

Interspecific breeding attempts by *Macronectes giganteus* and *M. halli*

The Southern Giant-Petrel *Macronectes giganteus* and the Northern Giant-Petrel *M. halli* have been recognized as distinct species since 1966 (Bourne and Warham 1966, *Ardea* 54: 45-67). Although the two species are similar in appearance, adult *giganteus* have a paler head and neck and a green tip to the bill (unguis), whereas adult *halli* have distinct dark-pink or horn-coloured tips to the bills and darker plumage on head and neck (Johnstone 1974, *Emu* 74: 209-218). In both species the males are significantly larger than the females (Voisin 1976, *Alauda* 44: 411-429; Johnstone 1977, in *Adaptations Within Antarctic Ecosystems*: 647-668, Smithsonian Institute). The species differ in their breeding schedules and choice of nest sites (Voisin op. cit.).

At Marion Island (46° 54'S, 37° 45'E) *halli* laid from 10 August until 1 September and *giganteus* from 18 September to 2 October (1974 and 1976 seasons). *M. halli* nests singly or in small loose colonies in sheltered nest sites. *M. giganteus* nests in larger colonies, usually in open exposed sites and occasionally in sheltered sites. There are 1,337 pairs of *giganteus* and 153 pairs of *halli* breeding at Marion Island. Two apparently mixed pairs of giant-petrels have been found at Marion Island. In early September 1974 one pair was found incubating an egg, which later failed for unknown reasons. No details of the age and sex of the members of the pair were obtained.

In August 1976, at a site within 200 metres of the previous sites, a mixed pair was again found. The birds were photographed, banded and measured. The larger bird (male) had features of *giganteus* and its culmen and tarsus measured 107 and 108 millimetres respectively. The plumage of its head and

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neck was darker than those of most breeding *giganteus*, indicating that it was possibly a young bird (Johnstone 1974, op. cit.). The smaller bird (female) had features of *halli* and its culmen and tarsus measured 86 and 87 millimetres respectively. An egg was laid on 20 August 1976, which measured 100 x 68 millimetres with a fresh mass of 245 grams. It was incubated for seventy-three days, at least ten days longer than the normal period of either species. It was then abandoned, being addled and foul smelling. The male incubated for seven bouts totalling thirty-one days and the female for eight bouts totalling forty-two days. Both the time of laying and the nest site were typical of *halli*. Several nests of *halli* were within 100 metres of this nest but the nearest colony of *giganteus* was one kilometre distant. Neither of the banded birds was found nesting in the 1977-78 season.

The two species breed sympatrically on at least four groups of islands (Watson 1975, *Birds of the Antarctic and sub-Antarctic*, Washington, Am. geophys. Union); yet no previous account of interspecific breeding has been published. Voisin (pers. comm.) found that the displays of the two species were similar but that individuals ignored or were aggressive toward displaying birds of the opposite species.

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