

## SHORT NOTE

### Marlborough Sounds, an important nesting and wintering area for white-fronted terns (*Sterna striata*)

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White-fronted tern (*Sterna striata*) is a common species in New Zealand's coastal waters, and occurs also on some subantarctic islands and in waters off south-east Australia (Turbott 1990). A nation-wide survey was conducted during the summers of 1995/96, 1996/97 and 1997/98 (Powlesland 1998). The Marlborough Sounds, from Croisilles harbour and D'Urville Island in the West to the entrance of the Queen Charlotte Sound in the East, was a part of this national survey. In this paper I provide numbers and record distributions of breeding white fronted terns in the Marlborough Sounds following additional surveys in 2002/03 and winter 2000 and present preliminary results on the size of the wintering population.

Incidental records of breeding and roosting birds have been reported from various places in the outer Marlborough Sounds (Fig.1): White Rocks (Bigwood & Stidolph 1949), The Brothers (roost 1963; Internal Affairs); White Rocks (breeding 1961; Internal Affairs), Duffers Reef (breeding 1981/83; R.Taylor pers.com.), Bird Island (125 pairs 1991; R.Schuckard), Jags (roost 1961; Internal Affairs), Hapuka Rocks (nesting 1961; Internal Affairs), Saddle Tower Rock (nesting 1988; D.Brown pers.com.), Stephens Island (breeding 1988; D.Brown pers.com.), Croisilles Harbour (breeding on large stack NE of Motuanauru Island; Walls *et al.* 1978), and Croisilles Harbour (breeding west of Otuhaererao; Walls *et al.* 1978). Breeding colonies do only appear on the smaller islands in the outer Marlborough Sounds.

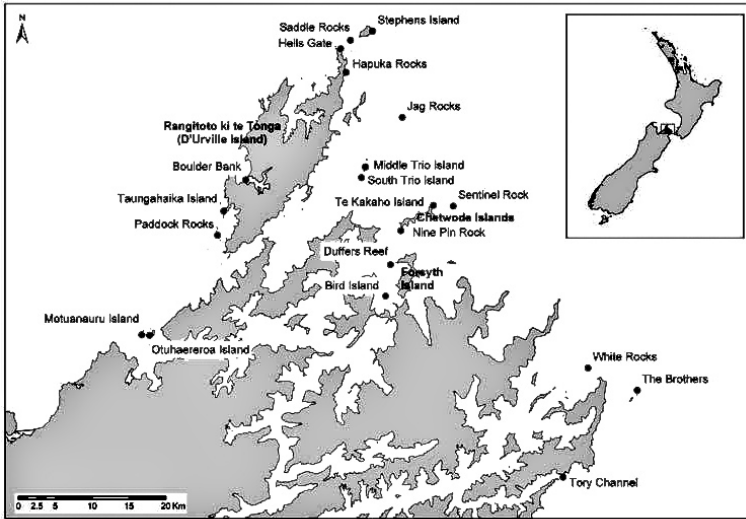
Numbers of breeding pairs between 1995 and 1998 in the Marlborough Sounds varied between 231 to 285 pairs, dispersed over seven to 11 colonies (Table 1). The numbers per colony varied between 1 and 129 pairs; the latter was the biggest single colony, established on Bird Island in the summer of 1997/98. Breeding on Bird Island and the Chetwode Islands was consistent between 1995 and 1998, but no breeding occurred there in 2002/03 but a colony of 120 pair had developed on the Paddock Rocks instead.

Additionally, about 200 pairs of white fronted terns have been counted at locations between Tory Channel entrance and The Brothers at the eastern end of Marlborough Sounds (B. Cash pers.com.). These include 20-30 pairs in most years on North Brothers Island, about 50+ pairs on the small rock islet near The Brothers, 40 pairs at Okukari Bay in Tory Channel (on 9 Sept.1997), and 100+ pairs on East Head Rock at the entrance to Tory Channel (9 Sept.1997).

Thus, between 400-500 pair of white fronted terns breed in the Marlborough Sounds, about 3% of the total national population.

