

The Gloucester Tops – an altitudinal study 2010-2016



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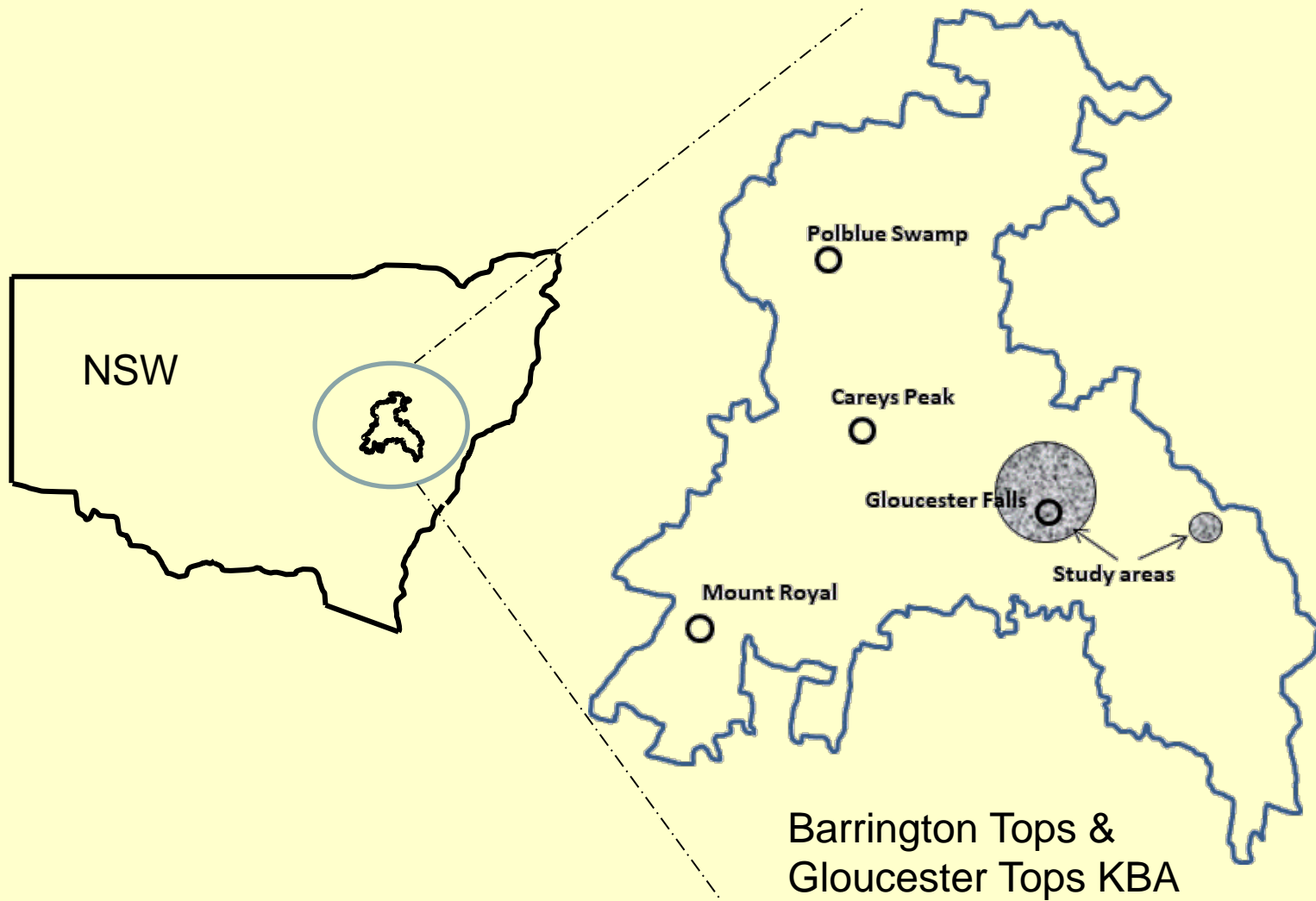
Features of the study

- Initiated in response to KBA (IBA) listing in 2010
 - Main driver: Rufous Scrub-bird monitoring
 - Six additional species were in the KBA nomination
- 100% volunteer based (>40 volunteers)
- Zero external funding
- Engagement and moral support from stakeholders
 - NPWS, OEH, BLA, HBOC
 - Some in-kind support received (e.g. help with mapping)
- Insights into a montane bird population
 - Limited similar studies in Australia previously
- Insights into Citizen Science projects

