



Conserving Australian biodiversity – the past, the present and the challenges for the future

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PRESENTATION INCLUDES SOME VIEWS
AND OPINIONS OF THE AUTHOR. THESE
VIEWS MAY NOT REFLECT THE VIEWS OF
THE CITED AUTHORS OR THE INSTITUTION
REPRESENTED.**

What will I be speaking about?

- A bit about me
- The biodiversity crisis in Australia
- Public support for the environment
- My research on people and nature



A bit about me

- BSc Ecology and Conservation Biology
- PhD Birdwatching tourism and conservation
- Birder, plant nerd, diver
- Multi-sectoral experience
- Postdoctoral researcher – Threatened Species Recovery Hub – University of Qld
- Species Conservation Project Coordinator – WWF-Australia
- Lecturer – Murdoch University, Perth (WA)
- Outreach champion – BirdLife Australia (Qld and WA)

How can I make them LOVE nature like I do???



Credit where credit is due...

Much of the following content draws on the work of colleagues in and across Australia. Some has been recently synthesised in several key references:

Loss of terrestrial biodiversity in Australia: Magnitude, causation, and response

Sarah Legge, Libby Rumpff, Stephen T. Garnett, John C. Z. Woinarski.

Science, 381, 622–631 (2023) 11 August 2023

Biodiversity Concerns Report: 97% of Australians want more action to protect nature

Borg et al. The Biodiversity Council, June, 2023.

Climate of the Nation 2021. Tracking Australia's attitude towards climate change and energy.

Audrey Quicke, The Australian Research Institute.

What's so unique about Australia's biodiversity crisis?

- Very high endemism – 90% herps, 80% mammals and plants.
- Globally iconic species – koala, kangaroos, lyrebirds (the origin of songbirds).
- Wicked, ongoing and synergistic threatening processes despite a high level of social and economic development.



Shameful track record

- Mammals (34 species) = 10% of mammals extant at the time of European colonisation; bird declines in Australia are inverse of the recoveries made in UK and USA bird species (Legge et al. 2023).
- ‘Biodiversity decline score’ – Australia in top 7 worst performing countries with Indonesia, Malaysia, Papua New Guinea, China, India, Australia and the USA (Waldron et al. 2017).
- Climate policy – still approving ‘new’ coal mines.

