

SEABIRD ISLANDS

No. 159

Michaelmas Cay, Great Barrier Reef, Queensland

Location: 16° 36' S., 145° 59' E.; 40 kilometres north-north-east of Cairns, Queensland.

Status: A National Park, with Upolo Cay (June, 1975).

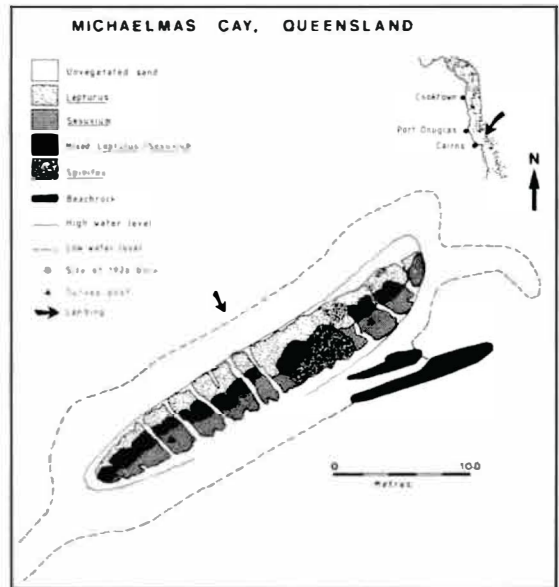
Other Name: Oyster Cay (until c1925)¹¹.

Description 1.8 ha; 360 m x 50 m, height 3.5 m above the reef. A vegetated sand cay of the outer Great Barrier Reef, situated at the western end of Michaelmas Reef. It is elongated with the axis about ENE-WSW. An area of intertidal beach-rock lies along the south-eastern quarter. An intertidal sandspit projects over the reef flat from each end of the cay. The cay is composed of coral sand

Vegetation consists of a low mat of grasses and herbs, interspersed with patches of bare sand. Vegetation cover may vary considerably from season to season. Since 1982, six species of plants have been recorded as established. These are grasses *Lepturus repens* and *Spinifex hirsuta*, a herb *Boerhavia repens*, a succulent *Sesuvium portulacastrum*, and creepers *Tribulus cistoides* and *Ipomea pes-caprae*. The majority of cover is provided by *Lepturus* and *Sesuvium*, with a large patch of *Spinifex*, patches of *Boerhavia* and isolated plants of *Tribulus* and *Ipomea*.

Landing: Onto the beach on the northern side. Under Queensland N.P.W.S. restrictions, this beach is the only area to which visitors are allowed and to which boats may approach. Access to the southern side, and into the vegetated area, is forbidden.

Ornithological History: The earliest ornithological record appears to be the visit by E. M. Cornwall³ on 15 November, 1902; he recorded a few Crested Terns and a few Common Noddies nesting. W. McLennan¹³ landed on 14 December, 1909, and recorded, in addition, Sooty and Lesser Crested Terns breeding. W. B. Alex-



1925, recording a large colony of Sooty Terns and some Crested Terns breeding. In 1926, C. M. Yonge²⁰ recorded large numbers of breeding Sooty Terns and Common Noddies (incorrectly identified as White-capped Noddies). Various other visitors to record seabirds were C. T. White¹⁹ in December, 1944, A. Taylor¹⁸ in July, 1963, V. Serventy¹⁵ in October, 1965, G. Holmes⁵ in December, 1971 and January, 1972, and R. Noske¹⁴ also in January, 1972. Among the species he recorded, Noske reported an isolated nesting attempt by the Black (White-capped) Noddy.

Queensland N.P.W.S. officers commenced monitoring visits in April, 1974 and these are continuing, now on a monthly basis since July, 1983.

Breeding Seabirds and Status

Sterna dougallii Roseate Tern — In January, 1982, one pair were incubating their egg in a nest in the centre of a colony of Black-naped Terns. Flocks are occasionally present on the cay but this is the only breeding record.

Sterna sumatrana Black-naped Tern — Breeding occasionally in summer. The first colony was recorded in January, 1982 (B. King, M. Weaver) and contained 50 nests each with one or two eggs. In February, 1983, a colony of 23 nests was present. Nests are simple scrapes in the sand, unlined, and are located on or above the spring high water tide level on the south beach. At most times of the year a flock may be seen at either end of the cay, on the beach near the water's edge.

