# SHORT NOTES

## Unexpectedly large number of Wandering Albatrosses (*Diomedea exulans*) breeding on Antipodes Island, New Zealand

The Wandering Albatross *Diomedea exulans* was first recorded breeding on Antipodes Island (49° 41′ S, 178° 47′ E) in 1886 (Oliver 1955), and birds from this island have been recognised as a separate subspecies, *D. e. antipodensis*, by Robertson and Warham (1992).

Recent declines in well studied Wandering Albatross populations have led to suggestions that all Wandering Albatross populations should be regularly monitored (Gales 1993). Unfortunately, the dense tussock cover and difficulty of travel have discouraged attempts to count albatrosses on Antipodes Island, and it was not until 1969 that Warham and Bell (1979) attempted the first assessment by counting all birds they could see from vantage points. As a check on accuracy they examined two areas closely, with counts made from vantage points being followed by ground searches. These searches showed that counts made from vantage points revealed only about two-thirds of the birds actually present. However, only about one-third of the birds on the ground were breeding birds with well built nests or eggs. From their observations and calculations Warham and Bell (1979) concluded that "It is possible that as many as 1000 pairs may breed in any one year".

During November-December 1978 a New Zealand Wildlife Service Expedition banded 1096 Wandering Albatross chicks on Antipodes Island. This was probably about half the number of chicks present at the end of the 1978 breeding season (C.J.R. Robertson pers.comm). The average rate of chick loss cannot be determined without further counting over several years.

No further attempts to count the Wandering Albatrosses at Antipodes Island were made until that carried out by us during the Totorore Expedition to the Antipodes Islands from 13 February to 24 March 1994.

Unlike Warham and Bell (1979) we felt that counting from vantage points could not be entirely relied upon because the tall dense tussock *Poa litorosa* and dense shield fern *Polystichum vestitum* concealed birds to a varying degree, as did the rugged and undulating terrain in areas other than the main plains. We made vantage point counts in most areas (see Table) but followed them with ground counts, and closely visited almost every nest. We searched all land available for nesting except steep, very densely vegetated coastal slopes and vegetation-choked gullies.

The island was divided into 28 blocks (Figure 1) based on visible topographical features, and we counted the Wandering Albatrosses in each block separately. A compass and GPS position indicator were used where necessary to establish the positions of the vantage points. For the ground counts each block was covered by walking over it in strips between 20 metres and 35 metres wide according to the vegetation. We were often amazed to find nests in very small clearings in dense tussock thickets, or almost surrounded by the fern *P. vestitum*. Such nests did not have the expected