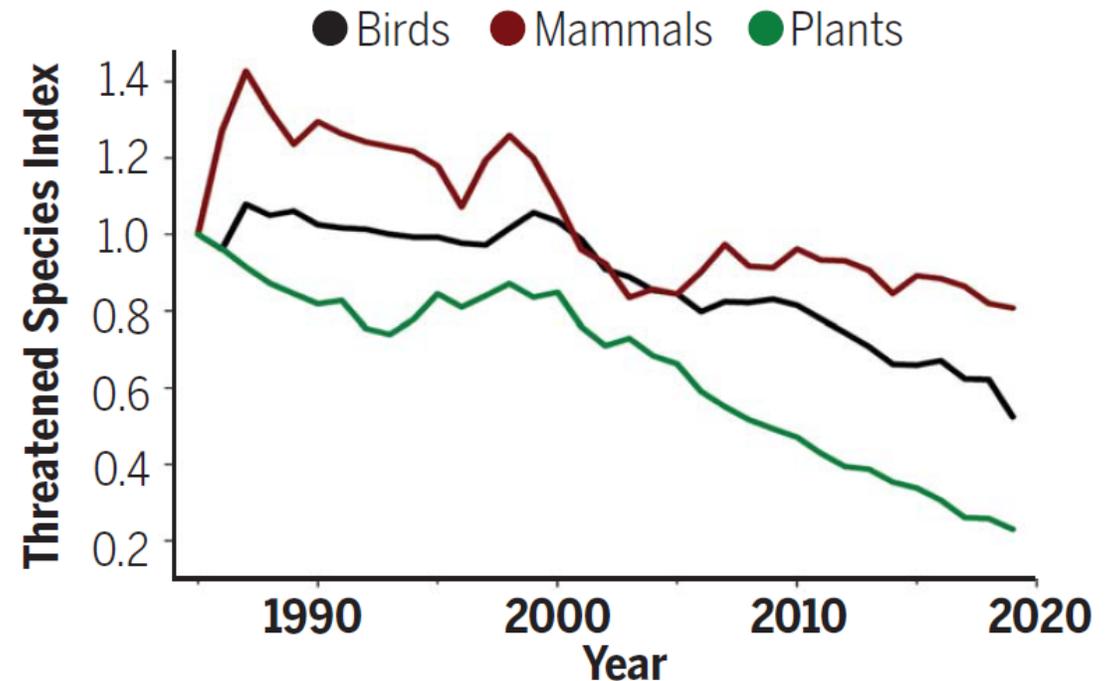
