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SEABIRD ISLANDS No. 261

Mutton Bird Island, Lord Howe Group, New South Wales

Location: 31°32'26"S, 159°06'26"E; 1200 metres north-east of Mutton Bird Point, Lord Howe Island, 580 kilometres east of Port Macquarie, New South Wales, in the South Pacific Ocean.

Status: The entire Lord Howe Group is inscribed on the World Heritage List. Mutton Bird Island is part of the Permanent Park Preserve administered by the Lord Howe Island Board. Permission from the Board is required to land on the island.

Other Name: Inaccessible Island

Description: Mutton Bird Island (3.8 ha), viewed most commonly from the eastern shore of Lord Howe Island, appears as a sharp-sided dome, but the 77-metre high island is actually 'tadpole' shaped with the 'head' forming the dome. The island has an elevated area of 2.7 hectares with a plateau (1.1 ha) sloping away to the south-west. Extensive ledges occur on each side of the north-east to south-west ridge, the 'tail'. The island is composed of igneous breccia dissected by basalt dykes, and supports only skeletal soils.

The island is dominated by Coast Tussock-grass *Poa poiformis* with patches of Leafy Flat Sedge *Cyperus lucidus*, and scrambling native Wandering Jew *Commelina cyanea*. Occasional clumps of wind-sheared shrubs, Tea-tree *Melaleuca howena* and Sallywood *Lagunaria patersonia*, survive on the steep cliffs. Other vegetation, including exotic (*) species, comprised:

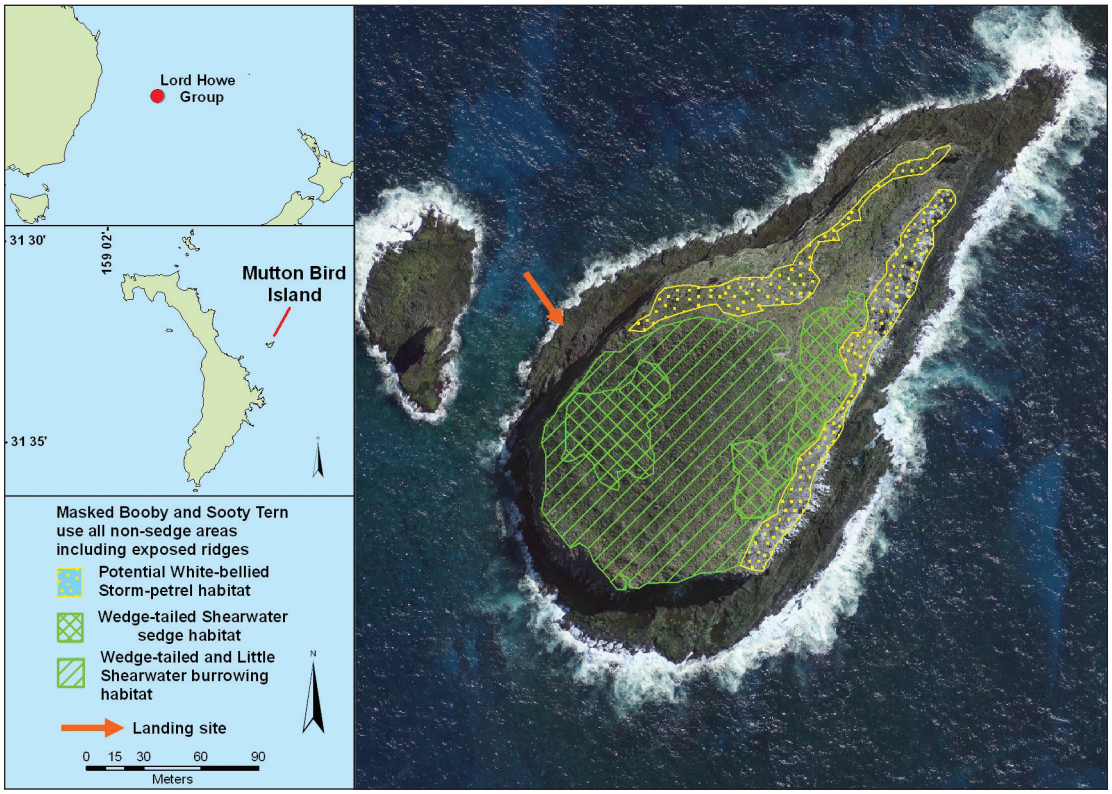
*Achyranthes aspera, Lepidium howei-insulae, *Polycarpon tetraphyllum, *Portulaca oleracea, Senecio howeanus, *Solanum nigrum, *Sonchus oleraceus, Tetragonia tetragonioides, *Digitaria sanguinalis, Sporobolus virginicus, *Ipomoea cairica, Canavalia rosea* and *Tylophora biglandulosa.*

