

# SEABIRD COUNTS MADE DURING A CROSSING OF THE SOUTHERN INDIAN AND ATLANTIC OCEANS

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**ABSTRACT.** This note documents standardized counts of seabirds made during a westward voyage of MS *Lindblad Explorer* across the southern parts of the Indian and South Atlantic Oceans in November–December 1980.

THE southern parts of the Indian and Atlantic Oceans are among the least-visited parts of the world. Data on the numbers and distribution of seabirds there are extremely sparse so it seems worth putting the results of a single long transect on record (Fig. 1).

All observations were made by the author from the wings of the bridge (c. 11 m above sea-level) covering an arc of c. 180° looking forward to include the ship's bow. All birds seen with the unaided eye were counted but identifications were made using binoculars. Birds following in the wake were not counted but were recorded separately. Counting was carried out for up to a total of 5 h each day. However, no counts were made in extremely rough conditions nor within 25 nautical miles of land. Penguins on ice floes are not included in the counts. No attempts were made specifically to identify prions (*Pachyptila* spp.), diving petrels (*Pelecanoides* spp.), giant petrels (*Macronectes* spp.) or penguins unless they were seen very closely.

The totals of birds seen (and scientific names) are given in Tables I–III. These comprise all the records of these species seen during the recorded times. Positions are noon fixes taken from the ship's log. All distances are given in nautical miles. The following species were seen in limited areas and are not included in the tables:

Great shearwater (*Puffinus gravis*). The only records were four between lat. 53°15'S, long. 17°30'E and lat. 53°21'S, long. 16°54'E on 14 December and one at lat. 54°00'S, long. 10°05'E the next day.

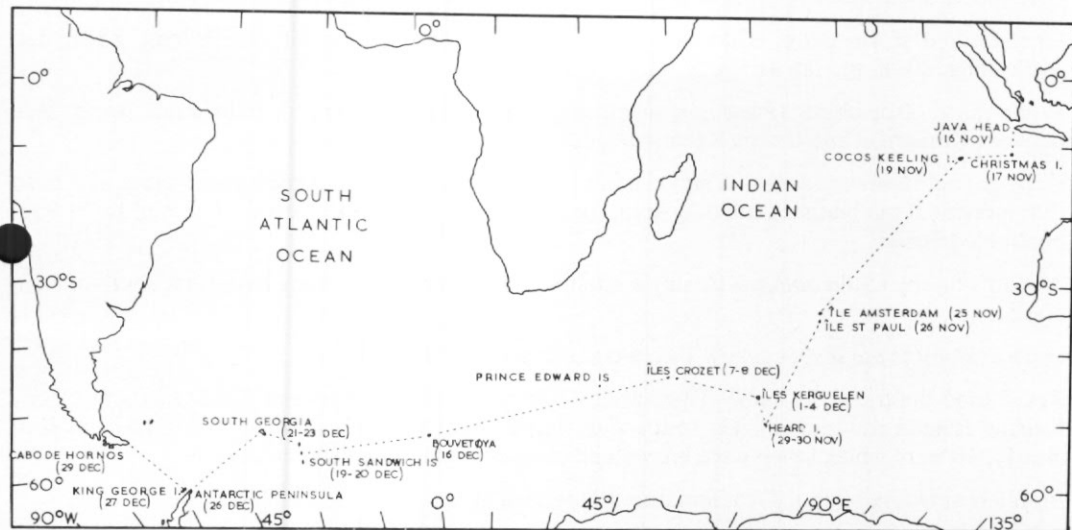


Fig. 1. Course followed by MS *Lindblad Explorer* in November–December 1980 and the dates the various islands were visited.

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TABLE I. SEABIRDS COUNTED BETWEEN JAVA HEAD AND ÎLE ST PAUL

Noon position (lat. S, long. E)	November								
	16 (1)	18 10°56' 101°56'	20 15°18' 97°10'	21 19°52' 90°56'	22 24°19' 87°30'	23 28°43' 84°21'	24 33°16' 80°47'	25 (2)	26 (3)
Observation time (min)	120	280	270	270	260	200	260	60	40
Wandering albatross ( <i>Diomedea exulans</i> )							3	3	2
Yellow-nosed albatross ( <i>D. chlororhynchos</i> )							9	4	7
Sooty albatross ( <i>Phoebastria fusca</i> )									4
Giant petrel sp. ( <i>Macronectes</i> sp.)							1		
White-chinned petrel ( <i>Procellaria aequinoctialis</i> )						2	51	41	9
Wedge-tailed shearwater ( <i>P. pacificus</i> )		42	11		2	2			
White-headed petrel ( <i>Pterodroma lessoni</i> )							3		
Soft-plumaged petrel ( <i>P. mollis</i> )						1	21	29	6
Wilson's storm petrel ( <i>Oceanites oceanicus</i> )							7		2

Notes: (1) Observation started south of Java Head, Java.

