Safeguarding a superb future

ACT Government
Environment and Planning

Laura Rayner
ACT Parks & Conservation Service

Conservation status

- **1994** • **Listed as Vulnerable under IUCN Red List**
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  "Recent evidence strongly suggests that the population of this species is well over 10,000 individuals, with no evidence of a continuing decline."
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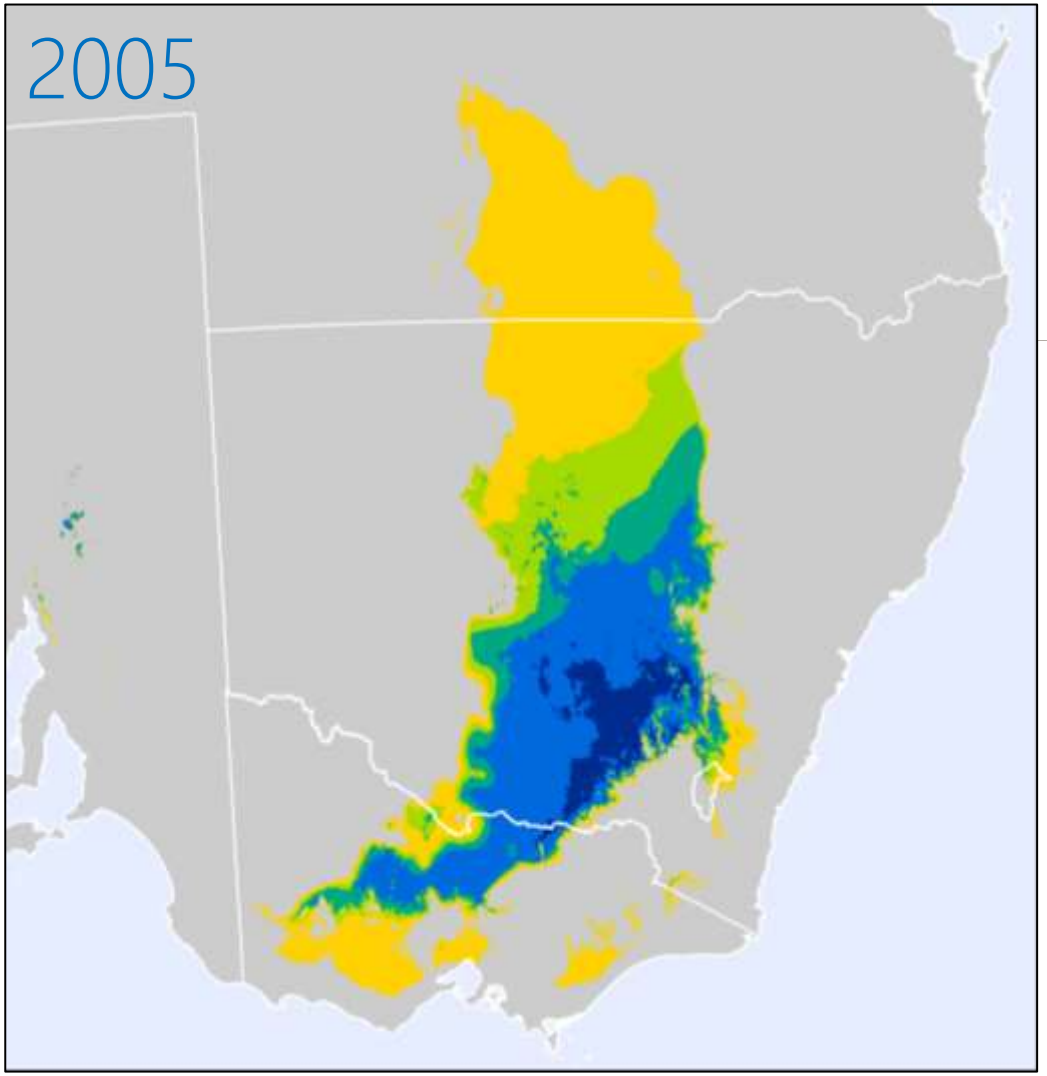
Bioclimatic profile



