

Hovells Creek Landcare Group February 2020

Safeguarding a superb future



ACT
Government

Environment and Planning

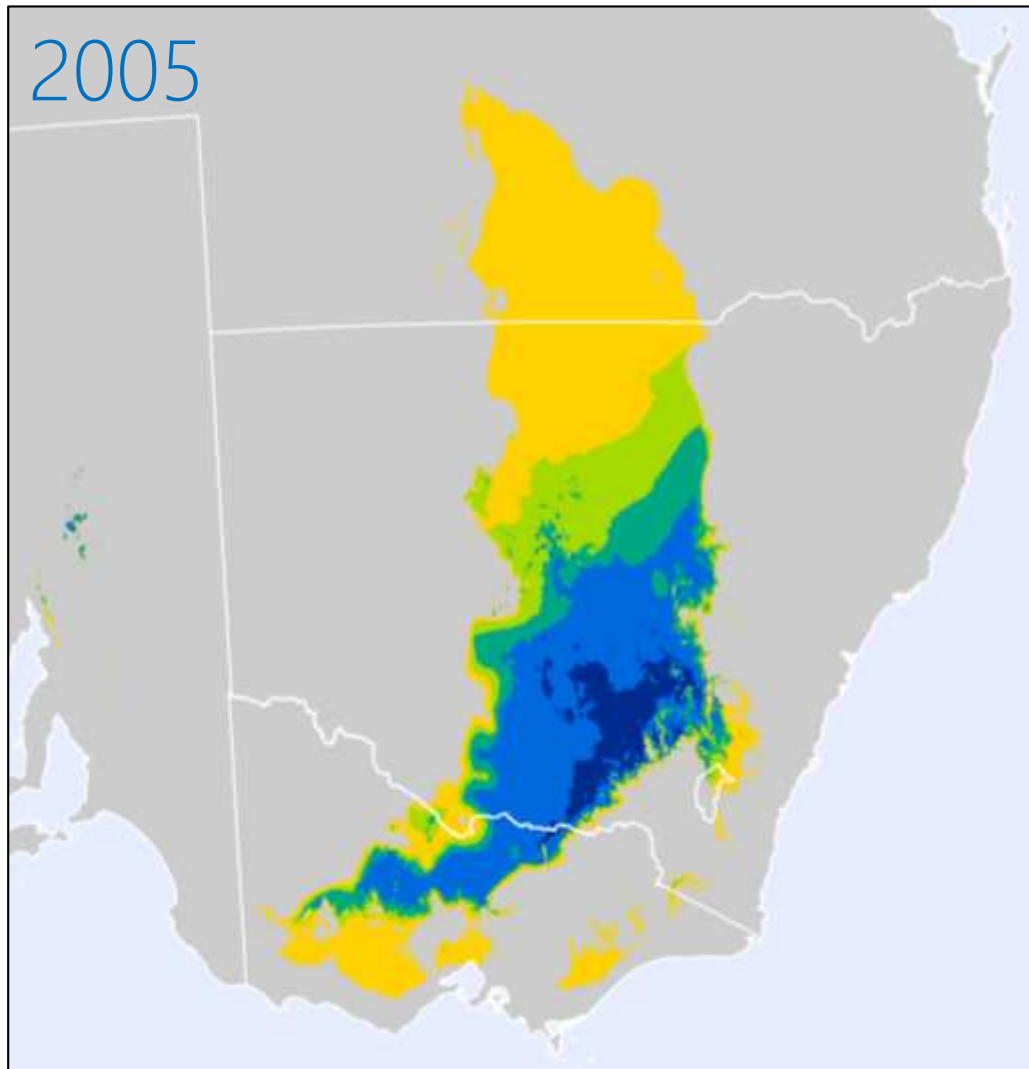
Laura Rayner
ACT Parks & Conservation Service

Conservation status

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- 2000** • **Listed as Vulnerable under EPBC Act**
- 2010** • **Removed from *Action Plan for Australian Birds***
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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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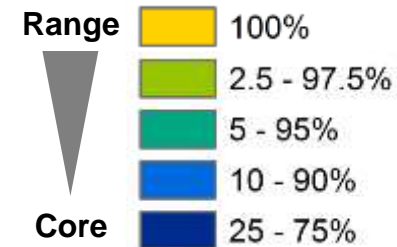
Bioclimatic profile



