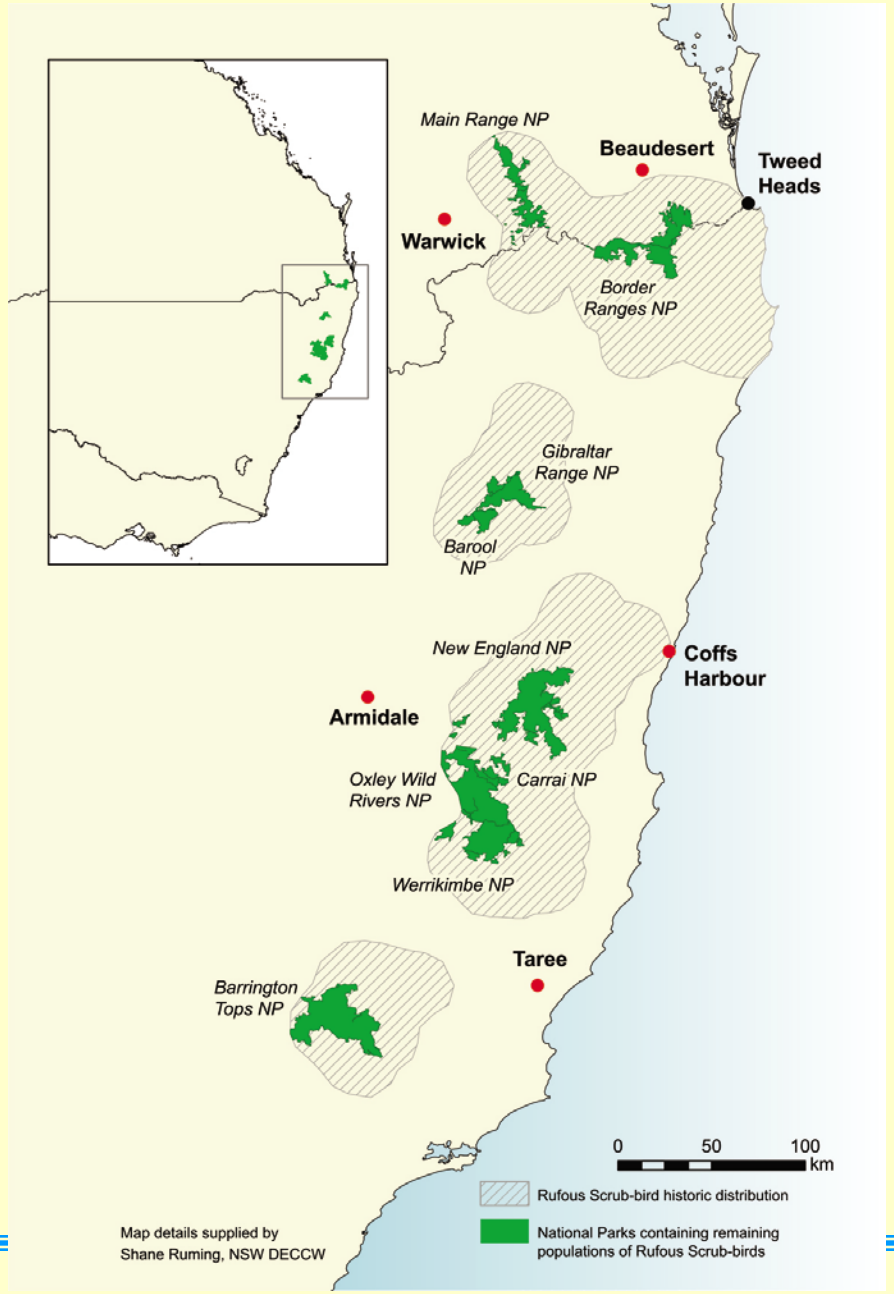
What have we learned after seven years of Rufous Scrub-bird surveys?

