

Seabird observations at Bouvet Island

B.P. Watkins

Percy FitzPatrick Institute of African Ornithology,
University of Cape Town, Rondebosch 7700

Information is given on the numerical status of penguins and the occurrence of other avian species, including first records of the yellow-nosed albatross *Diomedea chlororhynchos* and the sooty albatross *Phoebetria fusca*, found either breeding at, or visiting near, Bouvet Island.

Inligting word gegee oor die numeriese status van pikkewyne en die voorkoms van ander voëlspesies, ingeslote eerste verstaer van die geelbek-malmok *Diomedea chlororhynchos* en bruin-malmok *Phoebetria fusca* wat naby Bouvet-eiland aangetref is of daar gebroei het.

Introduction

Bouvet (54°26'S, 03°24'E) is a small (c.50 km²), volcanic island in the Atlantic sector of the Southern Ocean (Fig. 1). As the only land area within a vast segment of productive ocean, the island is potentially of considerable importance as a breeding station for seabirds. However, since most of

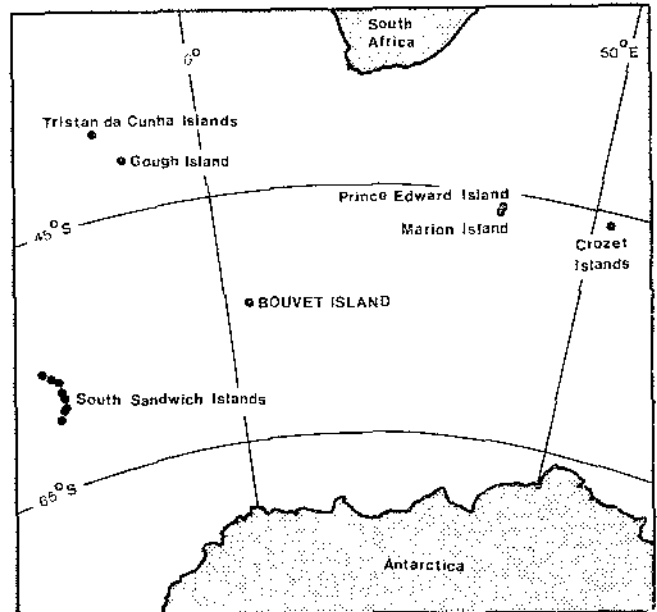
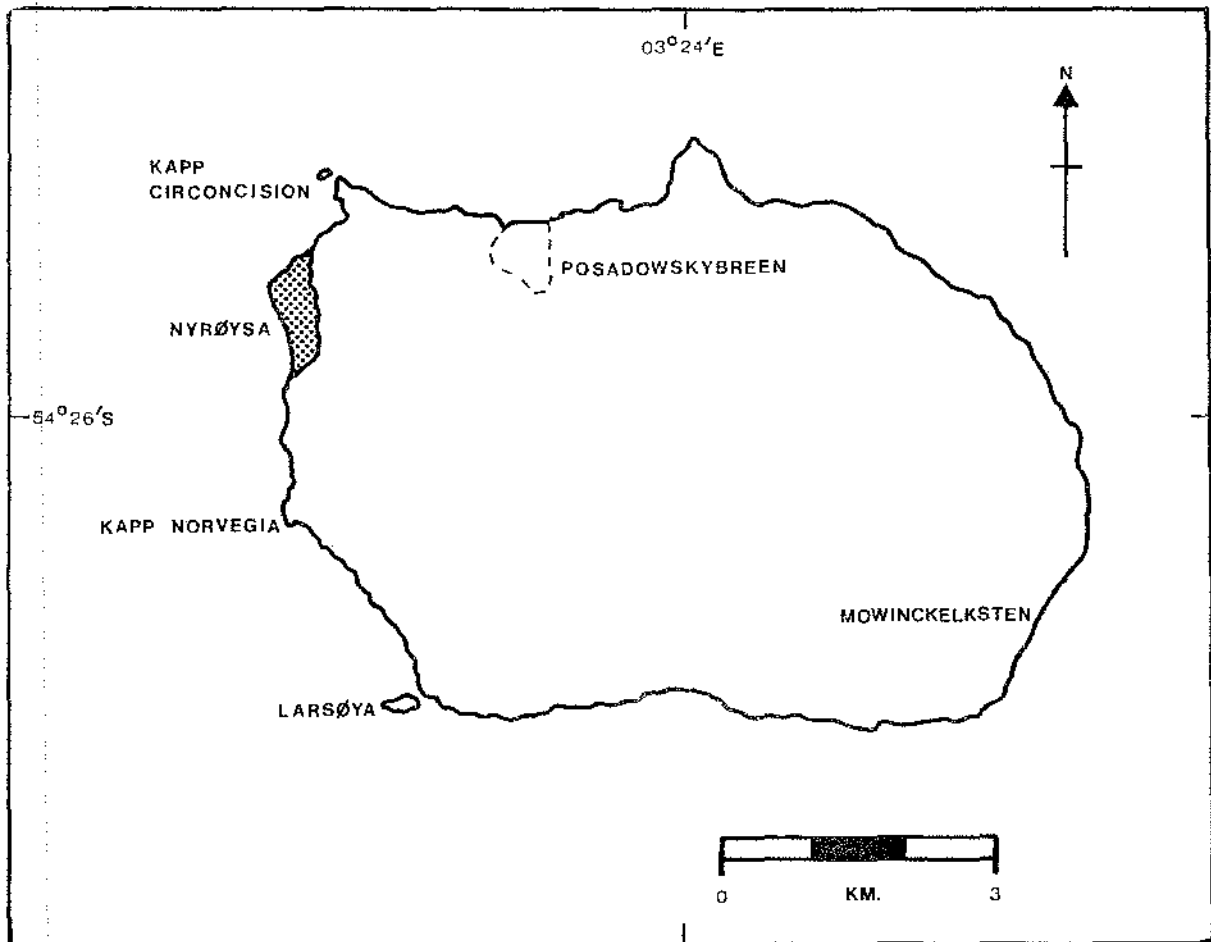