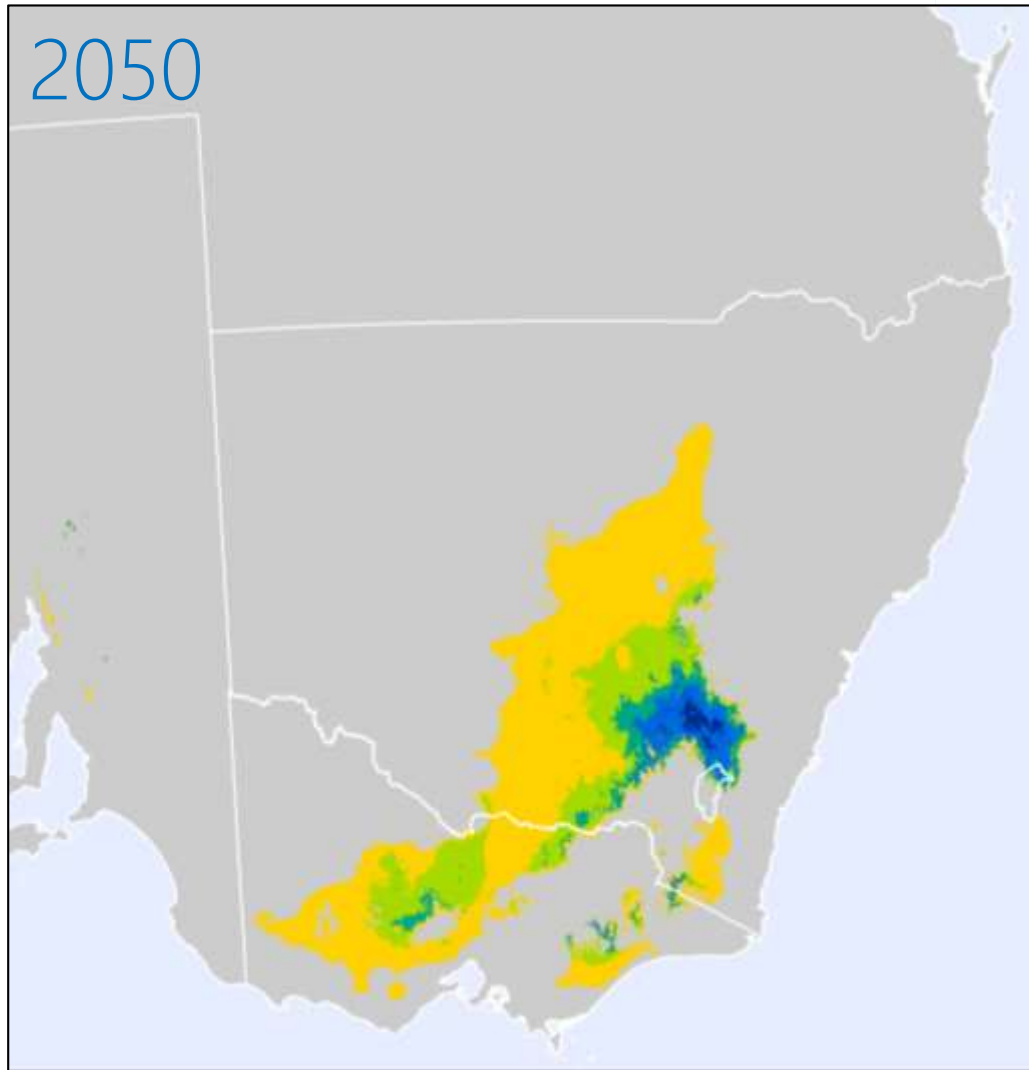
EOO = 95,000 km²

271,893 km²

BIOCLIM: Bioclimatic profile
1976 – 2005 climate surface



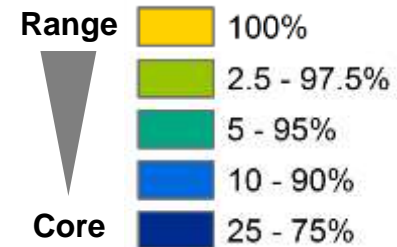
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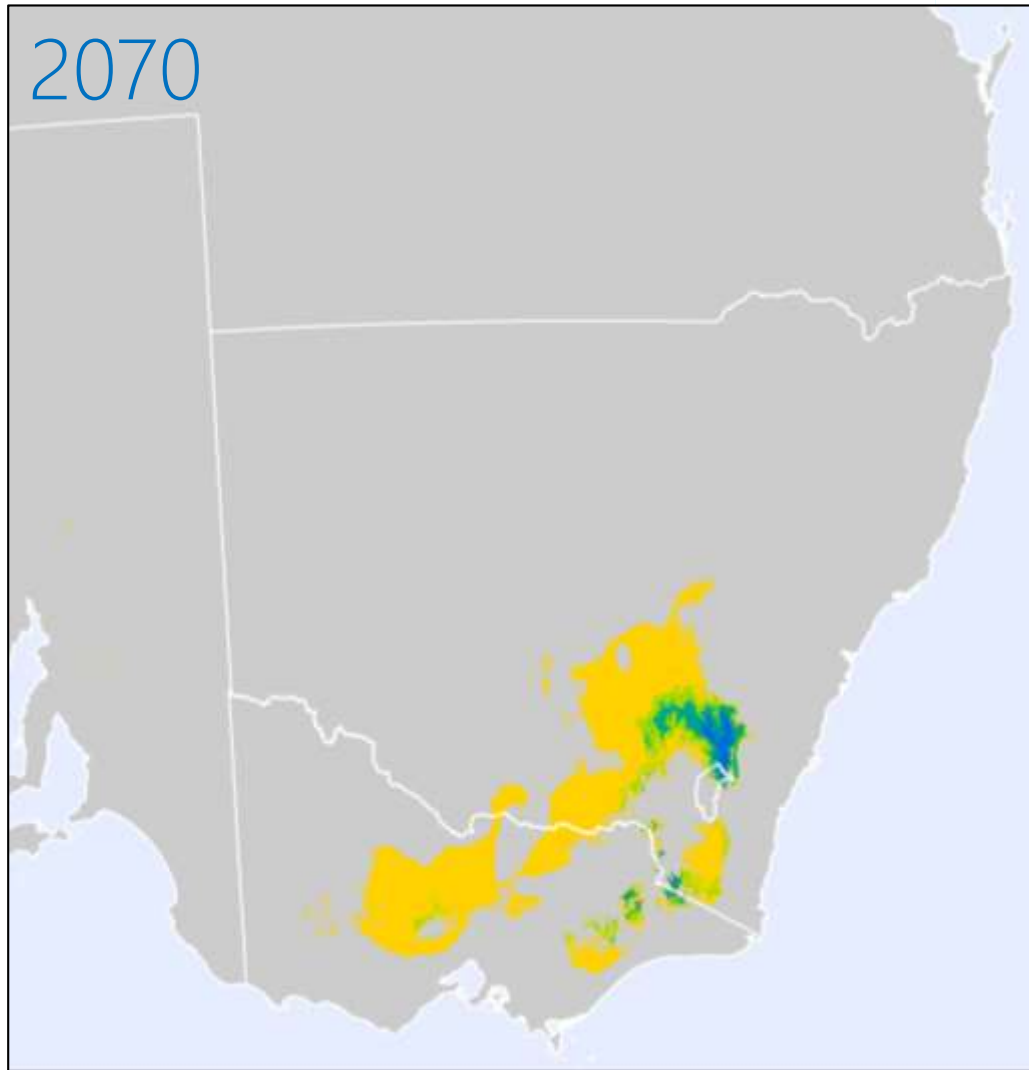
↓47%

142,885 km²

2050: A1F1 Greenhouse Gas
Emission Scenario



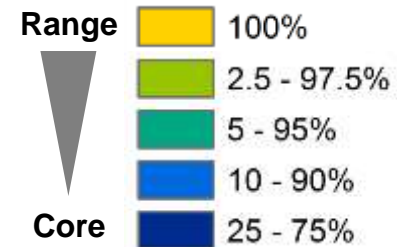
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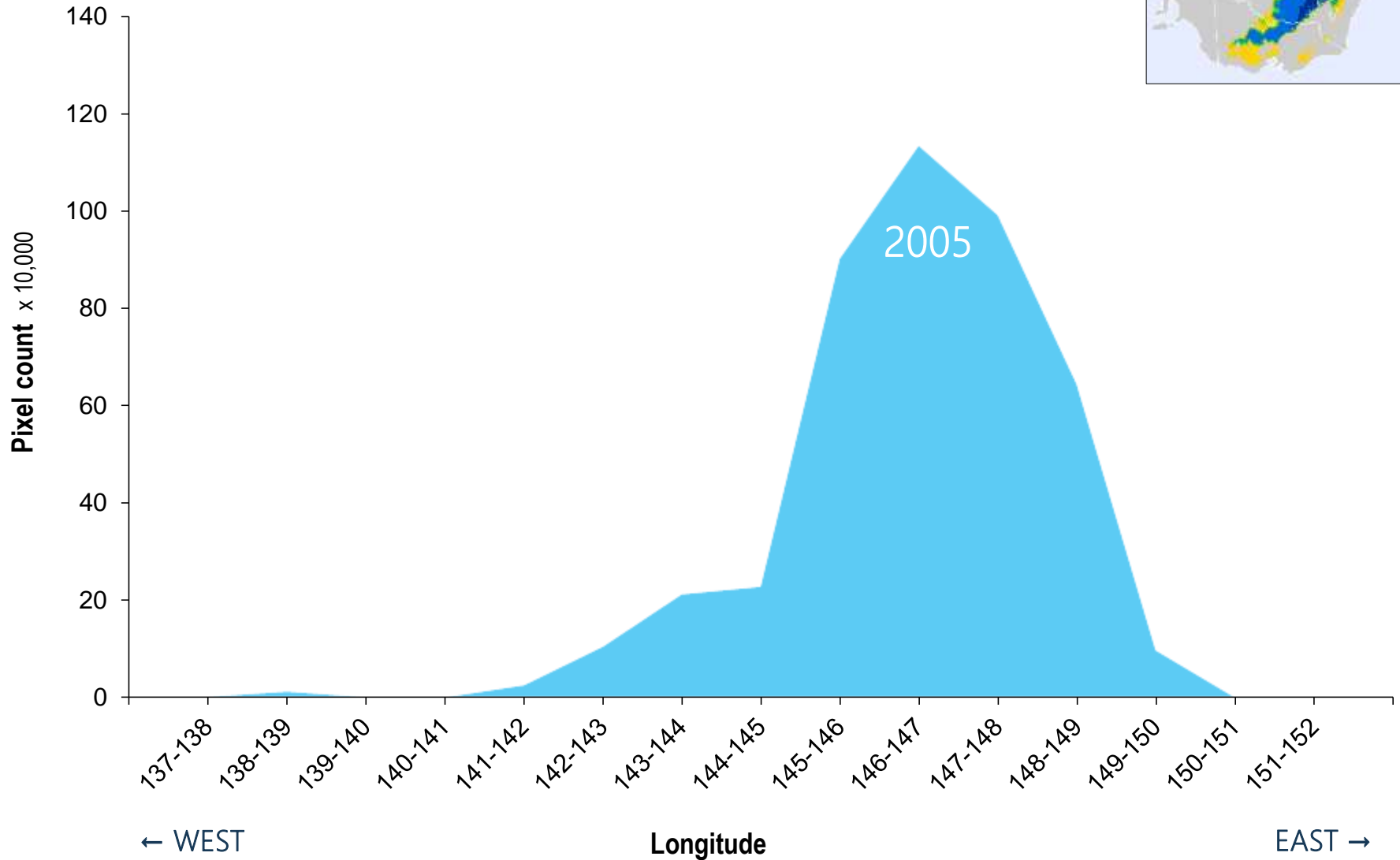
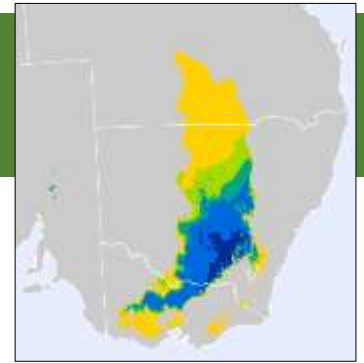
↓52%

