

# SEABIRD ISLANDS

# No. 41/1

## Martin Islet, Five Islands Group, New South Wales

**Location:** 34°29'40" S, 150°56'15" E: 1.3 km offshore from Hill 60, Port Kembla, New South Wales (NSW). It is part of the Five Islands Group, located 150 m east of Big Island No. 2.

**Status:** Nature Reserve administered by the NSW National Parks and Wildlife Service (NPWS), Office of Environment and Heritage (OEH). Entry permit required.

**Other Names:** Previously Five Islands No 3<sup>1</sup>.

**Description:** Martin Islet is the smallest islet in the Five Islands Group<sup>2</sup>, which also includes Bass Islet, Flinders Islet, and Big Island (comprising two main parts known as No. 1 and No. 2). Martin Islet is 2.33 ha in area, of which 0.26 ha is vegetated. Geologically, the islet resembles Big Island and Bass Islet in the Group, being derived principally from the Dapto-Saddleback Latite Member of the Gerringong Permian Volcanics<sup>3</sup>.

Martin Islet is irregularly shaped, with the highest point at 20 m on the plateau at the western end. All approaches to the islet encounter a rocky shoreline. Extensive rock platforms cover the islet, with a large, eroded, basalt dyke almost bisecting it from southeast to northwest one third of the way across the islet from the eastern shore (see Figure 1).

The plateau is dominated by the introduced shrub Bitou Bush *Chrysanthemoides monilifera rotundata* and the New Zealand

Mirror Plant *Coprosma repens*, with the slopes supporting native Prickly Couch *Zoysia macrantha*. Since it was last surveyed, the most notable losses of native plant species have been the Prickly Couch and Pigface *Carpobrotus glaucescens* communities on the plateau, as previously described by Battam<sup>1</sup>. These have been overcome by introduced shrubs and the establishment of an Australian Pelican *Pelecanus conspicillatus* population, which has hardened off and compacted the soil and generated considerable guano deposits. Other vegetation not mentioned in Battam<sup>1</sup> includes (\*indicates exotic species):

*Amaranthus viridis\**, *Atriplex australasica*, *Cenchrus clandestinus\**, *Chenopodium album\**, *Chenopodium murale\**, *Commelina cyanea*, *Einadia trigonos*, *Eleusine indica\**, *Enchylaena tomentosa*, *Lycium ferocissimum\**, *Malva parviflora\**, *Portulaca pilosa*, *Sonchus oleraceus\** and *Tetragonia tetragonoides*.

**Landing:** Landing can be effected from a tender on the northwest shoreline where a deep-water approach allows a bow disembarkation in low to moderate seas (Figure 1).

**Ornithological History:** Battam<sup>1</sup> detailed the ornithological visits to Martin Islet up until 1976. Over the next decade, four banders visited it a total of nine times (Australian Bird and Bat Banding Scheme [ABBBS], submitted data), but no further