Fig. 2. Map of Bouvet Island showing the positions of known penguin colonies as listed in Table 1. The shaded area depicts the new platform, *Nyrøysa*.

Fig. 1. The position of Bouvet Island in relation to proximate sub-Antarctic islands, South Africa and Antarctica.



the island is covered by an ice-cap, breeding birds are restricted to a limited number of ice-free cliff faces, offshore islets and volcanic beaches (Fig. 2).

Between February 1955 and January 1958 a volcanic outflow or a landslide produced a new rocky platform, Nyrøfysa, on the north-west of the island (Baker & Tomblin 1964). Adélie penguins *Pygoscelis adeliae*, chinstrap penguins *P. antarctica* and macaroni penguins *Eudyptes chrysolophus*, formerly restricted to Larsøya (Fig. 2), now breed at Nyrøfysa (Holdgate *et al.* 1968, Stonehouse 1972).

Few scientists have set foot on Bouvet, and generally their visits have been short, due to the island's virtual inaccessibility. The formation of Nyrøfysa created an ideal landing place for helicopters, but poor visibility due to mist and fog still hampers landings there. On 24 January 1981 the M.V. *S.A. Agulhas* visited the island, and a party of two ornithologists spent three hours on Nyrøfysa; the encroachment of fog curtailing the visit. Thus, only part of the penguin colony could be surveyed. This note reports ornithological observations made by the party, and reviews previous information in the literature.

Breeding species

Ten species of birds have been reported as breeding, and a further three species were suspected of breeding, at Bouvet (Tables 1 and 2). Seven species were found breeding in 1981, and Wilson's storm petrel *Oceanites oceanicus* was suspected of breeding. Of the three penguin species breeding on Nyrøfysa, the chinstrap has increased most markedly, from 680-800 individuals in 1958 (Solyanik 1959) to 8 200 (Haftorn *et al.* in press) in 1978-1979. The macaroni penguin has increased

from 150 (Solyanik 1959) to 6 500 (Haftorn *et al.* in press), whereas the Adélie penguin has remained stable around 56 (Solyanik 1959) to 60 individuals (Haftorn *et al.* in press). These figures support Conroy's (1975) conclusion that the chinstrap has increased its numbers and breeding range most significantly of all penguin species, whereas the Adélie has increased at only a few breeding colonies during the last 30 years or so.

