

SEABIRD ISLANDS

No. 218

Purtaboi Island, Great Barrier Reef, Queensland

Location: 17°55'S, 146°08'E; 4.5 kilometres east of Mission Beach on the north Queensland coast and 1.2 kilometres north of the western tip of Dunk Island.

Status: National Park since 1954.

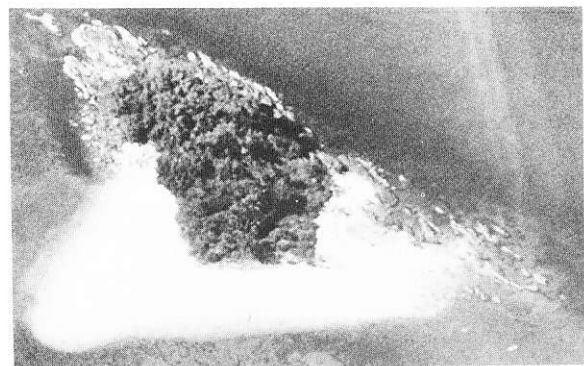
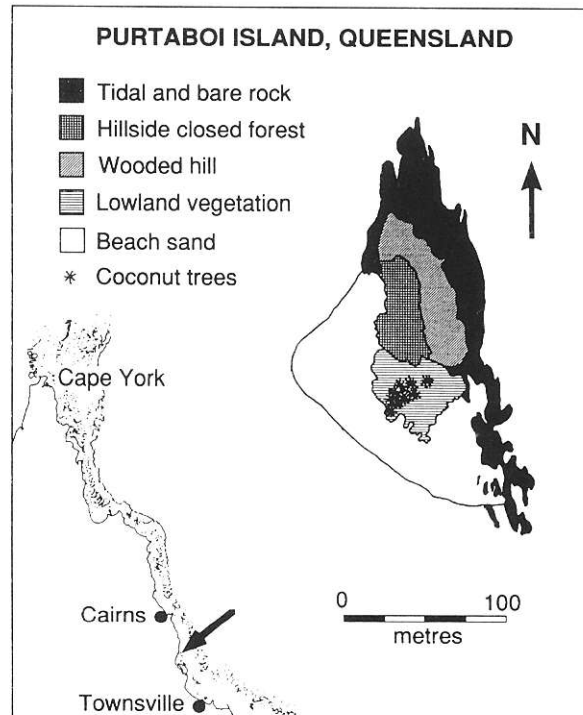
Other Names: Mound Island, Honeymoon Island.

Description: 150 m × 60 m; 0.6 ha. The island is a 19 m high rock with a low sandy area at the south. Nearly all of the isle is wooded and the western slope area is closed forest. More than 50 species of plants occur.

Trees include *Acacia* sp., *Casuarina equisetifolia*, *Cocos nucifera*, *Eucalyptus tessellaris*, *Ficus opposita*, *F. microcarpa*, *F. virens*, *Ganophyllum falcatum*, *Gmelina fasciculiflora*, *Hibiscus tiliaceus*, *Micromelum minutum*, *Pandanus tectorius*, *Pemphis acidula* and *Terminalia* sp. Shrubs and ground cover include *Asplenium australasicum*, *Bidens pilosa*, *Caesalpinia bonduc*, *Canavalia rosea*, *Catharanthus roseus*, *Clerodendrom inerme*, *Colubrina asiatica*, *Commelina* sp., *Cyperus* sp., *Dendrobium discolor*, *Dianella caerulea*, *Diospyros* sp., *Derris trifoliata*, *Drynaria sparsisora*, *Emilia sonchifolia*, *Euphorbia cyathophora*, *Flagellaria indica*, *Ipomea macrantha*, *I. pes-caprae*, *Imperata cylindrica*, *Mezoneuron brachycarpum*, *Lantana camara*, *Lepturus repens*, *Passiflora foetida*, *Pseuderanthemum variabile*, *Platynerium* sp., *Scaevola sericea*, *Sophora tomentosa*, *Sporobolus virginicus*, *Thuarea involuta*, *Vigna marina*, *Vitex negundo* and *Wollastonia biflora*.

Landing: At the southern and western beach.

Ornithological History: From 1897 to 1923 the bird colonies were watched over by E. J. Banfield^{1,2,3} who lived nearby on Dunk Island. Tarr⁴ noted the landing of a tropicbird in October 1947. Since the mid-1960s observations by tourists, Dunk Island resort staff, park officers and other visitors have confirmed regular summer nesting attempts by Black-naped Terns and occasionally a second unidentified species on the beach. Birds were recorded by T. Walker in 1987 on 19 May, 15 November and 27 December; and in 1988 on 6 February, 12 December and 20 December.



● Purtaboi Island from the air (looking north).

Photo: T. A. Walker

Breeding Seabirds and Status

Egretta sacra Eastern Reef Egret — Reported nesting by Banfield. One to three (two grey, one white) have been present in recent years.