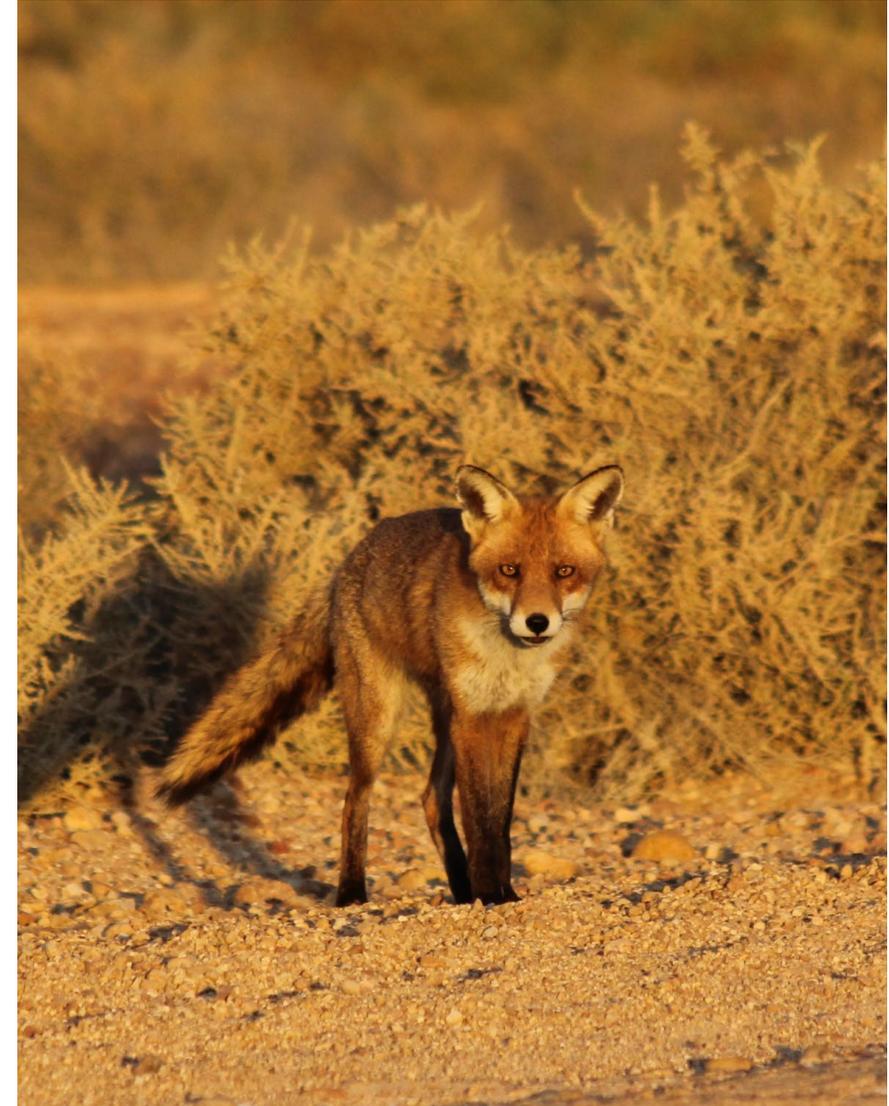


