

## SEABIRD ISLANDS

No. 43

## Raine Island, Queensland

**Location:** 11°36' S., 144°02' E.; outside and towards the northern end of the Great Barrier Reef. It stands at the centre of a 13 km gap in the Reef — Raine Island Entrance — and is 88 km north-east of Cape Grenville, the nearest mainland.

**Status:** Crown Land.

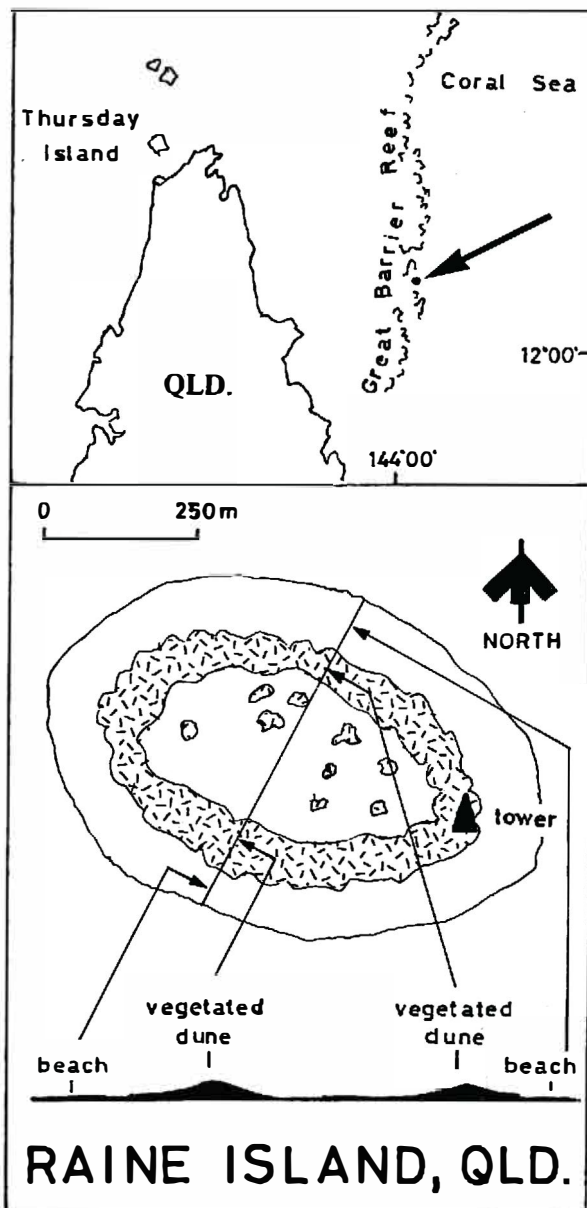
**Description:** About 30 ha; roughly pear shaped, 1 000 m by 500 m, its long axis running WNW-ESE, the broader end being the most westerly. The fringing reef is ovoid, axes about 1.5 km by 3 km, the long axis approximately NW-SE, the edge being only about 200 m from the beach at the western end of the island.

Raine Island is a vegetated sandbank with a hard core of coral rock. The beach is fairly steep and has some beach rock on the northern side. The beach levels out as a mostly unvegetated dune about 60 to 100 m wide much disturbed by Green Turtles. This dune ends in a low coral limestone cliff up to 1.5 m high where the vegetation begins. Inland from the cliff the ground continues to rise to some 6 m above sea level before falling to a flat central depression, mostly unvegetated, and about 140 m wide by 800 m long. The vegetated ridge itself varies in width from about 90 to 120 m.

Much of the vegetation so far recorded consists of two grasses, *Lepturus repens* and *Eleusine indica* with (in February 1959) flourishing thickets of *Abutilon indicum*, *Tribulus cistoides* and *Amaranthus viridus*, none more than 60 cm high.

A prominent man-made construction is the beacon, 14 m high and 10 m in diameter at the south-east end of the island. The beacon was built in 1844 from blocks of coral rock. Also prominent is the grave and headstone of Mrs A. E. Ellis who died there on 20 June 1891 during the guano-extraction period. In addition, the central area is dotted with piles of coral slabs presumably stacked there by the guano workers in the 1890's.

**Landing:** The approach from the inner passage of the Great Barrier Reef needs careful pilotage



through areas charted as "dangerous navigation". The usual anchorage is beyond the edge of the fringing reef at the western end of the island where the bottom is sandy.

**Ornithological History:** The natural history was first reported on by J. Beete Jukes, official naturalist on HMS *Fly*, who was there on 29 July 1843, but the major early account is that of John MacGillivray<sup>3</sup> who spent a month there in 1844 while convicts built the beacon. Only spasmodic references to the island's birds occur until the visit of W. D. K. MacGillivray on 30 October 1910<sup>4,5,6</sup>. The present writer published details of a stay between 7 and 14 February 1959<sup>8</sup>, and also recorded<sup>7</sup> *Pterodroma arminjoniana heraldica* during a landing on 22 February 1959. Hindwood, Keith and Serventy<sup>2</sup> gave notes on the birds and their numbers present in November 1961 but only two species, both waders, were recorded as new for the island. A popular, liberally-illustrated account of Raine Island and its birds appeared in 1963<sup>9</sup>.

#### Breeding Seabirds and Status

*Puffinus pacificus* Wedge-tailed Shearwater — Burrows below grass and other vegetation: population quite small, only a few hundred burrows in 1959.

*Sula sula* Red-footed Booby — Breeds June to January, nesting off the ground on the *Tribulus* bushes on the ridge but also roosting on the ground. All colour phases occur. Some hundreds of birds appear to breed here but only two chicks remained in nests in February 1959, with other flying juveniles returning towards evening.