69,014 km²

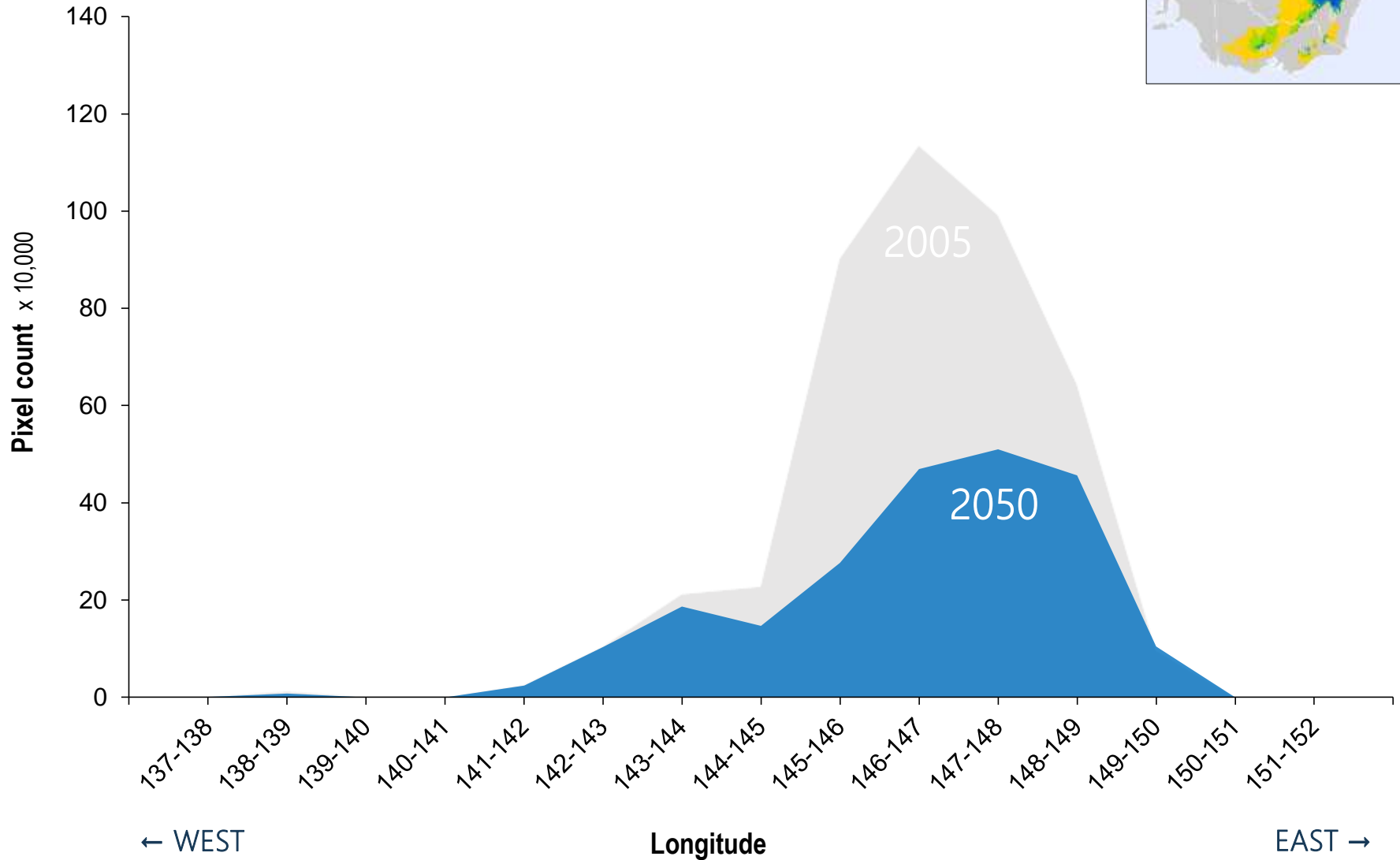
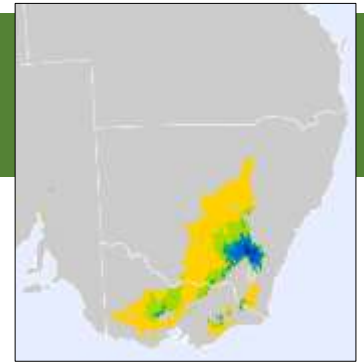
2070: A1F1 Greenhouse Gas Emission Scenario



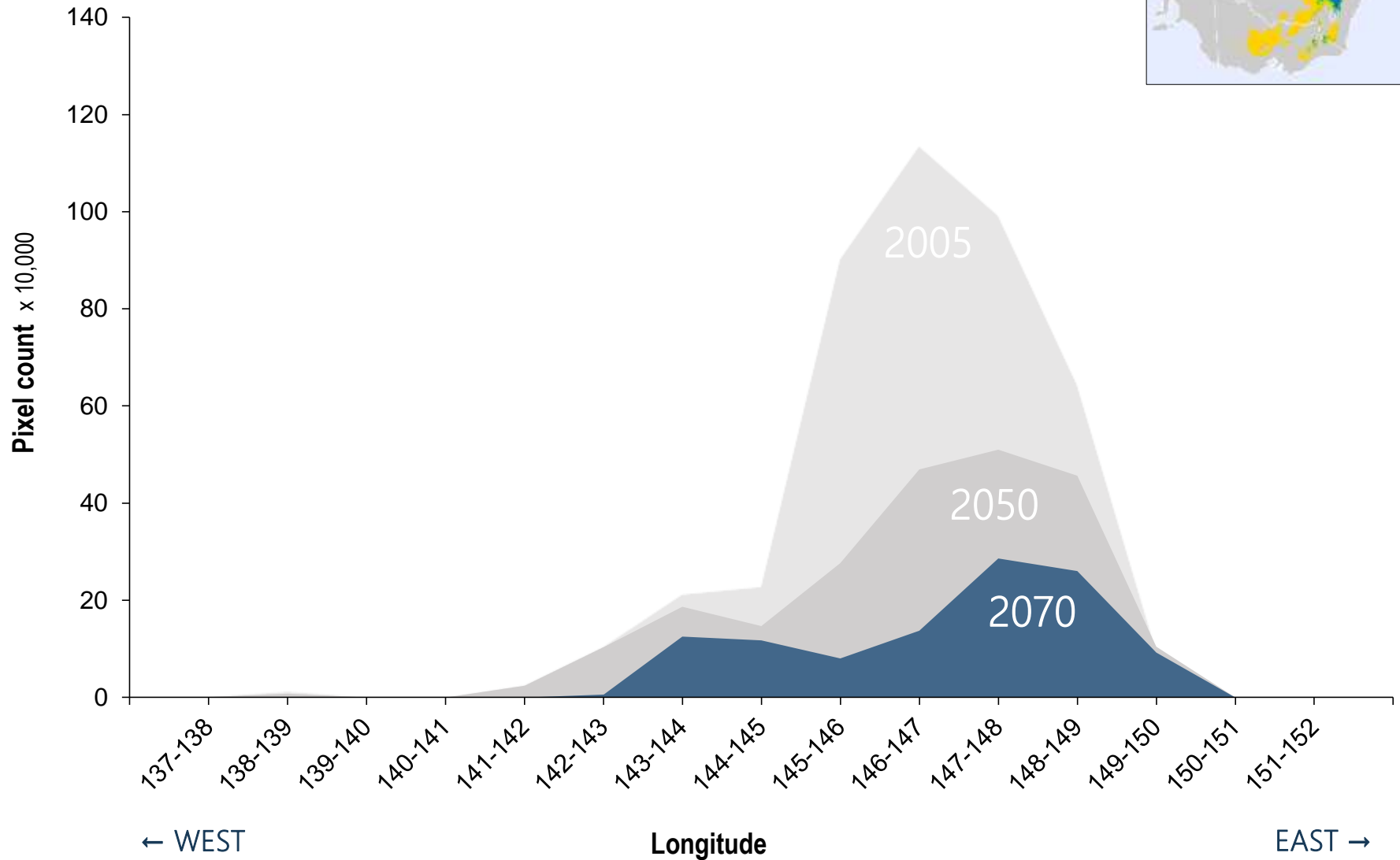
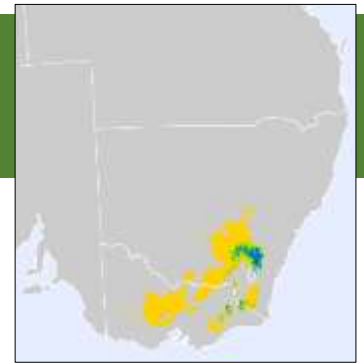
Bioclimatic range shift



