

VARIATION AND SPECIATION IN THE AUSTRALIAN FLYCATCHERS

(Aves: Muscicapinae)

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(Figures 1-7)

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SUMMARY

The Australian Muscicapinae, comprising some thirty-four species, is currently divided into seventeen genera. A study of generic characters shows that of these *Carterornis* is a synonym of *Monarcha*, *Amaurodryas* and *Melanodryas* of *Petroica*, and *Quoyornis* of *Eopsaltria*. The writer follows Mayr (1941b) in separating *Tregellasia* from *Eopsaltria*. Mathews' generic name *Peneoanthe* is reintroduced for the Mangrove Robin. The writer has been conservative in making generic changes, the view being taken that it is better to retain 'small' genera where relationships are doubtful than, for the sake of reducing the number of genera, to risk linking them with groups to which they may not belong.

A detailed study of infraspecific variation has been made. Nineteen of the species vary geographically within the Australian continent. Most of those that do not are New Guinea or tropical species that have only a 'toehold' in Australia. Distributions and habitats are detailed. The relatively large collections available to the author have permitted a detailed reassessment of named races and about sixty (slightly more than half those currently recognised) are reduced to synonymy.

Speciation is actively occurring in many flycatchers and isolates, forms with the 'potential' of developing into new species, are numerous. Of the fifteen well-differentiated isolates one (*Petroica rodinogaster*) has recently reached species status (as shown by resumption of contact with parental form without interbreeding). Two, the distinctive subspecies *Poecilodryas superciliosa cerviniventris* and *Eopsaltria australis griseogularis* though isolated are approaching that stage of morphological differentiation typical of species. In addition to the isolates referred to above most of the New Guinea species with a 'toehold' in northern Australia have started to differentiate here. The all-important isolating barriers in the flycatchers are extensive gaps in the particular habitat (tracts of arid country and sea).

Clinal variation (gradual change in a character without isolation) is pronounced in several flycatchers. It falls, in the main, into (a) tonal differences associated with rainfall (Gloger Effect), and (b) size differences according to latitude (Bergmann Effect). A most interesting demonstration of the effects of isolation on the tendency for northern populations of widely-ranging birds to be smaller, is noted in *Seisura inquieta*. Here the isolated northern populations are some 20 per cent. less than the most southern ones compared to the 'average' figure of 11 per cent. for *Rhipidura leucophrys*, in which the variation is in the form of a continuous cline.

INTRODUCTION

The present paper deals with infraspecific variation and speciation in those birds comprising the Family Muscicapidae of the 1926 *Checklist* of the Royal Australasian Ornithologists' Union, which group is regarded as a sub-family in the recent list of Mayr and Amadon (1951). The following genera are currently recognised: *Rhipidura* Vigors and Horsfield (four species), *Seisura* Vigors and Horsfield (one), *Piezorhynchus* Gould (one), *Myiagra* Vigors and Horsfield (three), *Machaerirhynchus* Gould (one), *Arses* Lesson (two), *Monarcha* Vigors and Horsfield (three), *Carterornis* Mathews (one), *Microeca* Gould (four), *Petroica* Swainson (five), *Melanodryas* Gould (one), *Amaurodryas* Gould (one), *Eopsaltria* Gould (one), *Quoyornis* Gould (two), *Heteromyias* Sharpe (one), *Poecilodryas* Gould (one), *Tregellasia* Mathews (two).

Genera and generic limits are assessed and some changes recommended.