

SEABIRD ISLANDS

No. 221

Wilson Island, Great Barrier Reef, Queensland

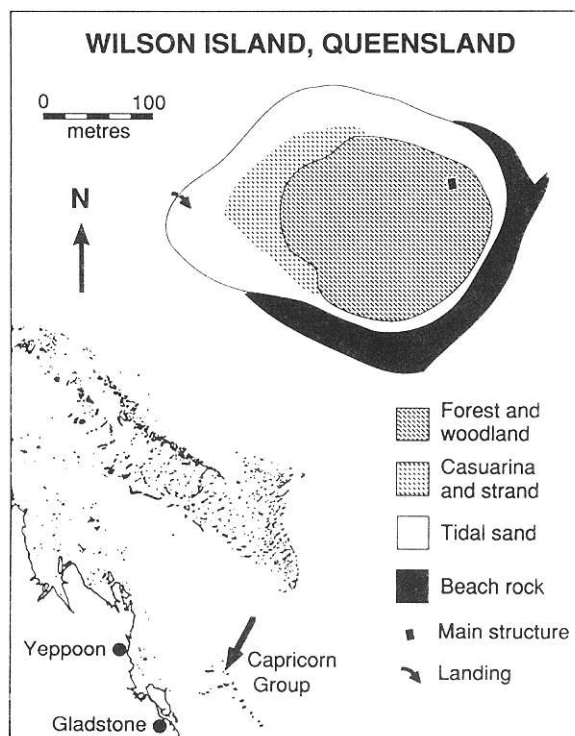
Location: 23°18'S, 151°55'E; situated 88 kilometres north-east of Gladstone on the central Queensland coast.

Status: National Park. Heron Island Pty Ltd holds a Special Lease over the island and permission is required for entry.

Description: 4.5 ha; 275 m × 210 m (above high tide). A sand cay with intermixed coral rubble and a wide band of beach rock around the southern and eastern shores. Erosion and accretion of the cay has been described over several years³. The vegetation^{4,5} is predominantly forest or stands of *Pisonia grandis* and *Pandanus tectorius* interspersed with grassy clearings. *Casuarina equisetifolia* forest occupies the western side with scattered trees elsewhere around the margin. Other strand trees are *Tournefortia argentea* and *Scaevola sericea*. Low *Ficus opposita* trees are common on the eastern half of the cay and a grove of *Cordia subcordata* is present on the northern strand. Ground cover is primarily *Sporobolus virginicus*. Other species present in February 1990 were *Wollastonia biflora*, *Euphorbia tannensis*, *Boerhavia repens*, *Achyranthes aspera*, *Tribulus cistoides*, *Lepturus repens*, *Thurea involuta*, *Solanum americanum*, *Cenchrus echinatus*, *Ipomea macrantha*, *Commicarpus insularum* and *Abutilon asiaticum*. *Euphorbia atoto*, *Gnaphalium luteo-album*, *Cakile edentula*, *Canavalia rosea* and *Sonchus oleraceus* were previously recorded² and probably dormant under the drought conditions of early 1990. Twelve tourist accommodation structures are dispersed over the north-eastern part of the cay.

Landing: The western beach is accessible at all tides.

Ornithological History: Birds were recorded on 13 December 1925 by MacGillivray⁸, Gilbert⁴ and Musgrave¹⁰; on 3 December 1927 by MacGillivray⁹;



and in December 1946 by Cooper¹. Wheeler and Watson¹⁴ listed the cay as a gull nesting site and Cribb⁴ noted some seabirds in May 1964. C. J. Limpus and other turtle researchers recorded seabirds in December 1977 and in February of 1981 and 1982. M. Vanek studied Wedge-tailed Shearwaters in the early 1980s. K. Hulsman^{6,7} censused seabirds and waders from December 1982 to February 1983 and from December 1983 to February 1984. S. G. Lane censused seabirds and waders (for Hulsman) on 4–5 January 1984. S. Domm recorded birds during 12 visits from February 1983 to January 1989. T. A. Walker^{11,12,13} censused birds during 18 visits from March 1983 to March 1990. D. Paton recorded birds on several occasions from 1988 to 1990 and bird notes were taken by other marine park staff from 1983 to 1990.

Breeding Seabirds and Status

Puffinus pacificus Wedge-tailed Shearwater — Arrive in October to breed and the last birds depart in May or June. In 1946 there were 'a number of burrows in one small section only'¹ but presently nesting occurs throughout the cay except where cay rock or rubble prevent burrowing. Census calculations from the 1982–83 and 1983–84 breeding seasons gave figures of 6 178 and 6 075 pairs respectively^{6,7}.