Non-breeding species

Nine species of birds have been reported as occurring on, or in the vicinity of, Bouvet (Table 2). Five were not seen in 1981, but two previously unrecorded species, the yellow-nosed albatross *Diomedea chlororhynchos* and the sooty albatross *Phoebastria fusca*, were added to the list of species found near the island. According to Watson (1975), the yellow-nosed albatross ranges between 20°S and 50°S, and the sooty albatross between 30°S and 50°S in the Atlantic and Indian oceans; the southernmost records of the sooty albatross being in the northern Weddell Sea and 58°S south-west of Bouvet Island. Contrary to Watson's (1975) opinion, it appears that the sooty albatross is a non-vagrant south of 50°S, since there are now nine records (FitzPatrick Institute unpublished) south of 50°S, the most southerly being 63°18'S.

King penguins *Aptenodytes patagonicus* have been observed at Bouvet Island on three occasions (Fevolden & Sømme 1977, Haftorn *et al.* 1980, this note), but there is no evidence for them breeding there. The single record of rockhopper penguins *Eudyptes chrysocome* at Nyrøfysa (Dickinson 1966) appears to be a misidentification, since the author fails to mention the macaroni penguin which is present in large

Table 1
Schedule of counts and estimates of penguin populations at Bouvet Island. Numbers of birds are for individual adults unless stated otherwise.

Locality	Date	Adélie	Chinstrap	Macaroni	Source
Kapp Circoncision	Feb. 1977	0	15 000 - 20 000		Fevolden & Sømme (1977)
	Dec. 1978 - Jan. 1979	0		66 400*	Haftorn <i>et al.</i> (in press)
Posadowskybreen	Feb. 1977	0	P+	P+	Fevolden & Sømme (1977)
	Dec. 1978 - Jan. 1979	0		5 500*	Haftorn <i>et al.</i> (in press)
Mowinkelksten	Feb. 1977	0	10	2	Fevolden & Sømme (1977)
Larsøya	Dec. 1928	0	P+	P+	Olstad (1929)
	—	P+	P+	P+	Holgersen (1945)
	March - April 1964	0	< 600	100	Holdgate <i>et al.</i> (1968)
	Feb. 1977	0	1 460	540	Fevolden & Sømme (1977)
	Dec. 1978 - Jan. 1979	0		21 700*	Haftorn <i>et al.</i> (in press)
opp. Larsøya	Feb. 1977	0	P+	P+	Fevolden & Sømme (1977)
Kapp Norvegia	Dec. 1928	12-20 pairs	0	0	Olstad (1929)
	—	P+	P+	P+	Holgersen (1945)
	Feb. 1977	0	P+	P+	Fevolden & Sømme (1977)
	Dec. 1978 - Jan. 1979	0		7 700*	Haftorn <i>et al.</i> (in press)
Nyrøfysa	Nov. 1958	56	680-800	150	Solyanik (1959)
	March - April 1964	0	P+	P+	Lunde (1965)
	March - April 1964	0	600	100	Holdgate <i>et al.</i> (1968)
	March 1966	0	P+	0	Dickinson (1966)
	March 1966	P	P	P	Müller <i>et al.</i> (1966)
	Feb. 1977	0	6 150	350	Fevolden & Sømme (1977)
	Dec. 1978 - Jan. 1979	60	8 200	1 400* 6 500	Haftorn <i>et al.</i> (in press)
	Jan. 1981	4 pairs	7 000 pairs	3 000 pairs	pers. obs.
(N. Nyrøfysa)					
All localities	Dec. 1978 - Jan. 1979	few hundred	> 10 000	> 100 000	Haftorn <i>et al.</i> (in press)

* Majority macaroni penguin. ° Chinstrap and macaroni penguins. P+ present, P++ present breeding

