

Getting to know Rufous Scrub-birds



Alan Stuart
February 2023

Photo: Allan Richardson

Note

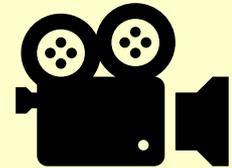
This presentation, when given, also made use of several video recordings and some audio files. That extra material has not been included into this PDF version of the presentation.

What would we like to know?

- How to see one
- Population status
- Singing behaviour by males
- Male territory size
- Can individual birds be identified?
- How long does a Rufous Scrub-bird live?
- Behaviour of individual birds
- What about females and immatures?
- Breeding biology



Rufous Scrub-bird habitat in the Gloucester Tops
Photo: Alan Stuart



How to see one?

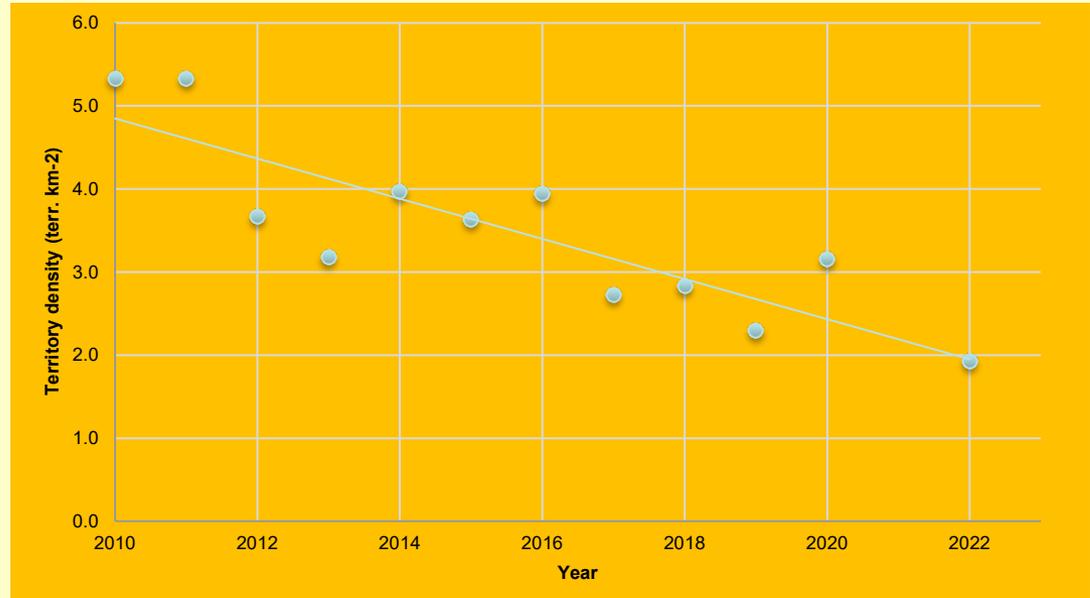
- Know the main calls
- Spring visits are best (males sing more often)
- Be quiet and patient
- Work alone (less noise)
- Call playback is of dubious value: birds usually go silent → you won't know where to look
- If at first you don't succeed



Male Rufous Scrub-bird
(photo: Allan Richardson)

Population monitoring

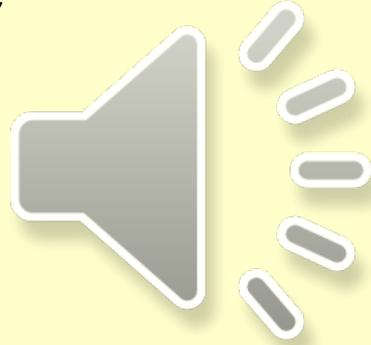
- Annual surveys in Gloucester Tops in spring, since 2010
- Listen for singing males
- Identify trends



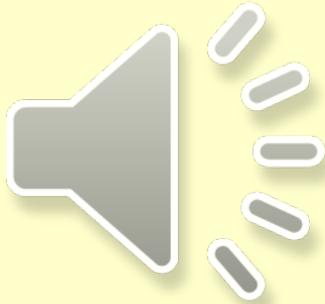
- This is a species in trouble!
 - Declining in the Gloucester Tops (drought & climate change)
 - Fires in 2019/20 in much of the habitat of the northern populations