Figure Source: Legge et al. 2023

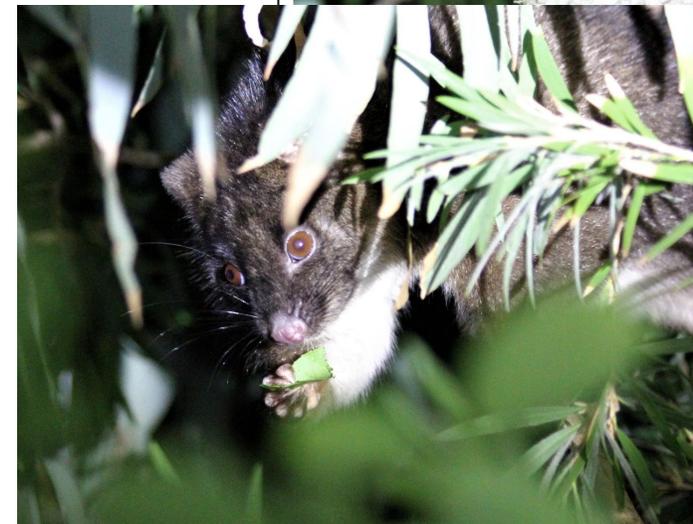
Unique threats on a unique island

- Habitat loss and degradation – agriculture and urban development and native forest logging continues.
- Introduced species (rabbits, cats, foxes) – island effect on steroids.
- Poorly understood relationships between fire and native species at different spatiotemporal scales.
- Public disconnect, inadequate intervention policy and weak legislation feed the crisis.



The social landscape of conservation in Australia

- Historically mandated clearing of habitat 'clear it or lose it'.
- Social stigma attached to environmentalism – cultural and historical drivers.
- People love to hate our native flora and fauna – possums, gum trees, magpies
- Media influence that strives to polarise public perceptions.



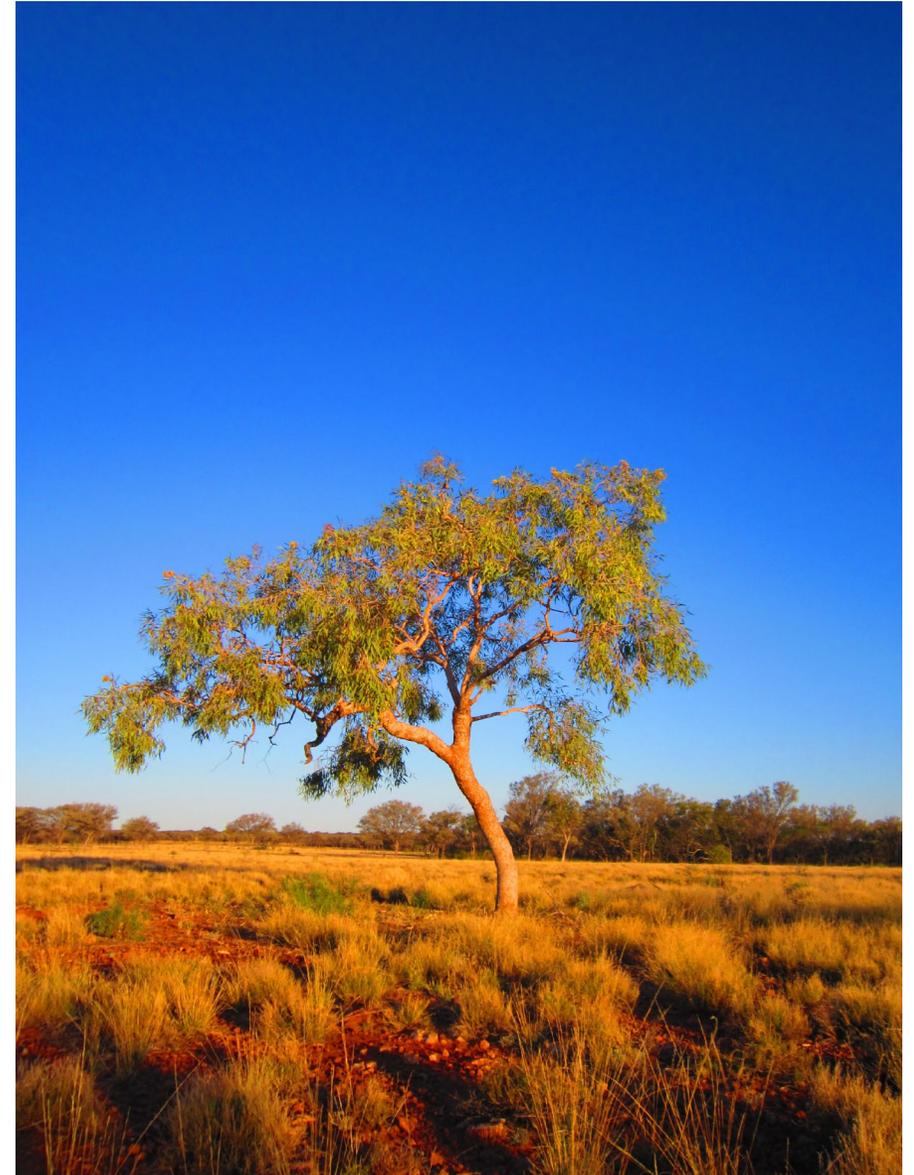
Some personal observations / comparisons

