

# Shoreline birds of Robben Island, Western Cape, South Africa

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Robben Island, with a perimeter of 10 km, lies near the port of Cape Town, South Africa. Seven surveys of the shoreline birds have been made. Of Palearctic migrant wader species, Ruddy Turnstones and Curlew Sandpipers were the most abundant; of the non-Palearctic migrants, the African Black Oystercatcher was most abundant. Robben Island qualifies as a Ramsar site. The possibility is suggested that Robben Island could be used as a “remote site” in a network of sites to monitor trends in Palearctic waders.

## INTRODUCTION AND METHODS

Robben Island (33°49'S, 18°22'E) is best known as the place of imprisonment of Nelson Mandela. It was declared a World Heritage Site in 1999, on account of its cultural value. However, Robben Island is also of biological importance, especially for its seabird populations and has been identified as one of South Africa's Important Bird Areas (Barnes 1998, Crawford & Dyer 2000). For example, the island supports important populations of two “Vulnerable” seabirds: 12% of the global population of the African Penguin *Spheniscus demersus* and 4% of Bank Cormorants *Phalacrocorax neglectus* (Barnes 2000).

The island has an area of 507 ha, and a perimeter of approximately 10 km (Figure 1). It lies in Table Bay, 11 km from the port of Cape Town, and 7 km from the nearest mainland (Barnes 1998, Crawford & Dyer 2000). Most of the shoreline is rocky with various degrees of exposure, dependent on the extent of offshore reefs. South of Murray's Bay Harbour is a 400-m section of sandy shore; this beach is probably kept in place by the jetty, which allows sand to accumulate.

We know of seven round-island counts of shoreline birds (Table 1), i.e. species that forage in or close to the intertidal zone. Four of the surveys were made in the austral summer and three in winter. Four were made within the 10-month period November 2000 to August 2001, two in summer and two in winter.

## RESULTS AND DISCUSSION

Of the non-Palearctic migrant waders, the African Black Oystercatcher was the most abundant (for scientific names of the study species, please refer to Table 1). This species is endemic to South Africa and Namibia, and is classified as “Near-threatened” (Barnes 2000). The increase in numbers of African Black Oystercatchers from 40 in 1977 to a median of 135 in the 1998–2001 surveys (Table 1) is probably attributable to decreased levels of disturbance on the shoreline. This has occurred since the mid-1990s when the Robben Island Museum took over management of the island from the Department of Correctional Services. At current population levels, the island probably supports about 2% of the world

population of this species (Barnes 1998). Numbers of two other African species, Spotted Dikkop and Blacksmith Plover, also appear to have increased on Robben Island, but White-fronted Plovers have inexplicably declined.

Four counts were made in the austral summer over two decades, one in 1980 and three between 1998 and 2001 (Table 1). These show that the species composition of Palearctic migrant waders was typical of rocky and mixed rocky–sandy shorelines of the Western Cape (Ryan *et al.* 1988). The majority of these birds comprised Ruddy Turnstones, Curlew Sandpipers, Whimbrels, Grey Plovers, Ringed Plovers and Sanderlings; other migrant waders occurred in only small numbers.

Numbers of Curlew Sandpipers, Ruddy Turnstones and Sanderlings showed decreases (Table 1). However, the boreal summer of 1979 was a particularly good breeding year for these three species (Summers & Underhill 1987), and the large counts made in 1980 might have represented inflated populations of largely first-year birds. Ongoing austral summer surveys are needed to determine this, and it is unfortunate that only a single summer historical survey on which to base trends is available. Austral winter surveys are needed to determine the extent to which the shoreline of the island is used by “overwintering” birds; most first-year waders do not migrate to the breeding grounds from non-breeding areas as far south as South Africa (Summers *et al.* 1995). It has been suggested that young birds move from exposed shorelines, such as that on Robben Island, which are subject to large winter storms, to more sheltered places such as Langebaan Lagoon (Pringle & Cooper 1977; Underhill 1987). In winter 2001, 18 Ruddy Turnstones were observed in May, before the passage of a series of severe cold fronts in June and July. In the survey made in August, none was observed (Table 1). It is therefore possible that these birds moved away from Robben Island to find more sheltered habitat.