Landing: Requires favourable seas, and is onto rocks on the western to north-western side, the location dependant on the prevailing conditions, with nearby Sail Rock providing some protection. A campsite, sheltered from falling rocks, is available in a shallow cave on the northern shore. Access to the plateau is from the southern shore and requires a steep, exposed climb best attempted with a fixed rope.

Ornithological History: Mutton Bird Island is seldom visited. Hindwood[1] remarked that the island was difficult to access and did not attempt a landing. The first and only recorded ornithological survey was led by Carlile with a single overnight visit (15–16 December 2009) lasting 18 hours.

Breeding Seabirds and Status

Phaethon rubricauda Red-tailed Tropicbird—This species nests on cliffs that are largely inaccessible, consequently estimating breeding numbers is problematic. During December, when this species is typically incubating eggs[2], only two birds were



• *Mutton Bird Island, Lord Howe Group, NSW*

• *Mutton Bird Island from the north.*

seen; both landed on cliff faces, presumably visiting nests. The breeding population of Red-tailed Tropicbirds on Mutton Bird Island was probably 1–10 pairs.

Fregetta grallaria White-bellied Storm-petrel—No survey of breeding pairs was possible in December 2009 because egg laying had not yet commenced[3]. However, potential nesting habitat similar to that used by this species on nearby Roach Island[3] (rock piles and eroding basalt dykes) occurred along the ledges on each side of the 'tail'. Spotlighting from the rock platform below (three operators for 1 hour; 10-minute periods of searching followed by five minutes of listening with no light), recorded more than 20 flying individuals. From this behaviour it is suspected that this species breeds here.

Ardenna pacifica Wedge-tailed Shearwater—This species nests in short burrows or rock cavities, under overhangs, or in the open between clumps of vegetation. The area of the plateau dominated by tussock-grass (0.7 ha) was surveyed for incubating birds using four transects (each 30 x 4 m), which together indicated a density (± s.e) of 0.35 ± 0.16 nests per square metre. Within the two sedge-dominated areas (2500 and 2200 m^2) a single transect (30 x 4 m) found the density of incubating birds to be 0.16 nests per square metre. From these data we calculate 3114 ± 1430 pairs nesting within the sloping plateau. In addition, a direct count of incubating birds in cavities and overhangs on the steeper slopes (0.5 ha) recorded 57 individuals, although this is likely to be an under-estimate due to some parts of the island being inaccessible. Thus, the total population for the island is about 3200 (± 1460) pairs. In 1971, Fullagar and others[4] suggested that Mutton Bird Island probably supported about 5000 pairs of Wedge-tailed Shearwater, based on land area and their knowledge of nesting densities on other islands.

Puffinus assimilis Little Shearwater—Being a winter-breeding species, Little Shearwater were not present during the December survey. However, potential nesting habitat (0.7 ha), similar to that on Roach Island (the main breeding location for this species within the Lord Howe Group[2]), is present on Mutton Bird Island and it is likely that this species also breeds here[1, 4]. As on Roach Island, the Little Shearwater would be limited to using small burrows or cavities that restricted the entry of the larger Wedge-tailed Shearwater.

