

SEABIRD ISLANDS

No. 158

Combe Island, Great Barrier Reef, Queensland

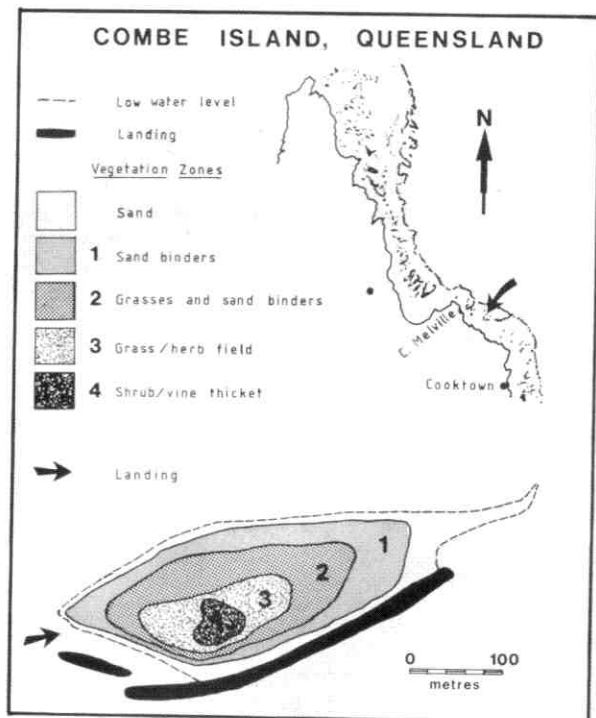
Location: 14° 25' S., 144° 55' E.; 52 kilometres east-south-east from Cape Melville, Cape York Peninsula, Queensland and 68 kilometres west-north-west from Lizard Island.

Status: Vacant Crown Land; Fauna Sanctuary.

Other Name: Howick No. 10.

Description: 4.0 ha; 375 m long and 130 m wide, it is the most northerly island of the Howick Group. An elongated, roughly triangular sand cay on a small coral reef, one of the inner reefs located 20 kilometres inside the outer Great Barrier Reef. The cay is composed entirely of coarse coral sand and reef rubble. It rises towards the centre to form a low plateau with a slightly higher crest near the western end. The highest point is about 6 m above spring high water level. A line of coralline beachrock runs, below high water level, along the southern side with a small patch at the south-western end. An intertidal sandspit runs over the reef flat from the eastern end.

Four plant communities can be distinguished. (1). An outer zone of sand binders that occur on the margins and most exposed areas, consisting of a vine *Ipomea pes-capre*, and grasses *Spinifex hirsuta* and *Thuarea involuta*. (2). Tufted grasses and sand binders occupy the lower



outer areas of the cay. This community contains a mixture of grasses *Sporobolus virginicus* and *T. involuta*, a vine *I. pes-capre*, scramblers

Cassitha filiformes and *Tribulus cistoides*, low shrubs *Vitex trifolia*, *Cleome viscosa*, *Euphorbia tannensis*, *Boerhavia diffusa*, *Salsola kali*, *Achyranthes aspera*, and a herb *Portulaca* sp. (3). An inner, closed grass/herb field, covering the slopes and all but the highest part of the crest of the sand ridge. Height of the vegetation in this zone rarely exceeds 0.5 m. The plants listed in (2) occur in this area excepting *Salsola*; it has, in addition, a grass *Dactyloctenium aegyptiacum*, shrubs *Cenchrus echinatus*, *Digitaria ctenantha*, *Abutilon indicum* and *Ac. aspera*, and a vine *Merremia tridentata*. (4). a low vine thicket is situated on the sand ridge on the highest part of the island. The thicket is 2-3 m in height and is composed of shrubs *Tournefortia argentea*, and scramblers *Morinda citrifolia*, *Capparis lucida* and *Euphorbia hypericifolia*.

Landing: By dinghy, generally onto the beach at the western end or south-western sandspit, from a vessel anchored in the lee of the cay and reef.

Ornithological History: The earliest record of Combe Island is believed to be that of W. D. K. MacGillivray¹. He landed in October, 1910 and recorded breeding Silver Gulls, Common Noddies and the Osprey *Pandion haliaetus*; Pelicans had nested earlier (40 or more nests). He also recorded Bridled and Lesser Crested Terns. Warham² reported Combe Island to be a breeding place for pelicans in 1962. Recent visitors include R. C. Buckley who landed in June and November, 1979; he recorded vegetation, and pelicans breeding in June. Queensland N.P.W.S. officers have made three recent visits to map the cay and to record vegetation and seabirds: M. Godwin and G. Rees on 4 March, 1984, B. King on 10 July, 1984, and D. Reimer and S. Wilson on 10 November, 1984.