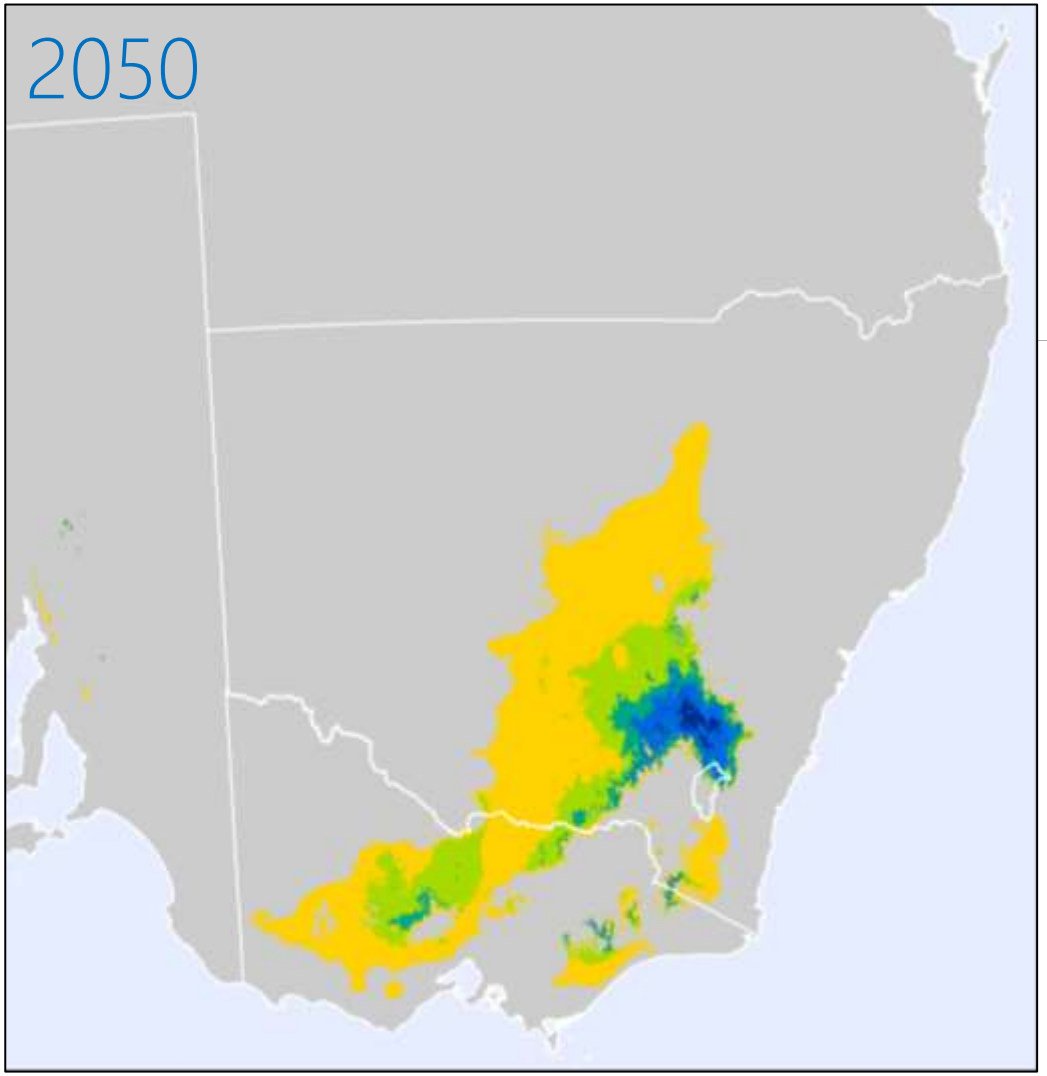
EOO = 95,000 km^2

271,893 km^2

BIOCLIM: Bioclimatic profile
1976 – 2005 climate surface

Range
100%
2.5 - 97.5%
5 - 95%
10 - 90%
Core 25 - 75%

Bioclimatic profile



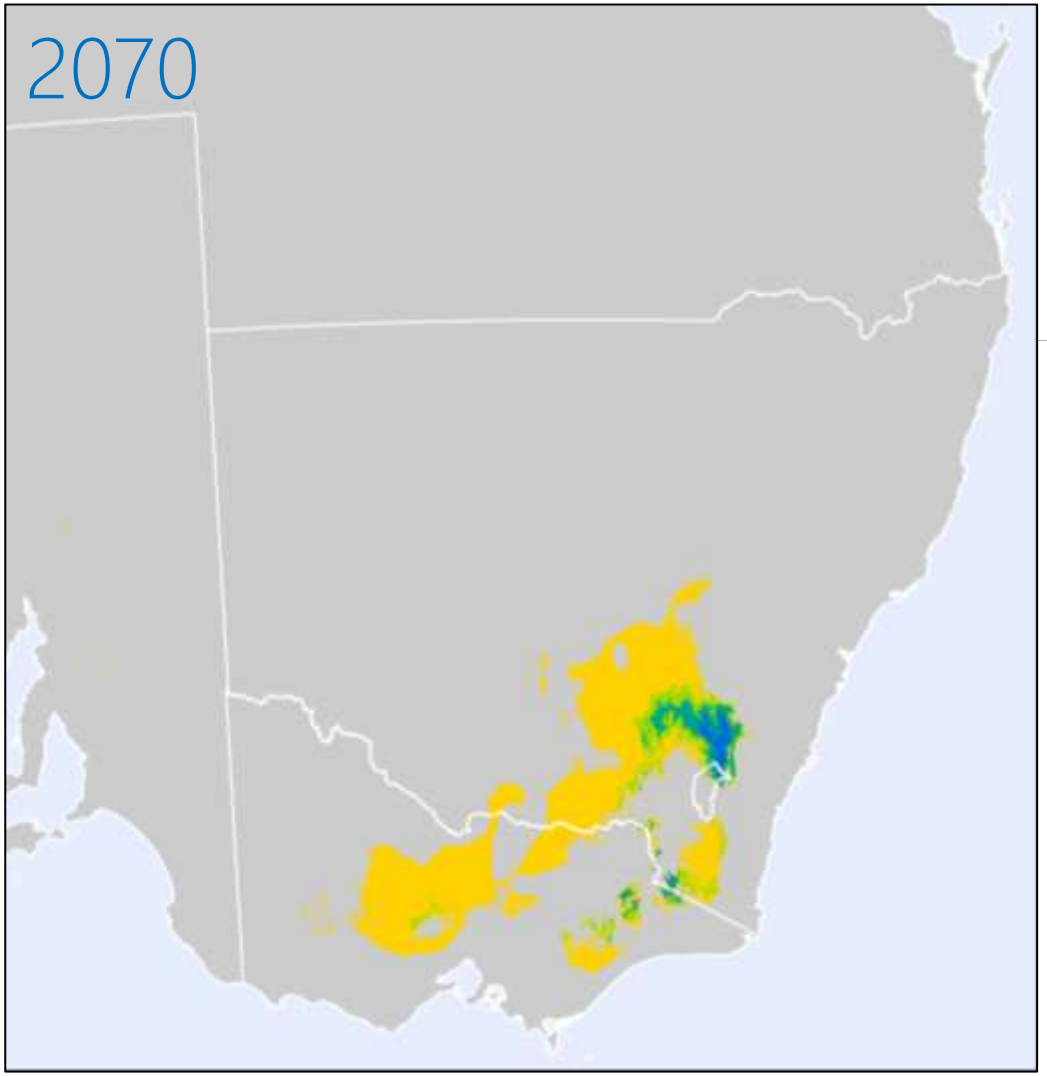
↓47%

142,885 km²

2050: A1F1 Greenhouse Gas Emission Scenario

Range	100%