*Sula dactylatra* Masked Booby — Breeds July to March. In November 1961 about 1 000 pairs were nesting but in February 1959 only 400 to 500 birds were seen and those that were still nesting mostly had large chicks; a few had eggs or small young. Nests were confined to the flat central area.

*Sula leucogaster* Brown Booby — Breeds July to March and at least 2 000 pairs were doing so in November 1961 while 7 000 to 9 000 roosted ashore in February 1959 when breeding had almost ended. The few nests were then mostly on the ridge or in the central depression.

*Fregata ariel* Lesser Frigatebird — Up to 2 000 birds roosted in February 1959 and about 150 nests seen. Breeding appears to occur between May and December and in February large flying young returned to roost on nests unoccupied by day. The possibility that *F. minor* may also nest here should be borne in mind for reasons outlined previously<sup>8</sup> and because Greater Frigatebirds



● *The Beacon on Raine Island. Lesser Frigatebirds and Brown Boobies in the air.*

breed on grass covered islets in the SW Coral Sea<sup>2</sup>.

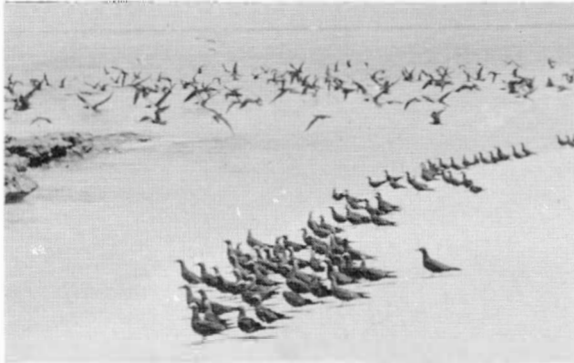
*Phaethon rubricauda* Red-tailed Tropicbird — Apparently breeds all the year round. No one has recorded more than a dozen nests on any visit. About 18 adults were present in February 1959. These birds take advantage of the shade available in holes in the coral cliff when nesting.

*Hydroprogne caspia* Caspian Tern — J. MacGillivray<sup>3</sup> stated that this species occurred “. . . in small parties in three spots only . . .”; he added that “It breeds upon the bare smooth spots surrounded by herbage . . .”. None was present during my visits and I can find no other breeding record.

*Sterna fuscata* Sooty Tern — Great numbers lay among the grass of the dune. The bird appears to be a winter breeder here, nesting from April to November. No Sooty Tern was seen to alight in February 1959 although many flew overhead by day and their numbers increased after dark.

*Sterna anaethetus* Bridled Tern — Said to nest under the cliffs in December but only a few birds seen in February 1959, none breeding.

*Sterna bergii* Crested Tern — Small breeding colonies have been recorded in December, June and July and a few non-breeders are usually present.



- The beach on the north side with beach rock and the fringing reef on the horizon. Common Noddies are in the foreground and Brown Boobies flying.

*Anous stolidus* Common Noddy — Breeds April to August. Up to 2 000 birds roosted on the island in February 1959, but no breeding was evident then.

#### Factors Affecting Status

There are no resident predators except the frigate birds which seem to harry the Red-footed and Masked Boobies rather than the Brown Boobies. Land Rails *Rallus philippensis* breed commonly and probably eat tern eggs here as they do elsewhere. Whether the seabirds are still raided by people from Darnley and Murray Island and other islands in Torres Strait seems to be presently unknown.

#### OTHER VERTEBRATES

Green Turtles *Chelonia mydas* are abundant.

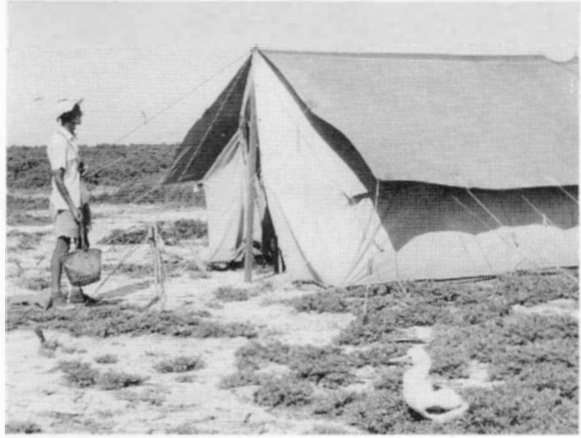
#### Other Seabirds Recorded

*Pterodroma arminjoniana heraldica* Trinidad Island Petrel — The single bird captured and described in detail<sup>7</sup> was caught close to a white, unsoiled, broken eggshell on the surface of the ground, so may well have been attempting to breed.

*Pelecanus conspicillatus* Australian Pelican — one straggler<sup>1</sup>.

*Egretta sacra* Reef Heron — Both phases common in 1844, one bird in 1913, none recorded subsequently. However, in 1959, over 1 000 Nankeen Night-herons *Nycticorax caledonicus* were present, many breeding, and the species appears to fill the niche here which is occupied by the Reef Heron on the inner Barrier Reef Islands.

*Larus novaehollandiae* Silver Gull — A small party is usually present but no one appears to have seen the species nesting.



- The campsite in 1959, showing the vegetated ridge beyond (left) and a Masked Booby chick in the foreground.

*Anous minutus* White-capped Noddy — A few stragglers occur with *A. stolidus* but breeding is unlikely in the absence of trees.

#### Banding

Nil.

#### Bibliography

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