Pterodroma neglecta Kermadec Petrel—The only site within the Lord Howe Group where this species is known to breed is Balls Pyramid, where it nests on sheltered ledges[2]. During a nocturnal spotlight survey of Mutton Bird Island a single Kermadec Petrel was observed. Approximately 30 minutes after sunset, it made two passes across the upper slopes of the north-east portion of the island before flying onto the slope and disappearing from view. Given the time of year, the observed behaviour could indicate an adult returning to provision a chick at the nest[5]. However, a subsequent search of all accessible areas within this part of the island during daylight failed to find any evidence of nesting. The possibility that this species is breeding on the island warrants further investigation.

Sula dactylatra Masked Booby—This species nests on large, flat areas on the main ridge or the west-facing sloping plateau. In December 2009, we counted 42 active nests. The Masked Booby has a protracted breeding season with laying documented from May[6] to January[2]. Weekly data on the number of active nests from a previous study of Masked Booby on Lord Howe Island[6] was used to determine the proportion of the total nests present during the breeding season. At the time of the December survey 11.5% of the total nests were remaining from the season. Assuming the timing of breeding is similar between years, we estimate that 365 pairs of Masked Boobies may have bred on Mutton Bird Island in 2009/10. In February 1971, Fullagar and others[4] made observations from a boat and estimated at least 90 adults nesting or roosting.

Anous stolidus Common Noddy—This species was nesting on the island in December 2009 but the precipitousness of the nesting habitat precluded an accurate assessment of population size. It is estimated that 10–100 pairs breed on the island.

Procelsterna cerulea Grey Ternlet—At the time of the survey, the breeding season for this species was nearing its conclusion, and only a few fledglings were present among the adult birds.

Onychoprion fuscata Sooty Tern—This species is both widespread and common on the island, and breeds on flat areas. Inspection of ledges on the steeper slopes (5349 m^2) produced a count of 160 young, ranging in age from downy pulli to near-fledged chicks. In contrast, only flying young and a few near-fledged birds were present on the plateau, with nesting apparently

• *Mutton Bird Island (and Sail Rock) from the west.*

occurring earlier here than anywhere else within the Lord Howe Group[3, 7, 8]. Consequently, we were unable to reliably estimate the size of the breeding population. However, the habitat on the plateau is similar, in terms of geology, vegetation and seabird communities to that of nearby Roach Island. Assuming that the breeding productivity of Sooty Terns on the plateau was similar to that on Roach Island[3] (0.22 ± 0.07 young per m^2) and each fledgling represents one breeding pair, we cautiously estimate that the total breeding population of Sooty Tern on Mutton Bird Island may be 2000–3000 pairs.

Factors Affecting Status

The possible presence of Kermadec Petrel on Mutton Bird Island warrants further investigation. The only breeding location for this species within the Lord Howe Group is Balls Pyramid, some 28 km distant. Previously, Kermadec Petrel also bred on the southern mountains of Lord Howe Island[1], where it suffered predation by feral Cats *Felis catus*[9] and possibly Ship Rats *Rattus rattus*. The isolation of Mutton Bird Island and the difficulty of access ensure minimal impact from humans.

Other Seabirds Recorded

Black-winged Petrels *Pterodroma nigripennis* were seen flying past the island in pairs in the late afternoon but did not land. A total of three hours of spotlighting from the shoreline up to the cliffs recorded no additional species.

Other Vertebrates Recorded

The Lord Howe Island Skink *Oligosoma lichenigera* was present. No microchiropterans were observed during nocturnal spotlighting and no activity was recorded overnight using an AnaBat™ bat detector[10]. No alien vertebrates were detected.

Banding

No banding has been undertaken on Mutton Bird Island.

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