

# Notes on the Gould Petrel

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Cabbage Tree Island off Port Stephens on the central coast of New South Wales is the only recorded breeding place of the Gould Petrel (*Pterodroma leucoptera*). Since my last report (D'Ombraïn 1964), I have made another 20 trips to the island. Some observations and results from these trips are given.

## Introduction

The Gould Petrel has specialised nesting habits. Its main nesting areas are in two rock-strewn gullies on the western side of the island. Here the birds seek sites in suitable cavities among the rocks; the single egg is laid in a scrape forming a slight depression.

The vegetation consisting mainly of trees and palms, forms a dense cover over most of this side of the island. (A more detailed description of the nesting site environment is given by K. A. Hindwood and D. L. Serventy, 1941).

## Marking of Nesting Sites

Formerly the method of marking the nest sites consisted of placing numbered strips of wood inside the nesting cavity; each strip was about nine inches long by one inch wide. Often these markers were scratched out, apparently when the returning birds clean out the nest sites. Later in the season, dead palm fronds drop to the ground and in places form a substantial cover over the rocks. Consequently many nesting sites were difficult to relocate or were "unidentified" because the wooden markers had been scratched out and lost among the fronds.

In 1967 some 100 hardwood stakes three to four feet in length were taken to the island. These had been specially treated to stop decay, a main cause of failure in the past. Zinc garden tags were fixed to the white painted tops of the stakes for marking purposes.

Previously many nest sites were not relocated later in the season because of the heavy coverage of fallen palm fronds. The new marking method enabled easy relocation despite this problem.

## Banding

On 12 January 1969, I took over John McKean, Peter Martensz and Lin Craven to carry out night banding over a period of two nights. A total of 117 birds was banded, most being caught on the surface at night.

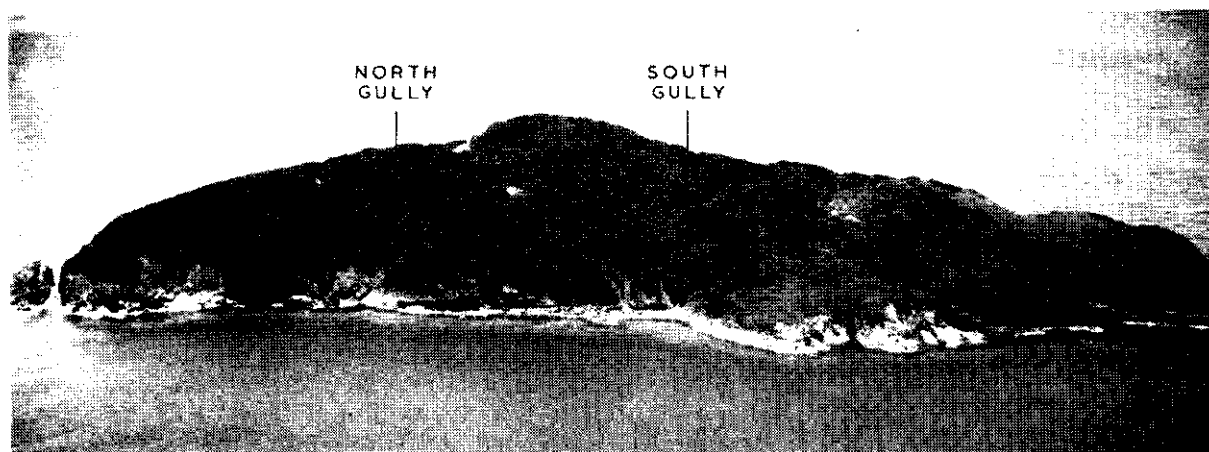
During the day we checked a number of sites, but only banded about 12 birds for rechecking later, to find out if any deserted. The result next morning showed no desertions at all. The next day a further check of four more sites showed no desertions.

Deserted nests often have a broken egg either in the nest chamber or else on the ground near the entrance. Nearly all such eggs have a fairly large puncture, suggestive of a stab from a strong beak. It would be possible for an enraged or disturbed petrel to smash the egg in the nest, or for the egg to be broken by two birds scuffling in the nest cavity. I have not seen a rat on the island.

Another visit was made to the island from 14 to 16 December 1969, this time with John McKean, Peter Fullagar, John Lewis and Mark Clayton. Due to the concerted work put in by this team, 243 birds were banded, mostly at night. This brings the total number banded during the past 22 years to 989, and I am sure that with continued night banding outings like this, much more will be found out about the life history of this petrel.

## Recoveries

No recoveries of banded birds have been reported away from the island but recoveries at the banding place have increased since 1964 to 118; all were adult or subadult when banded.



• The western or coastal side of Cabbage Tree Island. The highest point is 395 feet above sea level.

