

SEABIRD ISLANDS

No. 162

Brook Islands, Great Barrier Reef, Queensland

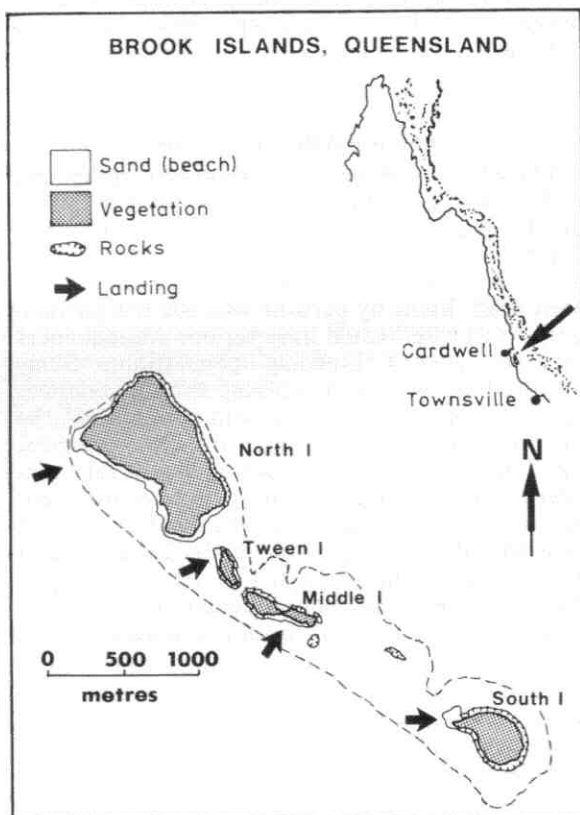
Location: 18°09' S., 146° 17' E.; 30 kilometres east-north-east of Cardwell, Qld.

Status: Four islands form the group; North, Tween and Middle Islands are National Parks; South Island is a Commonwealth Lighthouse Reserve. The surrounding area is a proposed Marine Park "B".

Other Names: Brooke's Islands; North Brook Island, Tween Brook Island, Middle Brook Island and South Brook Island.

Description: A group of four continental rocky islands of granitic formation plus two rocky outcrops between Middle and South Islands. A fringing coral reef lies along the eastern, southern and western sides of the group. A dead coral reef extends from the western side of North I. south to Middle I. and off the western side of South I.

NORTH ISLAND: 64.75 ha; 1000 m long by 500 m wide and 61 m high. The island has two hills, and a sand and coral shingle beach bordering 65% of its circumference, the remainder being rocks. Beach-fringing vegetation includes *Ipomea pes-caprae*, *Pandanus* sp., *Casuarina equisetifolia*, *Argusia argentea*, *Sophora tomentosa*, *Vitex* sp., *Scaevola taccada*, *Guetarda speciosa*, *Ochrosia elliptica*, *Cocus nucifera* (introduced), *Ximenia americana*, *Hibiscus tili-*





• Brook Islands (looking north-west).

Photo: D. Hopley

ceus, *Ficus platypoda*, *F. obliqua*, *F. microcarpa*, *F. virens*, *Thespesia populnea* and *Treminalia catappa*. There is a small stand of mangrove *Avicennia marina* where the beach meets the rocks in the south-eastern corner. Inland, rainforest covers most of the island. Species include *Microsorium* sp., *Cordia subcordata*, *Erythrina* sp., *Chionanthus ramiflora*, *Ervatamia orientalis*, *Crinum* sp., *Eugenia reinwardtiana*, *Arenga australasica*, *Ptychosperma elegans*, *Albizia* sp., *Palaquium galactoxylon*, *Melia azadarich*, *Castanospermum australe*, *Dendrobium discolor*, *Asplenium* sp., *Hoya* sp., *Deplanchea tetraphylla*, *Abarema grandiflorum*, *Syzygium cormiflora*, *Dendrocnide* sp., *Schefflera actinophyllum*, *Ixora klanderana*, *Leea indica* and *Morinda citrifolia*. In the hollow between the hills are *Melaleuca* sp. and *Acanthus ilicifolius*. The eastern exposed side is rocky with wind-shaped vegetation.

TWEEN ISLAND: 6.5 ha; 250 m long by 100 m wide and 15 m high. The island has a single hill and a beach on the south-eastern side. Most of the island is covered with rainforest similar to that of North I.

MIDDLE ISLAND: 16.2 ha; 500 m long by 100 m wide and 15 m high. The island has two hills and five small beaches. Vegetation is mostly rainforest with *Casuarina*, *Pandanus* and an occasional *Calophyllum inophyllum* edging the beaches.