Sterna dougallii Roseate Tern — Possibly one of Banfield's nesting species. A pair nested in December 1987 and six pairs were incubating eggs on 12 December 1988. Nesting occurred with Black-naped Terns on the beach. The eggs were washed away by waves prior to 20 December 1988 and the adults departed the island.

Sterna sumatrana Black-naped Tern — Nesting commences on the beach in November or December and appears to have occurred every year for which observations are available. Counts have been reported rarely but large annual fluctuations in colony size were noted. A maximum of 56 nests were present in the mid-1970s. From 1974 to 1982 information suggests that little or no successful breeding occurred. All nests in early 1986 were destroyed by a cyclone. In December 1988 two colonies containing 114 pairs with eggs and small chicks were mostly washed away by waves. In late December 1987

there were 280 adults, at least 50 pairs of which had eggs or chicks. This colony was successful in raising many juveniles.

Sterna anaethetus Bridled Tern — All observations have noted summer nesting amongst rocks and under vegetation mainly on cliffs around the northern half of the island. It is the only tern species breeding on the island unaffected by nest flooding. Birds arrive in November and depart by March. About 250 birds were present with eggs in December 1987 and December 1988.

Sterna albifrons Little Tern — Reported nesting in summer from 1907 to February 1920 when waves washed away the colony. In the following year very few nested³. There are no subsequent reports.

Sterna bengalensis Lesser Crested Tern — Not present from 1897 to 1907 but nested in following years to February 1920 when the colony was washed away by waves³. On 12 December 1988 a colony of 65 pairs were incubating eggs on the beach but nests were subsequently washed away by waves on spring tides and all birds were gone eight days later.



• Purtaboi Island looking east showing forested skyline.

Photo: T. A. Walker

Factors Affecting Status

In the early 1900s the island was unofficially protected from shooting and Aboriginal egg collecting by Banfield. In 1905 he saw Purtaboi and other islands in the Family Group declared as the first island Reserves for Protection and Preservation of Native Birds. In 1908 Banfield wrote¹, 'in years gone by but two species of seabirds nested on Purtaboi, now at least six avail themselves of that refuge'. In November the nesting terns became so numerous that insufficient space caused 'perhaps a thousand' to overflow onto the adjacent Dunk Island spit where they had not nested for at least 10 years. Of the six species 'three show almost pure white as they fly; the others less numerous, as dark flakes in the living whirlwind'. In later years he noted³ that 'the terns did not assemble in great numbers until after the establishment of a sanctuary, their coming being attributed to its existence.' Banfield's identifications were unreliable and the identity of two species is in doubt. He described Brown-winged Terns nesting in crevices (i.e. Bridled Terns) and 'Bridled Terns' nesting on the beach. The correct identity of Banfield's 'Bridled' and 'Sooty' Terns is unknown. Elsewhere on the Great Barrier Reef the Sooty Tern nests only on offshore unwooded coral cays and it seems unlikely that they would nest at a forested rocky island so close to the mainland.

Flooding of beach nests by waves coincident with high spring tides is a regular cause of high mortality. In addition to the events described above, flooding was noted by Banfield several times. On one occasion in September, 100 'wise' terns layed above high tide and 500 'foolish' terns layed below high tide². These were all 'white' terns, possibly Lesser Crested Terns since other

species do not nest in September. In February 1920 four species of nesting terns were 'overwhelmed and practically exterminated' by high-tide waves³. In the following year Lesser Crested Terns, 'Sooty Terns' and 'Bridled Terns' did not return to nest. Cyclonic storms in 1971 and 1986 destroyed most of the foliage and nesting seabirds on the island.

Picnics and visits by tourists from Dunk Island and Mission Beach caused disturbance, accidental or wilful destruction in seabird colonies until 1987 when the island was closed seasonally to protect breeding. Crested Terns are the most common tern in the area and are thought to nest in some years but there are no definite reports.

Other Seabirds Recorded

<i>Fregata minor</i>	Great Frigatebird*
<i>Fregata ariel</i>	Least Frigatebird*
<i>Phaethon rubricauda</i>	Red-tailed Tropicbird ⁴
<i>Sterna fuscata</i>	Sooty Tern (unconfirmed)
<i>Sterna bergii</i>	Crested Tern
<i>Anous stolidus</i>	Common Noddy (rare)

*Aerial over island

Bibliography

1. Banfield, E. J. (1908). 'Confessions of a beachcomber.' (Angus and Robertson: Sydney.)
2. Banfield, E. J. (1911). 'My tropic isle.' (Unwin: London.)
3. Banfield, E. J. (1925). 'Last leaves from Dunk Island.' (Angus and Robertson: Sydney.)
4. Tarr, H. E. (1948). Birds of Dunk Island, north Queensland. *Emu* 48: 8-13.

Date compiled: May 1990.

T. A. Walker, Department of Environment and Heritage, P.O. Box 5391, Townsville, Queensland 4810.