

Flame Robin Banding in the Shepparton District, Victoria

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The results of six years banding of Flame Robins *Petroica phoenicea* in the Shepparton district of northern Victoria are presented. These data confirm and amplify the results of Mary Bateman's study on this species (Bateman 1975).

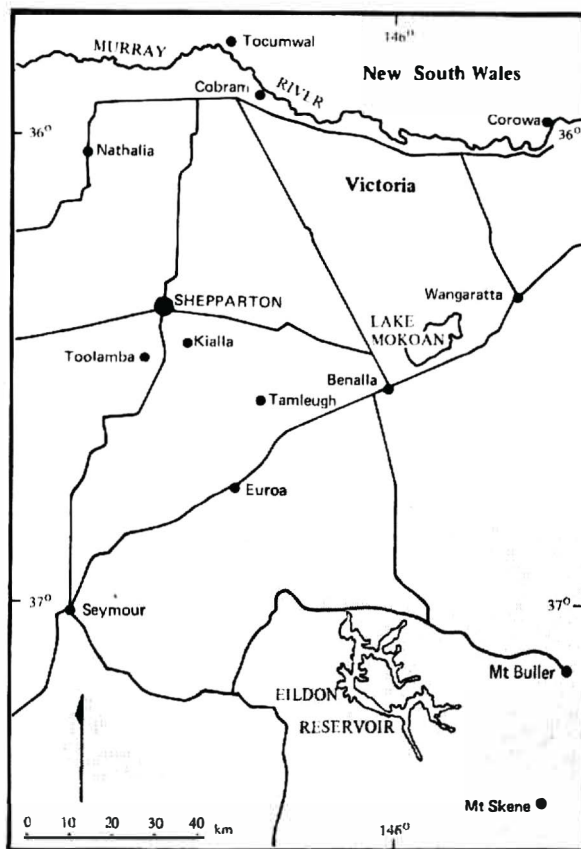
Introduction

Following the discovery in 1968 that wintering Flame Robins could be caught in appreciable numbers when coming to roost in citrus orchards from surrounding open country (Bateman and Fordyce 1970), various centres were tried around Shepparton. An orchard at Toolamba, ten kilometres southwest of Shepparton, was selected as the main centre for Flame Robin banding. This orchard's isolation from other orchards made possible a high recovery rate. Flame Robin banding at Toolamba has ended as the citrus trees have been removed. This paper presents an analysis of the six years of Flame Robin banding at Toolamba, as well as a summary of Flame Robin banding carried out at other stations by the Shepparton banders. Locations are shown in Map Figure 1.

Results

At Toolamba, a total of 774 birds was banded. The total number of individuals retrapped, including those retrapped in the year of banding was 313 (115 males and 198 free-flying ['brown'] birds), and the total number of retraps was 551 individuals (188 birds retrapped once, 73 twice, 26 three times, 15 four times, 3 five times, 5 six times, 3 eight times and 1 ten times). This last bird, a female, 011-91208, was retrapped on ten occasions spread over five years after banding on 27 June 1970. Another, a fully plumaged male, 010-36007, was banded on 16 May 1969 and retrapped in every year but one up to 3 May 1975.

Table 1 shows the total banded each year, together with the number of individuals retrapped each year and the interval since banding. In this table individuals appear only once in each year.



● Figure 1. Map of Shepparton District showing banding locations. Stippled area denotes land mass over 300 m.

* Bands used were provided by the Australian Bird-banding Scheme, Division of Wildlife Research, CSIRO.

TABLE 1

Banding totals for Flame Robins at Toolamba. Each bird retrapped is included only once.