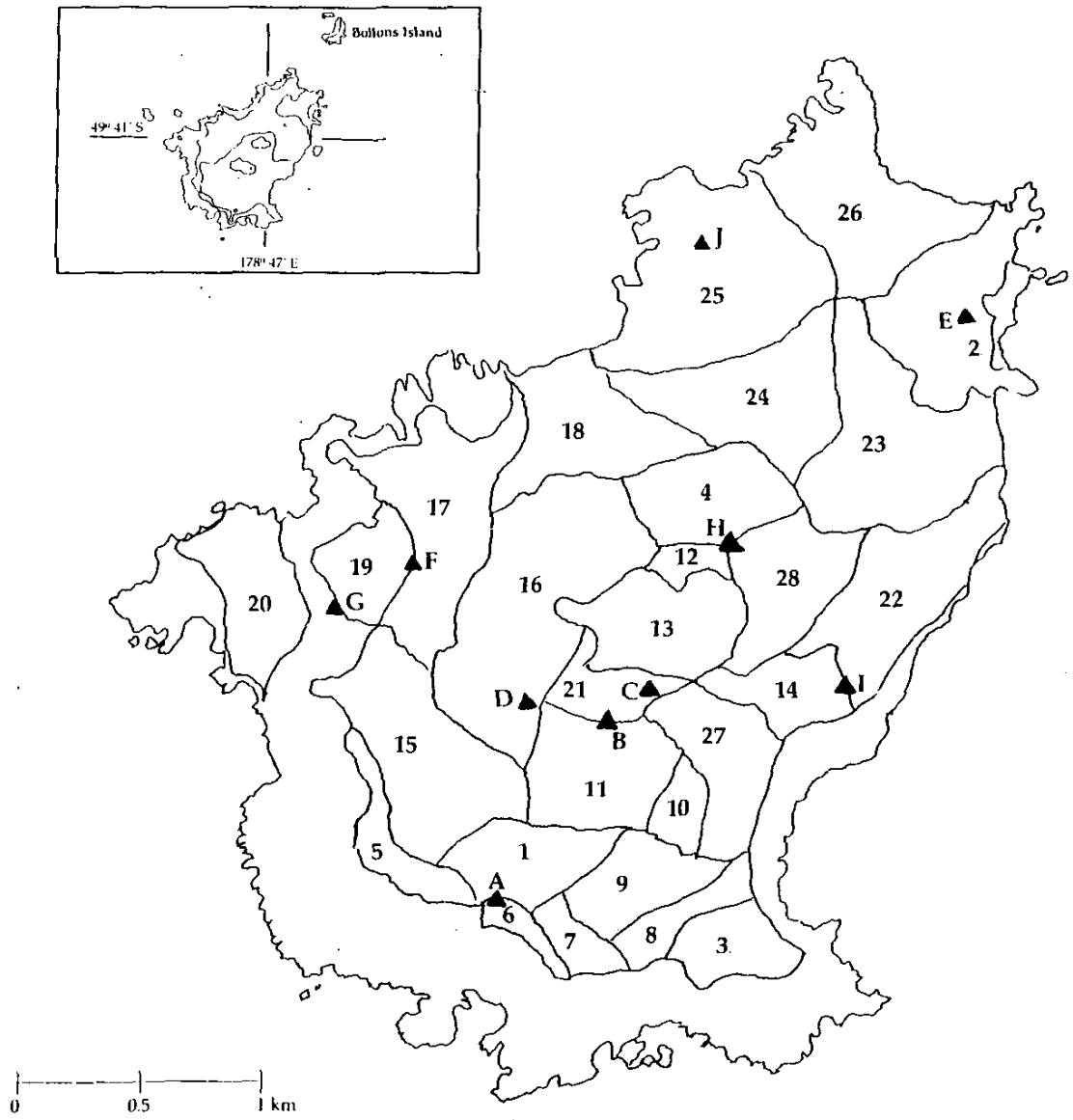


FIGURE 1 – The map of Antipodes Island, with the borders of the counting blocks and the position of the vantage count points.

clear runways of larger species of *D. exulans*. The lighter Antipodes birds were more adept at taking off with very short runways or even, in fresh winds, from the tops of tussocks.

Each breeding bird, when counted, already had an egg but no eggs had hatched before counting was completed. When counted, a nest was marked by a patch of red paint on a nearby tussock. As it was seldom possible to walk in straight lines, an unmarked nest on the border of a counted strip could be seen and dealt with on the return along the next strip, which avoided missing any. Fledglings were also counted, and other birds on the ground which included some off-duty breeders away from nests, some of last year's breeders back to feed fledglings, and the usual less mature pre-breeders.

TABLE 1 – Numbers of Wandering Albatrosses counted on Antipodes Island, February - March 1994. For block positions, refer to Figure 1.

| No. block | Number of birds counted | | | | Vantage point | No. of birds counted |
|---|---|---|---|---|---|---|
| | Fledglings | On egg | On ground | Total | | |
| 1 | 2 | 114 | 66 | 180 | B | 45 |
| 2 | 0 | 26 | 3 | 29 | | n.c.* |
| 3 | 1 | 85 | 44 | 129 | | n.c. |
| 4 | 0 | 77 | 33 | 110 | J | 39 |
| 5 | 2 | 124 | 71 | 195 | | n.c. |
| 6 | 0 | 30 | 12 | 42 | | n.c. |
| 7 | 0 | 17 | 12 | 29 | B | 7 |
| 8 | 0 | 125 | 85 | 210 | B | 33 |
| 9 | 0 | 126 | 43 | 169 | B | 36 |
| 10 | 1 | 80 | 32 | 112 | A | 18 |
| 11 | 3 | 129 | 25 | 154 | A | 43 |
| 12 | 0 | 73 | 19 | 92 | C | 33 |
| 13 | 6 | 242 | 126 | 368 | H | 64 |
| 14 | 1 | 160 | 53 | 213 | C | 45 |
| 15 | 2 | 463 | 185 | 648 | D | 126 |
| 16 | 4 | 483 | 159 | 642 | F | 181 |
| 17 | 0 | 301 | 136 | 437 | E | 116 |
| 18 | 0 | 29 | 32 | 61 | H | 28 |
| 19 | 0 | 159 | 128 | 287 | F | 140 |
| 20 | 0 | 5 | 3 | 8 | G | 9 |
| 21 | 0 | 128 | 25 | 153 | H | 63 |
| 22 | 1 | 268 | 108 | 376 | H | 97 |
| 23 | 5 | 553 | 197 | 750 | H | 100 |
| 24 | 1 | 261 | 121 | 382 | H | 119 |
| 25 | 1 | 105 | 91 | 196 | H | 27 |
| 26 | 2 | 115 | 44 | 159 | J | 45 |
| 27 | 3 | 194 | 104 | 298 | I | 78 |
| 28 | 0 | 50 | 35 | 85 | I | 74 |
| Total | 37 | 4522 | 1992 | 6514 | | 1566 |

* n.c. = not counted

These numbers counted were not as accurate as those of the breeders because the birds were more mobile, were more numerous on the ground in the late afternoon, and some may have been counted more than once. Birds in the air, of which there were many, were not counted. Most of the breeding birds on nests were checked for bands, as were birds on the ground where possible.

