

SEABIRD ISLANDS

No. 164

Frigate Cay, Great Barrier Reef, Queensland

Location: 21°44' S., 152°25' E.; centrally situated in the Swain Reefs complex at the southern end of the Great Barrier Reef (GBRMPA reef code 21-511). The nearest mainland is about 190 kilometres west-south-west at Perforated Point and the nearest town is about 230 kilometres south-west at Yeppoon, Qld.

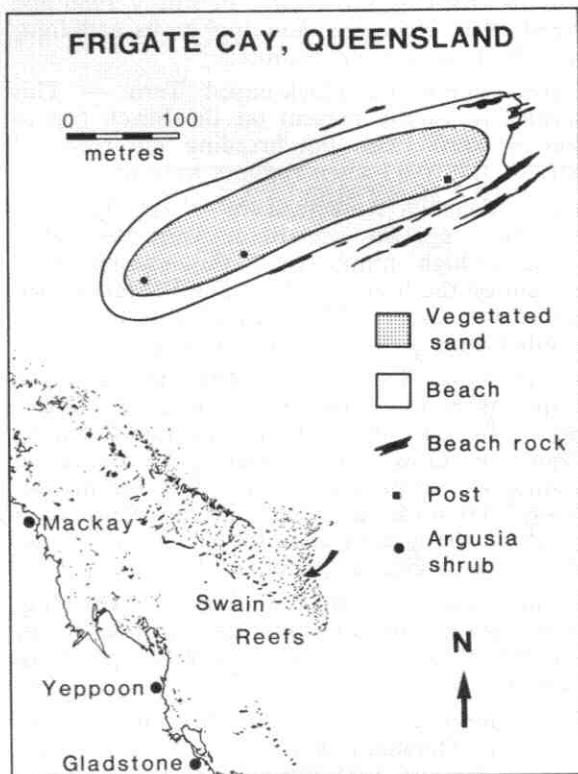
Status: Vacant Crown Land; Queensland Fauna Sanctuary.

Other Name: Gillett Cay is the name given by Gillett and McNeill³ and referred to by most previous authors.

Description: 2 ha; 350 m x 65 m, with an elevation of less than 3 m (measurements at high water). This sand cay is sited at the western end of an elongate platform reef 3 km in length. Changes in the area, position of the cay and vegetation over twenty years are described by Flood and Heatwole². Roughly 82% of the island (above high water, 1984) still covers an area on the reef that was previously covered in 1964. There is an extensive cover of herbs and grasses. The dominant species is *Boerhavia diffusa* with *Thuarea involuta*, *Lepturus repens*, *Coronopus integrifolius* and *Cakile edentula*. A stunted *Argusia argentea* bush (<1 m high) has been present since 1981².

Landing: Across the reef flat on the northern side.

Ornithological History: Gillett and McNeill³ first described the cay on 31 October 1960, at the same time recording the presence of five species of breeding and two species of non-breeding seabirds. Bennett¹ published two undated photographs by D. Wilson showing a nesting Masked Booby and a colony of frigatebirds. Limpus and Lyon⁴ visited on 5-6 November 1976 and censused nine species of seabirds of which four were breeding. Moverley⁵ described winter bird populations in July 1983 and July 1984 including five species of breeding and one species of non-breeding seabird. The 1984 Reader's Digest Book of the Great Barrier Reef⁶ contains an undated photograph showing



Sooty Terns on Frigate Cay. T. A. Walker and/or M. E. Jones surveyed the birds on 23 January 1985, 17 July 1985, 18 February 1986 and 6 April 1986.

Breeding Seabirds and Status

Sula dactylatra Masked Booby—Breeding occurs throughout the year with fewer than ten pairs usually nesting at any time. The maximum numbers of nesting pairs were twenty-seven in July 1985 and thirty-four in April 1986.

Sula leucogaster Brown Booby — Breeding occurs throughout the year with highest numbers in summer months. The maximum recorded was 350 pairs in February 1986.

Fregata ariel Least Frigatebird — In October 1960 four birds were seen to land beside un-

occupied nests³. An undated photograph showing frigatebird nests and sixteen juveniles appeared in Bennett's 1971 book¹. No nesting has been recorded in subsequent years.

Larus novaehollandiae Silver Gull — Nesting was recorded in July 1984⁵, February 1986 and April 1986. No more than four nests and fourteen birds have been recorded.

Sterna sumatrana Black-naped Tern — This species is usually present on the beach (up to 400 in April 1986) but breeding was recorded only in July 1983 when runners were present⁵.

Sterna dougallii Roseate Tern — A single nest with two eggs was present in April 1986. Particularly high numbers of this species were present on the beach in 1986. The February 1986 count was about 3 500 birds of which a small number were in full breeding plumage.

Sterna fuscata Sooty Tern — The undated photograph of Sooty Terns in the Reader's Digest Book⁶ (p. 334) shows birds positioned among strand vegetation with a spacing that suggests nesting was in progress or about to commence. About 200 birds are visible in the photograph either on the ground or in the air. There are no other reports of this species on the island.

Sterna anaethetus Bridled Tern — Breeding occurs mainly in November and December. In November 1976 over 200 nests with eggs were estimated to be present⁴.

Sterna bergii Crested Tern — Breeding was recorded in October 1960 (numbers not reported³), in January 1985 (60 pairs nesting), and in April 1986 (one pair nesting). Nesting was not recorded on other visits but non-breeding birds sometimes numbered 200-300 in summer.

Anous stolidus Common Noddy — Breeding occurs in summer and sometimes in winter. Only a few pairs were nesting in July 1984⁵ but in November 1976⁴, January 1985 and February 1986 there were over 200, 228 and 420 nests respectively.

Factors Affecting Status

The surface of the cay is less than 3 m above high water and is therefore susceptible to overwash and erosion by the sea during severe storms. Gulls predate unattended eggs of the other species and this activity increases when people visit the island. Human visitation to the cay is low but is becoming more frequent. Nest-



• Vegetation on Frigate Cay with Brown Boobies nesting in foreground.

Photo: T. Walker

ing of frigatebirds has not been seen since the 1960's and this species may have been permanently frightened away by human visitation. Nesting birds also suffer disturbance from nesting sea turtles.

Other Species Recorded

<i>Sterna albifrons</i>	Little Tern
<i>Sterna bengalensis</i>	Lesser Crested Tern
<i>Anous minutus</i>	Black Noddy

Banding

Commenced January 1985.

Sula dactylatra—59 adults, 2 juveniles, 12 chicks.

Sula leucogaster — 146 adults, 13 juveniles, 35 chicks.

Bibliography

1. Bennett, I. (1971). The Great Barrier Reef, Lansdowne Press, Melbourne.
2. Flood, P. G. and H. Heatwole (in press). Coral cay instability and species-turnover of plants at Swain Reefs, southern Great Barrier Reef, Australia. *J. Coastal Res.*
3. Gillett, K. and F. McNeill (1962). The Great Barrier Reef and Adjacent Isles. Coral Press, Sydney.
4. Limpus, C. J. and B. J. Lyon (1981). Seabirds breeding on the Swain Reefs, Queensland. *Corella* 5: 101-105.
5. Moverley, J. H. (1985). Winter bird observations for cays in the southern section of the Swaini Reefs, Queensland. *Sunbird* 15: 73-79.
6. Reader's Digest (1984). Book of the Great Barrier Reef. Reader's Digest, Sydney.

Acknowledgements

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