Song and calls

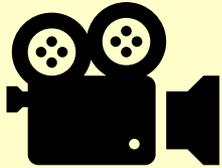
- Male



- Female



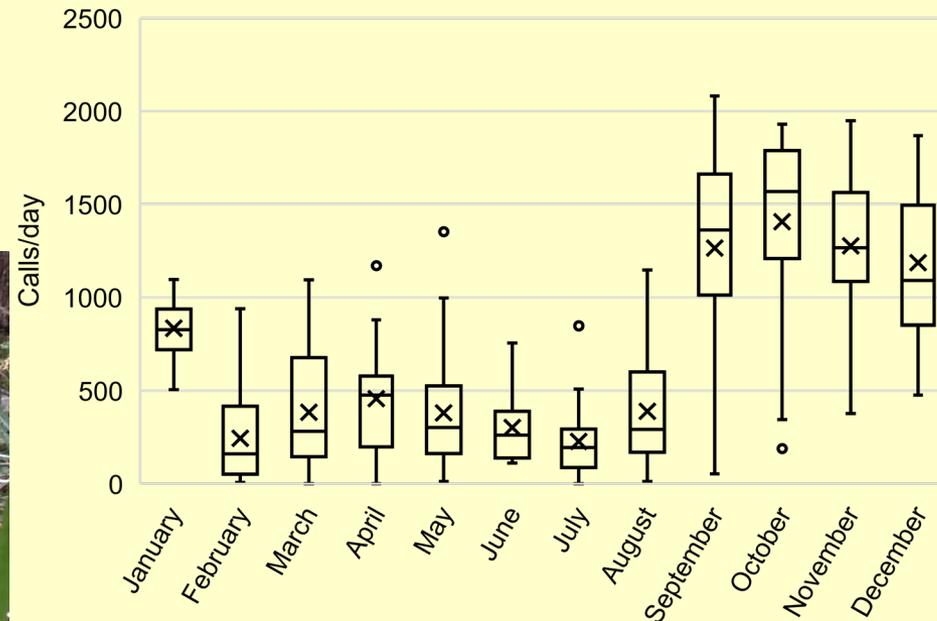
Singing behaviour (by males)