- Protected areas in Australia vs. UK – public, NGO, private land
- Individual action - bird feeding (i.e. gardens for nature)
- Australia hasn't 'lost' enough.....



The politics of nature

- A large percentage of people (52%) appear to place low or conditional importance on conserving nature (Zander et al. 2023).
- It takes the most confronting catastrophes to catalyse empathy and investment – 2019/20 bushfires.
- Politicians taking this as permission to continue – business as usual.



Climate change vs. biodiversity loss

82%

of Australians are concerned climate change will result in more bushfires, more droughts and flooding, and animal and plant species extinction

Climate of the Nation 2021
(n = 2,626)

82%

of Australians support a phase-out of coal fired power stations

75%

of Australians are concerned about climate change

A survey of Australians (n = 4000) seeking to build a picture of biodiversity awareness and concern found:

~ 65% are aware of the uniqueness of Australian plants and animals...

~ 50% are aware of the extent of biodiversity Loss (including that 54% having knowledge that much of this has been lost since European colonisation and 43% aware that Australia has the highest rate of modern mammalian extinctions ~67% indicated they have a moderate to strong relationship to nature

How concerned are Australians about biodiversity issues?

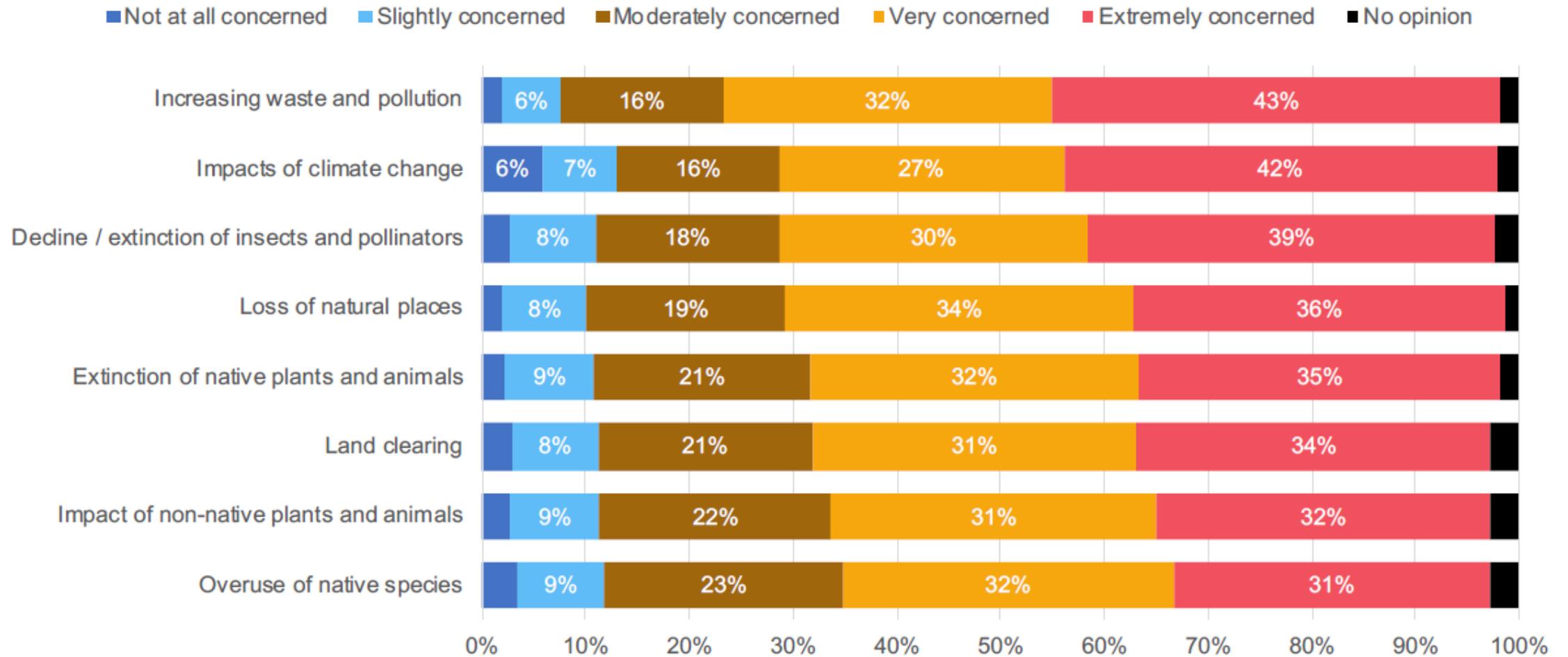


Figure credit: Biodiversity Concerns Report Borg et al. 2023

What's needed to redress the biodiversity crisis?

'Australia's next government must tackle our collapsing ecosystems and extinction crisis'

Euan Ritchie, Aeysha Tulloch & Megan Laws.

UNSW Newsroom Article

1. Strengthen, enforce and align policy and laws
2. Invest in the environment
3. Tackle the threats
4. Look to Indigenous leadership to heal Country
5. Work with communities and across boundaries



Promising pathways to success

- Managing invasive species
- Collaboration with First Nations Australians and other private landholders
- Broadscale community involvement in biodiversity monitoring



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Doing my bit – current research themes and projects