Breeding Seabirds and Status

Puffinus pacificus Wedge-tailed Shearwater — Breeding in summer in a small colony located on the upper western slopes and peak of the sandridge. Most of the burrows are among the roots of the *Messerschmidia* shrub thicket and the remainder are in the nearby surrounding grass/herb flat, mostly on the upper western ridge slope. In February, 1983, there were 104 active burrows. In July 1984 about one quarter of the

burrows were still occupied. In November, 1984, over 200 burrows were 'active'. Activity of burrows was judged by the presence of a fresh clean apron of sand at the entrance, and tracks. Burrows were not examined further.

Pelecanus conspicillatus Australian Pelican — Breeds mainly in summer, extending into mid-year. The colony is active in most years, according to reports by fishermen, but does not exceed 100 pairs. In February, 1984, there were over 90 adults with 40 nests on the ridge in the north-eastern portion of the cay. Twelve contained naked chicks; of the remaining nests, seven contained one egg and the others two eggs. Nests were shallow depressions in the sand, of 30-40 cm diameter and lined with a little vegetable matter, with about 75 cm between the edges of adjacent nests. The colony was surrounded by a bare area about one metre wide, of sand trampled flat by the adult birds. In July, 1984, there were 123 adults present with 30 juveniles. In November, 1984, a small colony with eggs was recorded.

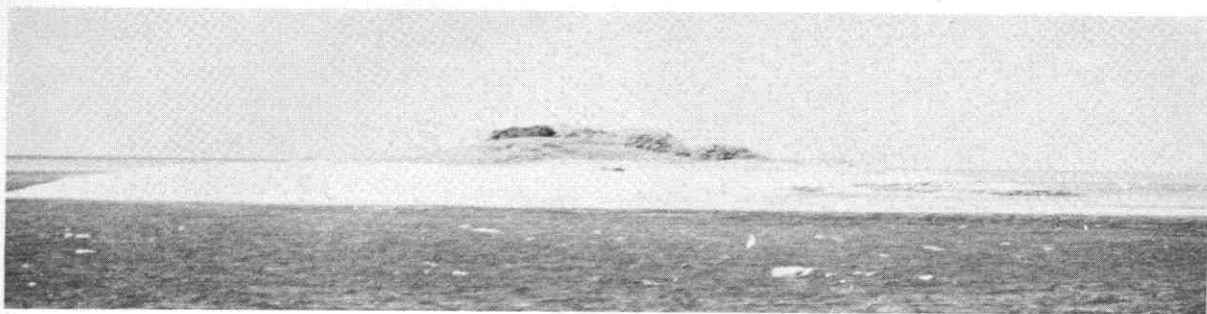
Larus novaehollandiae Silver Gull — Breeds in mid-year and early summer. In July, 1984, a small group of 10 adults and one juvenile were present. Two pairs of adults were defending areas of grassland but no nests were located.

Sterna fuscata Sooty Tern — Breeds in mid-year. In July, 1984, there was a single large colony on the northern side of the cay in a sparsely-vegetated area of the lower ridge slope. Most of the colony consisted of birds holding sites and a few pairs each with an egg.

Sterna anaethetus Bridled Tern — Breeds in mid-year, possibly throughout the year. Nests are widely scattered through the grass/shrub vegetation and are well concealed under shrubs. About 50 pairs were present in July, 1984.

Anous stolidus Common Noddy — Breeding in early summer, i.e. October 1910¹. A few birds were present in February and July, 1984, but no nesting was in progress.

Anous minutus Black Noddy — Thousands roost nightly on the shrubs of the cay. In July, 1984,



• *Combe Island*

a single nest with one egg was found in a *Messerschmidia* shrub in the ridge-top thicket.

Factors Affecting Status

The main threat to breeding species is disturbance from human visitors. Boats occasionally anchor off the reef and crews wander ashore or engage in "sport" shooting. Pelicans are particularly sensitive to disturbance and deserted colonies are often reported by fishermen. According to fishermen's reports, pelican breeding in the area of the Howick Group and Cape Melville has greatly declined in the past 15-20 years. In recent years regular overflights by military aircraft have begun and these may cause further disturbance.

On grassy cays there is always a risk of fires which could destroy ground and burrow-nesting species. Sea turtles (species undetermined) nest in small numbers and these may disturb some seabird colonies. Silver Gulls and Buff-banded Rails *Rallus philippensis* predate unattended eggs and small chicks.

Other Seabirds Recorded

<i>Sula leucogaster</i>	Brown Booby
<i>Egretta sacra</i>	Eastern Reef Egret
<i>Sterna bergii</i>	Crestern Tern
<i>Sterna bengalensis</i>	Lesser Crested Tern

Banding

Nil.

Bibliography

1. MacGillivray, W. D. K. (1910), 'Along the Great Barrier Reef', *Emu* 10: 218-233.
2. Warham, J. (1962), 'Bird islands within the Barrier Reef and Torres Strait', *Emu* 62: 99-111.

Acknowledgements

Support was provided by the Queensland National Parks and Wildlife Service and the Raine Island Corporation.

Date compiled: 6 December, 1984.

B. R. King, M. Godwin and G. Rees, *Old N.P.W.S., Northern Regional Centre, Pallarenda, Qld 4810.*