	2.5 - 97.5%
	5 - 95%
	10 - 90%
Core	25 - 75%

Bioclimatic profile



↓52%

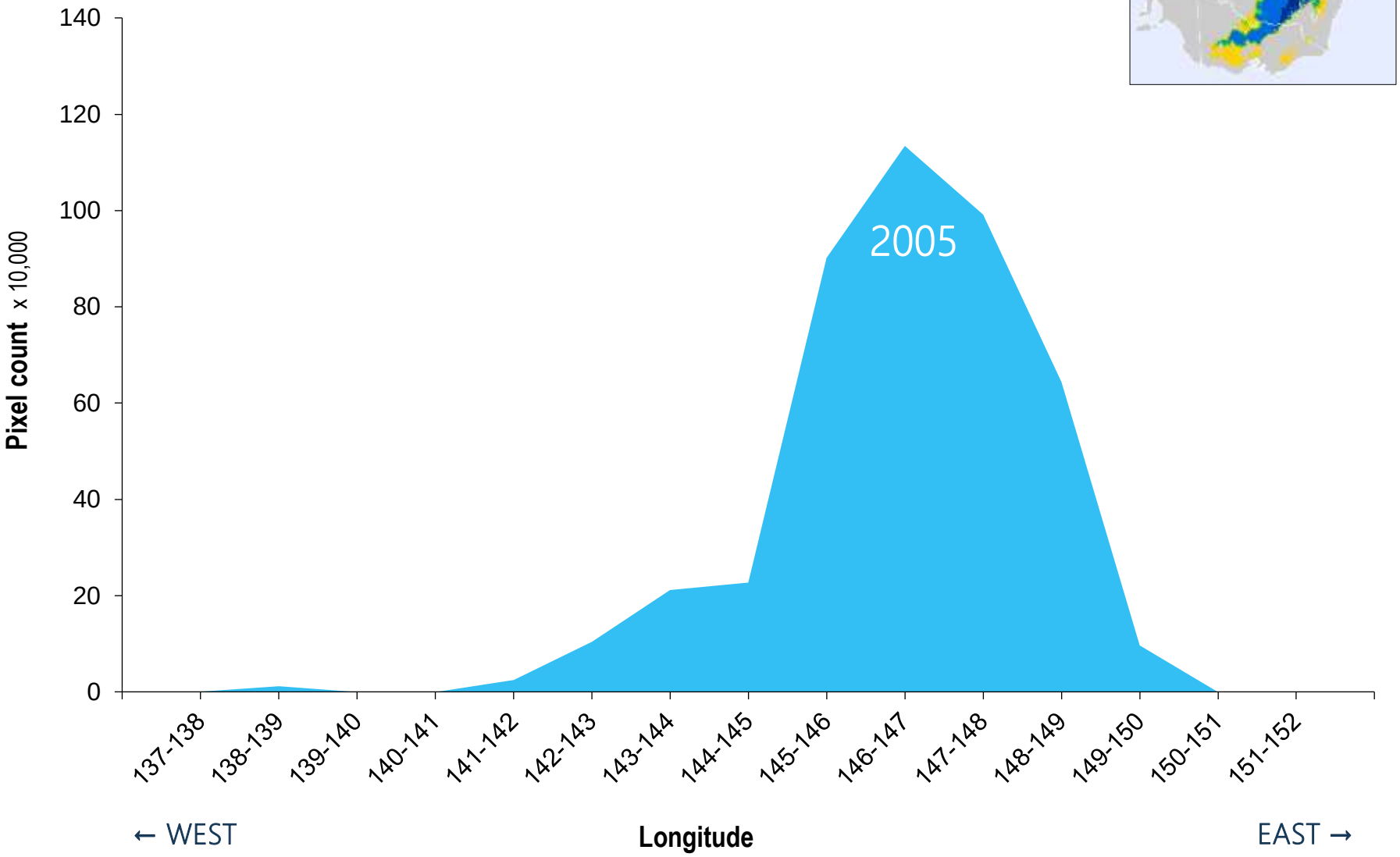
69,014 km^2

2070: A1F1 Greenhouse Gas Emission Scenario

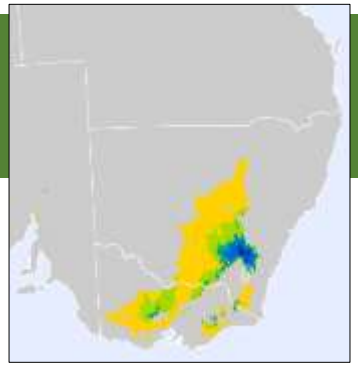
Range
Core

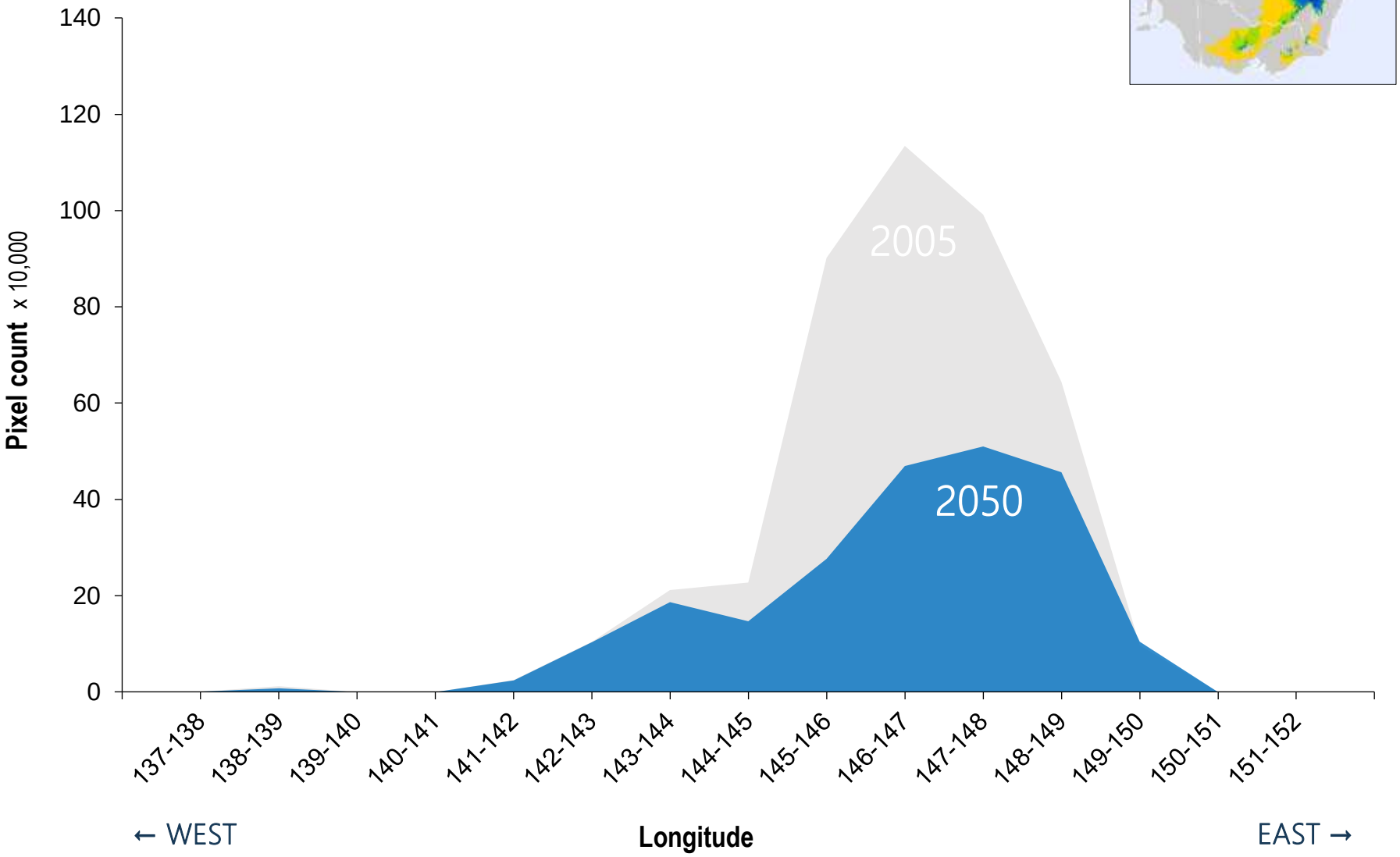
- 100%
- 2.5 - 97.5%
- 5 - 95%
- 10 - 90%
- 25 - 75%