Predators in the Australian landscape

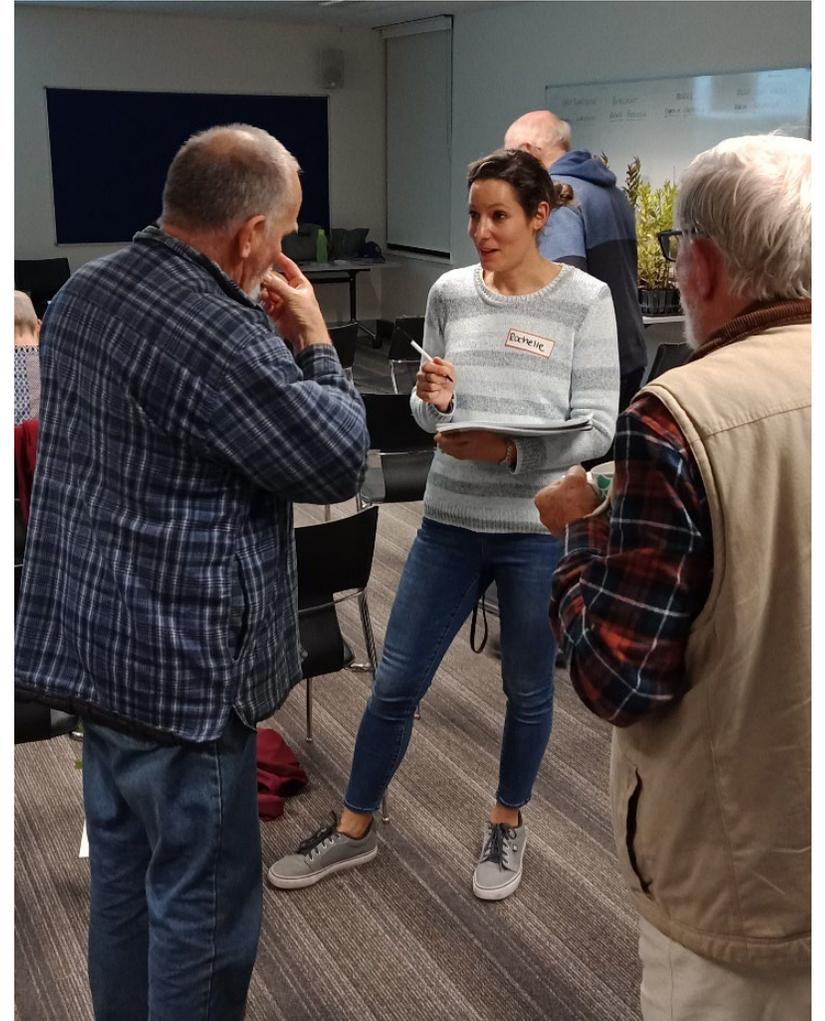
- Cats on Farms – managing the population of roaming cats in semi-urban / regional landscapes.
- Dingoes – managing human-wildlife conflict.



Doing my bit – current research themes and projects

Community involvement in biodiversity monitoring

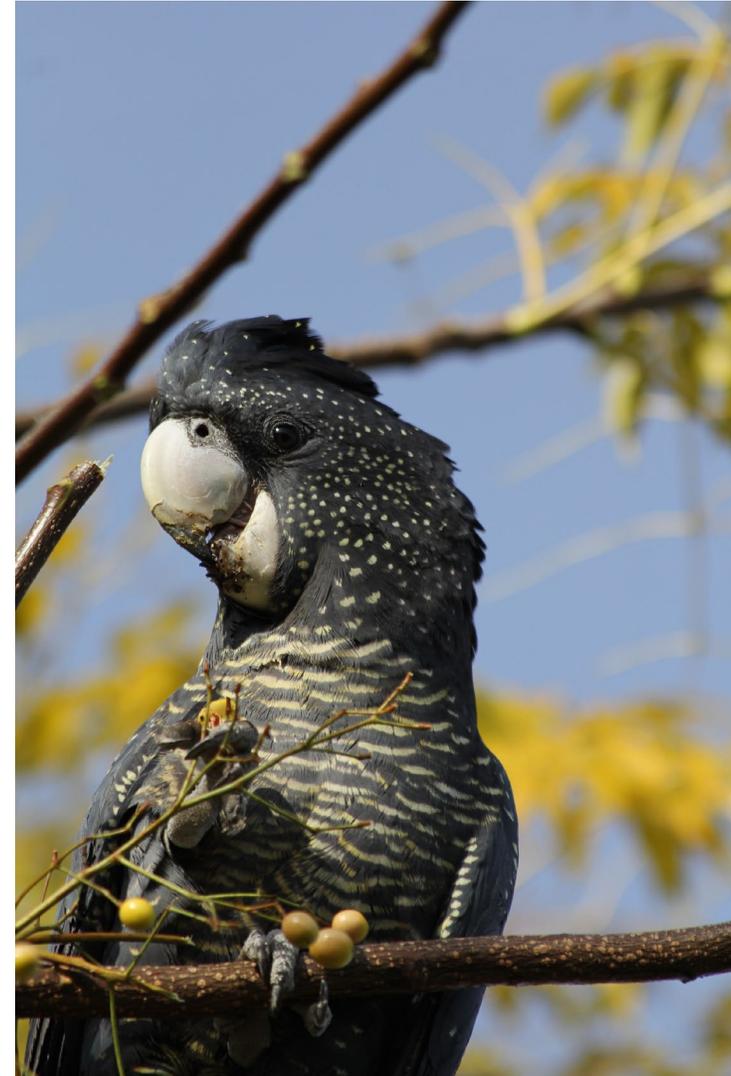
- Western ringtail possum citizen science and urban ecology.