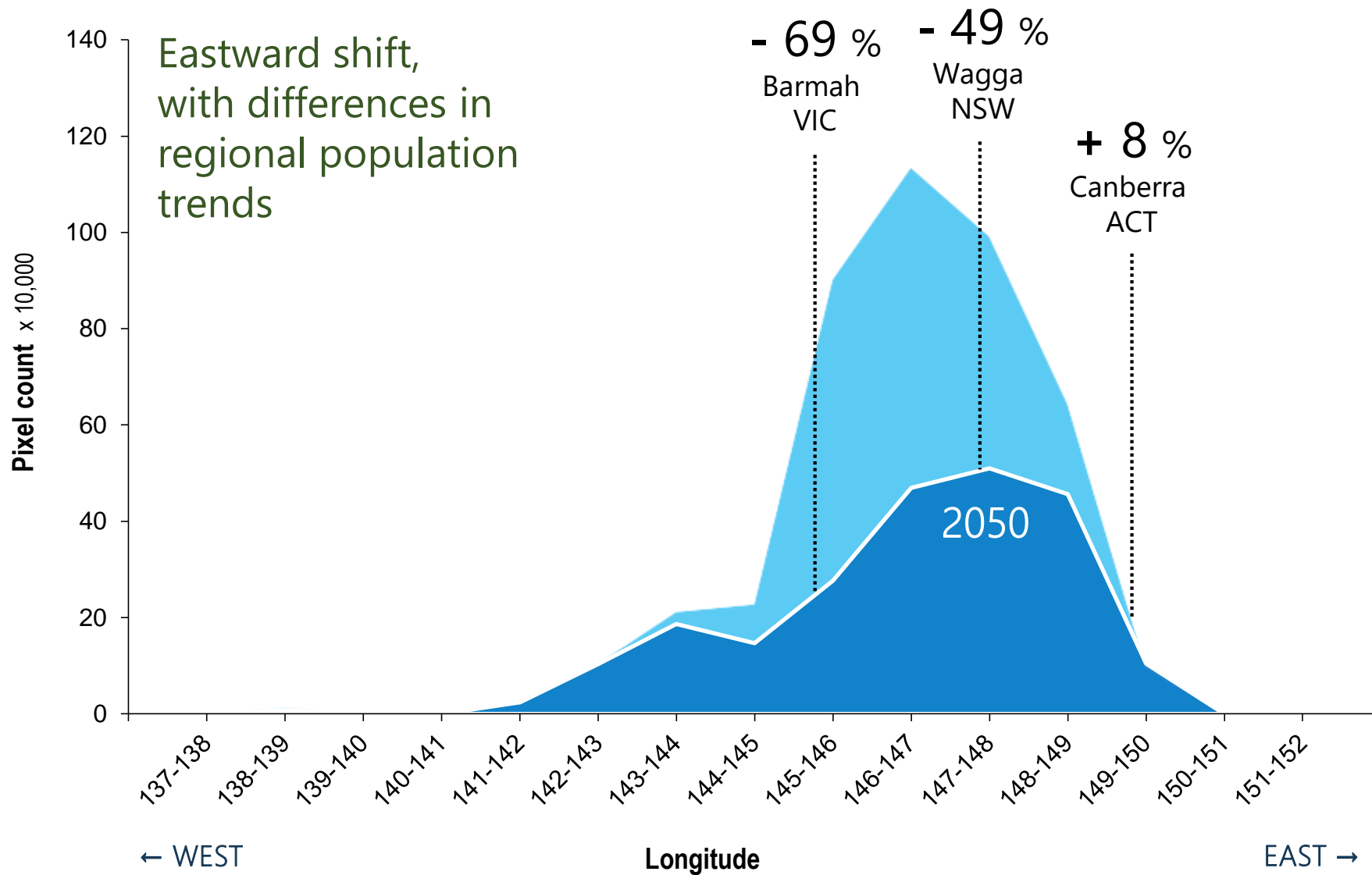
Bioclimatic range shift



Bioclimatic range shift



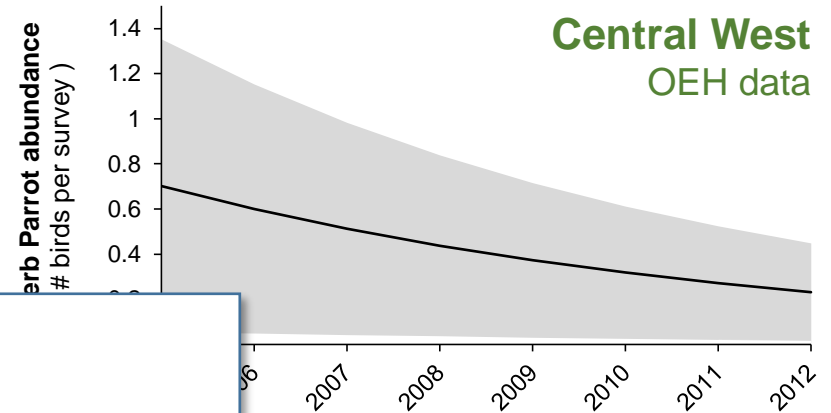
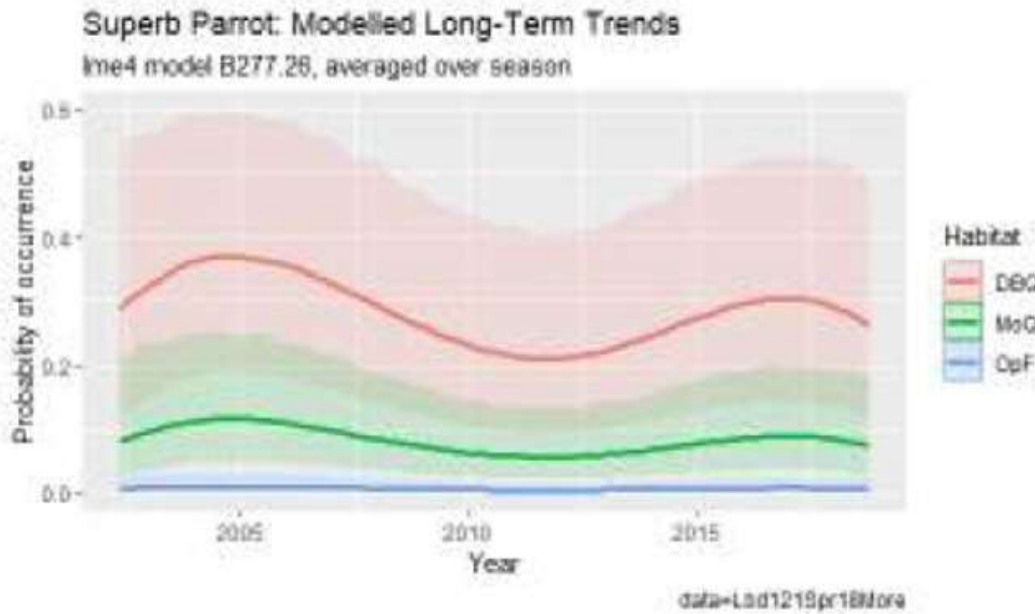
Regional trends



