

SEABIRD ISLANDS

No. 2

Montagu Island, New South Wales

Location: 36° 15' S., 150° 14' E.; 6 km off-shore and 10 km south-east from Narooma, N.S.W.

Status: Wildlife Sanctuary under the control of the National Trust of Australia (NSW), with the co-operation of the Commonwealth Lighthouse Service. Permission to land required. No camping allowed, accommodation arranged only by special permission.

Other Names: Barunguba (Aboriginal); Montague (in error).

Description: 1400 m by 525 m; 49 ha; a roughly rectangular, well vegetated twin island almost divided at two-thirds its length by a gulch resulting in a smaller northern and a larger southern portion. Both are hummock-shaped, the northern with considerable areas of exposed rock shelf on the north side and low cliffs to the east; the southern is characterised by many large smooth granite outcrops. A lighthouse (80 m) and quarters are positioned at the highest point on the southern portion (64 m a.s.l.). Some additional buildings and sheds are located north of the lighthouse and at the jetty on the west side.

All parts of the island are readily accessible, except the cliffs north of the gulch on the east side. Much of the island is rocky and the deep sandy soils required for burrowing shearwaters *Puffinus* sp. are limited to less than a quarter of the surface area. In the more sheltered places a few shrubs occur, but the dominant vegetation is the Matrush *Lomandra longifolia* often with creepers *Eustrephus* sp. and Blady Grass *Imperata cylindrica*. Over some parts, particularly at the southern end and on the sheltered western aspects, Bracken *Pteridium esculentum* dominates. Reed *Phragmites australis* and Rush *Juncus* sp. occur in the wetter areas and several places are dominated by the Tussock *Poa labillardieri*.

Open grassy regions (predominantly introduced grasses including Kikuyu *Penisetum clandestinum*) occur in the vicinity of the lighthouse buildings and along the tracks to the landing places. Patches of closely grazed sward occur in places along the coastline, particularly at the southern end.

Landing: A jetty (north landing) with safe access is located midway on the west side. An abandoned landing jetty (south landing) is located on the south-west side, though access to a small beach is still possible at this point in most weather conditions.

Ornithological History: K. A. Hindwood² reviewed the early ornithological history, listed with notes 43 species, and discussed the birds of the island. The earliest recorded visits were those of A. F. Basset Hull in September 1907³ and again in October 1911^{4,5}. Population studies on Silver Gull and Crested Tern involving extensive banding activities, were conducted between 1955 and 1963^{1,6}. In 1959 F. N. Robinson reported the presence of breeding Short-tailed Shearwaters among the Wedge-tailed Shearwaters⁷, and in 1962 breeding Sooty Shearwaters were also found by him⁸. Studies on the mixed colonies of shearwaters were begun in 1959 by Robinson and have been continued since 1967 by P. J. Fullagar, CSIRO Division of Wildlife Research. This is a long-term study of competition for breeding space and annual productivity in mixed populations of the three closely related species. There are four colonies and permanent study plots have been established and marked at two sites (see map). The 'South Island Study Area' (SISA) is a rectangular plot of 0.1 ha; the 'North Island Study Area' (NISA) is a square of 0.03 ha. In 12 seasons between 1960 and 1973 (P. J. Fullagar, unpublished data) the total number of chicks reared to near fledging has varied widely (see Table 1).

