

SEABIRD ISLANDS

No. 25/1

Grasshopper Island, New South Wales

Location: 35°38'S, 150°20'E; 150 metres offshore from Depot Beach, 12 kilometres north of the entrance to Batemans Bay on the south coast of New South Wales (NSW).

Status: Part of Murramarang National Park administered by the NSW National Parks and Wildlife Service (NPWS), Office of Environment and Heritage. Entry permit required.

Description: Approximately 420 metres long by 130 metres across, covering 4.3 hectares, with the main axis aligned northwest to south-east. An irregular shaped plateau (c. 190 m x 75 m; 0.7 ha) is surrounded by precipitous cliffs that rise to 25 metres above an extensive rock platform. Access to the plateau is via a steep slope at the western end. At the base of this slope, a spit of sandy soil supports some vegetation. The total vegetated area is approximately 0.8 hectares.

The sand spit is dominated by Seaberry Saltbush *Rhagodia candolleana* with clumps of Coast Tussock-grass *Poa poiformis* along the southern and western edge. The plateau, characterised by a bedrock of conglomerate, sandstone and silty sandstone, supports a shallow soil dominated by Pigface *Carpobrotus glaucesens*, with scattered clumps of Spiny-headed Mat-rush *Lomandra longifolia*, Seaberry Saltbush and several stands of Boobialla *Myoporum boninense*. Clumps of Coast Tussock-grass dominate the south facing cliffs at the eastern end of the plateau. Other vegetation includes: *Cakile* spp., *Commelinia cyanea*, *Kennedia rubicunda*, *Leucopogon parviflorus*, *Sonchus asper*, *Sporobolus virginicus* and *Tetragonia tetragonoides*.

Landing: Landing requires the calmest of conditions, and is onto rocks on either the northern or southern shore depending on swell direction.

Ornithological History: Lane¹ detailed the only recorded ornithological visit to Grasshopper Island up until 1972. NPWS staff made multiple day-visits to the island between 2006 and 2010 to monitor the population of Sooty Oystercatcher *Haematopus fuliginosus* as part of the South Coast Shorebird Recovery Program (contact NPWS for annual reports). We visited the island on 28–29 October 2009 to assess penguin numbers, for a half-day visit on 15 March 2010 to characterise vegetation and identify threats², and on 13–14 December 2010 to survey other nesting seabirds.

Breeding Seabirds and Status

Pelagodroma marina White-faced Storm-petrel – Burrows, eggs and remains were present amongst the tussock grass on the south-facing cliffs at the eastern end of the plateau. We surveyed approximately one fifth of this steep habitat and counted 20 burrows, suggesting a total of approximately 100 burrows overall. At night we spotlighted in this area and observed six individuals in flight. Spotlighting conducted along the inaccessible eastern cliffs failed to locate any birds, indicating the colony is confined to the south-facing cliff. Assuming an occupancy rate of 50 per cent³, we estimate the total population for the island to be approximately 50 pairs. Lane¹ reported finding one White-faced Storm-petrel burrow with a dead bird at the entrance and suggested a breeding population of around 10 pairs.