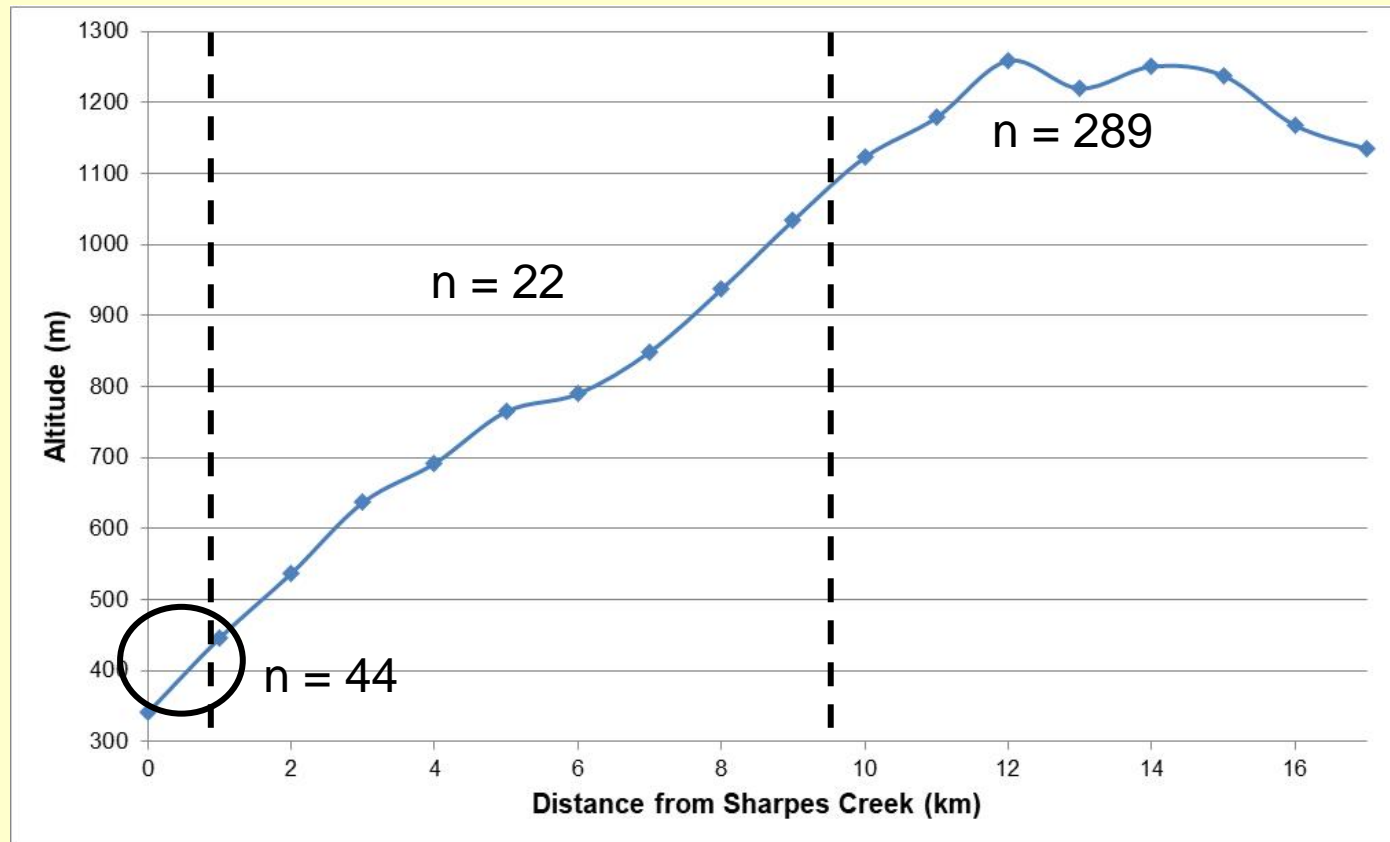


Photo: Allan Richardson

The Gloucester Tops study area



500m area surveys during 2010-2016



- Main focus was at high altitude (Scrub-bird core habitat)
- Other altitudes were surveyed as time permitted

The Gloucester Tops study area

Habitats

- At >1100m
 - Open woodland with dense understorey (esp. 0-20cm)
 - Antarctic Beech rainforest
 - Some areas of Snow Gum
- At <500m
 - Temperate rainforest, mainly
- At 500-1100m
 - Transitional (temperate rainforest / open woodland)
 - Margins of open valleys