(2) Noon off Île Amsterdam.

(3) All observations between Île Amsterdam and Île St Paul.

Sooty shearwater (*Puffinus griseus*). Only recorded within 15 miles of Cabo de Hornos, where 332 were counted in 110 min.

Pale-footed shearwater (*Puffinus carneipes*). The single record was at lat. 33°S, long. 81°E.

Grey-backed storm petrel (*Garrodia nereis*). Singles were seen at lat. 32°S, long. 82°E; lat. 31°S, long. 80°E and lat. 46°30'S, long. 74°E.

White-tailed tropicbird (*Phaethon lepturus*). Two golden-plumaged individuals were seen between Christmas and Cocos Keeling Islands.

Cape gannet (*Sula capensis*). A single adult accompanied the boat, sometimes as close as 5 m so that individual tail feathers could be seen, for c. 10 miles between Île Amsterdam and Île St Paul on 26 November.

Abbott's booby (*Sula abbotti*). A single adult was standing on a floating tree-trunk south of Java Head.

Brown booby (*Sula leucogaster*). Two were seen south of Java Head.

Red-footed booby (*Sula sula*). This species was recorded only between Christmas and Cocos Keeling Islands and immediately south of the latter at lat. 14°30'S, long. 95°45'E. Of birds seen clearly, 40 were white, seven were brown and two were intermediate in colour.

Frigatebird (*Fregata* sp.). Two immatures were seen at lat. 14°30'S, long. 95°45'E.

Kerguelen shag (*Phalacrocorax verrucosus*). Three immatures were seen 20–45 miles south-east of Îles Kerguelen.

Arctic skua (*Stercorarius parasiticus*). A single was seen at lat. 11°S, long. 102°E.

TABLE II. SEABIRDS COUNTED BETWEEN ÎLE ST PAUL AND THE SOUTH SANDWICH ISLANDS

	November					December										
	27	28	29	1	5	6	9	11	12	13	14	15	16	17	18	19
Noon position (lat. S, long. E/W)	42°17' 75°29'	46°34' 74°01'	51°41' 74°04'	(1)	47°40' 64°47'	46°31' 57°36'	46°23' 45°48'	48°36' 37°16'	50°18' 30°44'	52°13' 22°51'	53°30' 15°36'	53°53' 11°15'	(2, 3)	55°04' 3°29'	56°05' 13°04'	57°18' 23°27'
Observation time (min)	220	240	230	120	130	230	230	210	180	230	210	200	130	240	240	240
King penguin ( <i>Aptenodytes patagonica</i> )						1		11								
Gentoo penguin ( <i>Pygoscelis papua</i> )								1								
Chinstrap penguin ( <i>P. antarctica</i> )														4	7	2
Macaroni penguin ( <i>Eudyptes chrysolophus</i> )													6			
Penguin sp.																
Wandering albatross ( <i>Diomedea exulans</i> )	4	4			4	1	15	13		4		1		1		29
Black-browed albatross ( <i>D. melanophris</i> )	23	12	8	16	4	1	7			5	6	3	4	2	7	
Yellow-nosed albatross ( <i>D. chlororhynchus</i> )								1								
Grey-headed albatross ( <i>D. chrysostoma</i> )	9	2			3	5	3	1	4							
Sooty albatross ( <i>Phoebastria fusca</i> )	1					1	8									
Light-mantled sooty albatross ( <i>P. palpebrata</i> )		8	10	1		3	5	2	2	1	2	5	2	1	4	
Giant petrel sp. ( <i>Macronectes</i> sp.)	3	4	3	6	1		1	10		2	1	2	2	3	2	1
Southern fulmar ( <i>Fulmarus glacialisoides</i> )			2	1	1							4	14		1	5
Cape pigeon ( <i>Daption capense</i> )	7	3	8	1		1	2	1		9		4	4	2	6	8
Snow petrel ( <i>Pagodroma nivea</i> )														2		1
Blue petrel ( <i>Halobaena caerulea</i> )	3	7	429	115	9			8	18	173	272	432	60	257	376	2
Prion spp. ( <i>Pachyptila</i> spp.)	130	486	223	40	74	261	95	1 511	75	73	111	28	26	69	493	1
White-chinned petrel ( <i>Procellaria aequinoctialis</i> )	168	430	126	23	32	21	37	22		15						
Great-winged petrel ( <i>Pterodroma macroptera</i> )				3										1		3
White-headed petrel ( <i>P. lessoni</i> )	9	5	2	1	2	14	26	3	5	1	12	4	1			
Kerguelen petrel ( <i>P. brevirostris</i> )			1		13			2	6	60	24	73	34	75	69	301
Soft-plumaged petrel ( <i>P. mollis</i> )	10	4				15	17		3	7	9	4				
Wilson's storm petrel ( <i>Oceanites oceanicus</i> )	6	10	5	1	2	11	24								13	4
Black-bellied storm petrel ( <i>Fregetta tropica</i> )		3	2	3	2	1		9	1	10	2	3	24		1	11
Diving petrel spp. ( <i>Pelecanoides</i> spp.)		12	33	6	12	7	2	8	81	5						
Brown skua ( <i>Catharacta skua</i> )	3		1					3								