Bioclimatic range shift

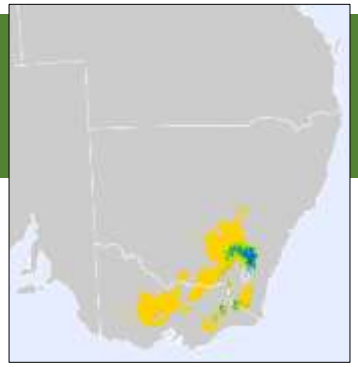


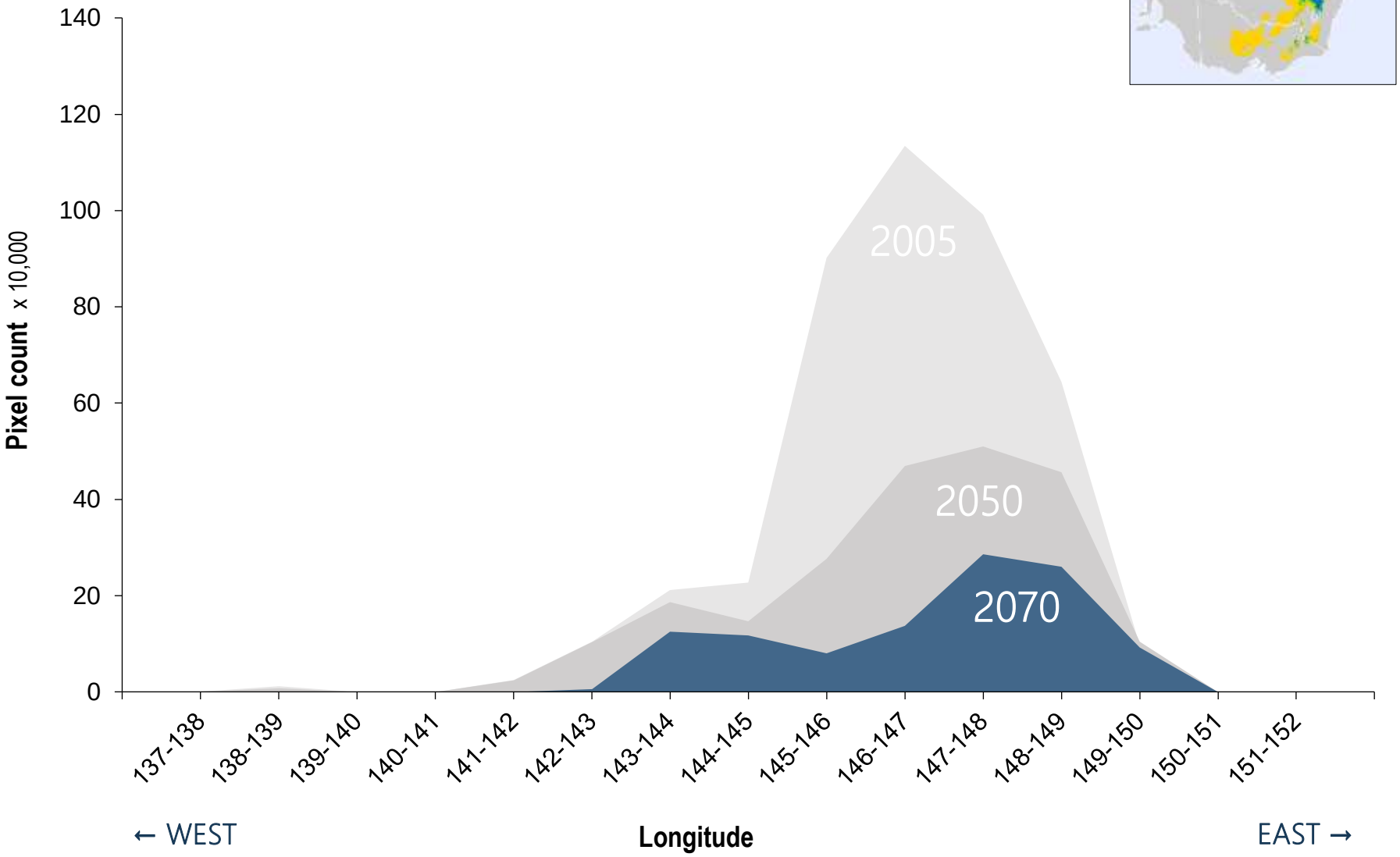
Bioclimatic range shift



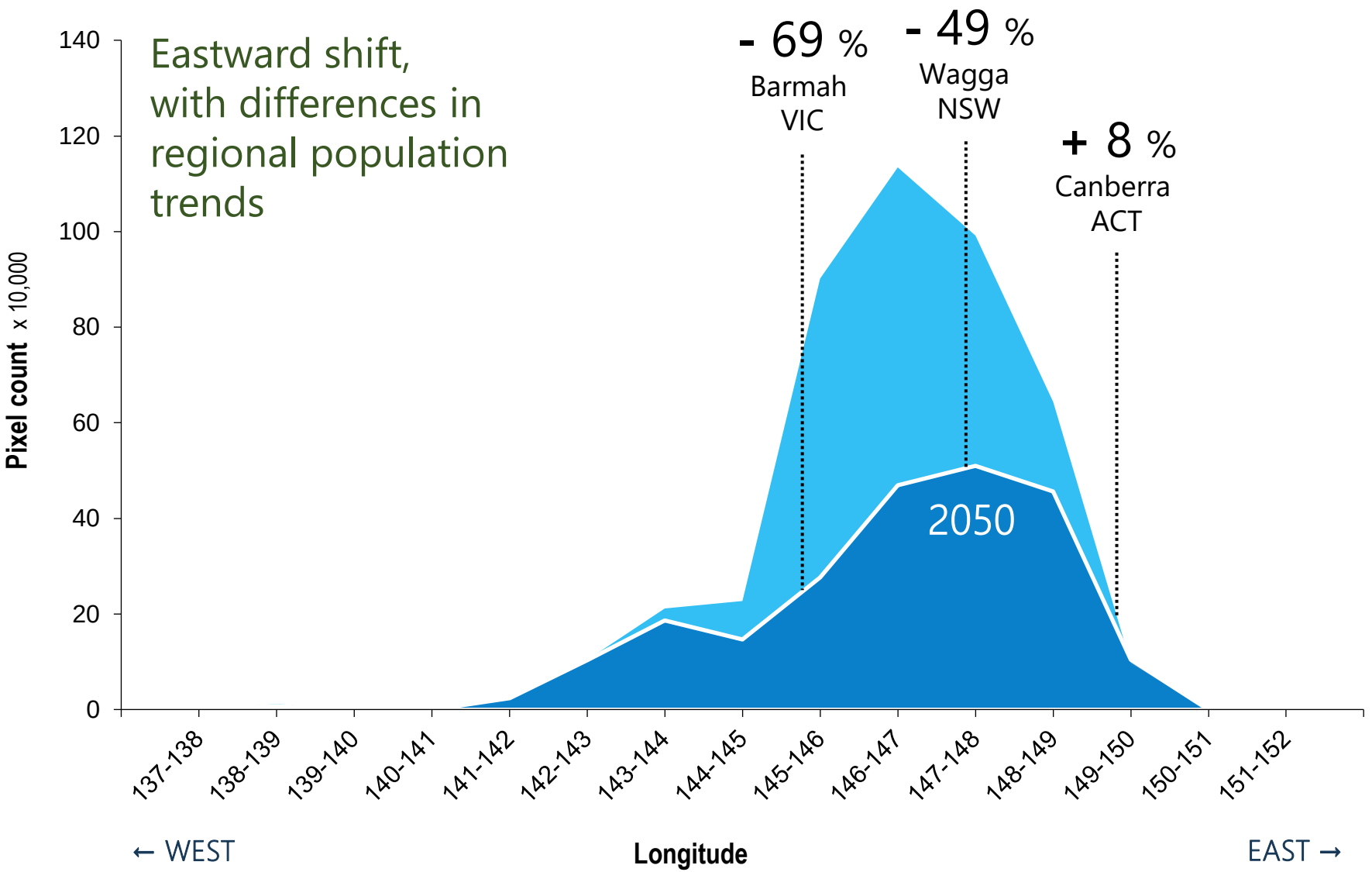


Bioclimatic range shift



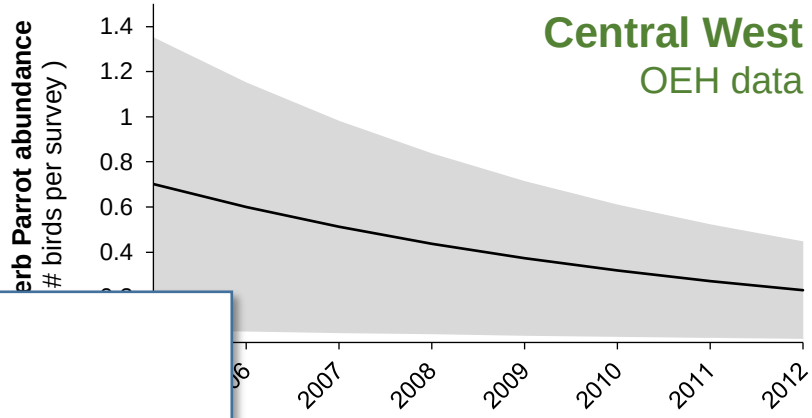


Regional trends

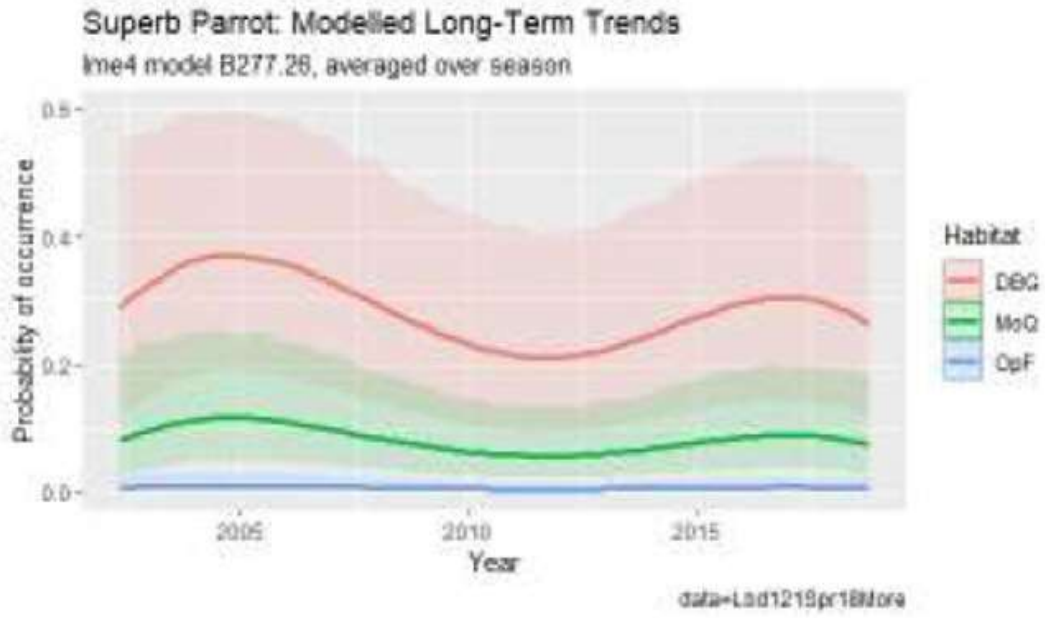


Regional trends

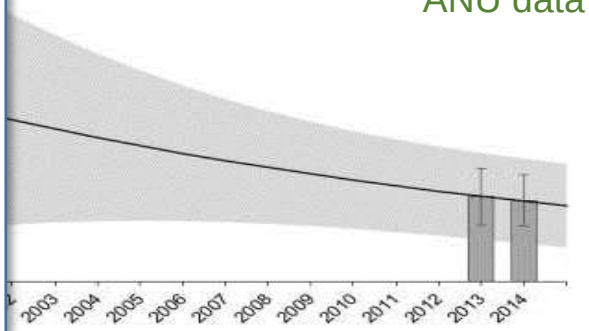
Central West
OEH data



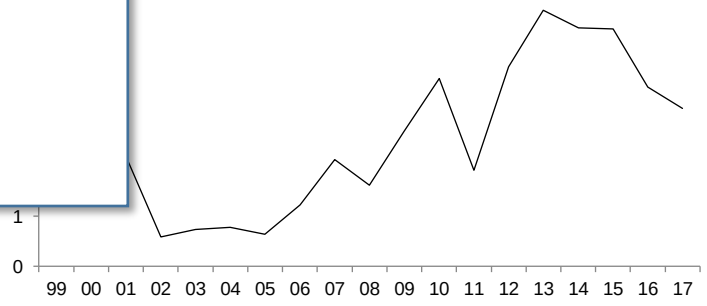
Cowra, NSW
Cowra Woodland Birds Program data