Regional trends

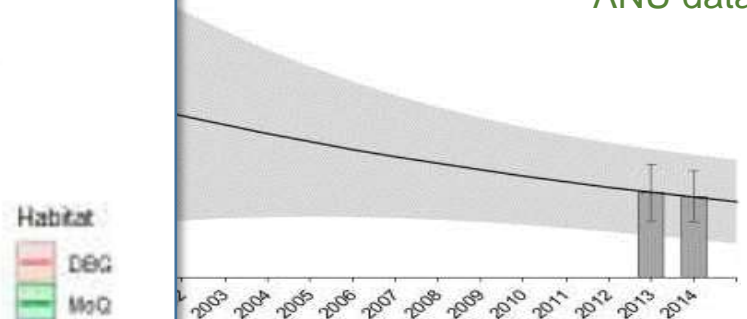
Cowra, NSW

Cowra Woodland Birds Program data



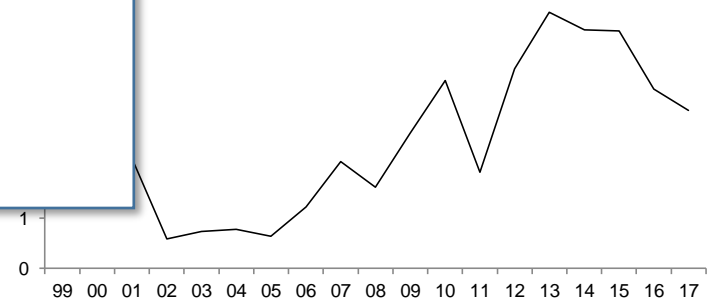
South West Slopes

ANU data

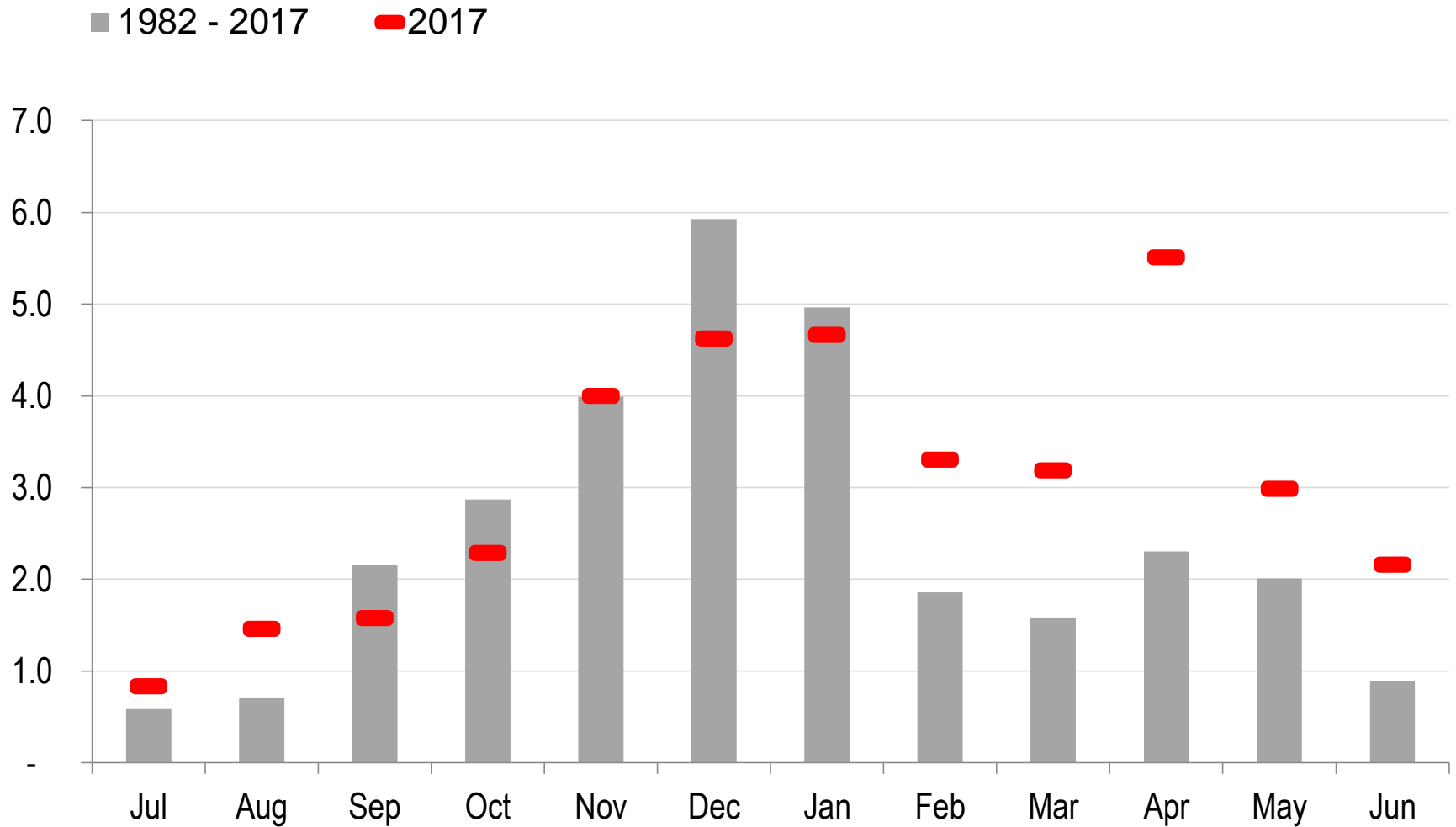


Canberra, ACT

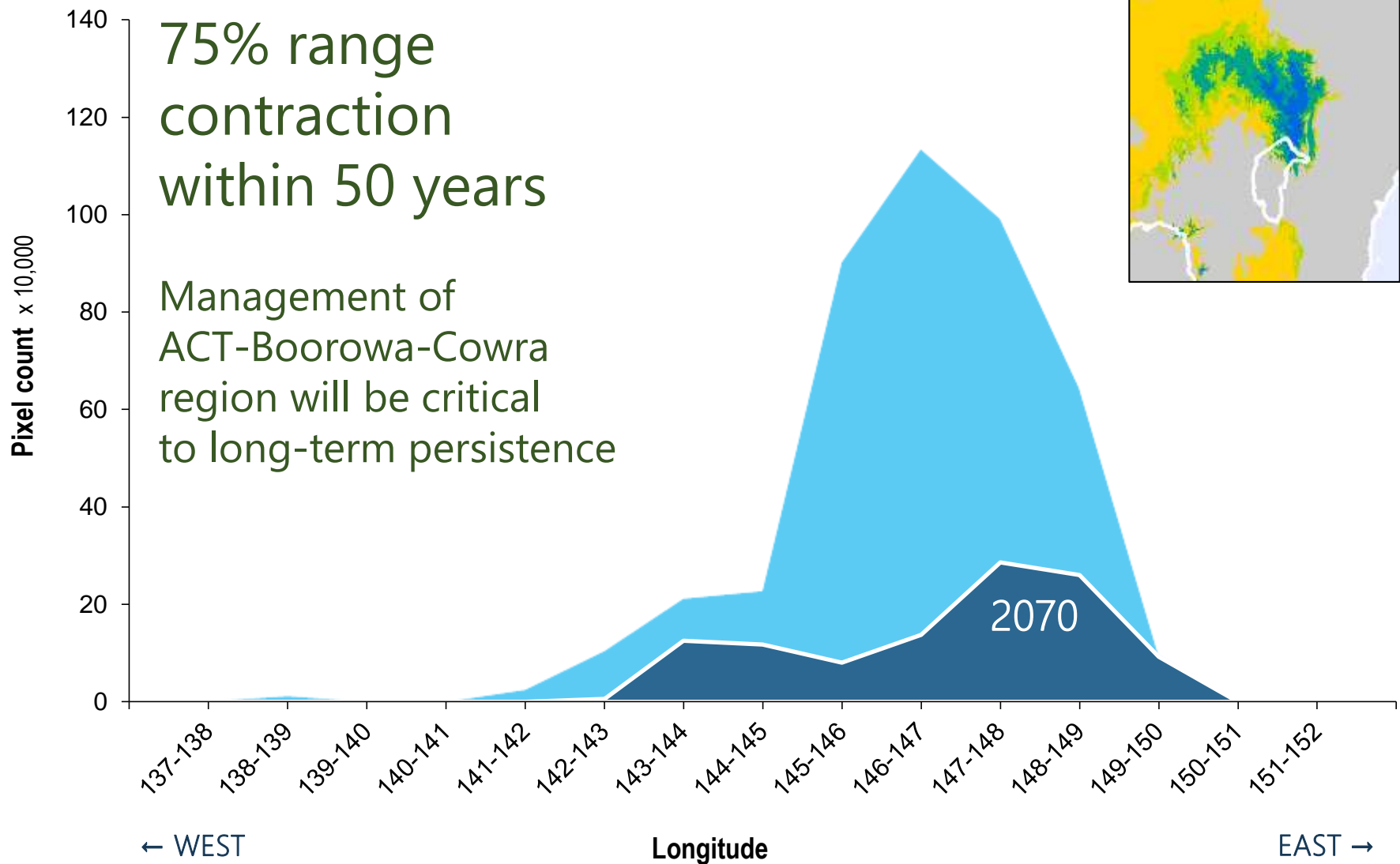
COG data



Recent overwintering in ACT



Implications for the ACT region



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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



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DBRG
Difficult Bird Research Group

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



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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