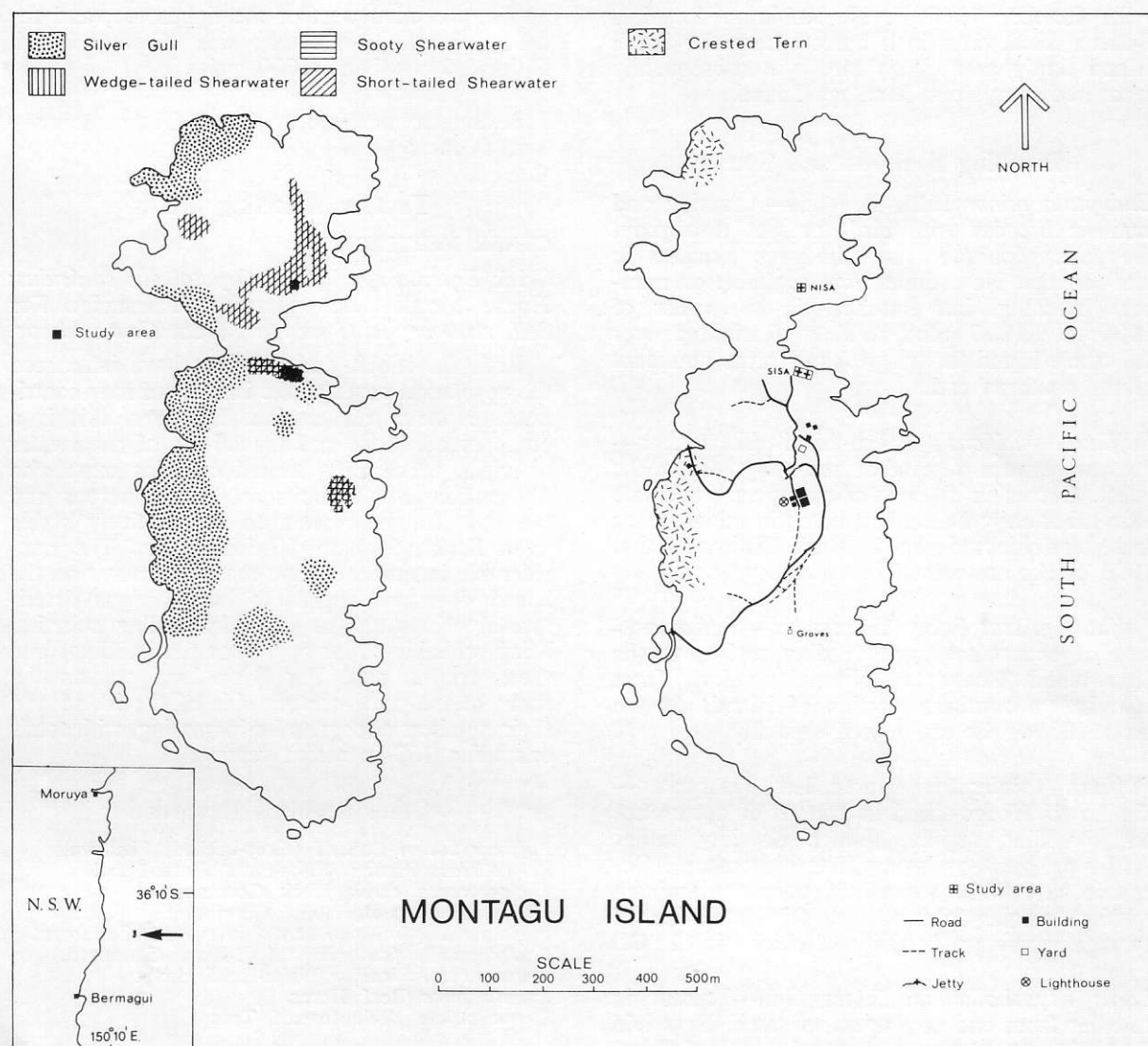


TABLE 1

Productivity of shearwater chicks in two study areas, Montagu Island, N.S.W. between 1960 and 1973

	South Island Study Area (SISA)		North Island Study Area (NISA)	
	Maximum	Minimum	Maximum	Minimum
Number of chicks (year)	160 (1972)	16 (1971)	91 (1968)	1 (1971)
Number of Short-tailed Shearwater chicks	129 (1972)	13 (1971)	67 (1968)	1 (1971)
Number of Wedge-tailed Shearwater chicks	30 (1973)	3 (1971)	42 ('63;'65)	0 (1971)
Number of Sooty Shearwater chicks	5 (1973)	0 (1971)	Absent	Absent

In October 1960 F. N. Robinson found a Buller's Shearwater in a burrow near the South Island Study area². This bird was subsequently recovered away from Montagu Island.

Breeding Seabirds and Status

Eudyptula minor Little Penguin—A spring and summer breeder with birds present throughout the year. Moults ashore in large numbers in late summer. No estimates are available on numbers breeding, but probably in the order of 1000 to 10 000 pairs. Widely distributed over the whole island though probably more abundant at the southern end.

Puffinus pacificus Wedge-tailed Shearwater—Present between September and early May at the latest. Occurs in all four colonies; eggs laid late November early December; hatch in mid-January and most chicks depart in April. Estimated that 3500 chicks are reared in average year.

Puffinus griseus Sooty Shearwater—Similar pattern of occurrence and breeding regime to the Short-tailed Shearwater. Known regularly from colonies on southern portion of island. At the most 100 chicks are reared annually.

