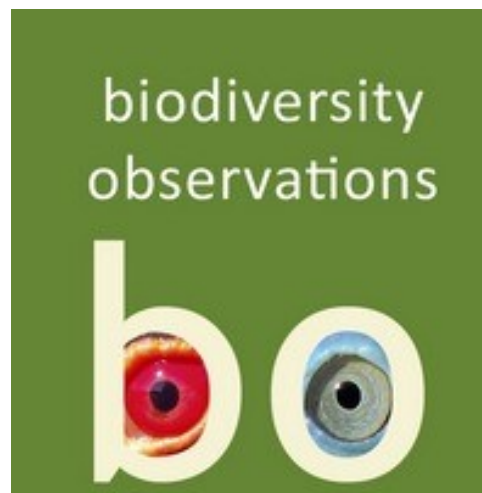


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Capture techniques for Rufous-eared Warblers *Malcorus pectoralis* during a ringing study in the Free State, South Africa

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Abstract

The techniques for capturing Rufous-eared Warblers *Malcorus pectoralis* for ringing studies are described. The most successful strategy was to use call playbacks in conjunction with mistnets in open areas with the lowest shelf set close to the ground level, which sometimes needed pruning of shrubs at the net site. We used standard four- and five-shelf 12 m-mistnets as well as 2-shelf mistnets. Other methods such as possible use of baited spring traps should be investigated.

Introduction

The Rufous-eared Warbler *Malcorus pectoralis* is endemic to southern Africa, with peak abundance in the Karoo (Berruti 1997). The preferred habitat is arid to semi-arid shrubland with little tree cover or none (Dean 2005). In the Free State, the species is found primarily in karroid or low shrub areas where *Rhigosum trichototum* and *Tarchonanthus camhorartus* are dominant, in old agricultural fields where *Felicia filifolia* is dominant, and in grasslands dominated by *Asparagus* spp., *Amphiglossa triflora*, and *Eriocephalus ericoides* (Dean 1976, le Roux et al. 1994, de Swardt 2024). In general, Rufous-eared Warblers move among the shrubs like rodents, hopping and bounding over their surroundings while feeding on the ground (Dean 1976, 2005). There are three subspecies and their biometrics are poorly known (Dean 2005, Chittenden et al. 2012).

Few have been captured and ringed, due to their environmental preferences and behaviours. Prior to 2018, the SAFRING database contained fewer than 50 ringing records; by November 2024, this had increased to 103, of which 31 had been ringed by DdS. The study sites visited in 2023 and 2024 included localities in the Paul Roux, Philippolis, Springfontein, Fauresmith and Florisbad areas in the Free State, where this species had been observed during previous field trips. This paper describes strategies and methods that can be used for capturing Rufous-eared Warblers for ringing, and thereby increasing our poor knowledge of their biometrics.

Capture techniques

Site location

We located suitable habitats for Rufous-eared Warblers. We played recordings of species vocalizations and listened for responses as part of the scouting process. When a call playback is made using a voice recorder, such as the Olympus LS_P5 voice recorder (Figure 1) or using the calls on the Sasol eBirds of Southern Africa bird app on a cell phone, the species typically reacts and responds by flying towards the sound source. These responses of a territorial bird were the first cue for the location of a potential ringing site.



Figure 1: The use of call playbacks to locate or “lure” Rufous-eared Warblers into the nets can be effective. Care must also be taken to stop playing playbacks when no birds respond to calling attempts.



Figure 2: Location of a 12 meter 5-shelf mistnet in *Felicia* shrub veld at Holhoek, Paul Roux, in the Free State during November 2023. The lowest shelf of the mistnet was set close to the ground level ensuring capture of low moving Rufous-eared Warblers in its habitat.

Playbacks were used intermittently, both before and after the nets are set up. It was found that call playbacks worked well depending on the day, season, and year. Sometimes the response was quick; at other times no responses from call playbacks were obtained. During the breeding season, Rufous-eared Warblers tended to respond to call playbacks more frequently and vigorously (pers. obs). If birds did not react, we stopped the playback process. Particularly in the breeding season, it is unethical to replay calls excessively.

Mistnet location

To capture Rufous-eared Warblers, we used standard four or five-shelf mistnets, mostly of lengths 10 m and 12 m. We set them close to the ground (Figure 2). We also used two-shelf mistnets; we found that they were quite successful in catching Rufous-eared Warblers in open shrub habitats. We arranged the mistnets either in a “V” pattern or in a straight line (Figure 3). We sometimes needed to prune the karroid shrubs close to ground level when setting up nets (Figure 4).



Figure 3. A net line of 10-m two-shelf mistnets in karroid veld dominated by *Asparagus* shrub and other species at Bankfontein, Phillippolis, May 2024.

During each day of fieldwork, we searched for Rufous-eared Warblers in other areas of the research site. We relocated mistnets to sites where individuals had been sighted. In one case, mistnets were moved to a location where a small group had been located. After the call was played, a male flew in the direction of the net and was captured (Figure 5).

Besides Rufous-eared Warblers, we also caught Cloud Cisticolas *Cisticola textrix* and Desert Cisticolas *C. aridulus*, and Yellow-bellied Eremomelas *Eremomela icteropygialis* (Figure 6) and potentially it is possible to catch other species which occur in these habitats, such as swallows and larks.

Potential use of spring traps

We need to explore the use of spring traps to capture Rufous-eared Warblers. During a field trip to the southern Free State in the early 1990s, DdS attempted to capture Ant-eating Chats *Myrmecocichla formicivora* with spring traps. A Rufous-eared Warbler moved towards a trap and showed some curiosity in the bait; but it hopped away and was not caught.



Figure 4: Zingisile Mbo pruning shrub species below a line of 12-m mistnets where Rufous-eared Warblers had been observed.



Figure 5: Rufous-eared Warbler of *M. p. ocularius* subspecies after capturing in 2-shelf net site at Holhoek, Paul Roux, November 2023.



Figure 6: Other species, such as this Cloud Cisticola, were captured in a 10-m two-shelf mistnets in grassland/karroid veld.

References

- Berruti A.** 1997. Rufouseared Warbler *Malcorus pectoralis*. In: Harrison JA, Allan DG, Underhill LG, Herremans M, Tree AJ, Parker V, Brown CJ (Eds) The Atlas of Southern African Birds. Vol. 2: Non-passerines. BirdLife South Africa, Johannesburg: 330–331.
- Chittenden H, Allan DG, Weiersbye I** 2012. Roberts geographic variation of southern African birds. John Voelcker Bird Book Fund, Cape Town.
- Dean WRJ** 1976. Niche occupation of Rufouseared Warbler and Blackchested Prinia. Ostrich 47: 67.
- Dean WRJ** 2005. Rufous-eared Warbler *Malcorus pectoralis*. In: Hockey PAR, Dean WRJ, Ryan PG (eds). Roberts Birds of Southern Africa 7th edition. John Voelcker Bird Book Fund, Cape Town. pp. 849–850.
- De Swardt DH** 2024. The Rufous-eared Warbler – a small prinia-like species associated with karroid shrub vegetation. Culna 78: 22–25.
- Le Roux PM, Kotzé CD, Nel GP, Glen HF** 1994. Bossieveld. Bulletin 428. Department of Agriculture, Pretoria.

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