Doing my bit – current research themes and projects

Urban ecology

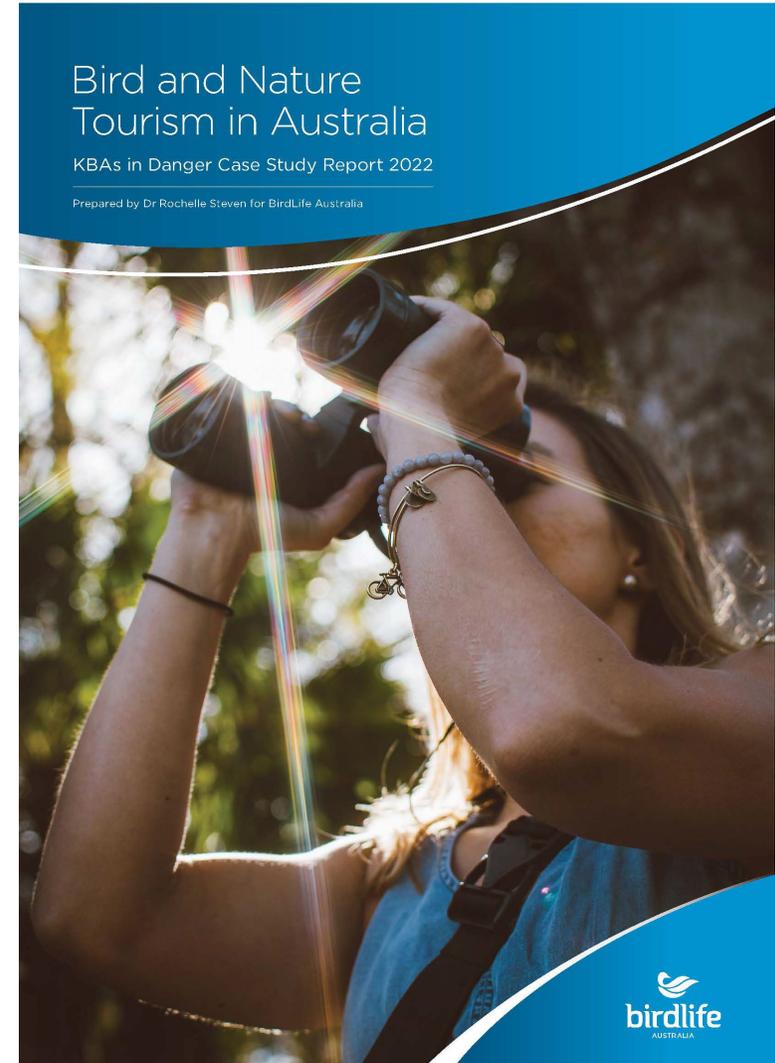
- Bird, social and garden attributes that predict garden occupancy in suburban Perth.



Doing my bit – current research themes and projects

Campaigning and lobbying through research.

- Working with BirdLife Australia to provide compelling evidence and arguments for sustainable economic development.
- KBAs in Danger April 2022
- Lake Eyre Basin – Due out September 2023



Everyday I aim to be that crazy nature lover – sharing what I love!



My students
My friends and family
Strangers
Outreach events





Thank you

PLEASE KEEP IN TOUCH 😊

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