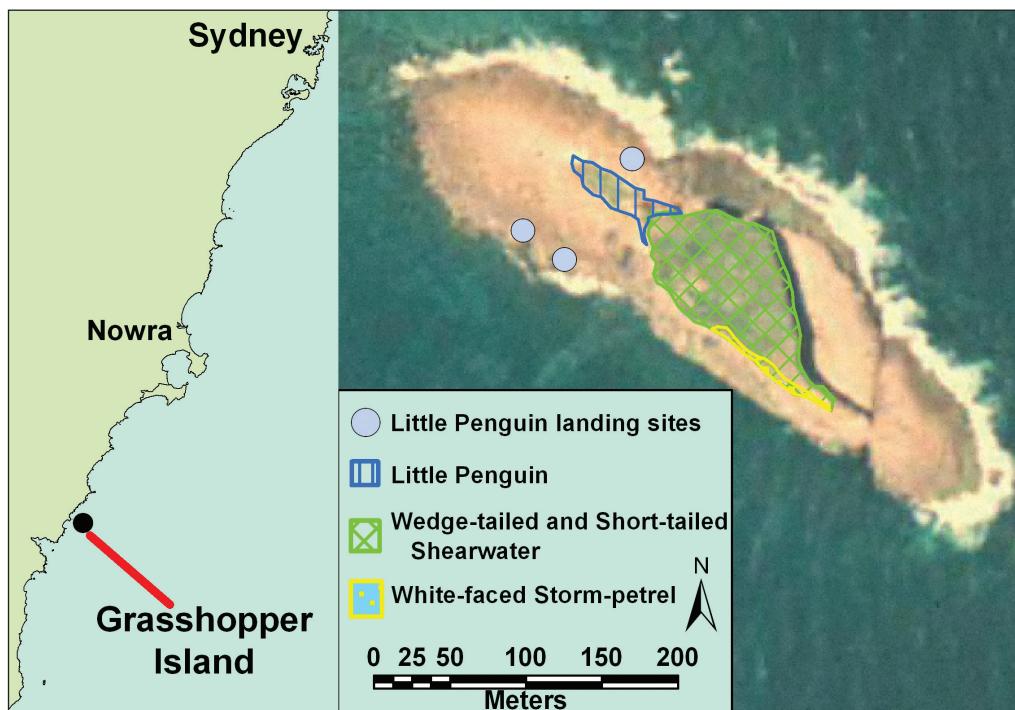


Figure 1. Grasshopper Island, New South Wales

Ardenna pacifica Wedge-tailed Shearwater – Nests across the plateau; burrows interspersed with those of Short-tailed Shearwaters *Ardenna tenuirostris*. Population size was estimated by sampling burrows within a series of five random transects (20 m x 4 m). The area surveyed was approximately six per cent of the area of the colony (c. 0.7 ha). At the time of the survey, adult birds were incubating eggs. All burrows within each transect were counted and searched; if occupied, the occupant was extracted and identified to species. Burrows that were too long to determine if they were occupied were classified as “indeterminable” and assumed to have the same occupancy rate and species ratio as shorter burrows.

In total, the five transects contained 267 burrows, of which 138 (52%) were occupied, 54 (20%) were empty and 75 (28%) indeterminable. The occupancy rate was 72 per cent, and of those birds present, 34 per cent were Wedge-tailed Shearwaters. We estimate the total number (\pm s.e.) of shearwater burrows on the island to be 4694 ± 490 , and the population of Wedge-tailed Shearwaters to be 1149 ± 221 . This is significantly greater than the previous estimate of 200 pairs¹.

Ardenna tenuirostris Short-tailed Shearwater – Nests across the plateau, in a mixed colony with Wedge-tailed Shearwaters. Sixty-six per cent of shearwaters present were Short-tailed Shearwaters. We estimate the population (\pm s.e.) of Short-tailed Shearwaters to be 2225 ± 233 . This is significantly greater than the previous estimate of 400 pairs¹, although the ratio of Short-tailed to Wedge-tailed shearwaters is unchanged.

Eudyptula minor Little Penguin – Nests on the sand spit and on the slope leading to the plateau, a total area of approximately 0.1 hectares. In October 2009, the coastline of the island was searched and all landing sites ($n = 3$) were identified from the trails of excrement present. Penguins landing at each of these sites were counted from dusk until no penguins arrived within a 15-min period (2115 hr); a total of 86 penguins landed. During the day we sampled 18 occupied nests (those containing at least one adult or chick) to estimate the proportion of breeding adults ashore; two nests contained two adults, four contained one adult and 12 contained unattended chicks. Assuming that all breeding adults at sea would come ashore (to incubate eggs or feed chicks), we calculated that each arriving bird represented 0.64 nests, and estimated the nesting population to be 55 pairs. This is similar to the previous estimate of 50 pairs in 1972¹.

Factors Affecting Status

White-breasted Sea-eagle *Haliaeetus leucogaster* and Peregrine Falcon *Falco peregrinus* were observed feeding on the island, and prey remains indicate that these birds take shearwaters and penguins. A group of five Australian Raven *Corvus coronoides* was observed searching on the plateau and taking shearwater eggs, although these are likely to be surface or abandoned eggs as when in view the birds did not enter burrows. Although the island is close to popular beaches, landing is difficult except in calm conditions and unauthorised access to the island is prohibited. Tussocks within the White-faced Storm-petrel nesting habitat showed signs of a previous fire which, depending on the timing, may have affected nesting adults or chicks. No highly invasive weed species were observed to be present.

Other Seabirds Recorded

<i>Anhinga novaehollandiae</i>	Australasian Darter
<i>Phalacrocorax carbo</i>	Great Cormorant
<i>Phalacrocorax varius</i>	Pied Cormorant
<i>Egretta sacra</i>	Eastern Reef Egret (breeding)
<i>Haematopus fuliginosus</i>	Sooty Oystercatcher (breeding)

Other Vertebrates Recorded

A small grey-brown skink (probably *Lampropholis* sp.) was seen infrequently, but not captured, so could not be identified.

Banding

One visit: 16 December 1972.

Ardenna pacifica – 29 adults.

Ardenna tenuirostris – 68 adults.

One recovery 53 km north almost six years after banding.

Bibliography

1. Lane, S. G. (1976). Seabird Islands No. 25: Grasshopper Island, New South Wales. *Aust. Bird Bander* **14**: 27.
2. Blackmore, C. J., Jarman, M., Craven, P. and Carlile, N. (2010). Population and Threat Assessment of Seabird Colonies on the South Coast of New South Wales, Ulladulla Area. Unpublished report. NSW National Parks and Wildlife Service, Ulladulla.
3. Brothers, N. P. (1981). Observations of breeding success in White-faced Storm-petrel at a newly established colony. *Corella* **5**: 29–33.

Acknowledgements

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