Alan Stuart 18 March 2017

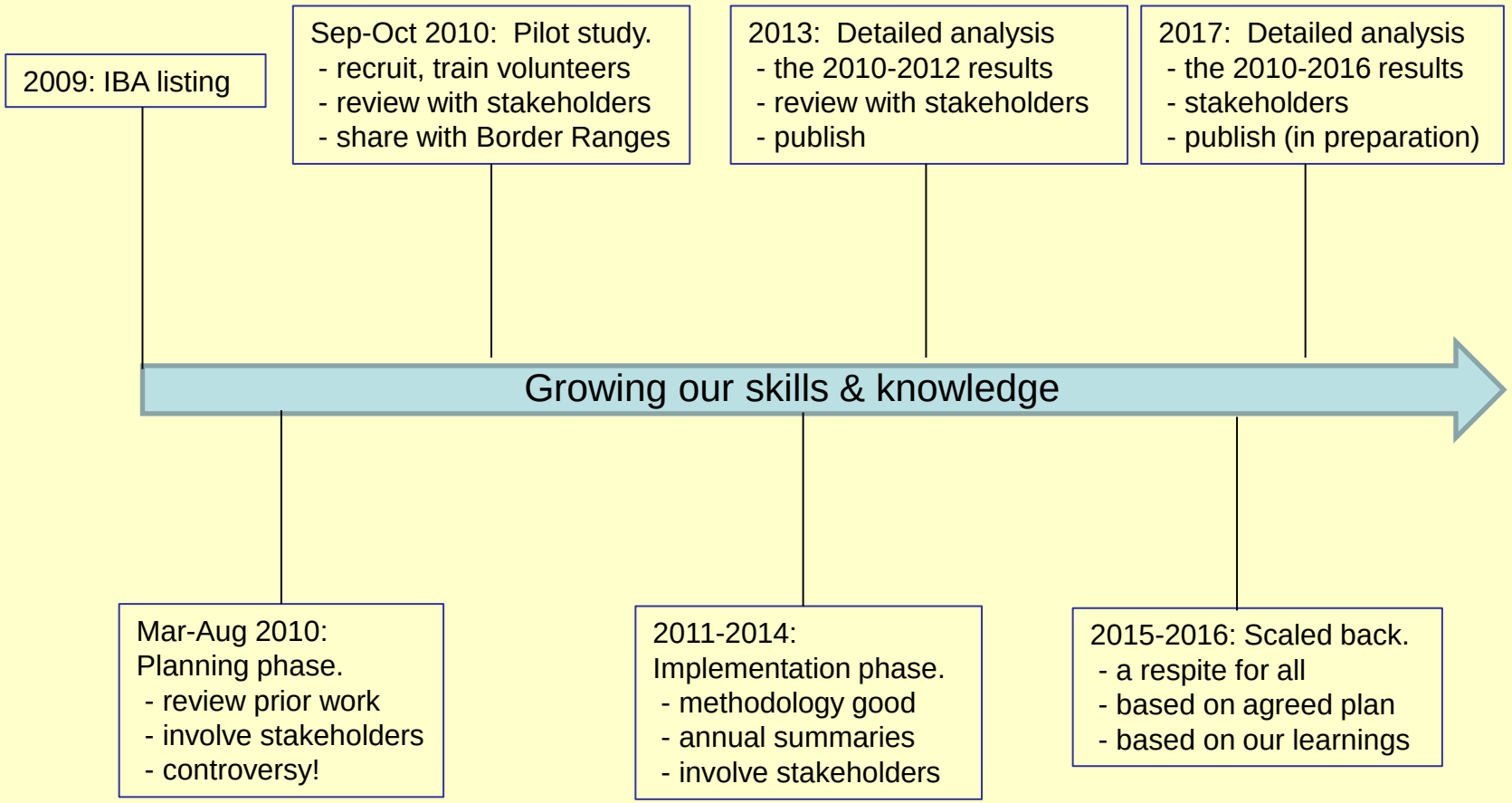


The distribution of the isolated populations of Rufous Scrub-birds

What have we learned about:

- Rufous Scrub-birds in the Gloucester Tops?
- The Barrington Tops & Gloucester Tops KBA?
- The birds of the Gloucester Tops?
- Conducting Citizen Science projects?

Timeline for the Gloucester Tops project



Scrub-birds: what have we learned?

- We focussed on understanding a population in core Gloucester Tops habitat
  - ~4km radius site (5,000ha)
  - Transects & a territory inventory, rather than randomised sampling
- 21 one-kilometre transects surveyed: a total of 289 surveys
  - Reporting Rate = 56.5%. Low relative Standard Deviation (18%) in the annual RR, as expected for a resident species.
- 37 Scrub-bird territories found
  - 20 with long-term occupancy
  - 17 with transitory occupancy (1-2 year periods)
- Effects of dry spring conditions: they stop calling. Song Meter studies have been initiated.

Scrub-birds: what have we learned?

