The Australian
Bird Watcher

Vol. 3 JUNE 30, 1969 No. 5

Multiple Feeding Habits of Wrens

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Although there has been a considerable number of field notes published regarding the habits of the various species of *Malurus*, there are almost one thousand two hundred references in the first 50 volumes of the *Emu*, it is only within the last few years that some of the problems have been solved.

Discussing the Blue Wren. *Malurus cyaneus*, in 1826, George Cayley stated that "They are gregarious, and polygamous to appearance, unless I have been deceived by the young birds possessing the plumage of the female". (North, 1901).

Almost 80 years later. A. G. Campbell. in a paper read before A.O.U., Adelaide session, October 13, 1905, (Campbell, 1906), when discussing the presence of several brown birds with each male Blue Wren. stated "I hold. too, in connection with the Blue Wren, that it is not polygamous. Certainly there are often seen several brown ones with each male bird. but these are lonely spinsters, or possibly young birds, that follow him about for company. But this and other matters in connection with this brilliant genus are awaiting more enlightenment".

The research carried out at Canberra. on the life history of the Blue Wren. *Malurus cyaneus*, by Ian Rowley (1965), has answered the queries of Cayley and Campbell; almost 140 years after the first one was raised. The composition of the family group has been analysed and explained, and it has been found that the male bird is not polygamous. However, although the evidence is not conclusive, there are indications that the female is polyandrous.

For many years I have kept records of the multiple feedings of the nestlings and the composition of the Family Group. Rowley confined his researches to the Blue Wren. but my records show that, with the Malurus, this behaviour not only applies to *M. cyaneus*, but also to the White-winged Wren. *M. leuconotus*, Variegated Wren, *M. lamberti*, Purple-backed Wren. *M. assimilis*, Red-backed Wren, *M. melanocephalus*, and the Black-backed Wren. *M. melanotus*.

Almost 30 years ago I observed a party of Blue Wrens, consisting of a fully plumaged male and six or seven brown birds, one of which had nesting material in its bill, fly into a thick clump of leaves of a Wisteria vine that was growing over a pergola at my home in Sydney. It was on November 12, 1939, and the young

were evidently the first brood of that season, as nesting in that area usually begun in September, or even earlier. A search of the vine did not reveal any signs of a nest.

Two days later, at 7 a.m., the same procedure was observed. The female, which had the nesting material, again disappeared among the leaves, but I finally located the nest by watching one of the other brown birds. The outer framework was almost completed but no lining had been added.

At that time I did not appreciate the actions of the brown birds, and attributed them to curiosity on their part.

In October 1945, at Kurrajong, New South Wales, two male Blue Wrens were observed feeding the nestlings in the same nest. This occurred in an area where there were nine occupied nests, in an area of one hundred yards square. Two nests were built within 6 feet of each other, in a large blackberry bush and, as they both contained young birds, it was assumed that one of the males had visited the wrong nest.

Alternatively, it could have been an action similar to the behaviour pattern of the Hooded Robin, *Melanodryas cucullata,* where it is not uncommon to see two, or sometimes three, fully plumaged males feeding the young birds in a nest.

These are only two of the many observations that have been made over the years on this species, but they have been selected as being indicative of different interpretations.

Among the many nesting Blue Wrens at Kurrajong, there was a part albino female that was building its nest. Three weeks later it was found that the unusual plumage did not prevent two adult males from assisting in feeding the nestlings.

Whenever I have been watching wrens, even with food in their bills, join a party of brown birds, I have assumed that they were feeding the brood that had already left the nest, and no attempt was made to follow them and locate a new nest.

It was not until November, 1948, during a visit to the Macquarie Marshes in New South Wales, that a forced observation made me aware of the multiple feeding of wrens.

This applied to the White-winged Wren, and is recorded in my paper on the "Birds of the Macquarie Marshes", (1955).

While watching a number of these birds, in an endeavour to locate an occupied nest, I was concentrating on a female which had food in her bill. When she was joined by a fully-plumaged male, also with food, and a number of brown birds, I assumed that the food was for the young birds.

A few yards away another female had food and I switched my attention to this bird and ignored the family party. Within the next few minutes a family party, with both the male and the female carrying food, flew into a bush within a few yards of where I was standing. This was repeated several times until finally it was seen that two brown birds also carried food. Within a short time a nest, containing young, was located, built in the centre of a thick roly-

poly bush. During the next few hours a number of brown birds brought food to the nest.

In September 1953, while on a visit to Sydney, I spent two consecutive week-ends searching for the nests of the Variegated or Lambert Wren. During this time four nests were found; one being built and three containing eggs. Each was attended by the female bird only.

As I was anxious to obtain photographs of the male bird, which will not, in my experience, visit the nest until the young have hatched, I kept searching until I finally located a nest that had one egg and three young birds in it.

The manner in which this nest was discovered is interesting. I was driving along the narrow bush road leading from Kuring-gai to Commodore Heights, a few miles north of Sydney, when three wrens flew across in front of the car.

Following them into the bush it was seen that they had joined up with other birds, and that they were all moving about in the undergrowth and were particularly noisy. Some were fully plumaged males, some partly plumaged males and the remainder the browns of the females and immature males.

Hoping for another example of multiple feeding, I continued to watch. Several of the birds flew to the top of the low bushes and, although they were still noisy, it was seen that they had food in their bills. They made no attempt to fly away and it was apparent that they were waiting. As other birds obtained food from near the ground in the low grasses, they would join those waiting on the bushes, until finally there were at least six birds with food.