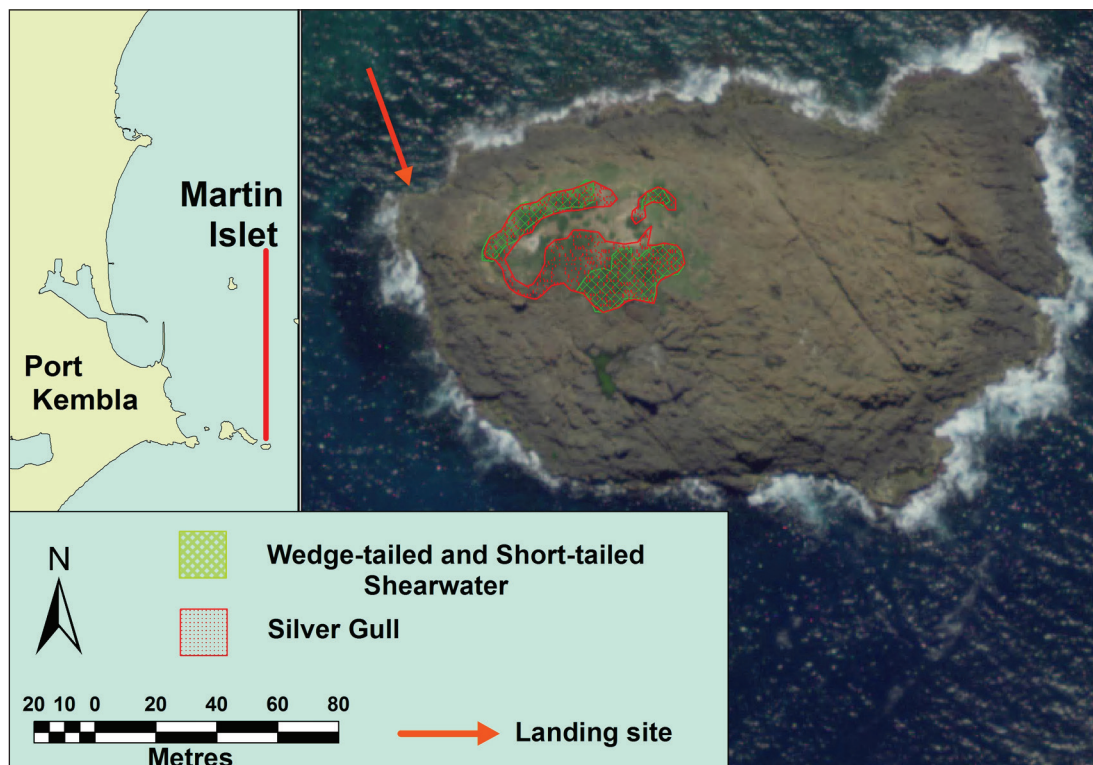


Figure 1. Martin Islet, Five Island Group, New South Wales

banding has been attempted since then. N. Carlile and N. Whitelaw visited overnight on 20–21 September 2016 to survey nesting seabirds and N. Carlile and R. Morris visited for an hour on 26 January 2017 to document shearwater distribution and burrow occupancy.

### Breeding Seabirds and Status

*Pelagodroma marina* White-faced Storm-Petrel — Previously found on the plateau of the islet in an area now dominated by an Australian Pelican crèche. There was no evidence of this species in the air over the previous colony area or on the ground during an overnight visit in September 2016, despite sightings of it at the same time on nearby Flinders Islet<sup>4</sup>. No burrows were seen during a burrow search in January 2017 and the species is likely to be locally extinct.

*Ardenna pacifica* Wedge-tailed Shearwater — Nests on the edge of the plateau and on some slopes with sufficient soil depth for burrowing. This species was seen at night among burrows during September 2016. Population size was estimated by counting all known burrows across the available habitat in January 2017. On the north-western edge of the plateau, burrows were checked for the proportion occupied and ratio of species (Wedge-tailed to Short-tailed Shearwaters). Each burrow was hand-searched for the presence of birds and, if it was occupied, the occupant was either extracted or evidence of its presence collected (downy feathers). Burrows with unreachable occupants were considered to have the same ratio of species as those where the identity of birds was determined. In total, 88 burrows were counted. From the search of 42 burrows, 40% were occupied, all with young chicks. Of the 15 observed chicks, all but one was a Wedge-tailed Shearwater. The average expected breeding success (i.e. eggs that produce chicks) is 50%<sup>5</sup> for this species, suggesting that the islet supports approximately 28 breeding pairs. This resembles the “30 (+) breeding pairs” estimated in the 1970s<sup>1</sup>, but is substantially more than estimated in the late 1990s<sup>2</sup> when search effort was not quantified.

*Ardenna tenuirostris* Short-tailed Shearwater — Nests are among those of Wedge-tailed Shearwaters. Whilst no calls of this species were documented during an overnight stay in September 2016, a single chick was found during a search of burrows in late January 2017. The population here is likely to comprise only a few pairs and much fewer than the estimated 40 (+) pairs in the mid 1970s<sup>1</sup> or 30 pairs in the late 1990s<sup>2</sup>.