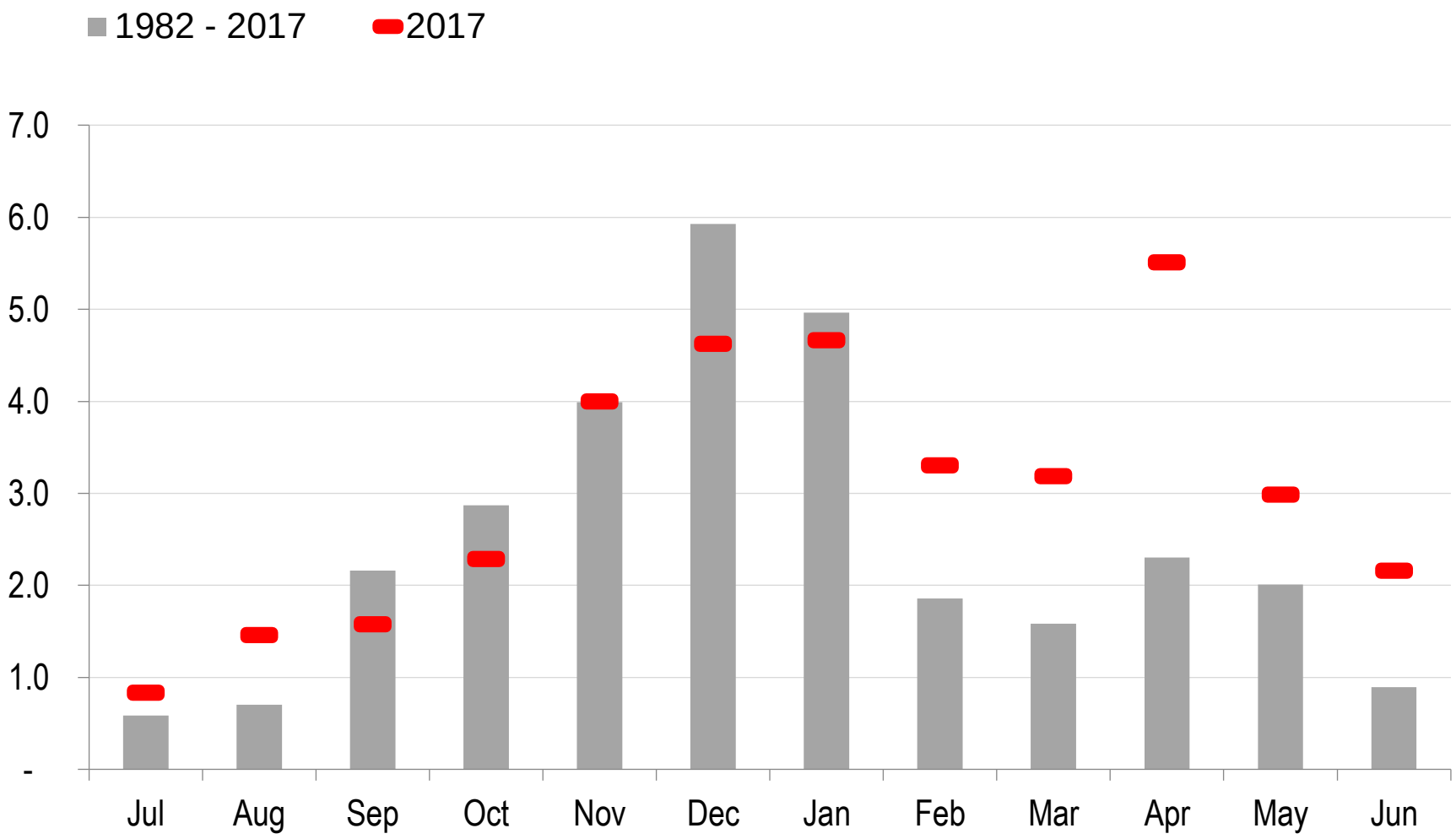
South West Slopes
ANU data



Canberra, ACT
COG data



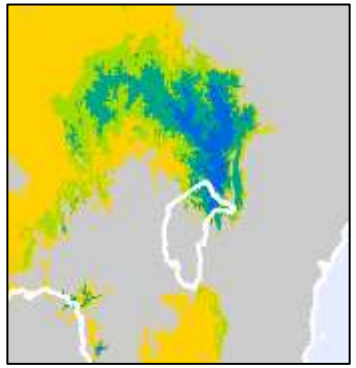
Recent overwintering in ACT



Implications for the ACT region

75% range contraction within 50 years

Management of ACT-Boorowa-Cowra region will be critical to long-term persistence



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Revised population size, population trends, and bioclimatic modelling

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2016 • **National Superb Parrot Recovery Team formed**

2018 • **IUCN Red List status maintained (Least Concern)**

2019 … omit from *2020 Action Plan for Australian Birds?*

2014: Throsby offset approved

ACT Environmental Offsets

Superb Parrot Monitoring and Research Program Update

ACT Government

Australian National University

DBRG
Difficult Bird Research Group

ACT offset commitments

MONITORING

Question: Has breeding activity declined within the Gungahlin Strategic Assessment (GSA) area due to suburb (Throsby) development.

Objective: Track the number and activity of superb parrot breeding pairs, within the GSA area, for 5 years post suburb development.

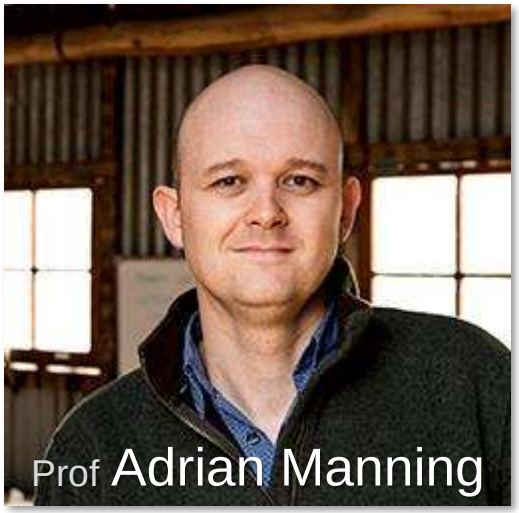
ACT offset commitments

RESEARCH

Aim 1: Identify critical breeding resources

Aim 2: Investigate nest hollow competition

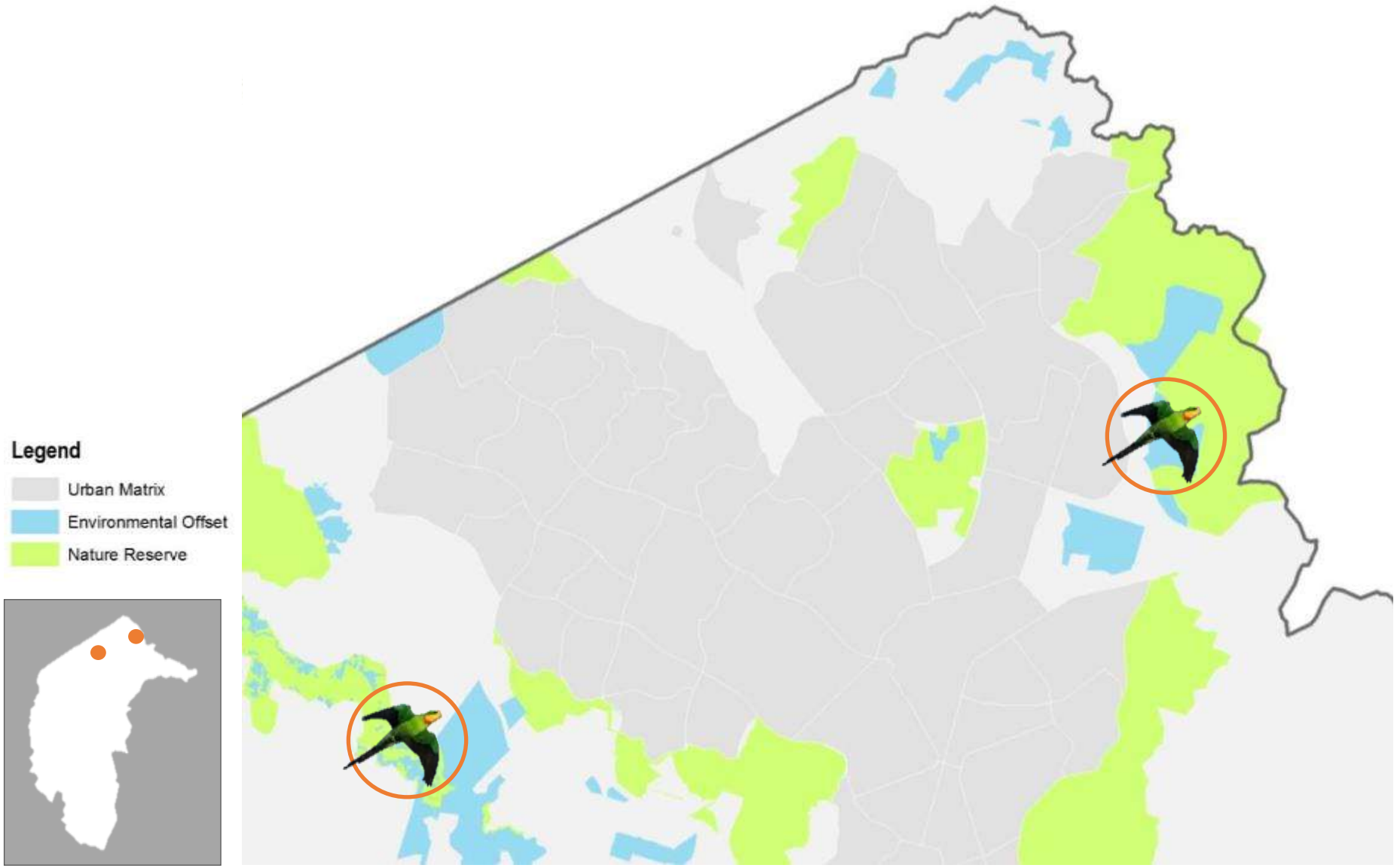
Aim 3: Locate and describe foraging habitat


Prof Adrian Manning


Dr Dejan Stojanovic


Dr Michael Mulvaney

Superbs in the ACT




Tree surveys


Bird surveys


Active search


Tree access


Confirm nest


Watch nest


Health check & measure


Band nestlings


Track adults

Monitoring results

Results

Nesting trees

Trees located to date = 36

- ✓ Blakely's Red Gum n = 27
  Eucalyptus blakelyi
- ✓ Scribbly Gum n = 8
  Eucalyptus rossii
- ✓ Yellow Box n = 1
  Eucalyptus melliodora
- ✓ Diameter = 112.4 cm ± 3.3 cm
  95% Range = 106 to 119 cm
- ✓ Height = 17.6 m ± 0.5 m
  95% Range = 17 to 18 m
- ✓ Living trees