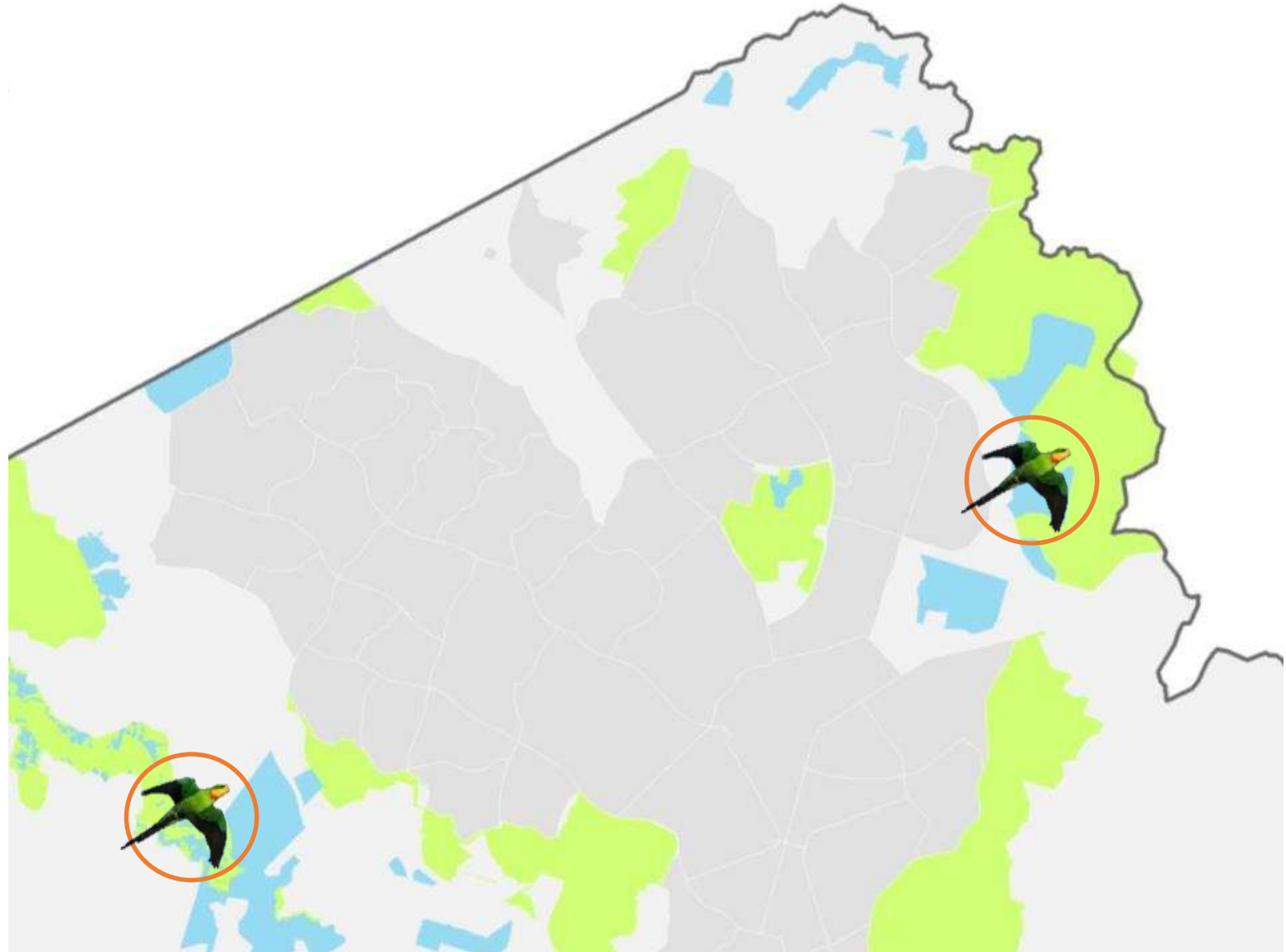
Superbs in the ACT



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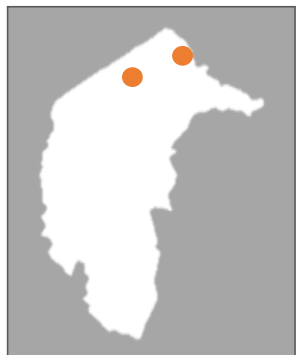


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Government



Legend

- Urban Matrix
- Environmental Offset
- Nature Reserve





Tree surveys



Bird surveys



Active search



Tree access



Confirm nest



Watch nest



Health check & measure



Band nestlings



Track adults

Monitoring 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** = $112.4 \text{ cm} \pm 3.3 \text{ cm}$
95% Range = 106 to 119 cm
- ✓ **Height** = $17.6 \text{ m} \pm 0.5 \text{ m}$
95% Range = 17 to 18 m
- ✓ **Living trees**



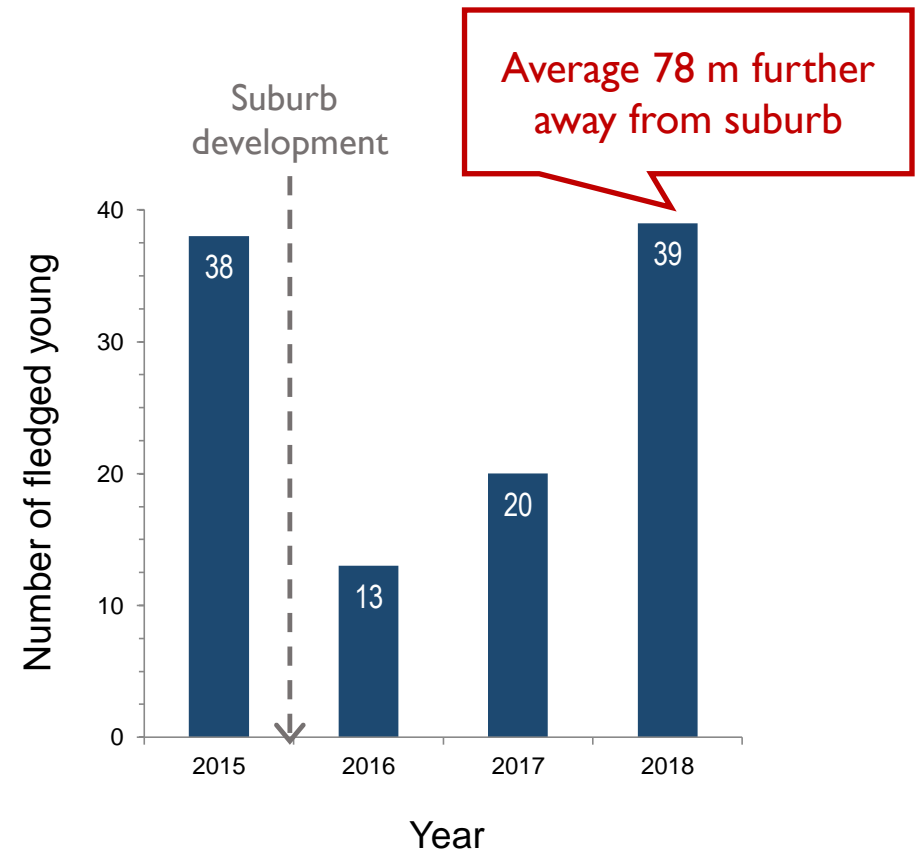
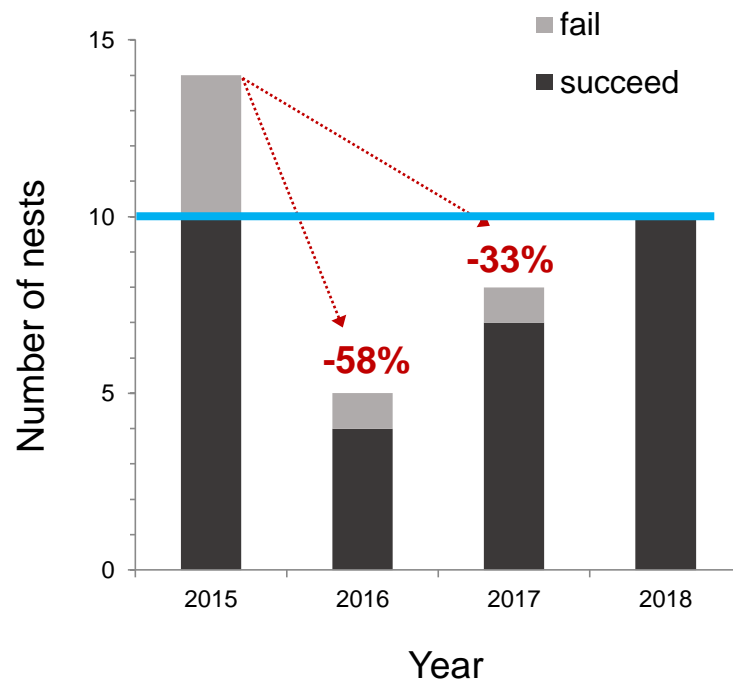
Nesting hollows

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**



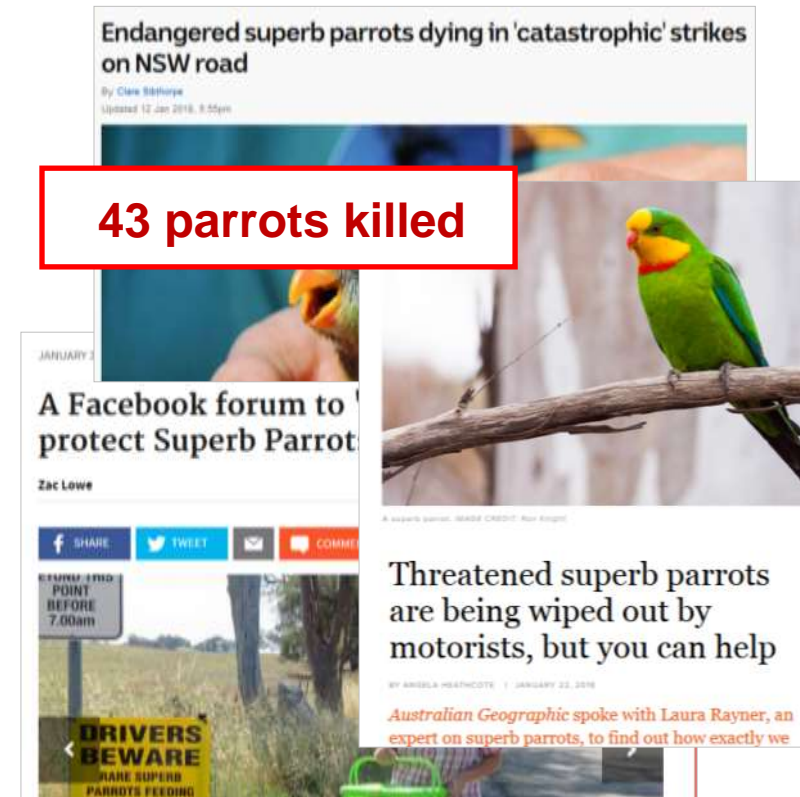
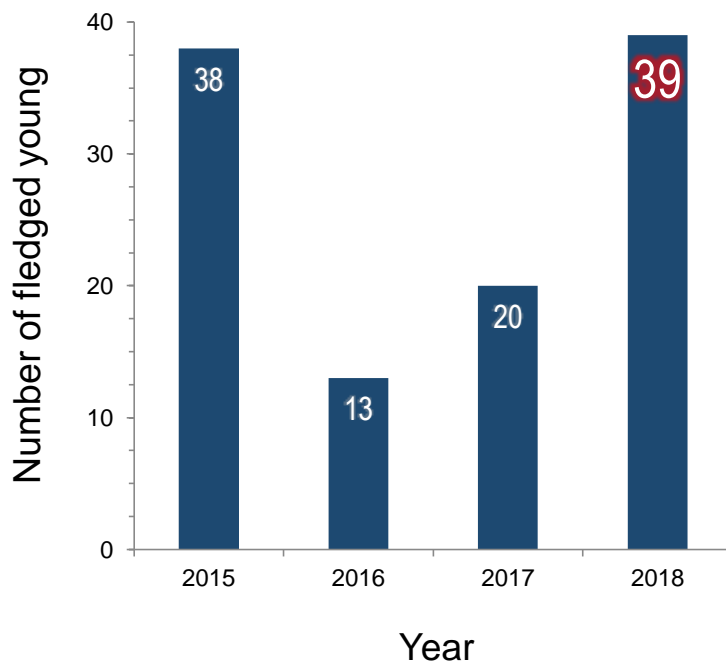
Breeding activity and urban impacts