SOUTH ISLAND: 9.1 ha; 500 m long by 275 m wide and 45 m high. There is a single hill, bearing an unmanned navigation light tower, and a

sandspit at the north-western end. A vehicle track leads from the spit to the light tower. Vegetation is rainforest, similar to that of North I. but more dense.

Landing: NORTH I. — by power boat or dinghy, at either side of the north-western point at any tide. TWEEN I. and MIDDLE I. — by dinghy onto the beaches at high tide. SOUTH I. — by power boat or dinghy onto the sandspit at any tide.

Ornithological History: Kendall Broadbent collected in the area from August 1888 to March 1889 and recorded Eastern Reef Egrets and Torresian Imperial Pigeons *Ducula spilorrhoa* on the island. Every year since 1964, A. and M. Thorsborne have visited the islands, mostly North I. Visits were of one to three days duration and usually were between September and March. The main purpose of these visits was to monitor numbers of breeding Torresian Imperial Pigeons on North I. (This is the most southerly large colony of the species and up to 21 000 birds have been counted in recent years.) Records were also made of seabirds and other species on North I., with occasional visits to the other islands. D. Savage (Qld N.P.W.S.) visited the islands on 9 January 1986 to record, among other things, the breeding seabirds.

Breeding Seabirds and Status

Sterna dougallii Roseate Tern — Records are incomplete but a few pairs (less than 10) have been recorded occasionally nesting amongst *S. sumatrana* colonies, e.g. on the north-western point of North I. in December 1975 and January 1980, and on its western side in January 1985 and on South I. in January 1986.

Sterna sumatrana Black-naped Tern — Present in all years. Breeding in most years on North I. from November to January. Breeding on Tween I. in December 1983; on Middle I. in December of 1967, 1968, 1969 and 1974; and on South I. in December 1974, January 1983 and in January 1986. On North I. nesting occurs at various sites on the beach. The most favoured areas are the northern and north-western parts. Occasionally eggs are laid in depressions in the rocks, e.g. Middle I. in January 1970; Tween I. in January 1982; rocks between between Middle and South

Is. in January 1982. Mostly nests are simple scrapes in the sand and coral shingle, and are located among the beach-washed debris slightly above high tide level. Nests are placed 20 to 40 cm apart, about four nests per square metre, and one or two eggs are laid. Colony size ranges up to 250 pairs.

Sterna anaethetus Bridled Tern — Records are incomplete, but present in large numbers in most years. Nests were situated among rocks and in crevices on the eastern side of North I. in December of 1970 and 1981, and on a rock outcrop between Middle and South Is. in December of 1976 and 1981, and also on South I. in December 1981. In January 1983 about 1 200 birds were on the rocks between South and Middle Is.

Factors Affecting Status

Human visitors are the main source of disturbance to nesting seabirds on the exposed beaches. In the past, nesting terns were disturbed by groups of people shooting large numbers of pigeons, but hunting practically ceased in 1971. Increasing tourism in the Cardwell-Hinchinbrook Island area in recent years has seen the development of regular day trips to the islands, presently twice weekly but likely to increase. Beach nesting species are vulnerable to visitor disturbance; their nests and eggs, well camouflaged among the pumice and shingle, are easily overlooked and trampled by visitors. Sea turtles rarely nest on the beaches and are not a threat, and the predatory Silver Gull *Larus novaehollandiae* has not been recorded. In January 1972, torrential rain killed some nesting terns. In January 1986, a helicopter, landing to rescue fishermen from a beached vessel on South I., disturbed a colony of 40 pairs of Black-naped Terns. This was followed by cyclone "Winifred" which badly eroded the beach on which the terns were nesting.

Other Seabirds Recorded

<i>Pelecanus conspicillatus</i>	Australian Pelican
<i>Sula leucogaster</i>	Brown Booby
<i>Fregata ariel</i>	Least Frigatebird
<i>Egretta sacra</i>	Eastern Reef Egret
<i>Haematopus fuliginosus</i>	Sooty Oystercatcher
<i>Sterna bergii</i>	Crested Tern
<i>Sterna bengalensis</i>	Lesser Crested Tern

Banding

Nil.

Bibliography

1. Broadbent, K. (1910). Birds of the Cardwell and Herbert River districts, North Queensland. *Emu* 10: 233-245.
2. Anon. (1985). Great Barrier Reef Marine Park: Central Section Zoning Plan for public review. GBRMPA, Townsville.

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