Year	Number of Visits	Numbers Banded		Retrapped one or more years after banding											
		M	FF	One Year		Two Years		Three Years		Four Years		Five Years		Six Years	
				M	FF	M	FF	M	FF	M	FF	M	FF	M	FF
1969	3	11	21	—	—	—	—	—	—	—	—	—	—	—	—
1970	12	31	150	5	5	—	—	—	—	—	—	—	—	—	—
1971	13	50	151	27	23	3	2	—	—	—	—	—	—	—	—
1972	11	24	130	20	12	14	9	2	1	—	—	—	—	—	—
1973	9	23	81	7	12	14	8	6	7	2	—	—	—	—	—
1974	8	17	68	15	7	7	10	13	1	4	2	1	—	—	—
1975	1	2	5	1	—	—	—	—	—	—	—	—	—	1	—
Total	57	168	606	74	59	38	29	21	9	6	2	1	—	1	—
Aggregate Total			774		133		67		30		8		1		1

M = Adult male; FF = Free-flying birds in 'brown' plumage.

TABLE 2

Banding Summary—Other Locations 1969-1974.

Location	FF	M	Total	Total Retraps
CITRUS ORCHARDS				
Nathalia (J. Warwick)	88	42	130	28
Wangaratta (W. Wilson)	26	4	30	3
Kyvalley (Nunn's)	71	40	111	24
DECIDUOUS ORCHARD				
Kialla (J. Richards)	130	21	151	44
OPEN FARMLAND				
Karramomus (R. Lowry)	35	6	41	3
Tamleugh (Roadside Reserve)	42	12	54	10
MOUNTAIN AREAS (Summer)				
Mt. Buller, Wandiligong, & Mt. Skene	50	11	61	0

M = Adult Male; FF = Free-flying birds in 'brown' plumage.

During the banding period from late April until late August, periodic visits were made to other areas, mainly citrus orchards, up to 80 kilometres away, to obtain wider coverage in the hope of getting information on migration. At these locations a further 607 Flame Robins were banded, with 114 retraps (Table 2).

No live recoveries have been made away from the banding place. The longest movement recorded was that of 010-36094 banded at Tamleugh, 15 kilometres south east of Toolamba on 25 April 1970 and found dead on a road at Lake Mokoan, 55 kilometres east-north-east on 31 May, 1974. The Tamleugh site was not operated after 1971.

Of a total of 58 Flame Robins which acquired adult male plumage between banding and re-trapped, 49 were from Toolamba. Forty-four of the 58 were re-trapped in the year after banding, and with one exception had completed the colour change in this period. The exception, 012-46401, banded as a 'brown' bird on 25 May, 1971, was re-trapped in an intermediate stage on 23 June, 1972, with the wings, underparts and tail in adult male plumage, head and flanks brown, and upperparts changing from brown to grey. On 22 July, 1972, the change was almost complete. The bird was not trapped again until 11 May, 1974, when it was fully coloured.

The completion of the colour change within 12 months of banding suggests that the species achieves full plumage before the second winter at this location, but records from other areas (M. Bateman, pers. comm.) indicate that this is certainly not so in all cases.

The presence of orange or rust colour on throat, breast or belly of 'brown' birds is not a reliable method of determining sex or age. Where the colouring was indefinite, it was found that artificial light (necessary as much banding is done after dark) often gave an impression of colour not seen in daylight, while some banders could detect an orange wash not visible to others. We recorded 13 per cent of the 'brown' birds with colour on breast or belly, 13 per cent showed some tinge of colour on the throat, while the remaining 74 per cent were classed as normal brown. Of the 58 which changed to adult male plumage, 29 had shown no colour at banding, 18 had a tinge of colour on the throat, and 11 had colour on breast and belly. These figures indicate a higher proportion of males among 'brown' birds showing colour than among those without it.

On the other hand, 011-91208 started in 1970 with an orange throat, which gradually faded until 1973, after which it could not be distinguished. In some instances the orange colour on the throat disappeared after one or two years. In others, it remained. Similarly, orange or rusty marking on breast or belly, at first thought to be a sure sign of an immature male, proved an unreliable indicator. In one instance the colour became brighter, in others it disappeared in one or two years, while in others it remained unchanged. We also have an observation of a female with bright orange throat paired with a coloured male at nest at Strathbogie in 1971.