#2



A Song Meter in a scrub-bird territory

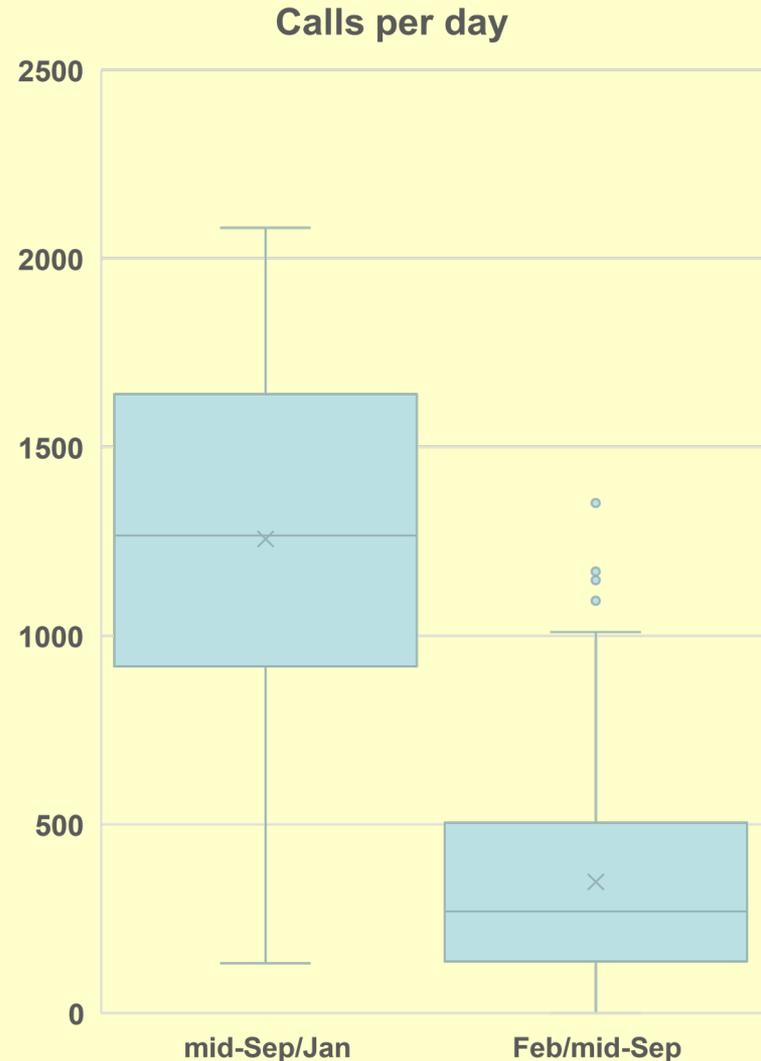


These are the combined results for five Rufous Scrub-bird territories

- A 3-year study at 5 territories, using Song Meters
- Recorded daily all day, in 7-day periods
- Analysed the frequency of birds making territorial songs (eg songs/day, %age of active 20-min periods)

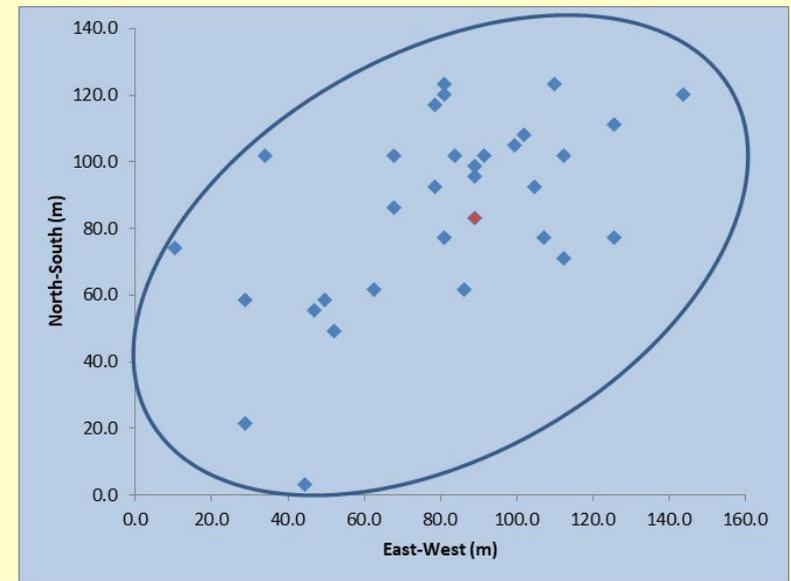
Singing behaviour

- Daily singing behaviour is unpredictable Feb-Aug
- Substantial change from mid-Sep
 - More calls per day
 - Also more 20-minute periods with singing activity



Territory sizes (of males)

- Over a 3-year period, I used a GPS to obtain the exact locations of singing males in 3 territories
- Each bird's singing area was less than 1.5ha (100m x 150m)
 - They don't range very far

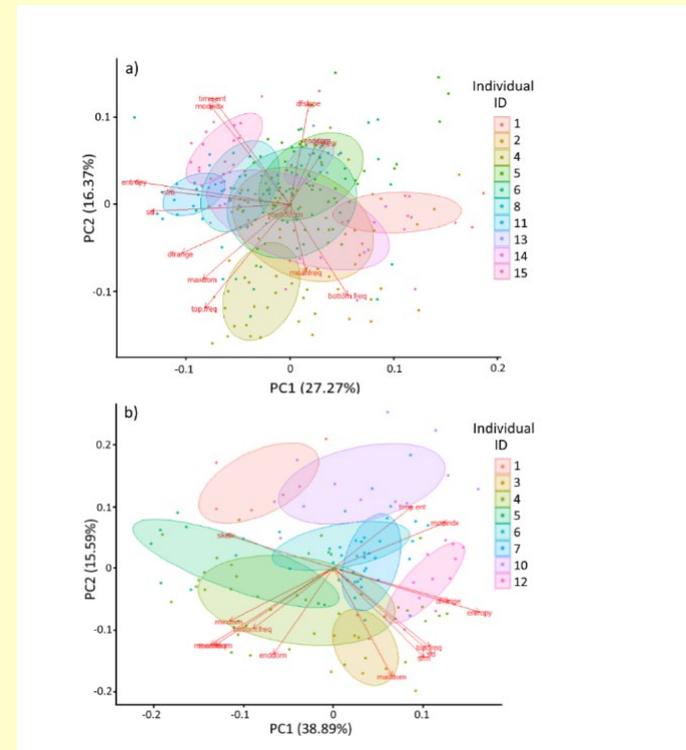


An unknown: Is the male's *territory* larger than its *singing area*? Where is the bird when it's not singing?

