

SOME OBSERVATIONS ON DUETTING IN MAGPIE-LARKS

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The Murray Magpie, Mudlark, or Magpie Lark (*Grallina cyanoleuca*) is one of a number of Australian species of birds which sing 'antiphonal' duets, in which the two members of a pair sing their parts alternately with very accurate timing. It is interesting to speculate about the evolution of such specialized behaviour and about its present significance, but the collection of clear evidence has proved difficult.

Robinson² attaches considerable importance to the role of antiphonal calling in defence of the territory. Miss G. Mitchell and Mr. D. Keightley, honours students in the Zoology Department, University of Adelaide, made observations in 1966 which agree with those of Robinson. They found that antiphonal calling was important in territorial defence and was most prominent in the breeding season.

But other authors, though not writing about Magpie-Larks in particular, have suggested that antiphonal singing is important in the formation and maintenance of a pair, rather than in territorial defence^{1,4}. These authors were discussing the value of antiphonal singing to birds which live in tropical jungles—there the members of a pair must very often lose sight of one another. The conspicuously-marked Magpie-Lark, living in open woodland, would not have the same problem, but it is still possible that duetting in this species helps to keep the pair together.

Between February and October, 1967, we observed a pair of Magpie-Larks in the Botanic Park, Adelaide, in the hope of discovering more about the significance of antiphonal calling in this species. The birds were watched once a week for two hours from dawn, and their calls were tape-recorded together with spoken comments on the circumstances in which each call was given.

We found no significant change in the amount of antiphonal calling as the breeding season began in early September. There was a decline but because there was a great deal of variation in the amount of calling from week to week throughout the year, this de-

cline may well have been due to chance and not to any real change in the behaviour of the birds. The male called solo significantly more often during the breeding season than earlier, but the female did not. These observations agree with the suggestion that antiphonal calling has its main function in maintaining the 'pair-bond,' for in that case antiphonal calling may be, if anything, less important during the breeding season when the attraction of the nest, eggs and young helps to keep the birds together.

Further, our records of circumstances in which the songs were sung show that they were rarely associated with territorial fighting. Generally the birds called, solo, with a high-pitched 'pee pee' when defending their territory—probably the 'threat scream' mentioned by Robinson. The birds called antiphonally on awakening in the morning, on flying from one spot to another, and when the pair became separated and lost sight of one another. Thus our observations suggest that antiphonal calling is more important in maintaining contact between the members of a pair than in territorial defence. Incidentally, we could not attach any individual 'meanings' to the different antiphonal calls in the pair's repertoire, such that a particular call was always given in a particular circumstance.

The calls of Magpie-Larks vary quite noticeably from pair to pair, and more so between different localities³. The differences between our observations and those of Robinson and of Mitchell and Keightley suggest that the behaviour of the birds also varies, even over small distances. (Mitchell and Keightley worked in the East Parklands about half a mile from the Botanic Park.) Magpie-Larks are therefore difficult to study; certainly generalizations about their calling and behaviour must be made with great caution.

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