

# CORELLA

Journal of the Australian Bird Study Association

---

VOLUME 16

MARCH, 1992

NUMBER 1

---

Corella, 1992, 16(1): 1-14

## WHY DO FLAME ROBINS *Petroica phoenicea* MIGRATE? A COMPARISON BETWEEN THE SOCIAL AND FEEDING ECOLOGIES OF THE FLAME ROBIN AND SCARLET ROBIN *P. multicolor*

DOUG ROBINSON

Department of Botany and Zoology, Monash University, Clayton, Vic. 3168  
Present address: 28 Bath Street, Mornington, Vic. 3931

*Received 17 November 1989*

Comparisons between the ecology of Flame and Scarlet Robins at a sympatric breeding site suggested that Flame Robins migrated during the winter months because of a decline in the availability of their major prey. During the nine months that Flame Robins were present at the breeding site, they foraged for flying insects twice as often as did Scarlet Robins. Scarlet Robins foraged more often for ground-dwelling prey. Flying insects are a very seasonal food resource, present mostly during the warmer months. Ground-dwelling arthropods remain relatively more common in winter. Thus, Flame Robins migrated from their breeding grounds once food abundance decreased and competition for remaining prey increased in the autumn months. Scarlet Robins were able to find sufficient food to remain at their breeding grounds throughout the year. Severe competition for territories in breeding habitat may have been a further selection pressure on Scarlet Robins to remain at their breeding grounds throughout the year, since territory turnover was low.

Morphological comparisons indicated that Flame Robins showed long-term adaptations to their winter environment and winter feeding behaviour (hop-gleaning on the ground). Such adaptations imply that migration may be an ancestral trait within this species rather than a recent event, and that Flame Robins have long moved between wintering and breeding grounds to exploit seasonally abundant supplies of food.