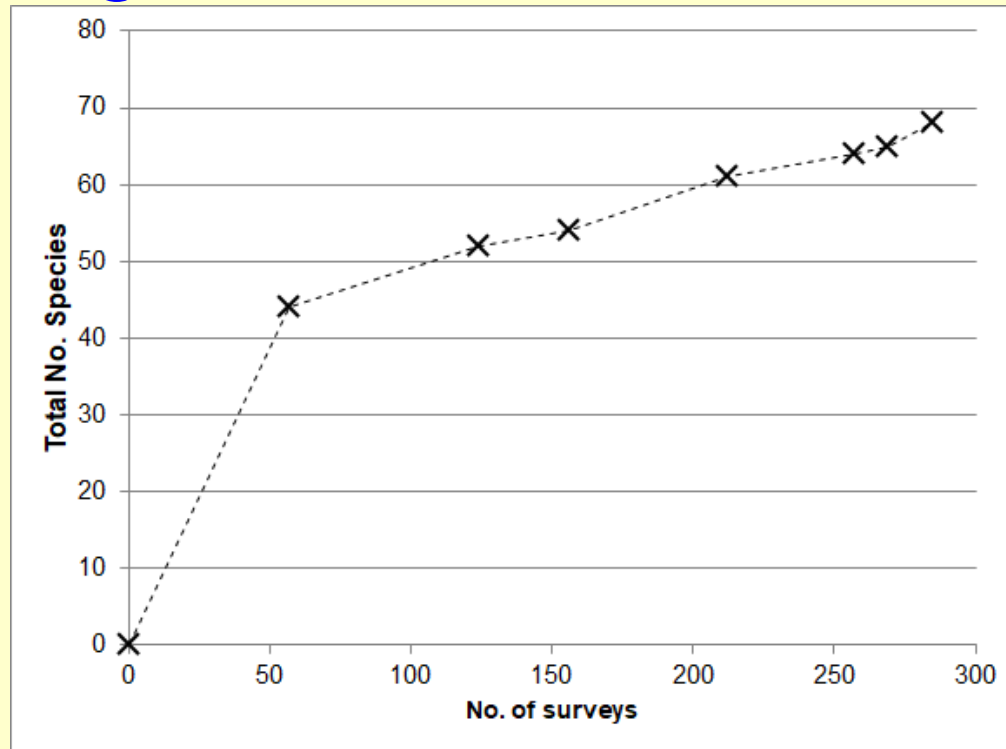
Birds at high altitude

- 5,000ha study area
 - 22 1-km transects surveyed multiple times each spring
 - Total of 289 surveys
- 68 species recorded
 - 37 species had RR>4%
 - 20 species had RR>20% and were recorded in all or most transects
- Six specialists ($p < 0.05$)
 - Rufous Scrub-bird
 - Red-browed Treecreeper
 - White-throated Treecreeper
 - Crescent Honeyeater
 - Rose Robin
 - Olive Whistler



Photo: Grant Brosie

Birds at high altitude



- Developing insights:
 - It took 44 surveys to record all 37 main species
 - It took ~125 surveys before RRs approached long term values
 - After 289 surveys, the number of species was still increasing

Lower altitudes

Birds at <500m

- 76 species from 44 surveys
- 40 species with significantly greater RR than occurs at higher altitudes ($p < 0.05$)

• **Birds at 500-1100m**

- 55 species from 22 surveys
- Two specialists ($p < 0.05$)
 - Paradise Riflebird
 - Bell Miner

KBA nomination species

- Only two species were found regularly in the Gloucester Tops at >1,100m
 - Rufous Scrub-bird (resident)
 - Flame Robin (spring-summer breeding migrant)
- Two others were uncommon at high altitude
 - Paradise Riflebird, Aust. Logrunner
- Paradise Riflebird: RR = 40.9% at 500-1100m
- Green Catbird: widespread, but highest RR at <500m
- Very few records of Pale-yellow Robin
- Regent Bowerbird was not recorded
 - And there is only one Birddata record for the entire KBA over 2010-2016 (668 surveys)

Conclusions

- 85 species recorded in the Gloucester Tops 2010-2016
- 68 species at high altitude (>1100m)
 - Including 6 specialists ($p < 0.05$)
- 55 species at 500-1100m
 - Including 2 specialists ($p < 0.05$)
- 76 species at <500m
 - Including 40 specialists ($p < 0.05$)
- 37 generalists and/or uncommon
- Citizens \neq scientists (without a lot of support by the organisers)