Notes: (1) Arrived Îles Kerguelen 12.00 h.

(2) Arrived Bouvetøya 11.00 h.

(3) Greenwich meridian crossed 16 December.

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TABLE III. SEABIRDS COUNTED IN THE SCOTIA SEA

	21	23	December		28	29
			24	25		
Noon position (lat. S, long. W)	54°42' 33°44'	(1)	57°01' 44°40'	59°49' 51°32'	59°48' 60°56'	(2)
Observation time (min)	300	40	170	200	210	170
King penguin ( <i>Aptenodytes patagonica</i> )	1					
Gentoo penguin ( <i>Pygoscelis papua</i> )	4					
Chinstrap penguin ( <i>P. antarctica</i> )	13		1	22	6	
Macaroni penguin ( <i>Eudyptes chrysolophus</i> )	29	13			1	
Penguin sp.	9	4		12	7	
Wandering albatross ( <i>Diomedea exulans</i> )	2			1		3
Black-browed albatross ( <i>D. melanophris</i> )	18	3	1	17	5	12
Grey-headed albatross ( <i>D. chrysoloma</i> )	2	1			1	
Light-mantled sooty albatross ( <i>Phoebastria palpebrata</i> )	3			4	2	
Giant petrel sp. ( <i>Macronectes</i> sp.)	6	1		4	1	4
Southern fulmar ( <i>Fulmarus glacialis</i> )				200		
Cape pigeon ( <i>Daption capense</i> )	56		3	266	1	
Snow petrel ( <i>Pagodroma nivea</i> )	7	1				
Blue petrel ( <i>Halobaena caerulea</i> )	8	2			14	19
Prion sp. ( <i>Pachyptila</i> sp.)	804	78	51	13	5	
White-chinned petrel ( <i>Procellaria aequinoctialis</i> )	46	2	2	1	1	2
Kerguelen petrel ( <i>P. brevirostris</i> )	3					
Soft-plumaged petrel ( <i>Pterodroma mollis</i> )			1			
Wilson's storm petrel ( <i>Oceanites oceanicus</i> )	91	4	7	26	3	67
Black-bellied storm petrel ( <i>Fregata tropica</i> )	16	1	1	9	2	
Diving petrel ( <i>Pelecanoides</i> sp.)	13	13	1		2	
Brown skua ( <i>Catharacta skua</i> )						1

Notes: (1) Observations started 40 nautical miles south of South Georgia.

(2) Observations finished 5 miles south of Cabo de Hornos.

Kelp gull (*Larus dominicanus*). Two first-year birds were seen 50 miles south-west of South Georgia.

Brown noddy (*Anous stolidus*). A single was recorded at lat. 10°30'S, long. 103°10'E.

Sooty tern (*Sterna fuscata*). Three feeding flocks (c. 25, 50, 50 birds) and a single bird between Christmas and Cocos Keeling Islands and another flock (100+) at lat. 14°30'S, long. 94°45'E.

American sheathbill (*Chionis alba*). Two at lat. 60°00'S, long. 52°00'W were the only sheathbills away from land.

