. (3), Brown's I. (4), Pipinui Pt. (8), Cape Terawhiti (13), Karori Stm. (south-east of Cape Terawhiti), Otakaha R. mouth (29).

ROOSTING FLOCKS IN THE WELLINGTON AREA

Wellington West Coast	
Kapiti I., north end (1)	large
Mana I. (7)	large
Te Ikaamaru Bay (10)	(E. C. Hall)
Wellington Harbour	
Taputeranga I. (15)	large
Mooring dolphins (W. side of harbour)	
Leper I. (17)	
Somes I. (18)	large
Ward I. (19)	large
Baring Hd., Northern flock (20)	
Baring Hd., Lighthouse flock (21)	large
Baring Hd., Lagoon flock (22)	large
Lake Wairarapa - Palliser Bay	
Palliser Spit (24)	large
Waiorongomai R. (25)	
Ruamahanga R. mouth (26)	
Whanagmoana cliffs (27)	
Te Humenga Pt. (28)	

All the large and some of the small breeding colonies serve as roosting sites in winter and summer, although the gulls often roost at sea adjacent to the site. Very small breeding colonies near large roosting sites may not serve as roosting sites themselves (e.g. Island Bay). Some birds roost on or near their summer nesting sites, but the majority usually gather in groups and are not widely dispersed as when nesting. These groups regularly form in the same general area each night, while in coastal colonies roosting flocks often move away from the upper beach terraces where nests are built, to below the high tide mark.

TOTAL POPULATION

The population of the Wellington area during breeding is composed of two main categories of birds; those in breeding colonies and those outside the colonies in feeding or resting flocks. An estimate of the population (based largely on mnthly transects round the harbour) was made in December, 1963, during peak occupation of the breeding colonies, and was affected by at least two sources of error. First by

immature birds visiting the clubs of breeding colonies, and second by breeding adults present in flocks for feeding, bathing, etc. On 20 December, 1963, ca. 1,800 gulls were counted on the Harbour transect and 500 ± 200 birds estimated for the west coast between Titahi Bay and Waikanae (on 17 December, 1961, there were ca. 450 gulls for this part of the west coast). For the rest of the Wellington area, i.e. in or near the city, and the Lake Wairarapa-Palliser Bay region 1,500 ± 500 birds were estimated, making a total of 3,800 ± 700 in flocks. With an estimated 5,700 ± 500 breeding pairs (the estimated error is mainly associated with Mana I.), this suggests a total population at the height of breeding of ca. 15,200 ± 1,700 birds. By comparison, aerial surveys in autumn 1964 and 1965 indicated that the peak population in the non-breeding season was in excess of 12,000 birds (Fordham, in press).

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BREEDING COLONIES

1. North end Kapiti I.
2. Tokomapuna I.
3. Fisherman's I.
4. Brown's I.
5. Wharekohu Bay
6. Pukerua Bay
7. Mana I.
8. Pipinui Pt.
9. Opau Bay
10. Te Ikaamaru Bay
11. Ohau Bay
12. Ohau Pt.
13. Cape Terawhiti
14. Island Bay
15. Taputeranga I.
16. Moa Pt.
17. Leper I.
18. Somes I.
19. Ward I.
20. Northern colony Baring Hd.
21. Lighthouse colony Baring Hd.
22. Lagoon colony Baring Hd.
23. Mukamuka R. mouth
24. Palliser Spit
25. Waiorongomai R.
26. Ruamahanga R. mouth
27. Whangamoana cliffs
28. Te Humenga Pt.
29. Otakaha R. mouth
30. Whale Pt.
31. Ngawihi Pt.

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SHORT NOTE

UNUSUAL RECORDS OF BIRDS AT SEA

The winter months of 1967 have been a period of very strong Trade Winds in the South Pacific. This has accounted for some rather unusual bird sightings.

1. A picture of a Wandering Albatross (*D. exulans*) was published by the Fiji Times on 6/7/67. The bird had been found on one of the outer islands and been brought into Suva for identification.
2. On 31/7/67 a Wandering Albatross (*D. exulans*) followed "Matua" throughout the day and was seen at dusk (1800 hrs.) in position 19° 40′ S 176° 55′ E. The wind then was East 24 knots and the sea temperature 76°F.
3. Whilst "Matua" was at anchor at Lifuka Island, Ha'apai Group, Tonga (19° 48′ S 174° 22′ W) on 10/8/67, wind East 30 knots and sea temperature 70°; between 1500 hrs. and 1530 hrs. a Giant Petrel (*M. giganteus*) was seen flying about the anchorage.
4. On 29/7/67 at 1730 hrs. with the ship in position 31° 00′ S 17° 38′ E. A Song Thrush (*Turdus ericetorum*) flew on board in a very exhausted condition. The wind was E x N 24 knots which put the ship downwind, 360 miles from Raoul Island. It seems probable that this bird was blown from Raoul, where Song Thrushes are common, to the position of the vessel.

— J. A. F. JENKINS