Results

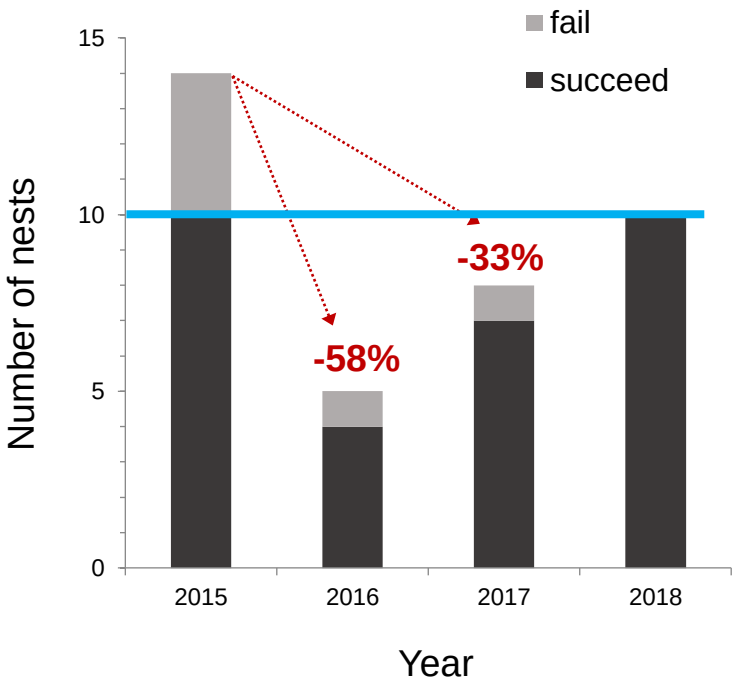
Nesting hollows

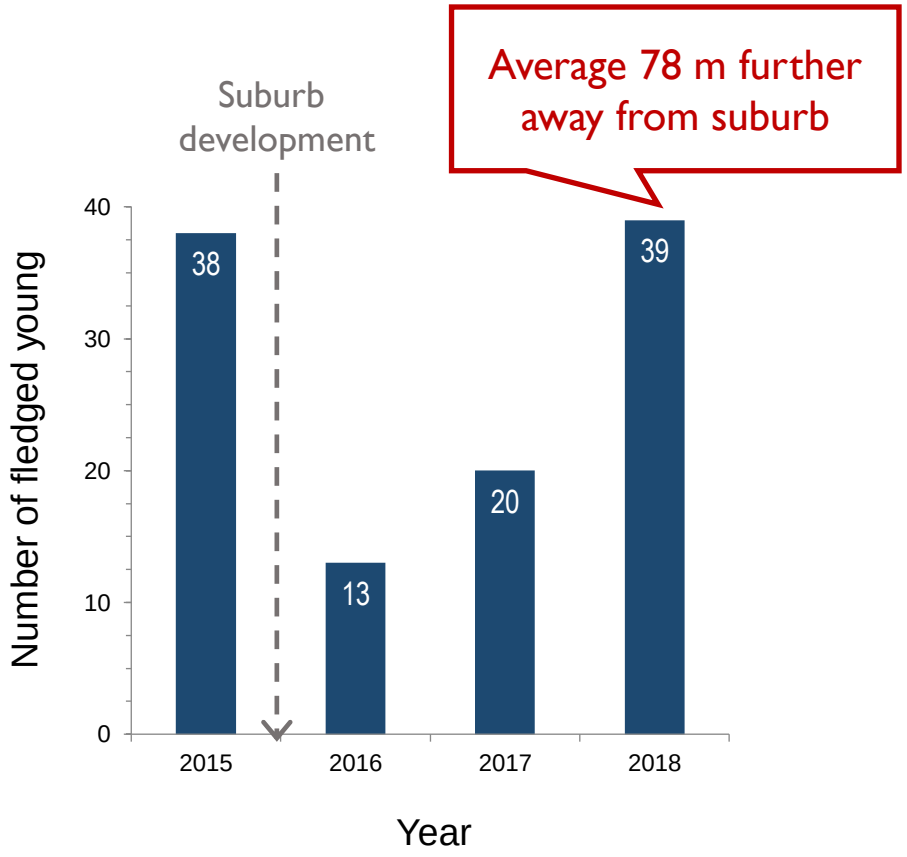
Trees located to date = 36

- ✓ Average entrance = 13 cm
  95% Range = 12 to 15 cm
- ✓ Minimum entrance = 8 cm
  95% Range = 10 to 12 cm
- ✓ Depth = 103 cm
  95% Range = 85 to 120 cm
- ✓ Floor = 17 cm
  95% Range = 15 to 20 cm
- ✓ Height = 7 m
  95% Range = 6 to 8 m
- ✓ Live trunk or large branch

