

THE EASTERN STRIATED PARDALOTE *PARDALOTUS STRIATUS ORNATUS* IN THE SOUTH-EAST OF SOUTH AUSTRALIA

NICHOLAS REID AND JOHN B. COX

Accepted February, 1980

Of the three south-eastern Australian subspecies of the Striated Pardalote *Pardalotus striatus*, two are known from South Australia (Condon 1968): *P. s. striatus*, of which there is one record (Condon and Waterman 1965), and *P. s. substriatus*, common in most of the State. The third subspecies, *P. s. ornatus*, occurs in south-eastern mainland Australia (Mees 1965) west to the western districts of Victoria where it breeds (Cooper 1961). Cooper (1961) considered that there was little doubt that it also occurred in adjacent parts of South Australia.

On 5 October 1976 the writers were walking through eucalypt woodland with a dense heath (*Hakea*, *Xanthorrhoea* spp, etc.) understorey near the north-eastern boundary of Big Heath Conservation Park, 37° 07', 140° 35'. A lone Striated Pardalote with a narrow wing-stripe was seen foraging in eucalypt canopies, and was collected:

Specimen. SAM B30430, adult male with somewhat enlarged testes; skull damaged but most if not all fully pneumatized; much subcutaneous fat at base of neck, on shoulders, flanks and lower back; colours (recorded in the first 10 minutes after death): leg blackish, bill black, mouth cream (whitish); length (bill-tip to tail-tip) 110 mm.

The seventh primary (from the inside of the wing) is edged with white, with a small amount of white edging at the base of the sixth. The first to fifth and eighth primaries are black. The greater upper primary wing coverts are tipped red (i.e. red "wing spot"). The specimen is thus an example of the less common *P. s. ornatus* morph recognized by Hindwood and Mayr (1946). Twenty-five per cent of the *P. s. ornatus* specimens they examined from throughout south-eastern Australia had white on both the sixth and seventh primaries; more often the white edging on the inner primaries is confined to the seventh.

The only lower South-East specimens of *P. striatus* in the South Australian Museum are the *P. s. ornatus* specimen reported here and four *P. s. substriatus*:

B2409, male (in adult plumage), 28.x.1918, Kingston.

B30576, adult female, 5.i.1977, Big Heath Conservation Park.

B30839, male (in immature plumage), 25.iii.1977, Naracoorte Highschool grounds.

B32082, subadult (moulting into adult plumage), 16.ii.1979, Lorimer Paddock, only wings preserved.

Such a small sample sheds little light on the seasonal and breeding status of either form in the South-East. The species is common in the region and breeds frequently in some districts, e.g. Lorimer Paddock near Big Heath (J. Bourne, *in litt.*, 15 June 1977). Until the question of the subspecific status of South-East Striated Pardalotes has been resolved, it would be presumptuous to refer unsubstantiated records of the species to either form.

Field separation of *P. s. substriatus* and *ornatus* is not easy. Cooper (1961:2) "found that many observations had to remain unrecorded as identification was not definite". The birds' small size, the minor differences in wing-markings and their usually active behaviour high in the treetops account for the difficulty. Additional confusion may arise because *substriatus* in worn plumage can appear to have a narrow wing-stripe like *ornatus*.

Lord (1956) and Cooper (1961) provided evidence of the frequent inter-breeding of *substriatus* and *ornatus* in at least two areas of south-eastern Australia, the inference being that hybridization is of common occurrence in their area of sympatry. However, Hindwood and Mayr (1946) noted a rarity of phenotypic intermediates, finding only six (1.4%) in a sample of 429 specimens of *ornatus* and *substriatus* from across Australia. Thus Palmer (1946) and Mees (1965) were led to suggest that the difference in wing-stripe between the two could be controlled by a single gene i.e. that the two forms represent a polymorphism.*

There is additional evidence to suggest that *substriatus* and *ornatus* are the constituent forms of a geographical and presumably selectively based polymorphism. Contrary to Mees (1965), Cooper (1961:5) described the hybrid young of an interbreeding pair in the Bendigo

*A polymorphism is here defined as the occurrence in a population of two or more alternative and distinct phenotypes, usually under the control of allelic genes, where at least two of the phenotypes are of frequent occurrence (sometimes taken to mean that the frequency of the most common form is less than 0.99).

district: "The feather markings on the wings [of the young birds] were most pronounced . . . One bird had two white-edged flight feathers and the other had seven." In other words the hybrids were indistinguishable from *ornatus* and *substriatus* respectively. Salomonsen (1961:4) noted that "*ornatus* and *substriatus* are exactly similar in proportion—wing-length, bill and tarsus." Hence, the only difference between them other than wing-marking may be the greater individual variability of *ornatus* in the colour and markings of the dorsum and crown (Hindwood and Mayr 1946: 55). This should be tested by comparing the variability within a series of *ornatus* from one area with that found in a comparable series of *substriatus*.

Note that the very existence of phenotypic intermediates, albeit few, means that the case for a single dimorphic population is not clear-

cut. Other objections to the polymorphism hypothesis raised by Salomonsen (1961) can be discounted in the light of more recent data. Closer study of this interesting situation is clearly warranted.

ACKNOWLEDGEMENTS

Shane Parker's critical comments on drafts of the manuscript were much appreciated. We also thank Leo Joseph for discussion and information about genetics.

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N. Reid: Botany Department, The University of Adelaide, Box 498, G.P.O., Adelaide, S. Aust., 5001.

J. B. Cox: 2 Rockbourne St., Elizabeth North, S.A. 5113.