Photo: by courtesy RAAF

No bird banded as a nestling has been recovered on the island.

Judging from other petrels it is possible that young birds would not return to the natal island for some years and heavy mortality could be expected during the early part of this period.

The loss of bands from corrosion is possible. However, during the last trip, an aluminium band was examined which had been on the bird for seven years; it was still legible but was replaced with a monel band.

The number of nestlings banded is summarised as follows:

F. & G. aluminium bands (Victorian Fisheries & Game Dept)	1948-1956	53
ABBS (CSIRO) aluminium bands	1957-1964	61
ABBS (CSIRO) monel metal bands	1965-1970	56
	Total	170

As this represents an average of less than eight nestlings banded each season, the chances of recovery back on the natal island are slight.

### Arrival at Breeding Island

When arriving over the island after dark, the birds are fairly high; their twittering calls are very faint as they circle around for a time before coming lower. They do not wait long before descending to tree top level where they again

circle about; then the call appears much louder. The answering calls from birds on the island are a succession of screaming, whining notes.

On landing, breeding birds usually make their way quickly to the nest site. Others, probably non-breeding birds, seem rather sensitive when they first land, and are quite likely to fly off again if approached; this they do at night with ease. This is in contrast to the flopping, scrambling attempts to take to the air made by a bird in daylight. The petrels can fly freely about among the trees at night although many do make crash-landings into thick ground-cover; also I have seen some birds make reasonably good landings on branches and limbs.

### Nesting Calls

One night during the visit in January 1969, my attention was drawn to a strange call at north gully, a call hard to describe but resembling a deep, drawn out, growling sound, which could be heard from quite a distance. It was made by a bird which had just landed among the rocks, and an answering growl was heard from under a mass of stones nearby.

When the bird from the 'nest' emerged, it was fed by the recently arrived bird which had driven a third bird from the area. The bird from the 'nest' then crawled down the slope over the boulders for a few yards, while the new arrival wandered over to where I was sitting and moved past my feet, all the time holding its wings closed. Both birds then wandered about without apparent reason, and one of them came over to



• Juvenile Gould Petrel just prior to leaving the island.

Photo: K. A. Hindwood

the rock on which I was sitting and allowed me to touch it with the palm of my hand. Most of the time the growling, croaking call was being uttered and I could hear others giving the same call nearby.

The bird from the 'nest', followed by the other bird, made its way back towards the entrance where it spread its wings out and flattened itself on the ground. Both birds then entered the cavity. As the growling call was commenced again, they came out from the rocks at the site and moved some yards away where they were banded.

I was not sure at the time whether or not this was a nesting pair, as no egg could be found in the cavity, but later, birds which made the same growling call were found with an egg.

### General Comments

The work carried out over the past few years shows that the nesting area is greater than had been previously recorded. Numerous 'nests' have been found between the two gullies and others some distance away. One 'nest' was found in the tussock grass area which is quite clear of trees of any sort, some 200 yards south of the landing place; Fairy Penguin burrows abound in this area. Here in 1967, S. G. Lane found a petrel in its 'burrow' on an egg. He told me that the cavity was formed between two or three rocks. Another rock across the front made the entrance too small to permit access by either shearwaters or penguins. The 'nest' was located at the edge of the tussock grass at the top of the bare sloping rocks of the foreshore.

Another 'nest' was found under the boulders which have been named "The Lookout", at the

extreme top of south gully; there is a sheer drop to the ocean below. Many more 'nests' have been found in the area between south and north gullies, and 'nest' No. 1 is actually on the rocks a few feet above high water mark at the foot of south gully.

I have always been concerned by the number of dead birds found on the island. One evening during the visit in January 1969, John McKean and the others went to the top of the island and, by torchlight, saw four or five Peregrines hunting in the dark. It seems possible that early arriving petrels might fall victim to these hunters, which regularly nest on the north-east side of the island on a spot known as "Cathedral Rock". Other predators are Ravens and Grey Goshawks.

### References

- D'Ombra, A. F. (1964). 'Four Hundred up—The Gould Petrel (*Pterodroma leucoptera*) on Cabbage Tree Island, N.S.W.', *Aust. Bird Bander*, 2:43-49.  
Hindwood, K. A., and Serventy, D. L. (1941). 'The Gould Petrel of Cabbage Tree Island', *Emu*, 41:1-20.

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## NEW MEMBERS

### Associate Members:

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### Junior Members:

- SWANSON, J. R., American River, Kangaroo Island, S.A.  
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### Change of Status:

- The following member, having become a licensed bander has been advanced to Full Membership.  
ROWE, M. T., Burrinjuck Waters Park, via Bowring, N.S.W.