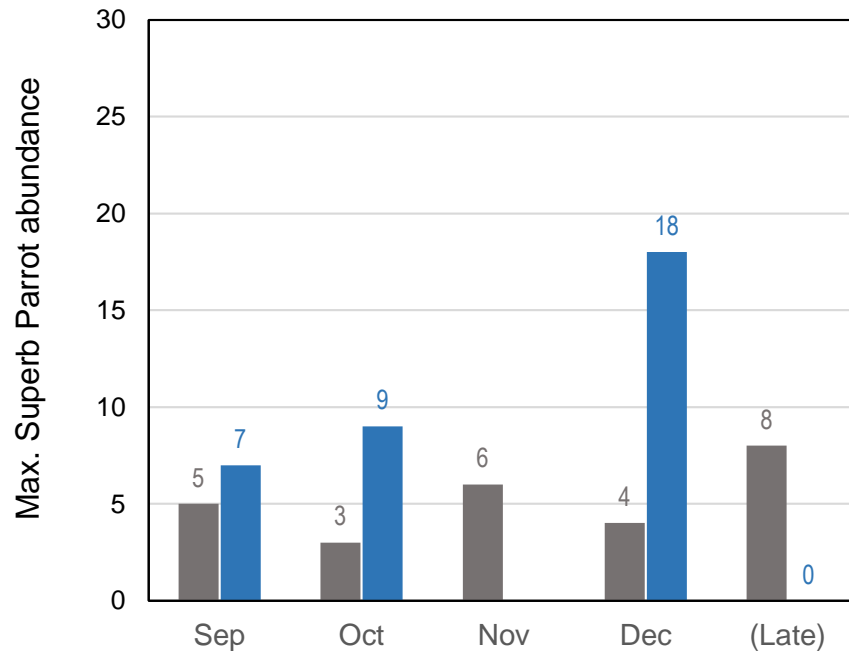


How important is ACT reproductive output?



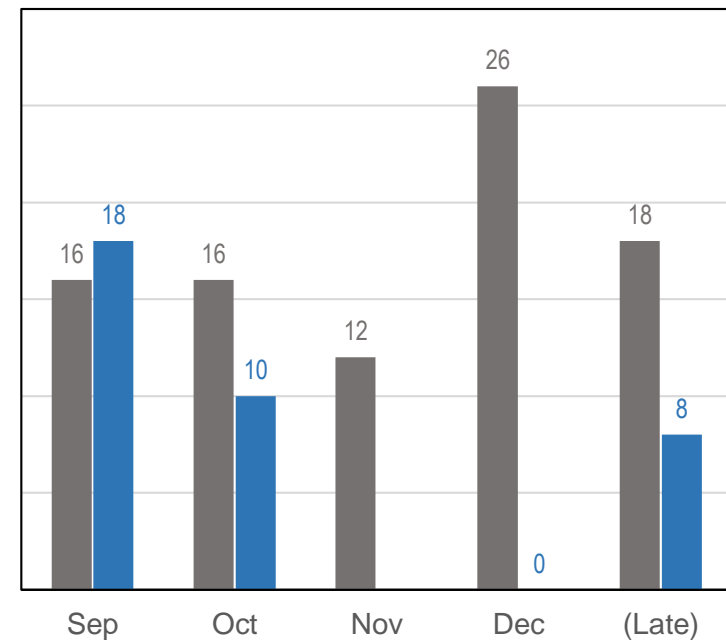
Numbers vs Nests

MFGO Extended Sanctuary (80 ha)



Breeding output:
59 birds

Central Molonglo Valley (300 ha)