Suddenly, as if at a given signal, they moved off in single file across the road and into the bush on the other side. I followed as fast as possible, first by sight and then by the calls, until I finally lost them.

An impatient motorist, who wanted to pass my car where I had left it in the centre of the track, made me lose complete contact with the birds.

Returning to the area where I had last seen them, I waited to see if they would reappear. Within five minutes I heard them coming through the bushes and they passed me, again in a somewhat single file order. They would not rise above the low shrubs and fly direct.

Again I could not keep up and again I waited. Having now obtained a rough direction of the flight I moved further ahead. After three halts I finally located the nest, at least one hundred yards from where the birds were first seen to cross the road. It was built within a few inches of the ground, in the midst of a thick mass of small shrubs and grasses. It was hidden so completely that it could not be seen even from a distance of a few feet, but the actions and noise of the birds revealed its position.

While one bird would dive into the low grasses with its food, the remainder would hop about in the surrounding bushes, all the time keeping up the continuous chatter. When the bird came away

from the nest it would join the remainder in the bushes and another bird would feed. When all had delivered their food the entire party would be off again, back to the same feeding area.

The remaining two hours of daylight were spent watching the birds, either at the nest or at the feeding area. Although this latter area was approximately 60 yards long by 40 yards wide, the birds would all assemble together and follow the same route across the road to the nest. The return journey followed the same pattern.

There was another pair of wrens in a nearby area but they did not attempt to join the larger party, nor did they have any other birds with them, at least as far as I could observe. It was possible that they also were nesting, as they kept to a narrow section. but I could not spend any time with them, excepting to see if they were joined by any other birds.

I returned to the area early the following morning, September 28, 1953.

The feeding pattern and the flight route was the same as the previous day and the same number of birds were still taking part.

The party consisted of three fully plumaged males, two partly plumaged males and four brown birds. While the brown birds could have been the young of the previous brood, the males must, at least, have been hatched the preceding year.

Not always would all the birds bring food, but they would return and depart together. Those without food would move with the others, but would not approach the nest.

The order of arrival of the birds at the nest did not follow any set pattern, but it soon became apparent that the female was the first to feed. Irrespective of her position in the party she would fly straight to the nest and feed, while the first arrivals would move about in the nearby bushes. When she had finished each bird fed in turn, without any sign of crowding or in any constant sequence. At no time were two birds seen at the nest together.

A total of eight hours was spent in watching these birds, either at the nest or in the feeding area.

The plumage of the two young males differed from the adult males only by a small brown patch on the crown of the head. One coloured photograph, taken when the head of a young male was lowered, clearly showed this brown marking.

An instance of the multiple feeding being carried out by the Purple-backed Wren, was recorded at Bendigo on November 23, 1952, when a nest, containing three nestlings, was found in the whipstick mallee. In attendance were two fully plumaged males, two partly plumaged males, and a number of brown birds. One brown bird had only a half-grown tail, but it was impossible to say whether it was a fledgling or an older bird going through its first moult.

All of these birds were seen to feed the young. One of the immature males cleared the nest after feeding, carrying the faecal sack away in its bill.

The immature males had bluish tails and blue cheek patches,

Partial albinism in the female Blue Wren did not prevent two male Wrens from assisting in feeding the nestlings.

Plate 17

Photo by Roy P. Cooper

with the rest of the colouring being the brown of the juvenile. Coloured photographs taken show that the blue patches were of the same density of colour as the fully plumaged birds.

Another inland species, the Black-backed Wren, has been recorded several times carrying out group feeding. In October 1958, a nest, at which 12 hours were spent in a hide over a period of several days, hatched the young on October 30. During the following week two fully plumaged males, in addition to the parent, were seen to feed the nestlings, and a young male in almost full plumage, and several brown birds were in attendance, but were not seen to feed.

At Grafton, New South Wales, in November 1963, three young Red-backed Wrens 'exploded' from the nest when I found it. During the next few days they kept under cover in the one area, and were fed by the parent Red-backed Wrens and one male Blue Wren. This latter bird acted as one of the family group, although there were only the Red-backed Wren parents present. The young kept to the one area of grasses and the adults, Red and Blue, moved around them collecting food, then flew to the young and fed them. The Blue Wren remained in the party all the time that I was watching and was seen to feed the fledglings at least six times.

The Red-backed and Blue Wrens appeared to be mixing freely in this area and the population density was as heavy as that of *cyaneus* at Kurrajong, in 1945.

In the same area one of the nests of the Blue Wren that was found had two fully plumaged males, two brown birds and one partly plumaged male Red-backed Wren feeding the nestlings, in addition to other brown birds that were seen nearby.

These are the only observations that I have recorded among the Malurus where birds of the one species have attended the nestlings of another species.

Although I have other records of this behaviour among this group of birds, usually the nesting is carried out by a single pair. It is not possible to give the full details of the composition of the numerous groups of wrens that have been seen in the past, as research on this problem has not been attempted. However, sufficient evidence has been presented to indicate that the multiple feeding of young birds is a feature of, at least, six different species of *Malurus*.

The multiple feeding of nestlings is not confined to the various species of wrens, or to the Hooded Robin. There are numerous examples in the literature, both in Australia and overseas, of young birds of many species being fed by more than two adults.

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Black-backed Wren, Male.

Photos by Roy P. Cooper

Blue Wren, Male.