A 'brown' bird banded as a Flame Robin at Toolamba on 23 June, 1973, 012-64932 was re-trapped on 11 May, 1974, with pink patches appearing on the breast and abdomen. It was a Pink Robin *P. rodinogaster*; the differences in the tail having passed unnoticed during banding. As far as we know, this is the first report of this species for the district, but its return suggests that immatures may have passed unnoticed. Previously Jim Richards had banded a Rose Robin *P. rosea* at his Kialla orchard, and both Scarlet Robins *P. multicolor* and Red-capped

Robins *P. goodenovii* have been present at Toolamba.

Weight

Most birds were weighed before release using a Pesola balance and small bag. The average weight of 791 brown birds was 13.4 g, while 278 males averaged 13.6 g. The greatest weight was 16.5 g and the least 11.5 g. Two thirds weighed between 13 and 14 g. Weights increased little with age in most cases, and almost as many lost weight as gained it. A light bird (12.5 g) usually remained somewhere near that weight. Average weights varied little between 1972, a drought year, 1973 almost a record wet year, and average seasons. However, in 1974, when a record flood covered the feeding areas with sticky mud, the average weight of 126 'brown' birds declined slightly to 13.3 g, and 68 males to 13.5 g. We were unable to detect any significant difference in weights for different months (such as prior to migration).

Jim Richards, banding during the day in his deciduous orchard at Kialla noted that robins sometimes weighed up to a gram less in the morning than when recaptured the same afternoon. The area is some hundreds of metres from the roosting area and the proportion of males is low. The average weight for 135 'brown' birds, 13.0 g was appreciably lower than in the citrus orchard where the banding was done in the evenings. However, the 18 coloured males averaged 18.8 g, higher than elsewhere.

Discussion

Flame Robins winter on the plains of northern Victoria, at an altitude of about 110 metres, between April and late August, and then return to mountain areas, where they breed at altitudes up to 1500 metres, and sometimes higher.

Generally there appears to have been a decline in numbers of Flame Robins at Toolamba, and this is supported by general observations in the district. The data given here give no true indication of numbers present. Banding began in August, 1969, with six 9 m nets, but these were gradually augmented with 18 m nets until in the last two years, 220 m of net were commonly used, and occasionally 256 m. The condition of the

orchard deteriorated in the last two years. Previously the grass was mown, and tractors maintained clear pathways between the rows, favorable both for robins and for mist-netting.

Data indicated that, even at the height of the season, late June to mid July, a proportion of the Flame Robins present were not resident but were passing through the area. Often long sequences of band numbers used on a particular day never figured in subsequent re-traps.

Groups of males were found to remain together two or three years after banding. At times orange-throated 'brown' birds were observed together in groups. When recaptured in following years they were still in groups but had acquired adult male plumage. In a number of cases, Flame Robins re-trapped in a year subsequent to banding, were first taken on almost the same date as the original capture. Early arrivals one year tended to be early arrivals the next and birds first captured in July were commonly not taken until July in subsequent years.

Flame Robins were rarely heard to sing in this area and calling was invariably on a warm day in late July or early August, an indication that migration would soon begin.

Acknowledgements

The banding was a team effort. J. Richards, R. & C. Lowry and later A. Corry and A. Johnston made major contributions. Thanks are also due to landowners Mr R. Pogue and lessee, the late John Cornish, at Toolamba and to other landowners listed in the tabulated results.

References

- Bateman, I. M. (1975). 'Report on Wintering Flame Robins in the Cobram District, Victoria', *Aust. Bird Bander* 13:47-52.
- Bateman, I. M. and J. D. Fordyce (1970). 'Flame Robin Banding in Northern Victoria', *Aust. Bird Bander* 8: 27-28.

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GAZETTER

Place names mentioned in text

Karramomus	36°34' S., 145°30' E.
Kialla	36°28' S., 145°28' E.
Kyvalley	36°17' S., 145°00' E.
Mt Buller	37°09' S., 146°25' E.
Mt Skene	37°25' S., 146°24' E.
Nathalia	36°02' S., 145°10' E.
Toolamba	36°28' S., 145°21' E.
Tamleugh	36°35' S., 145°39' E.
Wandiligong	36°46' S., 146°59' E.
Wangaratta	36°20' S., 146°14' E.