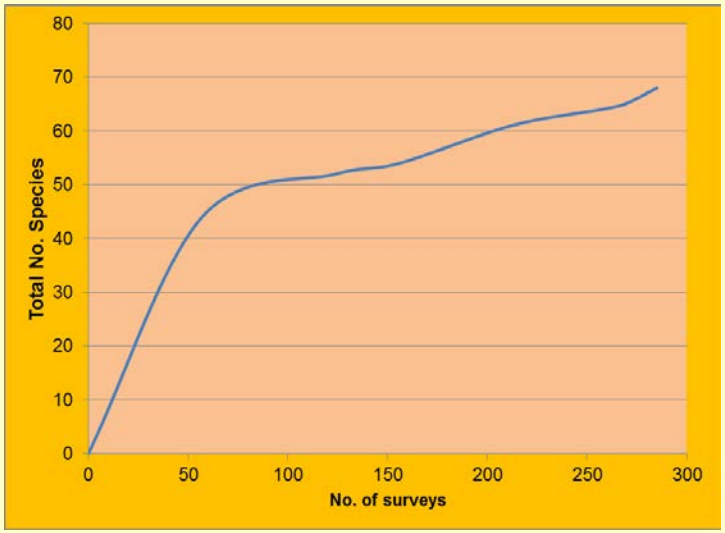
- Inter-territory separations:
  - Usually at least 300m between territories (mostly >400m)
  - Shorter-term clustering of territories can occur if conditions favourable
- It requires 6-7 years after a major fire before habitat begins to be suitable again for Scrub-birds
- Territory density of 3.6±0.3 territories km^{-2} is the same as was found in 1981.
- This equates to 167-200 territories in the 5,000ha study area
- But, we haven't found any Scrub-birds outside the core area!

The KBA: what have we learned?

- Seven species listed in the KBA (IBA) nomination
- Only two of them are found regularly in the Gloucester Tops at >1,100m
  - Rufous Scrub-bird (resident)
  - Flame Robin (spring-summer breeding migrant)
- Three others were uncommon
  - Paradise Riflebird, Aust. Logrunner, Pale-yellow Robin??
- And two had no records at all
  - Green Catbird, Regent Bowerbird
- These five species occur more often at lower altitudes
  - We have started to study the altitudinal transition

Birds of the Tops: what have we learned?

- 68 species recorded, from 289 surveys
  - 37 of these were with RR>4% (“main birds of the Tops”)
  - 20 species had RR>20% (“characteristic birds of the Tops”)
- Developing insights:
  - It took 44 surveys to record all 37 main species
  - It took ~125 surveys before their RRs approached their long term values
  - The species list continues to grow!

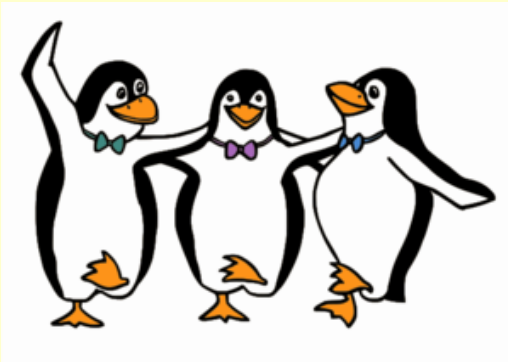


- No owls, very few raptors: partly this is a consequence of the survey method

Citizen Science: what have we learned?

- It's hard work! However, it can be rewarding.
- Requires:
  - Careful planning
  - Timely analysis (even if this is an interim analysis) and feedback
  - Ongoing engagement with stakeholders (land managers, local community, the volunteers)
- There are frustrations:
  - Many people can't follow instructions
  - Many people can't fill out paperwork correctly
  - We don't usually have the luxury of being choosy about our volunteers

Citizen Science: what have we learned?



- Some lessons:
  - Keep the team happy and don't overload them
  - Keep the paperwork simple e.g. develop tailored record sheets
  - Identify talent and tap into it as soon as you can
    - Mapping
    - Data handling
    - Communication
  - Direct the strugglers into non-critical tasks where possible
  - Find some trained scientists to take on the leading roles
    - From within the team if available
    - Otherwise, seek professional help and be prepared to pay for it
    - The cost will be minor in relation to the time-value of the efforts of the volunteers and the usefulness of the outcomes

What's Next?

- 2017 surveys (mid October, with dates TBC).
  - Come along to help?
  - 3 day Camp-out based at the NPWS campsite at Sharpes Creek
- Using remote recorders (Song Meters) to learn about Rufous Scrub-bird calling patterns
- Seeking ways to investigate individual Scrub-birds and their territories
- Holy Grail: find a nest
  - Step 1 = find females!

What you won't see on a survey