

Co-operative Feeding of Young by Superb Blue Wrens

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Participation in the rearing of young birds by individuals other than their parents is known to occur in a number of species, and it even occurs between different species (Skutch, 1935 and 1957). However, it is unusual for the young of one brood to remain long enough in the family circle, or to be permitted, to assist in the feeding of subsequent broods. Most of the previous data on the subject have come from single nests and unbanded birds. In a current study of a colour-banded population of Superb Blue Wrens (*Malurus cyaneus* Latham), near Canberra, A.C.T., evidence has been obtained of birds other than the parents caring for both nestlings and fledgelings.

During 1956, observation of 18 breeding groups revealed that twelve consisted of male and female only. Of the remaining six, four had a second male, one had both a second male and female, and one had two males and a female, in addition to the mated pair. All these birds had been banded with an individual colour combination before the breeding season started, and so were entering their second year, at least. These additional members may have been sexually immature, but were in full breeding plumage and one was the parent of a later brood during 1956.

Particular attention was paid to these six nests, and at each the other birds helped the parents feed the young, both in the nest and when fledged. Even in the case where five birds were attending the brood all were seen to visit the nest and present food to the nestlings. During four hours' continuous observation at one nest the female fed 16 times, one male 8, and the other 12 times; on four other occasions the visit was too quick to determine which male was feeding. At one nest the male parent disappeared (presumed dead) when the young were still in the nest. A supernumerary male from the neighbouring group joined the female and fed the young, and when she also disappeared he remained with his adopted fledgelings and reared them to independence.

Besides this assistance from other adults, the young birds of earlier broods frequently feed their more recently fledged brothers and sisters. The birds concerned were banded in the nest with both a numbered aluminium band and a bi-coloured celluloid band, the latter being different for each brood. The use of Zeiss 15 x 50 binoculars at a distance of a few yards made observation of the relationships between individual birds relatively easy and quite certain.

The Superb Blue Wren usually has several broods during

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the season and within three weeks of the young fledging the female parent may be brooding eggs in a new nest. This means that the female ceases to feed the young after they have been out of the nest about ten days; as the three or four fledgelings are still very dependent, help at this stage is of obvious advantage to their survival. Furthermore, these 'surplus' birds act as a reserve from which casualties amongst mated pairs may be replaced with minimum delay and the breeding rate maintained at a high level.

REFERENCES

- Skutch, A. F. (1935). 'Helpers at the Nest', *Auk*, 52, 257-73.
Skutch, A. F. (1957). The Incubation Pattern of Birds, *Ibis*, 99, 69-93.

Obituaries

J. A. ROSS

The death occurred at his residence in Malvern, Melbourne, on July 30, 1957, of John Alexander Ross, a noted Victorian oologist and a former president of the Union.

Mr. Ross was born at Castlemaine on April 18, 1868, and, as a boy, he attended the local State School and afterwards the Castlemaine High School where he passed the State Public Service examination. On November 10, 1886, he was appointed a junior clerk on probation in the Crown Solicitor's Office. Soon after taking up the duties of his new position he was engaged on conveyancing for various Government departments and remained on this work for thirty years. Over that long period he was gradually promoted from a fifth class clerk to a second class officer. At a late stage in life he took a law course at the Melbourne University and was admitted to practice as a barrister and solicitor, but continued in his clerical duties until July 1921 when he was promoted to the professional division as Examiner of Titles, a position which he held until April 30, 1930, when he resigned from the public service to accept the high position of Commissioner of Titles. In addition to that position he was also appointed Curator of Estates of Deceased Persons in Victoria. After carrying out the onerous duties of these two important positions for five years, Mr. Ross retired in 1935 when he had reached his sixty-seventh birthday. He then had an extended holiday in Western Australia and, on his return to Melbourne, commenced practice as a solicitor in Collins Street where he conducted his legal business until 1952 when he went into complete retirement. For a number of years Mr. Ross was engaged on writing an important legal work, *Conveyancing Precedents and Forms with Notes*, which was published in 1938.

Soon after taking up his residence in Melbourne, Mr. Ross, as a young man, joined the Volunteer Militia Forces where he was attached to C Battery, Field Artillery. In a short