*Eudyptula minor* Little Penguin — Previously known to breed in an area south of the plateau that is currently dominated by Prickly Couch<sup>1</sup>, but none were heard either swimming near the islet at dusk or onshore during an overnight visit in September 2016.

*Thalasseus bergii* Crested Tern — The breeding population recorded irregularly on Martin Islet in the 1970s<sup>1</sup> was not evident during the survey in September 2016, but birds did breed on the islet in 1999<sup>2</sup>. They were noted breeding on Big Island in 2016 (unpubl. data), which possibly explains their absence from Martin Islet during our visits.

*Chroicocephalus novaehollandiae* Silver Gull — This species now dominates the vegetated areas of Martin Islet that are not being used by Australian Pelicans or covered in shrubs. A direct

count of nests in September 2016 indicated that 230 pairs were breeding on the islet. This is significantly fewer than the 1970s estimate of 1,000 breeding pairs<sup>1</sup> or the 500 pairs suggested in the late 1990s<sup>2</sup>.

*Larus dominicanus* Kelp Gull — Has been observed both on the islet (2014, unpubl. data) or near it (this survey), but no nests were found for the species. Previously two pairs were known from this site<sup>6</sup>.

*Haematopus fuliginosus* Sooty Oystercatcher — The extensive area of rock platform favours this species, but in September 2016 Carlile and Whitelaw recorded only a single pair defending territory which may have gone on to breed.

*Pelecanus conspicillatus* Australian Pelican — A small breeding population became established at the eastern end of No. 2 plateau on Big Island in 1983<sup>5</sup>, very near to Martin Islet. As part of observations on the growth of the Big Island colony<sup>5</sup>, it was noted that on Martin Islet by September 1991 there were two adults on nests and four ‘loafing’ nearby. In September 1995, up to 55 adults were noted on the islet and 50 breeding pairs were present in the late 1990s<sup>2</sup>; however, in 2005 there were only 33 adults. During the current survey period, 16 incubating adults and 33 crèche young were noted occupying the central section of the small plateau in September 2016.

*Threskiornis molucca* Australian White Ibis — This species first appeared breeding in the Five Islands Group on Big Island in the late 1990s<sup>5</sup>. As part of observations on the growth of the main colony<sup>5</sup>, it was noted that up to 25 White Ibis were seen on Martin Islet by 2005. This expansion of breeding onto Martin Islet probably occurred after the establishment of Mirror Plant at this site. In September 2016, an estimated 80 birds were occupying the available habitat. A direct count of nests was not possible due to the unacceptable disturbance this would have caused to a crèche of juvenile Australian Pelicans.

### Factors Affecting Status

The loss of White-faced Storm-Petrels on Martin Islet sometime between the 1970s<sup>1</sup> and late 1990s<sup>2</sup> probably occurred because substrate conditions deteriorated during the increase in nesting Australian Pelicans.

The Wedge-tailed Shearwater has managed to retain its breeding population size since the 1970s survey despite a significant decline in available habitat<sup>1</sup>. The Short-tailed Shearwater is in decline on Martin Islet for unknown reasons. On nearby Big Island the population has remained stable over the same period<sup>5</sup> and the species has established itself on Flinders Islet<sup>4</sup>.

The local extinction of Little Penguins on Martin Islet is probably an outcome of the re-establishment of Australian Fur Seals *Arctocephalus pusillus* in the island group. From the location of the mapped colony in the 1970s<sup>1</sup>, the current haul-out area of seals now dominates the rocks where penguin landings would previously have occurred. The presence of the seals would now probably be deterring any penguin arrivals, as has been seen previously on Montague Island off Narooma, NSW. On Montague Island, as seal numbers rise and their haul-out

sites expand<sup>7</sup>, the Little Penguin landing sites in the immediate vicinity appear to diminish or cease to be used (unpubl. data). It is almost certainly this impact rather than other land-based changes that have led to their disappearance from Martin Islet, as their former breeding location near the plateau appears to be little changed since the previous survey<sup>1</sup>.