On 16 June 2000, 2600 white fronted terns were observed roosting on the three main stacks of the White Rocks in outer Queen Charlotte Sounds. The extensive guano deposit indicated that that this roost was regularly used. A further 300 birds were observed roosting on Sentinel Rock in the same period. On an early visit at White Rocks on 10 Oct. 2002, only about 50 terns were present at White Rocks.

The breeding population of white-fronted terns in New Zealand is now estimated to be between 12,000 and 15,000 pairs (Taylor 2000) and is accorded a conservation status of "vulnerable". However, my surveys indicated that estimating population size is difficult. Though white-fronted terns are often seen feeding and roosting in the sheltered inner Marlborough Sounds, they predominantly breed on the islands and rock stacks of the exposed coastal waters of the outer Marlborough Sounds. Significant changes in breeding locality took place during the survey period and many of the older-recorded breeding colonies that were visited are now deserted. Despite this, the overall population in the Marlborough Sounds appears to be stable.



**Figure 1** Breeding locations of white fronted terns in the Marlborough Sounds

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**Table 1** Location of breeding and roosting sites of white-fronted terns in the Marlborough Sounds and numbers present in summer 1995/6 – 1997/8 and 2002/3, and winter 2000.

Colony	Lat., Longt.	Summer 1995/96		Summer 1996/97		Summer 1997/98		Winter 2000	Summer 2002/03	
		Roost	Nests	Roost	Nests	Roost	Nests	Roost	Roost	Nests
Brothers										
White Rock-east	41°04'45"S, 174°21'42"E		12		4	2	0	1200		50
White Rock-middle	41°04'44"S, 174°21'40"E		26	2	17	0	0	600		
White Rock-west	41°04'40"S, 174°21'36"E					0	0	800		
Cape Lambert	40°59'15"S, 174°13'54"E	116	1	0	0	0	0			
Titi Island, little island western site	40°57'10"S, 174°07'52"E	30		0	0	6	0			
Bird Island	40°59'38"S, 174°02'01"E		78		83	20	129			0
Duffers Reef	40°57'24"S, 174°02'26"E	0	0	0	0	0	0			
Chetwode Islands, Nine Pin Rocks	40°57'24"S, 174°02'26"E	13	94	0	43	0	18			0
Chetwode Island, north of Te Kakaho Island	40°53'02"S, 174°06'29"E	13	3		17	10	0			
Sentinel Rock	40°53'02"S, 174°08'25"E	0	0	0	0	0	0	300		
South Trio Island	40°50'52"S, 173°59'33"E	0	34	0	20	0	0			
Middle Trio Island	40°50'15"S, 173°59'54"E	0	0			0	17			
Jag Rocks	40°46'37"S, 174°03'24"E	0	0		50	0	11			
D'Urville Island, Hapuka Rocks	40°43'20"S, 173°58'06"E	0	0	0	0	0	0			
D'Urville Island, Saddle Rocks	40°40'60"S, 173°58'19"E	0	0	0	0	0	0			
Stephens Island	40°40'18"S, 174°00'27"E	0	12			0	14			
D'Urville Island, Hells Gate	40°41'36"S, 173°57'24"E	0	0	0	1	0	0			
D'Urville Island, Ragged Point	40°50'00"S, 173°47'07"E	0	0	13	0	45	0			
Boulder Bank Greville Harbour	40°51'16"S, 173°48'21"E					50	0			
D'Urville Island, Taungahaika Island	40°53'34"S, 173°46'04"E	0	0	0	1					
D'Urville Island, Hapuka Island.	40°54'03"S, 173°46'12"E	0	0	0	20					
Paddock Rocks	40°55'21"S, 173°45'42"E		5	0	0		36			120
Croisilles Harbour, Motuanauru Island.	41°02'37"S, 173°38'24"E	0	0	0	0					
Croisilles Harbour, Otuhaereroa Island	41°02'42"S, 173°39'10"E	3	0	0	29		6			
<b>Total</b>		<b>175</b>	<b>265</b>	<b>15</b>	<b>285</b>	<b>133</b>	<b>231</b>	<b>2900</b>	<b>50</b>	<b>120</b>