Egretta sacra Eastern Reef Egret — Up to 64 have been counted, most of which were white colour morphs. Nesting has been observed from August to March in thicket of *Cordia*, *Tournefortia* and *Pandanus*.

Larus novaehollandiae Silver Gull — Gull numbers ranged from 6 to 130 in the 1980s. Breeding was not observed in December of 1925, 1927 or 1946 but now occurs through summer with nests dispersed along the western, southern and eastern strand or in loose colonies at the south-west among *Casuarina* and *Pandanus*. Fewer than 20 occupied nests are usually present at any time.

Sterna dougallii Roseate Tern — This tern is absent in winter but hundreds arrive to breed between November and March in most years. Eggs are laid in tight colonies close to the beach on sand or in grass; sites are sometimes deserted without laying (1982–83, 1983–84, 1988–89). The largest colonies were 500 birds with eggs and chicks in February 1982, 298 nests with eggs in February 1987 and 502 nests with eggs in February 1990. Breeding success is low or nil in most years. The 1989–90 season was remarkable in that three successive nesting attempts were made in December, February and April; intricate cup-nests were constructed from *Casuarina* leaves by every February pair instead of laying eggs on the sand.

Sterna sumatrana Black-naped Tern — Laying occurs in most years between November and March. Up to 300 or 400 birds are sometimes present at colonies but a maximum of 50 nests has been recorded at any time. Low breeding success is common and late colonies in the season might consist of re-nesting birds. Eggs are usually laid on sand or rock close to the high tide line. This species is rarely present in winter.

Sterna anaethetus Bridled Tern — A small number breed from October to December or January and are absent for the rest of the year. Ten pairs were found in 1982–83 and five pairs in 1983–84^{6,7}. The colony was not reported prior to the 1980s. Nests are dispersed and hidden on the ground under *Pandanus* roots and shrubs.

Sterna bergii Crested Tern — A few nested in summer 1925^{4,8}. Numerous remains of nests thought to be of this species were present in a clearing in May 1964². Presumed nesting was observed in February 1981 but the presence of eggs or chicks was not investigated.

Anous minutus Black Noddy — Summer roosting of up to 1 000 is common in the western *Casuarina* trees. Four nests were present in a tree in January 1990 and a fifth pair were incubating an egg in another tree in March 1990.

Factors Affecting Status

Frequent human visitation and occupation may be associated with the breeding failure of Roseate and Black-naped Terns during the 1980s. Up to 75 day-visitors and 16 overnight tourists are permitted on the cay (1990 figures). The small size of the island makes it difficult for people to avoid disturbance of terns nesting or selecting nest sites. Eastern Reef Egrets will probably desert their breeding site since tourist accommodation was placed there in 1989–90. Shearwater burrows are inevitably collapsed by people walking through the grassy clearings and forest. Burrows are particularly collapsible when the sand is very dry or very wet.

Higher gull numbers are attracted to the cay by the presence of people¹³. They patrol the margins of tern colonies, prey on eggs, steal fish and are implicated in the nesting failure of the terns.

The forest was once dominated by *Pandanus* trees^{2,4,9} but these have been reduced by burning and by natural expansion of *Pisonia* forest. The island was carelessly set on fire in the early 1960s and early 1970s. Breeding seabirds would suffer directly from fire and indirectly through changes to the vegetation. Bridled Terns would be most affected and this might have contributed to their low breeding numbers. Highest densities of shearwater burrows occur amongst *Pandanus* stands and these would have suffered accordingly.

Small numbers of shearwaters or occasionally herons and terns fall prey to the White-bellied Sea-Eagle *Haliaeetus leucogaster*.

Other Seabirds Recorded

<i>Sula leucogaster</i>	Brown Booby (rare)
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant (rare)
<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant (rare)
<i>Fregata ariel</i>	Least Frigatebird (rare)
<i>Ardea novaeollandiae</i>	White-faced Heron (rare)
<i>Haematopus longirostris</i>	Pied Oystercatcher (rare)
<i>Haematopus fuliginosus</i>	Sooty Oystercatcher (rare)
<i>Sterna albifrons</i>	Little Tern (max. 150)
<i>Sterna bengalensis</i>	Lesser Crested Tern (uncommon)

Banding

One visit — 4 January 1984.

Puffinus pacificus — 20 adults.

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• Wilson Island (looking east).

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Acknowledgments

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