Sterna fuscata Sooty Tern — This is one of the two major breeding species on the island. Nesting occurs throughout the year, with a summer peak, usually in December and January. In January, 1982, the highest count of 10 000+ pairs was recorded. Numbers tend to be lowest in July/August. However, regular counts have shown that there are great variations in numbers from year to year, making overall trends difficult to assess. Nests are on bare sand and densely vegetated areas are avoided if open sand patches are available. When large numbers are present, the whole island is covered with nests not only on the open parts but on every sand patch among the vegetation. The nest is a simple scrape in the sand and one egg is laid.

Sterna bergii Crested Tern — Breeding mostly in summer months. Up to five colonies have been recorded on the island. The highest count recorded was in February, 1983, of 3960 nests in three large colonies. In winter months few birds are to be seen. Nests are on the bare sand, in dense colonies that may be mixed with groups of Lesser Crested Terns.

Sterna bengalensis Lesser Crested Tern — Breeding mainly in the summer months. In October, 1983 over 1 000 nests were present in several large colonies. Colonies are often intermixed with those of the Crested Tern.

Anous stolidus Common Noddy — Breeding all year round with the peak numbers in the summer months. It is the second main breeding species on the cay. In January, 1982, there were 6 000+ nests with eggs, and 1 000+ chicks and juveniles. Numbers are very low in the winter (July/August). Nests are built on clumps of vegetation and rarely on the ground. Tussocks of *Lepturus* are preferred, and other plant species less so.



• *Michaelmas Cay* (looking north-east).

The nest is a platform of grass and other vegetation. It is often attractively lined with pieces of coral, shells or debris, white being the selected colour. One or two eggs are laid.

Anous minutus Black Noddy — Often present as groups or individuals resting by day on the vegetation or beach. Noske¹¹ recorded what appeared to be an isolated nesting attempt by one or two pairs in January, 1972. As the species is normally a nester in large colonies in trees, Michaelmas Cay cannot be considered as a permanent breeding site.

Factors Affecting Status

About the turn of the century Oyster Cay was occupied by beche-de-mer fishermen³ and by guano miners⁴. A lease for guano mining was granted in May, 1901 and mining continued for several years⁴. It is not known to what extent this affected the breeding seabirds. The bird population is subject to occasional dying off of large numbers of birds. On a recent occasion, the cause was attributed to a preceding period of bad weather that caused desertion of eggs and death of young by exposure or starvation. At other times disease may also be a cause. Disturbance by nesting sea turtles is now either rare or no longer occurs. Egg harvesting, once carried out

on a large scale¹ has not been reported since 1976. In October, 1973, an oil slick, discharged from a passing freighter, polluted the reef and beaches. It caused the death of at least some seabirds. Tropical cyclones can cause total breeding failure.

The cay is subject to frequent periods of erosion and accretion of sand and, as a result, is constantly changing its size, shape and location. This movement alters the areas available for nesting, including vegetation for Common Noddies' nests. Active erosion can also destroy large numbers of nests.

The cay is easily accessible by air or sea from Cairns and is frequently visited by many people. The seabirds are disturbed by visitors from vessels and by overflying or landing of seaplanes and more recently, helicopters. Careless visitors disturb birds on the ground. Silver Gulls take advantage of disturbances to predate eggs and young chicks. Queensland N.P.W.S. has introduced controls for vessels and visitor behaviour, but enforcement of these is difficult. Visitor increases has resulted in a number of emergency helicopter landings. At present the bird populations do not appear to be declining; however, regular counts for two years have shown fluctuations in numbers that make the identification of trends difficult at present. Monitoring visits, commenced by Queensland N.P.W.S. officers in April, 1974, are continuing on a monthly basis. Moves are under way to try to regulate the number of visitors.

Other Seabirds Recorded

<i>Sula sula</i>	Red-footed Booby
<i>Sula dactylatra</i>	Masked Booby
<i>Sula leucogaster</i>	Brown Booby
<i>Fregata minor</i>	Great Frigatebird *
<i>Fregata ariel</i>	Least Frigatebird *
<i>Phaethon lepturus</i>	White-tailed Tropicbird
<i>Larus novaehollandiae</i>	Silver Gull
<i>Sterna anaethetus</i>	Bridled Tern
<i>Sterna albifrons</i>	Little Tern

* Frigatebirds fly over the island and also perch (singly) on a pole which marks a borehole.

Banding

Commenced January, 1984.

Sterna fuscata — 412 chicks.

Sterna bergii — 40 chicks.

Anous stolidus — 160 chicks.

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B. R. King, *Qld N.P.W.S., Northern Regional Centre, Pallarenda, Qld 4810.*