

breeding population in the 1969-70 season. Thus after 22 years, 7 per cent of the 1947 breeding birds were still surviving. The exact age of these birds is not known, but as they were adult when originally marked, and hence at the very least 5 or 6 years old (the average period of adolescence), they must be at least approaching 30 years of age and are probably older.

We now have a "pool" of birds of known age breeding on Fisher Island as they were banded there as fledglings. Two of the oldest are No. 10706, a female, and No. 10708, a male, both hatched on the Island in January 1950, and hence now 20 years of age. The female started egg-laying in November 1956, at 6 years of age, and the male first bred in November 1957, at 7 years of age.

There is a considerable number of other Fisher Island fledglings now breeding on the Island, and these birds of known age comprise 38 per cent of the breeding population. Other marked birds from Fisher Island, both fledglings and adults of unknown age, also nest on an adjoining part of Little Green Island; this is another of our study areas and a third nestling from January 1950 (from Flinders Island), No. 12008, was caught there in February 1970.

The extent to which Fisher Island birds become established on the adjoining islands, Little Green Island and Great Dog Island, is now being investigated. The study could be considerably advanced if volunteers could come forward to help us search the islands for marked birds. Nocturnal inspections of surface birds in the rookeries during the months of January and February are the most profitable. Readers who may be interested in assisting are asked to get in touch with me.

A summary of some of the results of the mutton-bird work on Fisher Island is given in my paper, "Aspects of the population ecology of the Short-tailed Shearwater *Puffinus tenuirostris*", *Proceedings of the XIV International Ornithological Congress*, 1967, pp. 165-190. Summaries of the work also appear in the "Handbook of North American Birds", vol. 1, edited by Ralph S. Palmer, and published by the Yale University Press, 1962, pp. 179-186. A further account of the biology of the bird will appear in the "Handbook of Australian Seabirds", by D. L. Serventy, V. N. Serventy and John Warham, now in course of publication by A. H. and A. W. Reed, Sydney.

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Follow the Band!

BLACK-BACKED MAGPIE 090-00002

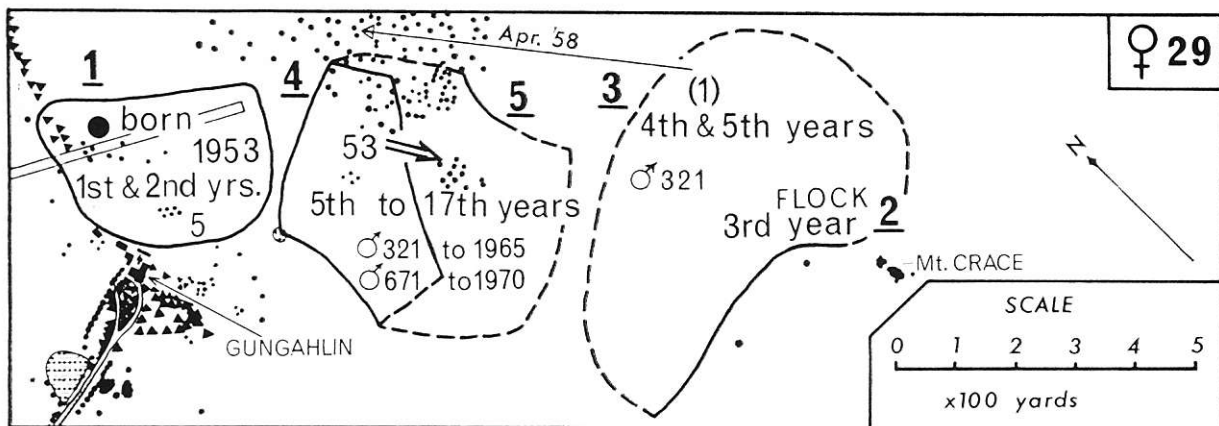
The Grand Old Lady of the Banding-Scheme

ROBERT CARRICK

The life-history of a 17-year-old Black-backed Magpie (*Gymnorhina tibicen*), one of the first birds banded when the Australian Bird-banding Scheme commenced operations in 1953, is described from 148 colour-band observations, mostly made by Chriss Carrick and Wim Vestjens during 1955-1966.

Black-backed Magpie 090-00002 was one of three nestlings banded by Dr George Dunnet on 16 October 1953 in a gum tree beside the lane north of Gungahlin, Canberra. It became a useful member of the Magpie population study that started two years later, and its history illustrates several aspects of the ecology and social organisation of the species.

1. During the two years to August 1955 that it remained in its natal territory 5, 090-00002 was seen there 25 times and was never seen outside this 15-acre permanent territory. On 25 July 1955 it was trapped and colour-banded WHITE LIGHT BLUE/LIGHT BLUE on the left leg, to become 229 in the series of individually identifiable birds.



• Figure 1. *The Life-history of Black-backed Magpie 090-00002.* (The successive stages 1 to 5 are similarly numbered in the text. Each dot represents a gum tree and each triangle a conifer. Solid lines are sharply-defined territorial boundaries, and broken lines are less definite ones. Only territories occupied by ♀ 29 are shown, but all trees with adjacent pasture were held).

2. By 16 April 1956 it was in the non-terrestrial flock near Mount Crace, feeding in the open treeless paddocks by day, and roosting with other flock birds in the denser trees on nearby hills that are not held by territorial groups. This would take ♀ 29 more than a mile from its birthplace, but its farthest observed feeding distance is 1350 yards.

3. During its fourth and fifth years it associated by day with ♂ 321, which had been trapped nearby with other flock birds in May 1956. The pair was seen 32 times and retrapped once in the large area of open pasture which they held more-or-less exclusively as open group (1). They reconnoitred adjacent territories strongly held by resident permanent groups. On 2 April 1958 they penetrated to the centre of the nearby group of open trees and carolled and preened for some time, but their efforts to gain trees and pasture within one boundary were thwarted by the established groups.

4. When, by 8 May 1958, the adult female of nearby group 14 disappeared, presumed dead, the adjacent groups 47 and 34 expanded and ousted the surviving male from its 20-acre territory. Group 47, consisting of three adult males and two adult females, increased its area from 15 to 30 acres, and group 34, an adult male and female, gained 5 to become 27 acres. But by 16 September 1958 ♂ 321 and ♀ 29, familiar with these territories and their occupants for three years, eventually succeeded in pushing group

47 and 34 back almost to their former boundaries when their hens were preoccupied with incubation. Thus, at 5 years old, ♀ 29 became established in permanent territory 53 which was almost the same piece of real estate owned by former group 14, and only 400 yards from her birthplace.

This was the first opportunity that ♀ 29 had to breed. She was seen collecting twigs, but constant conflict with neighbours while the new territorial boundaries were being established prevented nesting. She hatched young in 1959 and 1960, but they did not fledge.

5. In April 1961 the female in adjacent territory 34 became sick, with untidy plumage and drooping wing, and ♀ 29 and ♂ 321 were able to evict the group and double their own territory. In that year ♀ 29 first fledged young successfully, at 8 years old.

When ♂ 321 presumably died in July 1965, the subordinate ♂ 671 from neighbouring territory 47, where it was one of two adult males with only one female, crossed into 53. Up to 1966, ♀ 29 was recorded 148 times and retrapped on six occasions. Wim Vestjens continues to report it in the territory it has occupied for nearly 12 years. Now almost 17 years old ♀ 29 is still going strong!

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