

SEABIRD ISLANDS

No. 15

Heron Island, Queensland

Location: 23°26' S., 151°57' E.; 77 km north-east of Gladstone, Qld, in the Capricorn Group of the Great Barrier Reef.

Status: National Park and private tourist resort; the entire island is designated a wildlife sanctuary; free public access.

Description: 700 m by 300 m; 16 ha, of which 11.5 ha comprises the Heron Island National Park and 4.5 ha are under lease for the tourist resort. The island is elongate west to east and consists entirely of coral sand. Dunes form a ridge on the south side while beachrock borders both the south shore and the western half of the north shore. The resort is located in the north-west sector, and the University of Queensland and Great Barrier Reef Committee Heron Island Research Station occupies the south-west portion within the National Park.

The centre of the island is vegetated with *Pisonia grandis* (8-12 m), with some *Ficus opposita* and *Celtis paniculata*. A stand of *Cordia subcordata* borders the shore east of the resort. *Casuarina equisetifolia*, *Pandanus tectorius*, *Scaevola sericea* and *Messerschmidia argentea* fringe the beach on the north and east sides. Other main plant species include: *Abutilon albescens*, *Wedelia biflora*, *Suriana maritima*, *Cassytha filiformis* and *Euphorbia cyathophora* (introduced).

Landing: Landing facilities are available at the resort on the north-west corner. There are regular trips from Gladstone to the island by boat and helicopter.

Ornithological History: In October 1910, the Royal Australasian Ornithologists' Union conducted an expedition to the Capricorn Group including Heron Island. In their summaries of the trip, Barrett¹, and Campbell and White³ include Reef Herons, Silver Gulls, Sooty Oystercatchers and White-capped Noddies, but apparently their visit was too early for Wedge-tailed Shearwaters.

Since that time there have been numerous other ornithological studies. MacGillivray visited in 1925¹² and again in 1927¹³, and Cooper in 1946⁴. Booth², Miles¹⁴, Recher and Recher^{20, 21}, Shipway²³, and Kikkawa^{9, 10} are among others who have conducted research on the island.

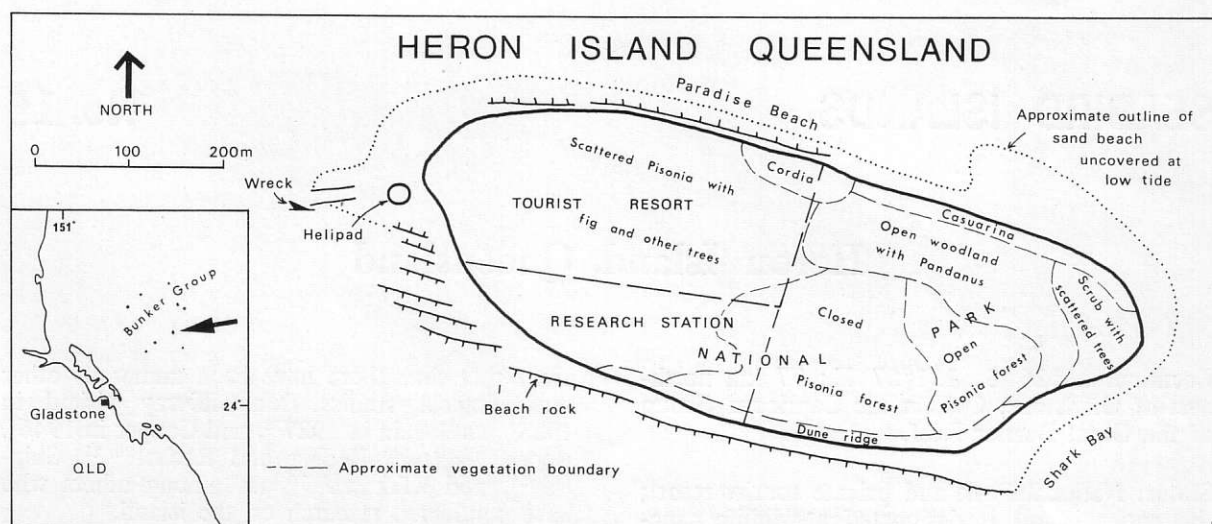
Breeding Seabirds and Status

Pterodroma nigripennis Black-winged Petrel—First recorded in 1962²²; present in summer, landing nightly on the eastern end of the island. Often found in pairs but breeding has not been confirmed.

Puffinus pacificus Wedge-tailed Shearwater—Breeds extensively in burrows in the sandy soil over the entire island except where the ground has been compacted by tourist activities (buildings, roads, rubbish dumps). Arrive during the first week in October and most have departed by May, although juveniles may remain until June. Estimated 8300 breeding pairs in 1965²³.