The reduction in the Silver Gull population since the 1970s survey<sup>1</sup> mirrors the decline now recorded for this species on Big Island<sup>5</sup>. At the higher elevations on Martin Islet, the dominance of the Australian Pelican rookery and the spread of exotic shrubs may also be restricting gulls from breeding. Certainly, the area previously known for Crested Tern breeding<sup>1</sup> is now dominated by shrubs and this may preclude terns reusing this islet in the future.

Australian Pelicans and Australian White Ibis are recent arrivals on Martin Islet. Whilst the pelicans appear to favour the skeletal soil areas on the plateau, the presence and uncontrolled expansion of introduced shrubs may eliminate the area available to them. This will be to the advantage of the Australian White Ibis. The removal of shrubs will reduce seed spread to other islands and assist recovery of native vegetation nearby<sup>5</sup>.

Whilst not recorded on or over Martin Islet during the survey, the Swamp Harrier *Circus approximans*, White-bellied Sea-Eagle *Haliaeetus leucogaster* and Peregrine Falcon *Falco peregrinus* are known to frequent Big Island<sup>2</sup>, and would probably impact colonial nesting populations on Martin Islet.

### Other Seabirds Recorded

Other seabirds observed during the current survey:

*Phalacrocorax carbo* Great Cormorant

*Phalacrocorax sulcirostris* Little Black Cormorant

### Other Vertebrates Recorded

The Eastern Water Skink *Eulamprus quoyii*, previously identified by Battam<sup>1</sup>, was not recorded during these surveys. Australian Fur Seal numbers are likely to rise, as the count of 90 individuals during this survey has increased from 20 seen from Big Island in August 2012 and 34 counted during a circumnavigation of the islet in April 2014 (unpubl. data).

### Banding

Data for all banding records from December 1969 to December 1986:

*Ardenna pacifica* – 16 adults, with two recoveries: one nesting on nearby Big Island and the second as a beach-washed recovery 10 km to the south.

*Ardenna tenuirostris* – 16 adults, with no recoveries.

*Pelecanus conspicillatus* – 48 nestlings, with 8 recoveries away from the site: Lake Wooloweyah near Yamba on the NSW north coast is the greatest distance at 600 km.

### Acknowledgements

The survey of Martin Islet was undertaken with the assistance and support of the Illawarra Area of the NSW NPWS. Nick Whitelaw (Friends of Five Islands) and Rowena Morris (NPWS) assisted in the surveys. The Illawarra Area field staff (NPWS), Ben Hope (OEH) and Marine Rescue Port Kembla assisted with boat transfers and logistics. The ABBBS provided banding and recovery information. Kevin Mills assisted with botanical identifications. Suggestions and corrections by Chris Lloyd and Rowena Morris improved an earlier draft of this paper.

### Bibliography

- 1 Battam, H. (1976). Seabird Islands No. 41: Martin Islet, Five Islands, New South Wales. *The Australian Bird Bander* **14**: 108–109.
- 2 NSW NPWS. (2005). *Five Islands Nature Reserve Plan of Management*. NPWS, Sydney.
- 3 Branagan, D. F. and Packham, G. H. (2000). *Field Geology of New South Wales (3rd Edition)*. NSW Department of Mineral Resources.
- 4 Lloyd, C. and Carlile, N. (2019). Seabird Islands No. 39/1: Flinders Islet, Five Islands Group, New South Wales. *Corella* **43**: XX–XX.
- 5 Carlile, N., Lloyd, C., Morris, R., Battam, H. and Smith, L. (2017). Seabird Islands No. 38/1: Big Island, Five Islands Group, New South Wales. *Corella* **41**: 57–62.
- 6 Battam, H. (1970). The Dominican Gull on Five Islands, New South Wales. *Australian Bird Bander* **8**: 32–33.
- 7 Shaughnessy, P. D., Briggs, S. V. and Constable, R. (2001). Observations on seals at Montague Island, New South Wales. *Australian Mammalogy* **23**: 1–7.

**Date compiled:** 6 April 2018.

Nicholas Carlile, Office of Environment and Heritage, PO Box 1967, Hurstville BC, NSW 1481.

Email: Nicholas.Carlile@environment.nsw.gov.au