Breeding output:
56 birds

Survey period
■ 2017 ■ 2018

Results

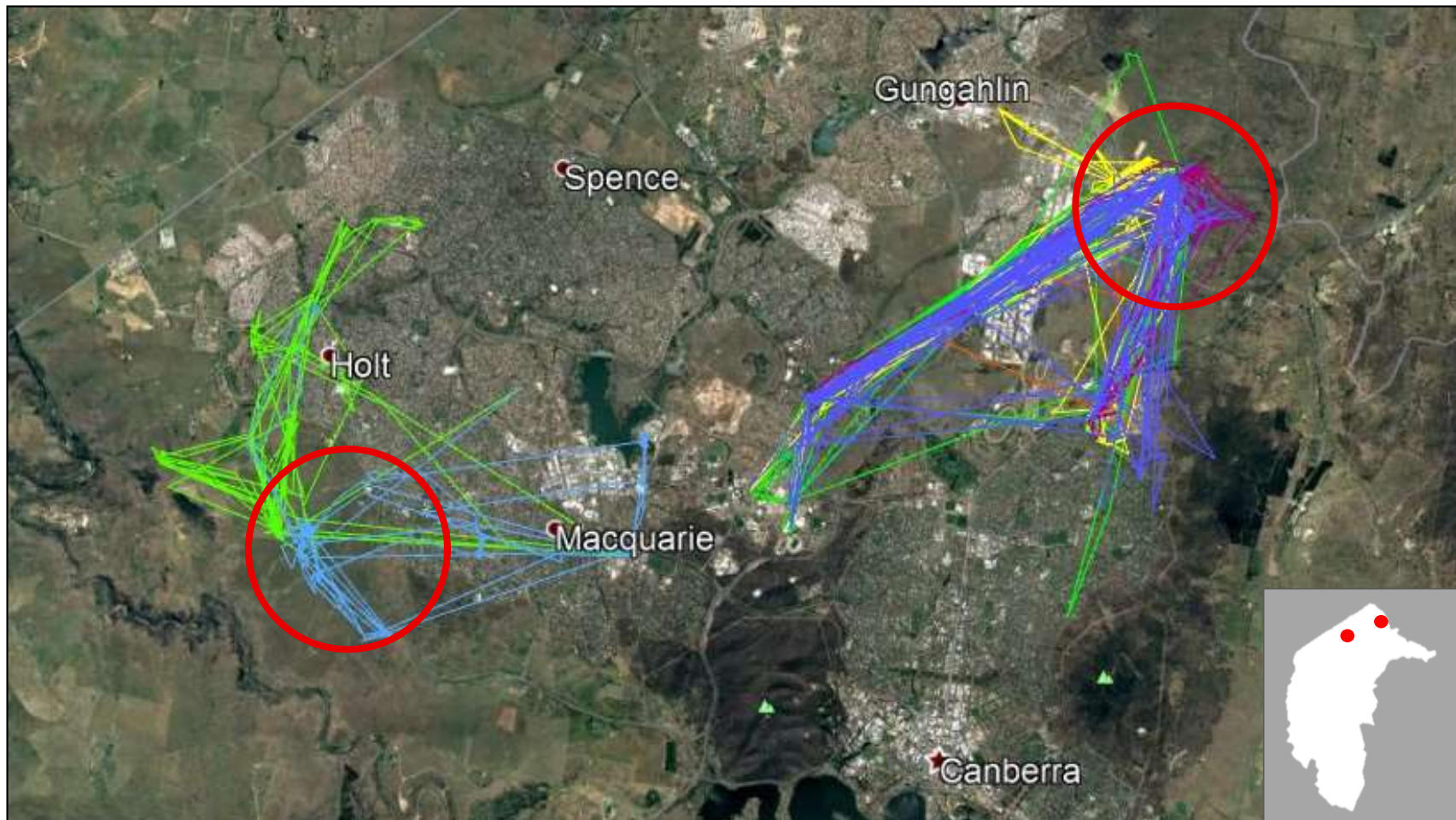


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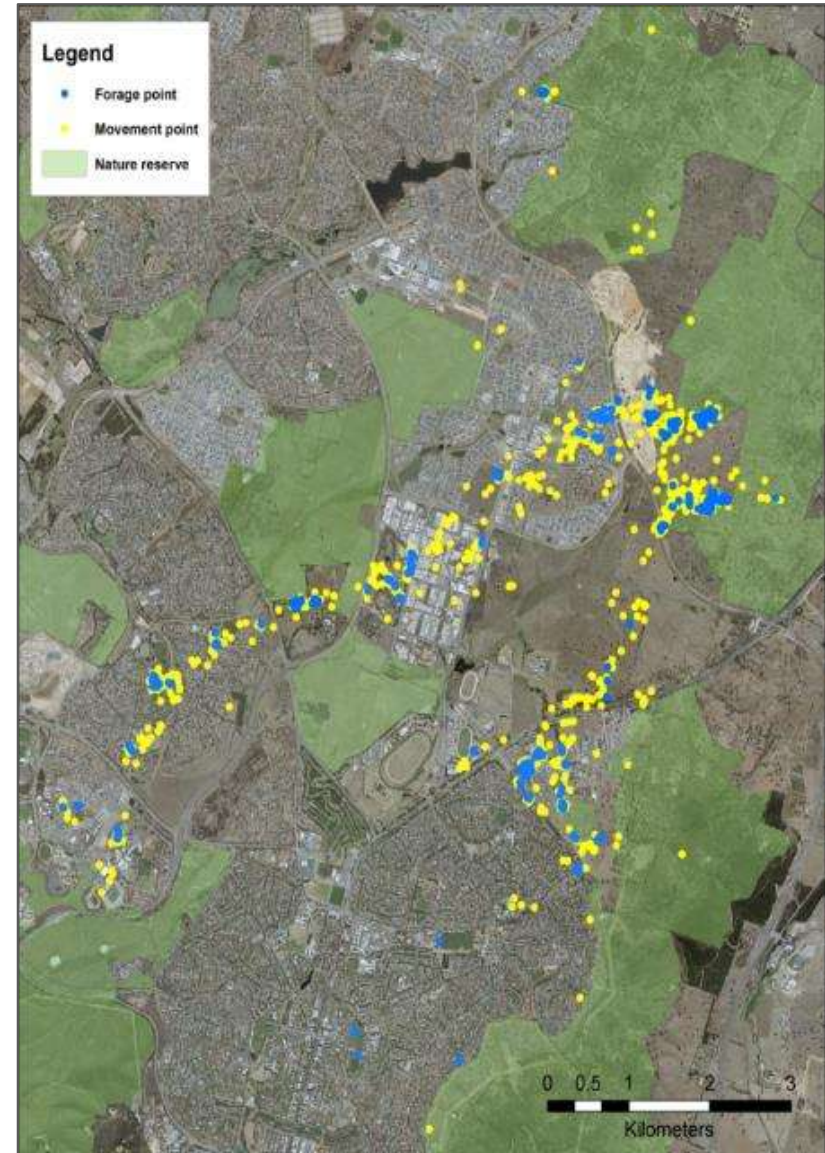
Local movement

Colours are different individuals (n = 8)



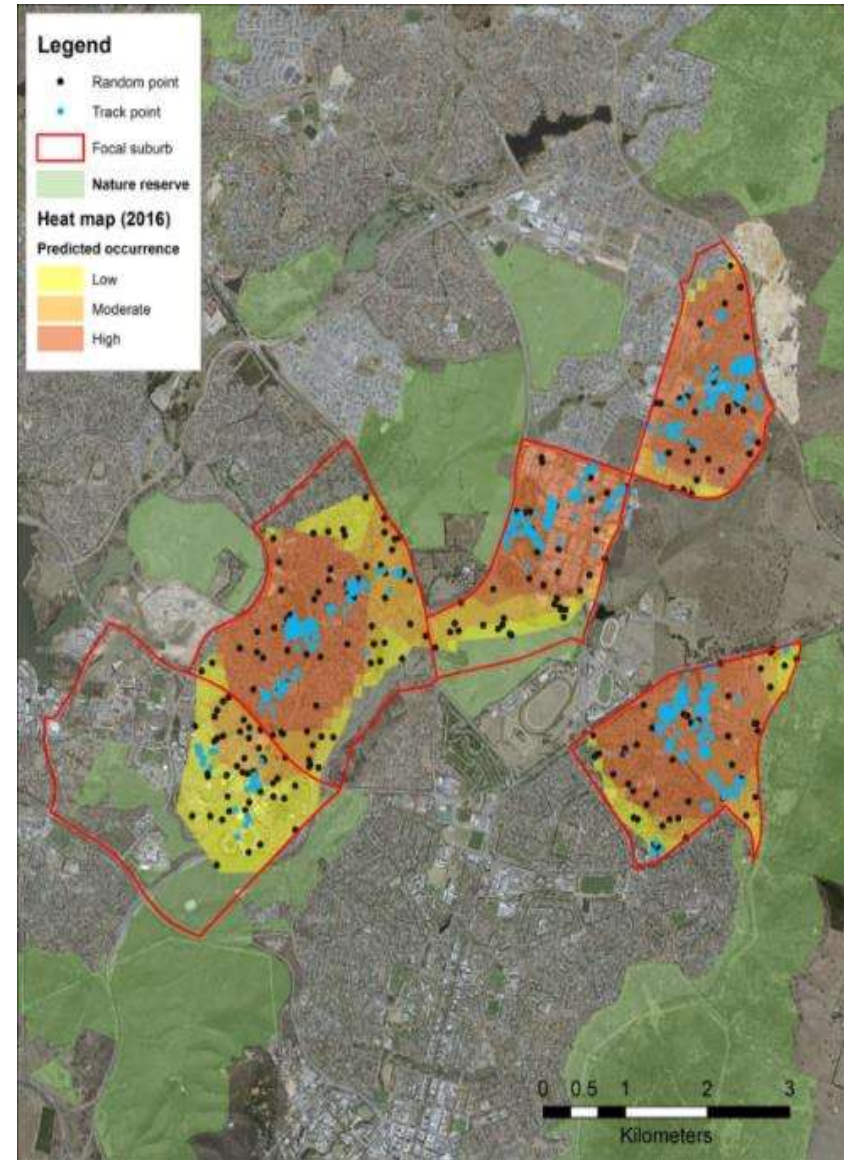
Critical habitat

- ✓ 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



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



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?



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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

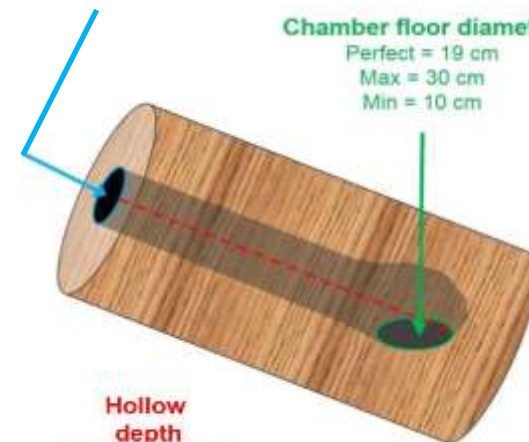
Updated recovery advice

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



**Hollow
entrance
diameter**
Perfect = 11 cm
Max = 14 cm
Min = 8 cm

Chamber floor diameter
Perfect = 19 cm
Max = 30 cm
Min = 10 cm



**Hollow
depth**
Perfect = 130 cm
Good = 80 cm
Max = n/a
Min = 40 cm

You can help!



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Nest competition

Examining visitation rates at known nest hollows

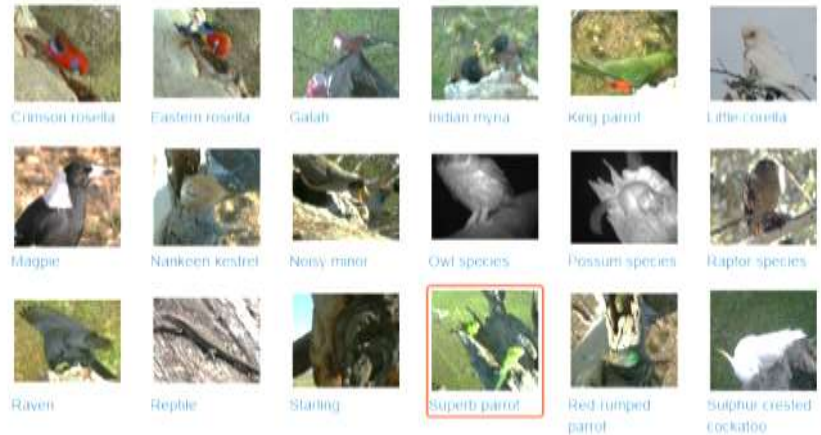
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Steps 1 2 3 4 5 6 7 8 9

Please indicate which species you see in the whole image.

Please see tutorial for help with species identification, and ignore humans



DigiVol: <https://volunteer.ala.org.au/>

Pushing on...



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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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Special thanks:

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



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