SOME OBSERVATIONS ON THE RUFOUS SONGLARK

by GORDON CLARKE

During October, 1963, the opportunity was taken of recording the song pattern and frequency of utterance of the Rufous Songlark, *(Cinclorhamphus mathewsi)*; which is a summer breeding visitor to southern South Australia.

Habitat.

The same individual bird is thought to have been involved on each of two occasions, it holding a territory within the Weapons Research Establishment, at Salisbury, near Adelaide. The territory occupied approximately 1.6 acres consisting of open grass paddock with a little-used road unequally trisecting it in the shape of a letter 'T.' The road was lined in each direction by telephone poles and wires, and across the horizontal bar of the 'T' by tall mature Sugar Gums, *(Eucalyptus cladocalyx)*. Situated nearby was an old boxthorn which the bird visited. The grass was long and rank, being ungrazed.

The weather at the time of the observations is summarised below:

Date	Temperatures °F. Max.	Min.	Rain-fall	Hours of Sunshine	General Remarks
7 Oct. 1963	82.8	57.4	Nil	10.4	Fine, winds light and variable.
10 Oct. 1963	86.8	71.0	Nil	10.9	Fine, winds gusty, N.W. to N.E.

NOTE:—The meteorological data were supplied by the Bureau of Meteorology, Adelaide; and applies to that station.

Method of Study.

The data were obtained on two days, the 7th and 10th of October. On the 7th, the observations were made between 12.34 hours and 13.06 hours, during which time the bird was inactive for seven minutes, comprising five periods of between sixty, and 120 seconds. The bird was observed for a slightly longer period on the 10th, from 12.45 hours to 13.21 hours, during which time the bird was inactive for four minutes, twenty-five seconds, comprising four periods of between fifty and eighty seconds.

Observations were made in full view of the bird and at close quarters, as I sat at a position approximately half way along the vertical bar of the 'T' (See Habitat). Within a few minutes of my settling down the bird commenced singing and the study commenced.

Each call was allotted a symbol, and, as it was uttered, the symbol and time in seconds were recorded, as were song-flights, and all other behaviour.

Types of Call.

Four distinct types of call were recognised and are as follows:

1. Song. Either of long or short duration, given in flight or when perched.
2. Call. Given when perched.
3. Trill. Generally of long duration, but occasionally short. Given when perched. See later.
4. Chatter. Given in flight.

No attempt has been made to render these 'calls' phonetically, and reference is only made as to which type was used.

Territory.

The extent of the territory was clearly marked by the physical features affording song-posts, this having been remarked upon by Ryan (1952), and in the case of this particular bird these were the telephone wires and posts, and to a lesser degree the outer, bare, upper branches of the eucalypts. In fact, all vantage points from which the bird could most easily be seen and heard were used.

The vertical bar of the 'T' was the most favoured part of the territory, with the bird occasionally sallying forth along the arms at right angles. This continued use of the favoured part of the habitat enabled the bird to be in almost constant view of three other birds which all held territories nearby, whereas if it had used the horizontal bar of the "T," it would have either been approaching, or receding from its rivals and would not have been so conspicuous.

When calling, the bird faced the territories of the other birds, and was usually in full view of at least one of them.

Rate of Calling.

The numbers of 'calls' of all types that were given are summarised below:—

Date	Study Period	No. of Calls	Rate of Calling
7th	25 mins. 0 secs.	152	Once every 9.87 secs.
10th	31 mins. 35 secs.	197	Once every 9.62 secs.

It will be seen that the results for both days compare very closely. Calling continually at this rate for ten hours, the bird would utter approximately 3,750 calls.

This persistence would not appear to be unduly high as de Kiriline (1954, quoted by Armstrong) records the Red-eyed Vireo *(Vireo olivaceus)* as uttering 22,197 songs in a day.

Pattern of Song Utterance.

The call considered to be of the greatest biological importance to this species during the breeding season is the song, and its importance must be greatly enhanced when used in conjunction with the song-flight. Therefore, the song-flight is taken as being the most important utterance given by the bird. Armstrong (1963) considers that when the song-flight is used, stimulation is at its height, and the song, when delivered from a perch, is used at lower levels of stimulation.

In song-flight the bird moved on a semi-circular flight path from one perch to another on much the same level as the perch, which in this case was usually the telephone wires, but on three occasions, the flight was noted to take a circular pattern, the bird arriving back at the original perch. The circles and normal song-flights extended over a diameter of approximately thirty yards. At other times, the song was uttered in flight to the ground, and vice versa.

If one takes frequency of utterance as a sign of importance, the calls rank in the following order of importance: song in flight; song from a perch; call; trill; chatter.

In the following table, the number of songs is compared with the number of other calls.

	7 Oct.	10 Oct.	Both dates combined
Calls other than songs as a %	53.6%	60.7%	57.6%
Mean no. of utterances between each song-flight	3.6	4.6	4.1
Mean no. of utterances between each song of either type	1.1	1.5	1.3

From these data, it is evident that the 10th produced a slackening-off in song-flight and song, though not in rate of call. The reasons for this are not clearly understood. The strong gusty winds of the 10th may have had some effect, as the bird ceased calling at 13.21 hours when wind speed increased. The progression of the breeding cycle would also induce this slackening off.

The call accounted for 48.4% of total utterances on the 7th, and 49.3% on the 10th. It was given as often as six times in succession, though normally only once or twice before a different note was used.

The trill was uttered seven times on the 7th. On the 10th it was used much more often, taking up 10.4% of the total utterances. On the 10th there was also a remarkable series of eight trills in succession, which were interrupted only by a call after the fourth trill, and alternated between ones that were fast and low, and ones that were slow and loud.

The chatter was noted only three times altogether. On each occasion it was delivered in flight immediately after the song during a song-flight.

It may be mentioned in passing that the male of this species has also been recorded singing at the nest, Bourke (1949); whilst Boehm (1950) records it singing at night.

Display Posture.

The following distinctive posture was adopted as the bird alighted following a song-flight. The wings were held off the body, half closed, and with the tips pointing downwards. The underside of the wing was presented to the front, and, at this point, the bird assumed an almost vertical position, the tail was spread and depressed so that the whole stance of the bird momentarily became an upright one.

Although the wings were normally returned to the body immediately after this posture was adopted, the tail was often held spread for a short period after this.

Relationship with Female.

On the 10th, the presumed female was noted feeding in the grass, below the calling male, occasionally moving up onto a fence to look about before dropping down to feed again. When, on one occasion, she flew up onto the telephone wire near the male, the male quickly chased her back down into the grass and then returned to the wire.

Feeding Periods of the Male.

Ryan (1952) stated that the male fed for brief periods only, and such was the case with this bird. During the study period, the male was noted to go to the ground seven times to feed, four times on the 7th and three on the 10th. These visits occupied between fifty and one hundred and twenty seconds each, a very brief period indeed. On one occasion, the bird was noted to leap into the air to take a passing insect.

Reaction to Predator.

Whilst perched on the wire and calling, the male ceased to call for one minute as a Kestrel *(Falco cenchroides)* passed close by overhead, the songlark watching the falcon the whole time as it moved over.

ACKNOWLEDGEMENT

Mr. D. E. Pomeroy very kindly read the draft of this paper, and I gratefully acknowledge his assistance and observations regarding it.

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