On the evening of 31 March 2001, a flock of 136 Sanderlings was seen on the short section of sandy beach on Robben Island (PAW). Sanderlings are thought to undertake a loop migration clockwise around southern Africa (Underhill 1997). Therefore such short-term influxes of this species probably represent birds on passage.

Because the entire island is part of the Robben Island Museum, the shoreline is likely to remain unaltered. Robben



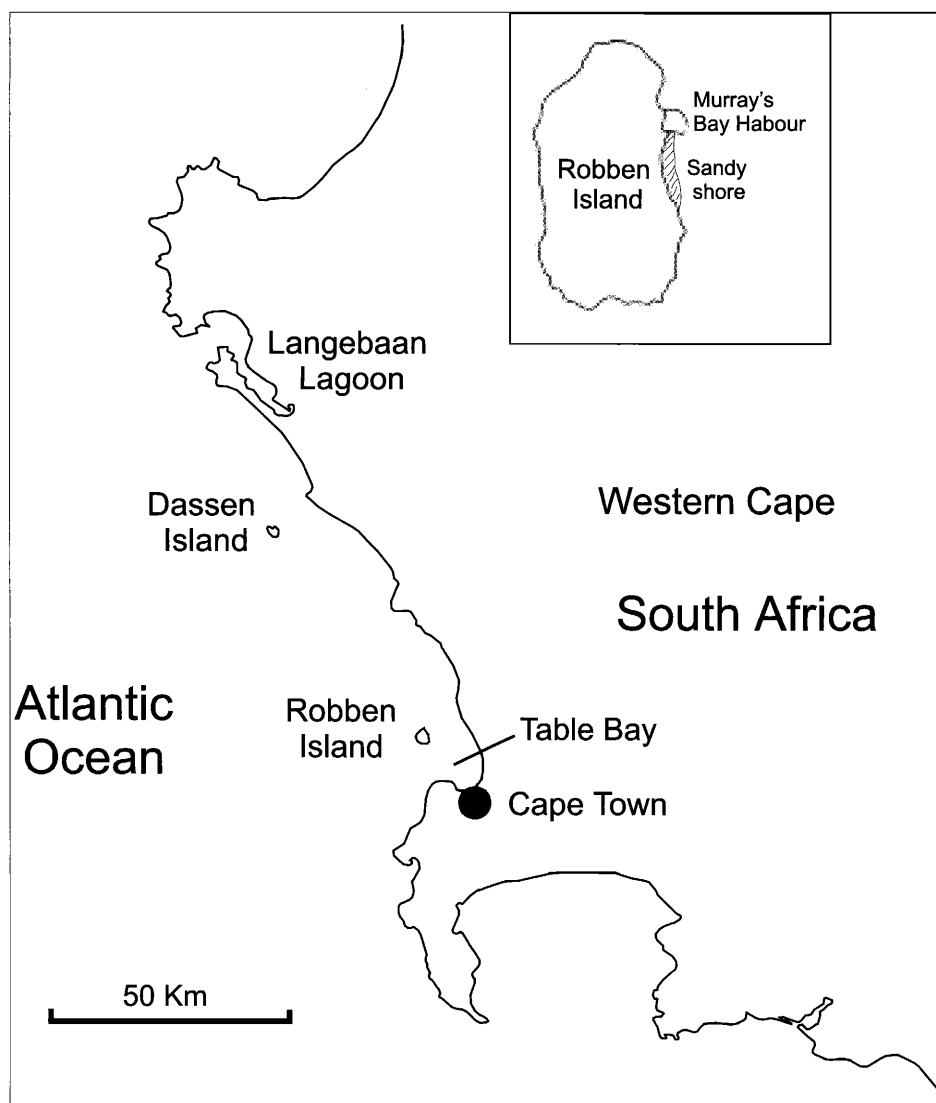


Figure 1. Map showing location of Robben Island in western Cape.

Island is therefore likely to be valuable as a “remote site” for monitoring population trends of Arctic-breeding long distant migrants such as Ruddy Turnstones, Curlew Sandpipers and Sanderlings. Such remote sites are localities at which the magnitude of fluctuations in breeding success is exaggerated because the shoreline is suboptimal habitat, occupied by large numbers of birds only in those years in which optimal habitat (such as at Langebaan Lagoon) is fully utilized. These influxes are likely to be of first-year birds. Fluctuation in the numbers of these species at Langebaan Lagoon during the austral summer is small in relation to the variation in breeding productivity (Underhill 1987).