Egretta sacra Reef Heron—Conspicuous breeding bird after which the island was named. Nests are constructed in *Pisonia* and *Pandanus* trees with 2-3 eggs in a clutch. Recher and Recher²⁰ reported 160 birds in 1967 of which 35-40 pairs were actually breeding, the remainder being young birds. Eggs are laid from August to February with a peak in September. The ratio of white to dark-phased birds is about 2:1.

Haematopus fuliginosus Sooty Oystercatcher—A chipping egg and a hatched chick were reported in 1910^{1, 3}, but recorded only as a visitor since that time. Although not explicitly naming Heron Island, Campbell and White³ implied that the Pied Oystercatcher *Haematopus ostralegus* also bred on the island in 1910.



Larus novaehollandiae Silver Gull — First recorded in 1946⁴ and later reported to have bred²⁵. Numbers have increased greatly in recent years with up to 300 birds present, but little or no breeding has occurred in recent years⁹.

Sterna sumatrana Black-naped Tern—Present in small numbers throughout the year but not recorded breeding until a wrecked boat was placed in the surrounding lagoon in recent years. The colony is located on the wreck and nesting starts in August with fledged young occasionally being fed as late as March. Estimated 20 breeding pairs.

Sterna albifrons Little Tern — Lavery and Grimes¹¹ listed this island as a breeding colony of uncertain status without further comment. Kikkawa⁹ recorded that these birds were present in small numbers throughout the year but did not breed.

Anous minutus White-capped Noddy — The colony appears to have increased over the years; no indication of numbers was given in 1910³ but in early December 1927 about 50 trees were used for nesting¹³. In 1965 the number of pairs was estimated at 8500²³. Except for rare occasions these birds are present on the island throughout the year and eggs are found from October to March with a peak in November-December.

Factors Affecting Status

Green Turtles, and less commonly Loggerheads, nest around almost all the island's edge except where the dunes are too steep. At one stage an attempt was made to establish a turtle soup factory to utilise the presence of these creatures. Sea snakes have been reported but probably have little interaction with the birds. The White-breasted Sea-eagle *Haliaeetus leucogaster* formerly bred on the island and analyses of remains in the nests indicated some predation on birds, including herons⁹. The nests were abandoned and have now disappeared. An Osprey *Pandion haliaetus* stayed on the island for a brief period in December 1974-January 1975.

The presence of man has brought the greatest change to the status of the birds. Shearwaters were formerly used as a food source for sailors, workers at the factory, and other residents of the island. In recent years these birds have lost much of their former breeding areas in the western half of the island as a result of the building construction, rubbish dumping and other tourist-created activities. Increase in the number of Silver Gulls, disappearance of the Pied Currawong *Strepera graculina*, and cessation of breeding by sea-eagles and oystercatchers are almost certainly due to the constant presence of people on the island. A large number of migrating or wintering waders (some 15 species have been recorded) is also disturbed frequently by people walking along the beach. A number of animals



● Heron Island, October 1968 (looking north-east).

Photo: J. Kikkawa

have gone feral or otherwise been introduced but control campaigns against them have met with some success. Cats and goats were removed long ago, and rats, listed by MacGillivray¹³ as infesting the island, have now been exterminated. Domestic fowl, known to have bred on the island²⁴, were reduced to a few individuals, but now appear to be increasing again. Breeding has been recorded for both Peafowl and Guinea fowl. Continued vigilance against these species should prevent any great impact on native birds; the presence of the national park and its administration should aid in this respect. At one time an Emu, Grey Kangaroo and Whip-tailed Wallaby were introduced for the tourist resort but they are no longer on the island. Some introduced plants from the tourist resort are spreading over the island. *Euphorbia cyathophora* for example, covered all clearings and areas under open canopy, and covered half the island area by 1961⁷. In the past bores were sunk by geologists for coral research, but no oil drilling has occurred

Cyclones also affect bird population drastically. One cyclone before 1960 is said to have reduced

the size of the island by half⁶, although this may be somewhat exaggerated. Another in January 1967 conspicuously reduced the noddy colony until the following breeding season⁹. The most recent cyclones in April 1972 and in January 1976 also killed many birds on the island.

OTHER VERTEBRATES

Green Turtle *Chelonia mydas*, Loggerhead *Thalassochelys caretta*, Domestic Fowl *Gallus gallus*, Peafowl *Pavo cristatus* and Guinea fowl *Numida meleagris*.