The total number of breeding birds on eggs was 4522, but the number of pairs that attempted to breed will be slightly higher as some will have lost eggs and abandoned their nests before our count. There were 37 fledglings from the previous year's breeding still present, and 2024 other birds on the ground (see Table). It is not appropriate to make direct comparisons between the 1994 and 1969 vantage point counts since they might not have covered the same ground. However, they indicate that the huge difference between the 1969 estimates and the 1994 counts probably results from the complete coverage of the island and the improved accuracy of the 1994 counts, rather than from any increase in population.

121 banded birds were recorded, the majority having been banded during previous expeditions to the island in 1969, 1978 and 1984. Three birds had Australian bands, banded near Sydney.

Bollons Island was searched on 12 March and no breeding Wandering Albatross was found. On the top ridge of the island, eight non-breeders were awaiting wind to be able to take off, and one new out-of-use nest was found which appeared to be that of a pre-breeder, as often seen on Antipodes Island. Up to 20 Wandering Albatrosses were frequently in flight between Antipodes and Bollons Islands, and were often seen cruising along the south east cliffs of Bollons Island in the vicinity of the mollymawk colony. The other smaller islands in the group were not searched but, where possible, they were observed from Antipodes Island, and all were passed several times in "Totorore". We did not see any sign of Wandering Albatrosses on them.

Encouraging though the large number of breeding Wandering Albatrosses on Antipodes Island this year may be, they are biennial breeders and the number of birds attempting to breed can vary greatly from year to year. It will be necessary to count them for several years to obtain an estimated total population. Furthermore, in the absence of earlier comparable counts, and information on breeding success and survival, an assessment of the status of the population will not be possible for some years.

ACKNOWLEGDEMENTS

Our gratitude to Colin Lougheed whose financial contribution made the "Totorore" Expedition possible, to the Department of Conservation for their co-operation, and the Royal Forest and Bird Protection Society for their grant from the James Sharon Watson Conservation Trust. I thank my wife Marjorie for her constant support for the expedition, and for typing this manuscript. We thank Chris Robertson, Lance Tickell, and two anonymous reviewers for offering constructive criticism.

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*Received 29 Jul 1994, revised and accepted 23 Nov 1994*

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## Breeding pattern in the Banded Rail (*Gallirallus philippensis*) in Western Samoa

The Banded Rail (*Gallirallus philippensis*), or Vea as it is known in Samoa, occurs from the Cocos-Keeling Islands in the Indian Ocean, through South-east Asia, north to the Philippines, south through Australia and New Zealand and Macquarie Island and from Fiji eastward through Polynesia. Twenty-six subspecies were recognised by Ripley (1977), though a recent review by Schodde and de Naurois (1982), combined several and created one new one. The Banded Rails of American and Western Samoa belong to the subspecies *Gallirallus philippensis godsoni* and they are widespread, common and easily observed along the roads of Western Samoa.

From October 1992 to August 1994 I lived in Fagalii Uta on the south-east edge of Apia, Western Samoa, which is on the north central coast of the island of Upolu. A banana plantation with a dense grass understorey adjoined the northern boundary of the property and a large four-sided man-made mound (part of Samoa's virtually unknown archaeological heritage), densely covered in long grass bordered the property to the east. A pair of Banded Rails had a teritory in this area and made regular foraging trips to the lawns and gardens surrounding my house.

From January 1993, regular observations were made of the pair of rails in my garden. I was unable to distinguish reliably the sexes of these birds and they were not marked in any way, but I am confident that the same pair occupied the area from January 1993 to February 1994, when one of the pair disappeared. During this period, the first appearance of chicks, their numbers and their progress until they were chased from the garden by their parents, were recorded.

During the study period this pair of rails produced five broods, one each in February, April, August and December. The number of chicks per clutch ranged from 3-5 with a mean of 4.2. The interval between hatching and the eviction of the fully fledged young from the area ranged from 34-63 days with a mean of 44 days. Survival of chicks to fledging ranged from 1-3 with