*Birds seen at some infrequently visited islands*

*Île St Paul.* A total of 43 occupied nests of yellow-nosed albatrosses were counted high up on the northern part of the crater wall, above the colony of rockhopper penguins (*Eudyptes crestatus*), which had large young gathered in to crèches. Both Antarctic terns (*Sterna vittata*) and prions were obvious on the isolated Roche Quille but none was seen on the main island where the only other species seen was a single Wilson's storm petrel apparently trying to land on the boulder beach and five small waders, apparently turnstone (*Arenaria interpres*) (personal communication from K. Shackleton). Cape pigeon, sooty albatross, white-headed and white-chinned petrels were seen within 1 mile of the island.

*Heard Island.* The colony of king penguins at South-west Bay had a maximum of 72 incubating birds, seven moulters and 40–60 other individuals on the afternoon of 30 November. Kelp gulls, brown skua, macaroni and rockhopper penguins had eggs, whereas some of the gentoo penguins had small young. Incubating gentoos were being attacked by skuas which opened up gaping and bloody wounds at the base of the tail. A single snow petrel was seen just offshore.

*Bouvetøya.* Only a brief landing was possible but observations were made from an inflatable boat taken close inshore and from MS *Lindblad Explorer* which was anchored 0.6 miles offshore. Birds seen inshore were chinstrap penguin (common), macaroni penguin (few), wandering albatross (one), black-browed albatross (common), grey-headed albatross (few), light-mantled sooty albatross (common), giant petrel (common), southern fulmar (common, breeding), cape pigeon (common, breeding), snow petrel (common), Antarctic petrel (single), prion (few inshore but abundant further away from land), Wilson's and black-bellied storm petrels (both common), skuas (c. 15 around ship) and Antarctic tern (few). Kerguelen and blue petrels were common to within a few miles of shore but the nearest white-headed and soft-plumaged petrels were 15 miles from the island. No Adélie penguins, gulls or sheathbills were seen.

*South Sandwich Islands.* Although no landings were possible, some observations were made during boat journeys close inshore. There was a colony of many thousands of Adélie penguins in a large ash cone inland from the ash beach on the north side of Ashen Hill, Saunders Island, whereas chinstrap penguins were concentrated on the tops of the low cliffs at the eastern point. Snow petrel, cape pigeon and southern fulmar were all common and both Wilson's and black-bellied storm petrels were seen coming to land at dusk. Other species present were giant petrel, brown skua, kelp gull and Antarctic tern (one). Kerguelen petrels were abundant up to a few miles east of the island but were not seen inshore.

Several large chinstrap penguin colonies, probably totalling tens of thousands of birds, could be seen near Medusa Pool on Candlemas Island and there were large colonies of unidentified penguins south of Demon Point. Among the chinstrap penguins on the beaches were a few macaroni and a single Adélie penguin. Snow petrels and cape pigeons were abundant and nesting but there were far fewer southern fulmars. Other birds seen were giant petrel (common), brown skua (few), kelp gull (few), Antarctic tern (one), Wilson's and black-bellied storm petrel (common), and blue-eyed cormorant (*Phalacrocorax atriceps*) (three).

There are few published records of seabirds from this area and I was unable to make oceanographic observations. Hence, it is impossible to put the present data into a wider context. However, several points were obvious. Although there was a latitudinal zonation of some species, e.g. yellow-nosed albatrosses in warmer waters were replaced by grey-headed albatrosses in sub-Antarctic waters, many species were widespread. Blue and white-headed petrels, cape pigeons, black-browed and light-mantled sooty albatrosses were all seen almost daily south of lat. 35–40°S. The overall track was south-westerly from Île St Paul to the

Antarctic Peninsula and crossed the Antarctic Convergence several times which made it difficult to separate the effects of water conditions and longitude. However, there were some dramatic changes as we progressed westward. The most marked were the absence of white-chinned and diving petrels between about long. 20°E and the Scotia Sea, and the absence of Wilson's storm petrels from long. 40°E to 13°W. Kerguelen petrel was rare east of Îles Kerguelen but then became gradually more common until it was abundant just east of the South Sandwich Islands, then records stopped abruptly. Whereas all blue and Kerguelen petrels seen in the south-eastern Indian Ocean were in immaculate plumage, by long. 22°E many were moulting the inner primaries.

Diving petrels, which are often considered a coastal species, were common in the southern Indian Ocean as far from land as it is possible to be. Perhaps the most unexpected record was the adult Cape gannet between Île Amsterdam and Île St Paul, about 2 500 miles from its breeding area in South Africa. This was obviously a vagrant to the area. It is less clear whether the great shearwaters seen east of Bouvetøya were similarly lost or whether this typically Atlantic species might regularly migrate into the southern Indian Ocean.

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