Table 2
Records of breeding and vagrant birds at Bouvet Island

Species	1981*	Pre 1981	Source
King penguin	V 3. 2 moulting imm. and 1 adult	V	8,9
Adélie penguin	B 4 pairs	B	1, 2, 3, 6, 9
Chinstrap penguin (Rockhopper penguin)	B c. 7 000 pairs ---	B V	1, 2, 3, 4, 5, 6, 7, 8, 9 5
Macaroni penguin	B c. 3 000 pairs	B	1, 2, 3, 4, 6, 7, 8, 9
Wandering albatross	V seen offshore	V seen offshore	2, 3, 7
Black-browed albatross	V seen offshore	V seen offshore	2, 3, 7
Grey-headed albatross	---	V seen offshore	7
Yellow-nosed albatross	V seen offshore	---	---
Sooty albatross	V seen offshore	---	---
Light-mantled sooty albatross	V seen offshore	V seen offshore	2, 7
Southern giant petrel	B 1 nest	V B	2, 3, 6, 7 8
Southern fulmar	B c. 40 nests	B	2, 3, 4, 7, 8
Antarctic petrel	---	V seen offshore	2, 7
Pintado petrel	B 3 nests	B	2, 3, 7
Snow petrel	V seen offshore	B	2, 3, 7
Blue petrel	---	V seen offshore	2, 7
Wilson's storm petrel	B? 1	V B?	2 7
Black-bellied storm petrel	---	V B?	2 7
South Polar skua	---	V seen offshore	3, 4
Sub-Antarctic skua	B	B	2, 3, 7
Kelp gull	---	V B?	3 7
Antarctic tern	---	B	3, 7

* Refers to this note. V = vagrants, B = breeders, B? = possible breeders

1 Olstad (1929), 2 Holgersen (1945), 3 Solyanik (1959), 4 Lunde (1965), 5 Dickinson (1966), 6 Müller *et al.* (1966), 7 Holdgate *et al.* (1968), 8 Fevolden & Sømme (1977), 9 Haftorn *et al.* (in press).

numbers. The English abstract of Lunde's (1965) paper mentions rockhopper penguins at Bouvet, but the text states macaroni penguins. Several authors have mentioned prions (*Pachyptila* spp.) as breeders, or likely breeders, at Bouvet but it is significant that Holgersen (1945), Solyanik (1959) and Holdgate *et al.* (1968) do not report any sightings of members of this genus (Cox 1979).

Acknowledgements

The South African Department of Transport provided logistical support. The South African National Committee on Oceanographic Research provided financial assistance.

References

- ANONYMOUS, 1928. Bouvet Island. *Geogr. J.* 72(6): 537-546.
- BAKER, P.E. & TOMBLIN, J.F. 1964. A recent volcanic eruption on Bouvetøya, South Atlantic Ocean. *Nature* 203: 1055-1056.
- CONROY, J.W.H. 1975. Recent increases in penguin populations in the Antarctic and sub-Antarctic. In: *The Biology of Penguins*, ed by B. Stonehouse, 321-336. London, Macmillan Press.
- COX, J.B. 1979. Some remarks on the breeding distribution and taxonomy of the Prions (Procellariidae: *Pachyptila*). *Rec. S. Aust. Mus.* 18(4): 91-121.
- DICKINSON, E. 1966. A journey to the lost islands. *Personality* (Friend Newspapers, Bloemfontein), 13 Oct. 1966: 73-85.
- FEVOLDEN, S. & SØMME, L. 1977. Observation on birds and seals at Bouvetøya. *Norsk. Polarinst. Arb.* 1976: 367-371.
- HAFTORN, S., SØMME, L. & GRAY, J.S. (in press). A census of penguins and seals on Bouvetøya. *Norsk. Polarinst. Skrifter.* 175: 29-35.
- HOLDGATE, M.W., TILBROOK, P.J. & VAUGHAN, R.W. 1968. The biology of Bouvetøya. *Brit. Antarct. Surv. Bull.* 15: 1-7.
- LUNDE, T. 1965. Fra et besøk på Bouvetøya. *Norsk. Polarinst. Arb.* 1963: 197-203.
- MÜLLER, D.B., SCHOEMAN, F.R. & VAN ZINDEREN BAKKER, E.M. Sr. 1966. Some notes on a biological reconnaissance of Bouvetøya (Antarctic). Unpublished report, Dept. of Botany, University of the Orange Free State, Bloemfontein. 6 pp.
- SOLYANIK, G.A. 1959. Some bird observations on Bouvet Island. In *Sov. Antarct. Exp. Inf. Bull.* 2 (1964): 97-100.
- STONEHOUSE, B. 1972. Animals of the Antarctic, the ecology of the far south. Publ. Peter Lowe. 171 pp.
- TALJAARD, J.J. 1964. Reconnaissance expedition to Bouvetøya. *Newsl. Weath. Bur., Pretoria* 181:73-75.
- WATSON, G.E. 1975. Birds of the Antarctic and sub-Antarctic. Washington, D.C., American Geophysical Union. 350 pp.