Other Seabirds Recorded

Oceanites oceanicus Wilson's Storm-petrel
Sula leucogaster Brown Booby
Phalacrocorax varius Pied Cormorant
Phalacrocorax melanoleucos Little Pied Cormorant
Phalacrocorax sulcirostris Little Black Cormorant
Fregata minor Greater Frigatebird
Sterna dougallii Roseate Tern
Sterna fuscata Sooty Tern
Sterna anaethetus Bridled Tern
Sterna bergii Crested Tern
Sterna bengalensis Lesser Crested Tern

Banding

Period 1963 to 1966 (recoveries to 30.6.75)

Daption capense—1 adult.

Pterodroma nigripennis—8 'adults'.

Puffinus pacificus—1091 adults; 38 nestlings: 1 recovery 14 km; 340 individuals recovered at banding place 575 times.

Egretta sacra—19 adults; 45 nestlings: 1 recovery (four times) 77 km; 22 individuals recovered at banding place 72 times.

Larus novaehollandiae—2 adults; 5 juveniles: 1 recovery at banding place.

Sterna sumatrana—1 adult; 40 nestlings: 30 individuals recovered at banding place 57 times.

Bibliography

- Barrett, C. (1910), 'Narrative of the Expedition to the Islands of the Capricorn Group', *Emu* 10: 181-194.
- Booth, J. (1970), 'Birds of Fairfax Island (Bunker Group) and Wreck Island (Capricorn Group), Great Barrier Reef', *Sunbird* 1: 85-92.
- Campbell, A. J. and S. A. White (1910), 'Birds Identified on the Capricorn Group During Expedition of R.A.O.U., 8th to 17th October', *Emu* 10: 195-204.
- Cooper, R. P. (1948), 'Birds of the Capricorns — Great Barrier Reef', *Emu* 48: 107-126.
- Evans, P. R. (1975), 'Notes on the Feeding Waders on Heron Island', *Sunbird* 6: 25-30.
- Fosberg, F. R., R. F. Thorne and J. M. Moulton (1961), 'Heron Island, Capricorn Group, Australia', *Atoll Res. Bull.* 82: 1-16.
- Gillham, M. E. (1961), 'Coral Cay Vegetation, Heron Island, Great Barrier Reef', *Proc. Roy. Soc. Qld.* 73: 79-92.
- Keast, A. (1966), *Australia and the Pacific Islands*. Random House, N.Y.
- Kikkawa, J. (1970), 'Birds Recorded at Heron Island', *Sunbird* 1: 34-47.
- Kikkawa, J. (1976), 'The Birds of the Great Barrier Reef'. In "Biology and Geology of Coral Reefs" Vol. III, Biology 2 (pp. 279-341). Academic Press, N.Y.
- Lavery, H. J. and R. J. Grimes (1971), 'Sea-birds of the Great Barrier Reef', *Qd. Agric. J.* 97: 106-113.
- MacGillivray, W. (1926), 'Birds of the Capricorn Islands', *Emu* 25: 229-238.
- MacGillivray, W. (1928), 'Bird-life of the Bunker and Capricorn Islands', *Emu* 27: 230-249.
- Miles, J. A. R. (1964), 'Notes on *Puffinus pacificus* on Heron Island, Capricorn Group', *Emu* 63: 420-421.
- Napier, S. G. (1928), *On the Barrier Reef — Notes from an Oologist's Pocketbook*. Angus & Robertson, Sydney.
- Nebe, J. (1928), 'A Naturalist's Holiday on the Great Barrier Reef', *Qd. Nat.* 6: 102-108.
- Nebe, J. (1932), 'A Second Holiday on the Barrier Reef', *Qd. Nat.* 8: 54-59.
- Recher, H. F. (1972), 'Territorial and Agonistic Behaviour of the Reef Heron', *Emu* 72: 126-130.
- Recher, H. F. (1972), 'Colour Dimorphism and the Ecology of Herons', *Ibis* 114: 552-555.
- Recher, H. F. and J. A. Recher (1969), 'The Reef Heron', *Aust. Nat. Hist.* 16: 151-155.
- Recher, H. F. and J. A. Recher (1972), 'The Foraging Behaviour of the Reef Heron', *Emu* 72: 85-90.
- Reid, A. J. (1965), 'An Australian Record of *Pterodroma hypoleuca*', *Emu* 64: 99-100.
- Shipway, A. K. (1969), 'The Number of Terns and Shearwaters Nesting on Heron Island in 1965', *Emu* 69: 108-109.
- Tarr, H. E. (1950), 'The Distribution of Foreign Birds in Australia', *Emu* 49: 189-198.
- Wheeler, W. R. and I. Watson (1963), 'The Silver Gull *Larus novaehollandiae* Stephens', *Emu* 63: 99-173 (pp. 110-112).

Date compiled:
30 September 1975

J. Kikkawa,
P.O. Box 97,
St Lucia, Qld.

W. Boles,
C/- The Australian Museum,
College Street, Sydney, N.S.W.