Other offshore islands along the southern African coastline could also form part of such a network of remote monitoring sites. There is baseline data from, for example, Dassen Island (Underhill 1992), and several surveys have subsequently been made on this island (A.C. Wolfaardt pers. comm.). It would be valuable to do a series of trials over a period of years to establish whether increases and decreases on these islands fluctuate synchronously and whether they do indeed reflect fluctuations in breeding success.

Robben Island already qualifies as a Wetland of International Importance in terms of the Ramsar Convention because it supports more than 1% of the global population of the African Black Oystercatcher, and of the nominate race of the Swift Tern (Barnes 1998). However, the list of bird species defined as “waterbirds” by the Ramsar Convention has remained static since the inception of the Convention in 1975. It has not kept pace with the changing definition of wetlands, which has been extended to include shorelines, and the associated areas of sea out to a depth of 6 m. To be consistent with this definition of wetlands, the “waterbird” list should be revised to include species that would conventionally be classified as seabirds. In the case of Robben Island, it should also be possible to motivate its listing as a Ramsar site on the basis of its breeding colonies of African Penguins and Bank Cormorants. This would be closely analogous to the listing of the shoreline of northern KwaZulu-Natal, South Africa, for which the turtles that come ashore to lay their eggs on the beaches formed part of the argument for listing the site (Cowan 1995).



**Table 1.** Counts of shoreline birds on Robben Island, 1977–2001. The survey covers the shorebirds visible from the perimeter road of the island, and includes the waterbirds within three disused quarries which fill up with rainwater during winter.

Date of survey	18 Aug 1977	8 Dec 1980	26 Dec 1998	30 Nov 2000	3 Mar 2001	18 May 2001	12 Aug 2001
Observers	G. Arkell, C. Marais	G.D. Underhill, LGU H.G. Robertson*	PAW	Avian Demography Unit	Earthwatch team	LGU, KMC	LGU, KMC
<b>Species</b>							
Little Egret <i>Egretta garzetta</i>		22	29	39	29	26	22
Cattle Egret <i>Bubulcus ibis</i>					1		13
Sacred Ibis <i>Threskiornis aethiopicus</i>			57	52	174	129	29
Hadedda Ibis <i>Bostrychia hagedash</i>							2
Egyptian Goose <i>Alopochen aegyptiacus</i>			5	2	3	14	16
South African Shelduck <i>Tadorna cana</i>							2
Yellowbilled Duck <i>Anas undulata</i>			1				5
Moorhen <i>Gallinula chloropus</i>				2	2	2	
African Black Oystercatcher <i>Haematopus moquini</i>	40	89	149	135	143	110	126
Ringed Plover <i>Charadrius hiaticula</i>		34	17	16	32		
White-fronted Plover <i>Ch. marginatus</i>	23	24	2	10		4	2
Kittlitz's Plover <i>Ch. pecuarius</i>		5	11	3		2	2
Grey Plover <i>Pluvialis squatarola</i>			17	10	14	3	2
Crowned Plover <i>Vanellus coronatus</i>				4	4	4	13
Blacksmith Plover <i>V. armatus</i>		16	59	35	42	36	40
Turnstone <i>Arenaria interpres</i>	40	517	235	257	137	18	
Greenshank <i>Tringa nebularia</i>		1	3	3	1		
Common Sandpiper <i>Actitis hypoleucos</i>		2					
Curlew Sandpiper <i>Calidris ferruginea</i>		339	152	114	151		
Knot <i>C. canutus</i>		2					
Sanderling <i>C. alba</i>		88	4	3			
Whimbrel <i>Numenius phaeopus</i>	1	38	24	27	14	2	6
Spotted Dikkop <i>Burhinus capensis</i>		19	50	13	42	150	28
Kelp Gull <i>Larus dominicanus</i>	120	139	43	39	336	230	51
Hartlaub's Gull <i>L. hartlaubii</i>	136	305	327	259	187	223	98
Swift Tern <i>Sterna bergii</i>		23	95	53	30	300	280
Sandwich Tern <i>S. sandvicensis</i>		232	40	3			
Common Tern <i>S. hirundo</i>	7	359	2300	120	635	10	

\* Published in Ryan *et al.* (1988)

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