Can individual birds be identified?

By their call?

- I recorded all call types by individual birds
 - By following them with a hand-held recorder
 - Recorded males at 22 territories
- Data analysis by ANU showed that there were variations – but, there was much overlap



Hand-held Song Meter

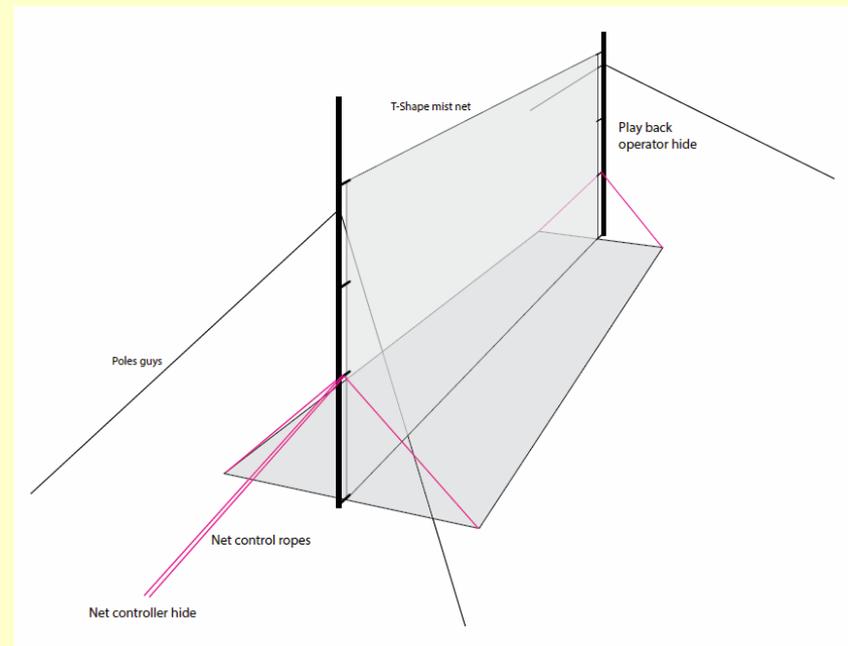
Can individual birds be identified?

By banding them?

- Scrub-birds don't fly
 - Thus can't be caught in a conventional mist net
 - We use an inverted-T net (developed for Noisy Scrub-birds)



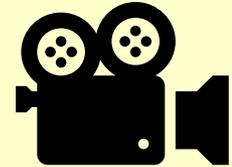
A 3+ years old
Rufous Scrub-bird
(yellow-banded)



Inverted-T net (sketch: Rob Kyte)

How long does a Rufous Scrub-bird live?

- Two colour-banded males have had multiple re-sightings
 - 22 months after banding in one case
 - 17 months after banding in the other case
- Both birds were adult males (1+ years old) at the time of their banding
- Both birds seem to no longer be present (3-4 years after banding)



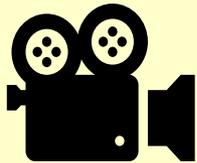
#3



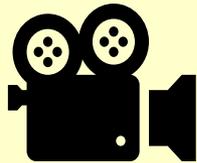
A 2+ years old
Rufous Scrub-bird
(pink-banded)

Trail cameras

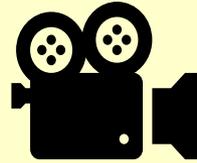
- Trialling use of motion-activated cameras in Rufous Scrub-bird territories
 - A hit-or-miss process!
- There have been many successes though:
 - More than 700 videos where a scrub-bird is on camera (about half of them: for >10 seconds)
- Have filmed them singing, calling, walking, hopping, eating, flying (poorly)
- A handful of videos involve more than one bird



#4



#5



#6

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Uncracked secrets

- Territory size
- Breeding biology, e.g.
 - Females: where, how many?
 - Nest design and location?
 - Dispersal by young birds
- Predator defence strategies?
 - Near-flightless bird in a world of cats, foxes and quolls

Acknowledgements

- Margaret O'Leary
- Rob Kyte, Greg & Judy Little, and occasional other helpers
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