Results

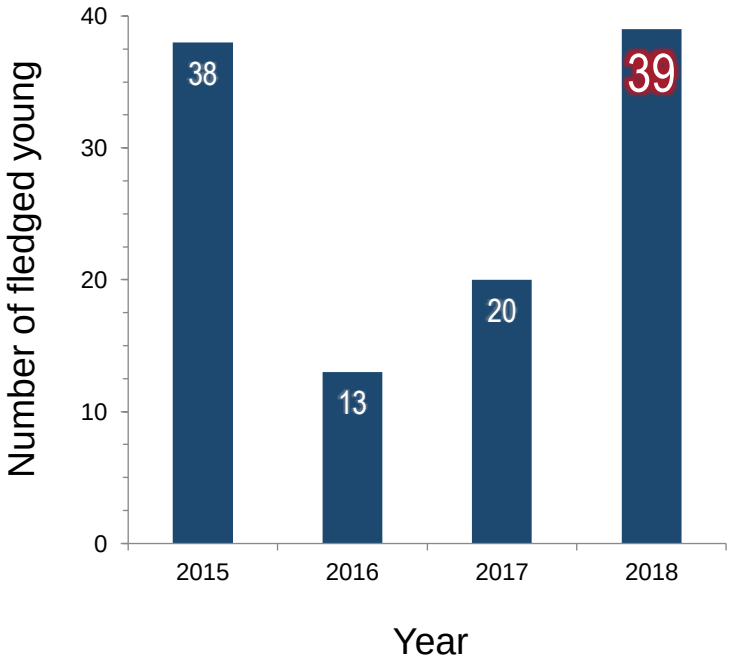
Breeding activity and urban impacts

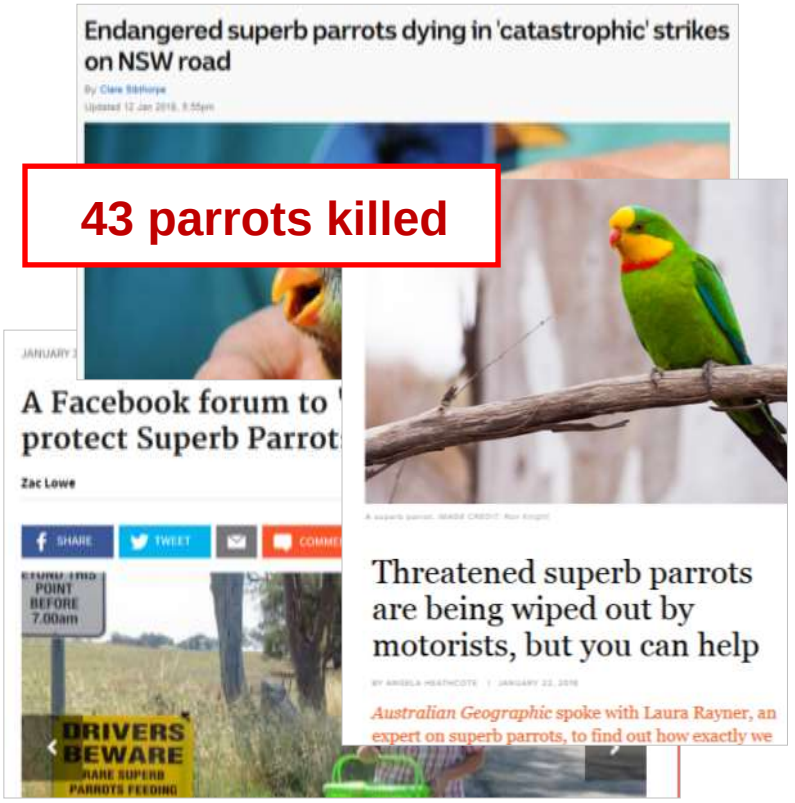




Results

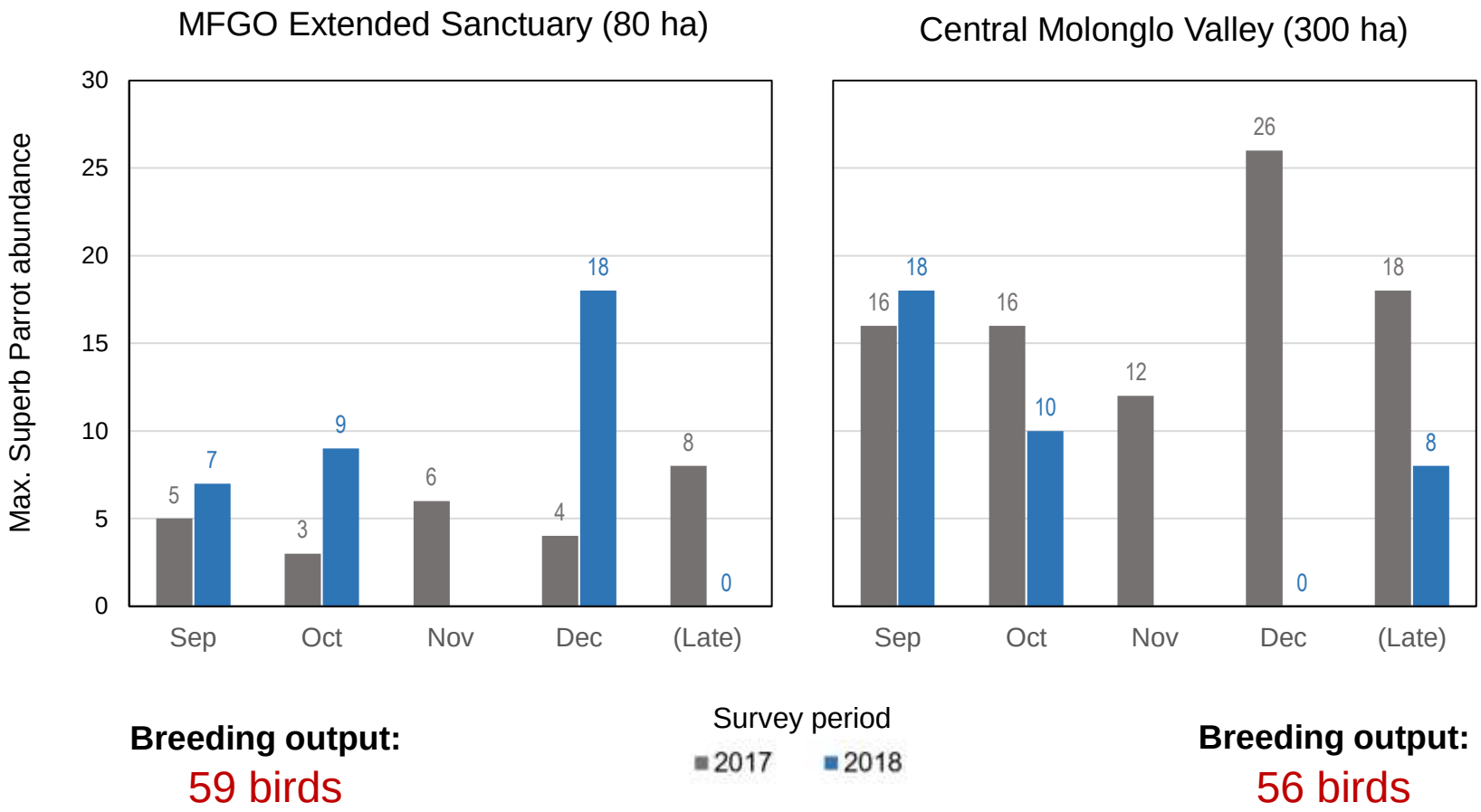
How important is ACT reproductive output?





Results

Numbers vs Nests



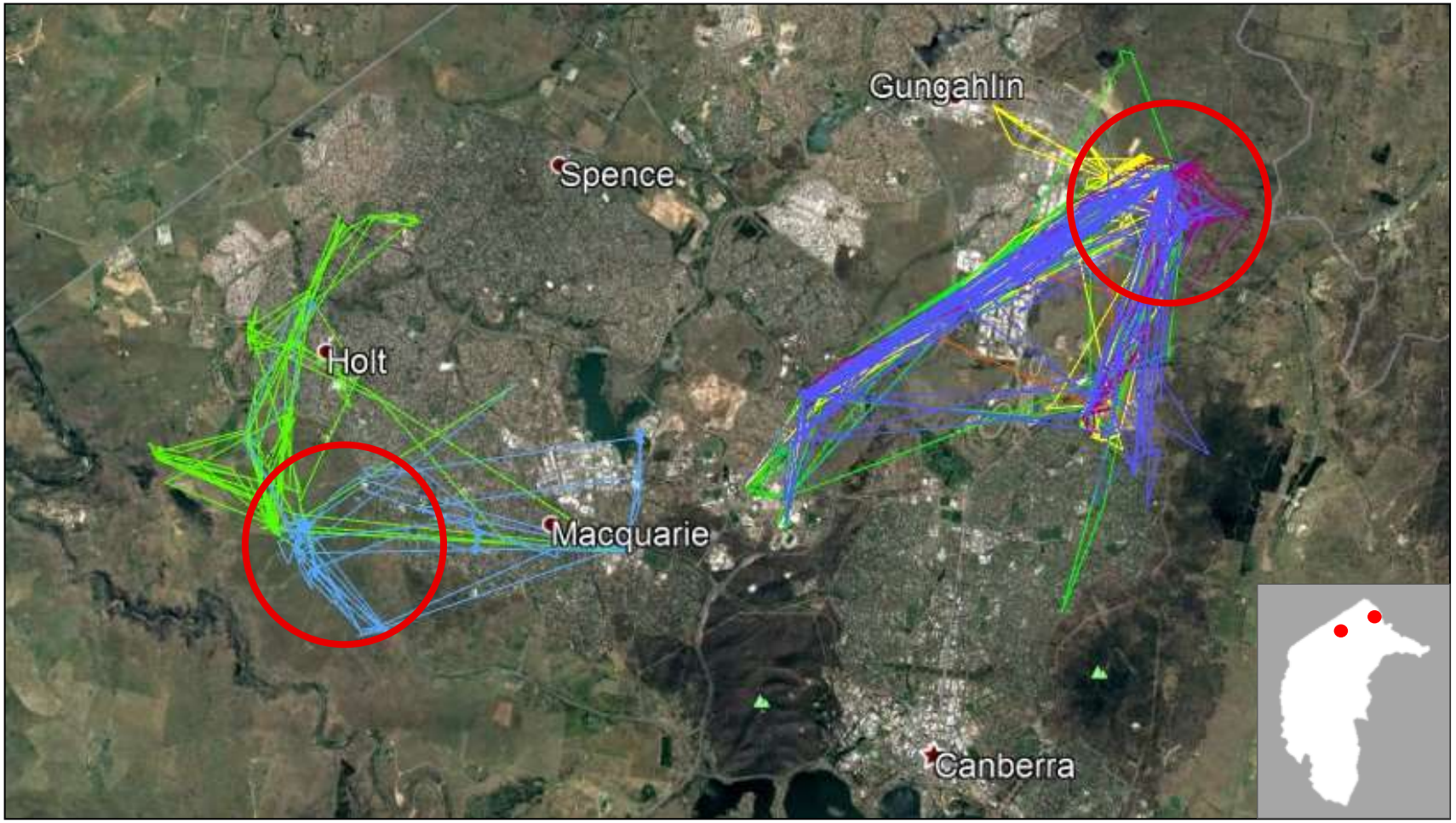
Breeding output:
59 birds

Breeding output:
56 birds

Results

Local movement

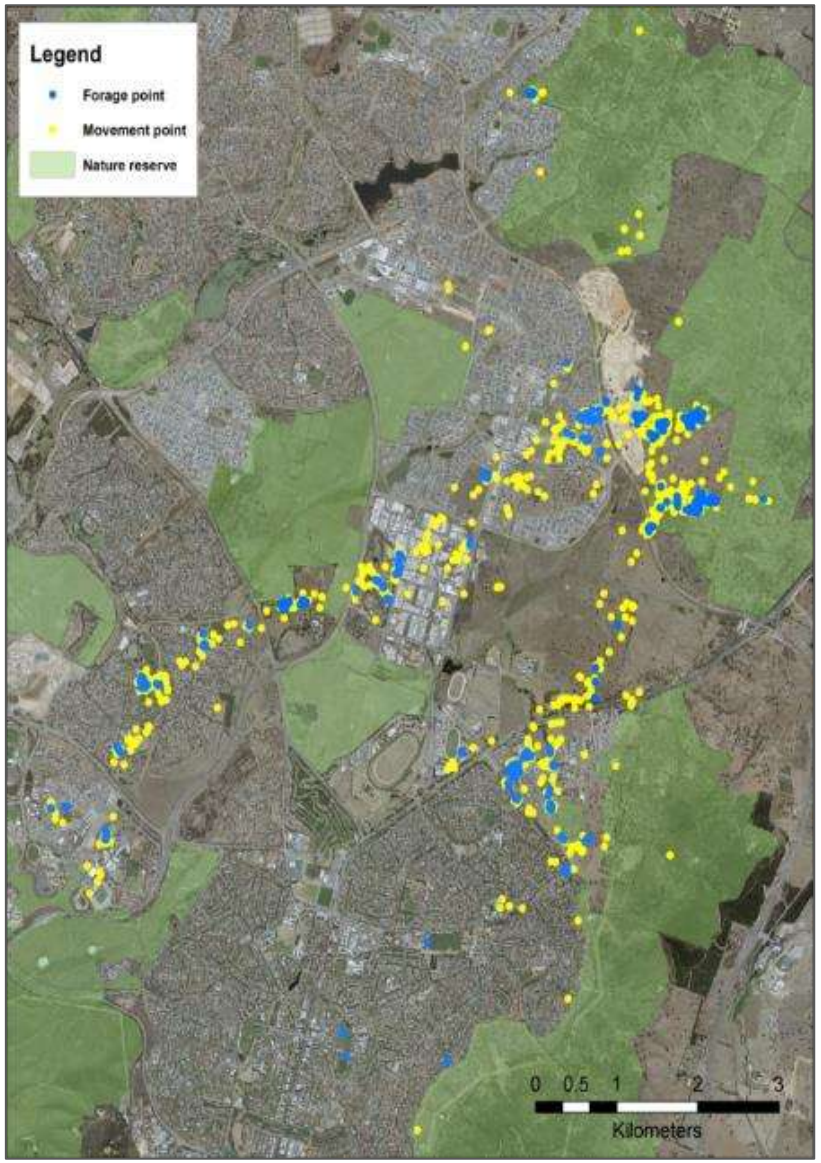
Colours are different individuals (n = 8)