Puffinus tenuirostris Short-tailed Shearwater—Similar to Wedge-tailed in pattern of occurrence and breeding regime, though possibly rather earlier peak to egg laying (late November). Occurs in all colonies almost always as predominant species (ranging from 41% to 95%). Estimated average yearly productivity of chicks is 12 500.

Larus novaehollandiae Silver Gull—Present in colonies from end of August to April. Eggs laid September; most young depart by end of January; in some years late broods are free-flying as late as April. Colonies present over much of island; particularly concentrated along the western side, the slopes south of the gulch and near the outcrops on the higher parts surrounding the lighthouse. Estimated numbers, between 5000 to 10 000 pairs. Location and size of colonies requires more thorough documentation. There is some evidence of increasing numbers.

Sterna bergii Crested Tern—Present in colonies between September and January. Egg laying usually in October, chicks fledge late December early January. Colonies occupy two sites, one

on the shoreline west of the lighthouse, and the other on the north-west side of the island. Estimated numbers, 1000 pairs.

Haematopus fuliginosus Sooty Oystercatcher—Two to three pairs.

Factors Affecting Status

OTHER VERTEBRATES

Skink *Egernia* sp.; Rabbit *Oryctolagus cuniculus*; House Mouse *Mus musculus*; Tasmanian Fur Seal *Arctocephalus pusillus*; Goat *Capra hircus*.

Both the rabbit and the goat have influenced the vegetation cover of the island and may contribute to some soil erosion. However, this is a complex question, and the effects of shearwater activities in densely packed colonies must also be considerable. Rabbits are not numerous and the goat numbers seem to be relatively stable as a flock of about 60 individuals. The considerable intrusion of man-made structures on the island does not appear to have serious detrimental effects on the seabird breeding colonies. Mice probably occur only near the buildings and there are no rats. Fur Seals haul out on the rocks at the north-eastern side of the island and their numbers appear to be increasing, with totals exceeding 100 in recent years.

Other Seabirds Recorded

Puffinus bulleri Buller's (Grey-backed) Shearwater
Pelagodroma marina White-faced Storm-Petrel
Phalacrocorax carbo Black Cormorant
Phalacrocorax varius Pied Cormorant
Phalacrocorax melanoleucos Little Pied Cormorant
Phalacrocorax fuscescens Black-faced Cormorant
Ardea novaehollandiae White-faced Heron
Egretta sacra Reef Heron
Sterna striata White-fronted Tern

Banding

First banding trip 7 November 1955. The banding data are set out in Table 2.

RECOVERIES AWAY FROM MONTAGU ISLAND

Little Penguin—One recovery at Bermagui, N.S.W. (29 km SSW).

Buller's Shearwater—One recovery 63 days later at New Brighton Beach, N.S.W. (970 km NNE).

Short-tailed Shearwater—One recovery at Forster, N.S.W. (512 km NNE). Banded as adult 31 months earlier.

Silver Gull—Coastal areas of Tasmania, Victoria, New South Wales and southern Queens-

TABLE 2

Seabirds banded on Montagu Island, 1955 to 1973

	Banded (to 15.4.73)		Recovered at Banding Place		Recovered away from Banding Place	
	Young	Adult	New Birds	Total Times	New Birds	Total Times
Little Penguin		14			1	1
Wedge-tailed Shearwater	343	145	10	10		
Buller's Shearwater		1			1	1
Sooty Shearwater	24	21	2	2		
Short-tailed Shearwater	1167	360	47	52	1	1
Silver Gull	6520	441	21	21	244	246
Crested Tern	3134	589	63	69	111	111

land (majority from N.S.W.). A few from inland Victoria and New South Wales^{1,6}.

Crested Tern—Coastal areas of Tasmania, Victoria, New South Wales and southern Queensland (majority from N.S.W.)¹.

RECOVERIES ON MONTAGU ISLAND

Wedge-tailed Shearwater—Two chicks banded on Montagu have been captured again at three and four years of age.

Short-tailed Shearwater—One banded as a chick at Port Fairy, Victoria, was captured five years later as a surface bird. Recoveries of other chicks banded on Montagu have ranged from three to nine years of age. In two cases they were known to be breeding, one at five years, the other at seven years.

Recoveries of Silver Gulls and Crested Terns have not been fully analysed^{1,6}. Hindwood² gives details of the recoveries of a Fairy Prion, a White-fronted Tern and an Australian Gannet from the island.

Bibliography

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