Results

Critical habitat

- ✓ Highest occurrence in Yellow box - Blakely's red gum woodland habitats
  Endangered ecological community
- ✓ Old remnant trees are important
  Twice as likely to stop
- ✓ Yellow box used for movement
- ✓ 25% of tracks in urban space
  Favouring native-dominant areas



Results

Urban foraging

- ✓ **Overall high vegetation cover important**

  Especially in the 15-20m ht class

- ✓ **Eucalypts are critical**

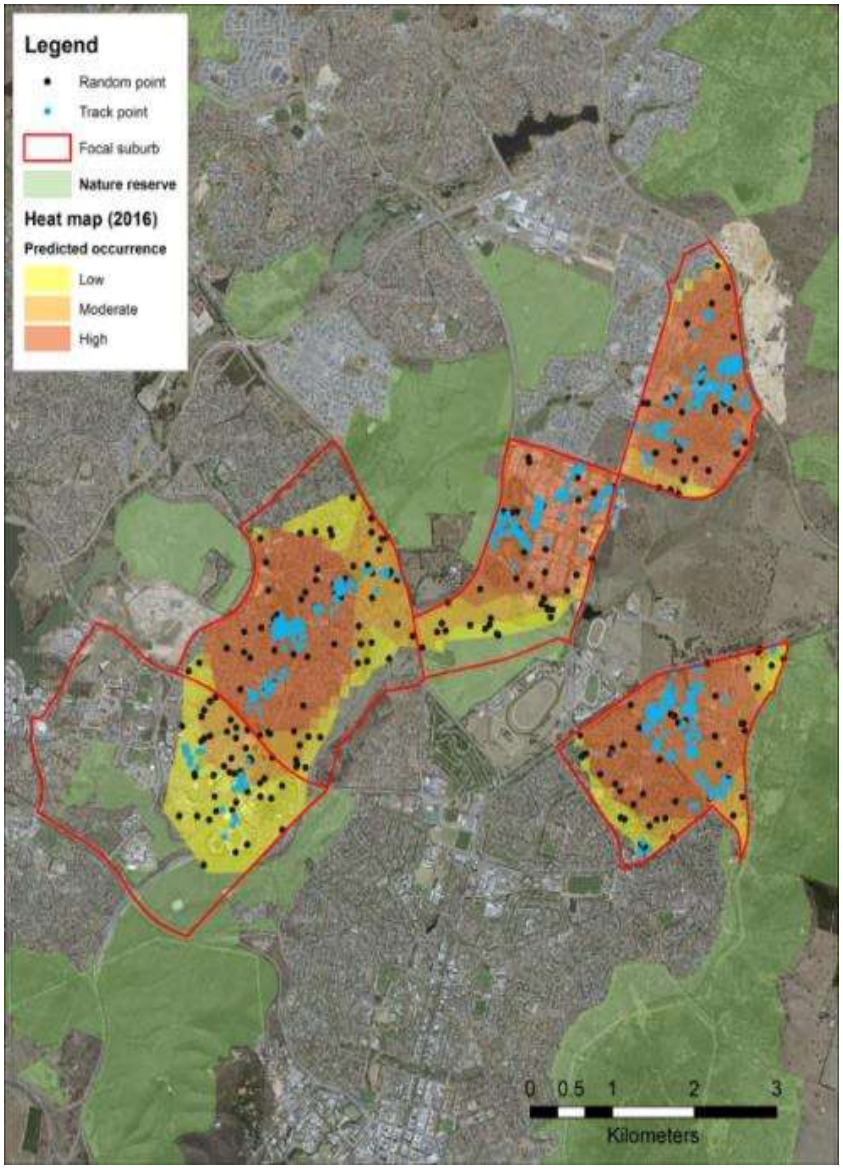
  Especially Argyle Apple, River Peppermint and Blakely's Red Gum

- ✓ **Exotic Elms a favourite**

  but oaks, pittosporums and privets all showed negative effect

- ✓ **Cootamundra Wattle**

  Major food source



Conservation status

Australian National University

ACT Government

Is the superb parrot threatened?

Population data limited across the range

Widespread persistent threats:

- climate change
- mature tree loss
- dieback
- nest competition
- road strikes
- wind farms?

Pre-emptive management?

So, what do we do?

Nest tree protection

Nest trees located → ACT tree register
Flight paths mapped → ACT tree register

Urban planning

Foraging species → urban design standards

Adaptive monitoring program

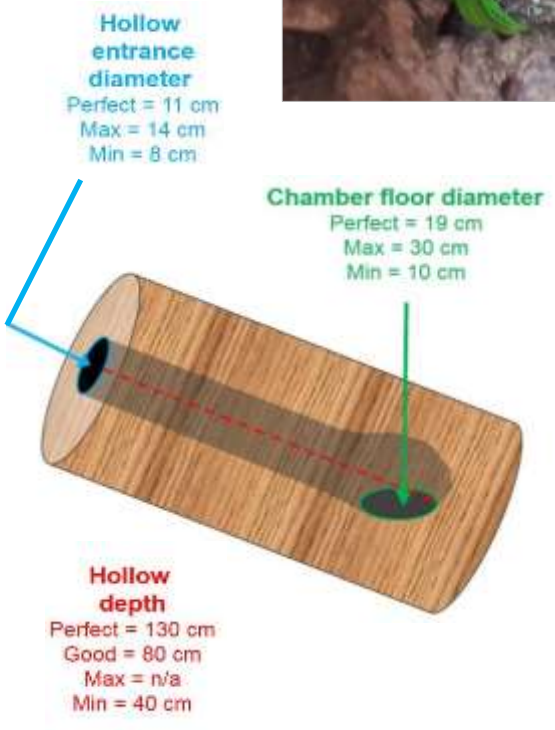
Competitive pressure

Nest box experiments

Detailed measures → box design

Updated recovery advice

New research → Action & Recovery Plans
Survey guidelines revised → made public

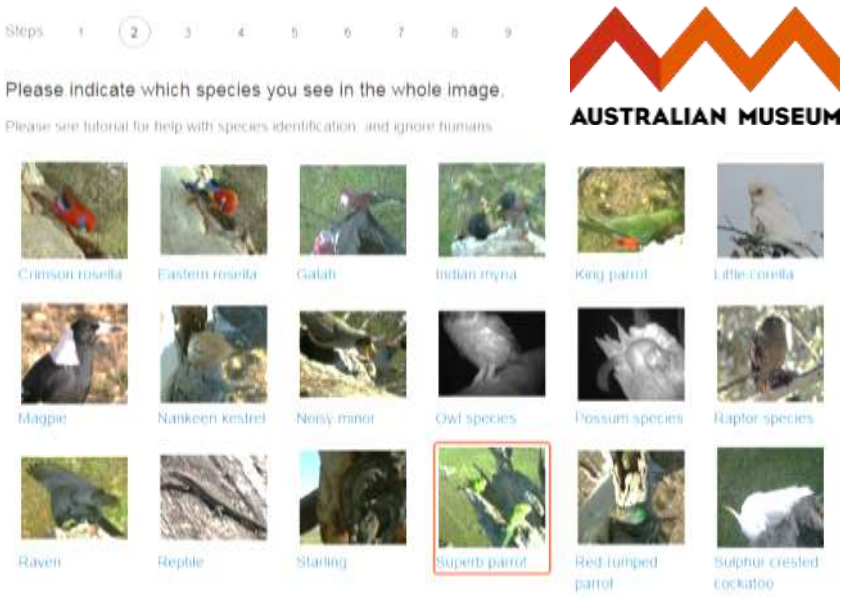


You can help!

Nest competition

Examining visitation rates at known nest hollows

Over 170,000 images have been transcribed by volunteers



DigiVol: **https://volunteer.ala.org.au/**

Pushing on…

ACT habitat mapping (in progress)
Find new breeding and wintering habitats

Long-range tracking (2019-2022)
PinPoint Solar ARGOS transmitters

Trend analysis (2020)
Regional estimates of change

Expand monitoring (2020-2023)
Extend research into NSW

Strategic restoration plan (2023)
Across range

THANK YOU

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Clare McInnes
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Dejan Stojanovic
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Margaret Kitchin
Richard Milner
Robert Heinsohn
Fernanda Alves
Jenny Newport
Chloe Sato

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