Image: Chris Tzaros

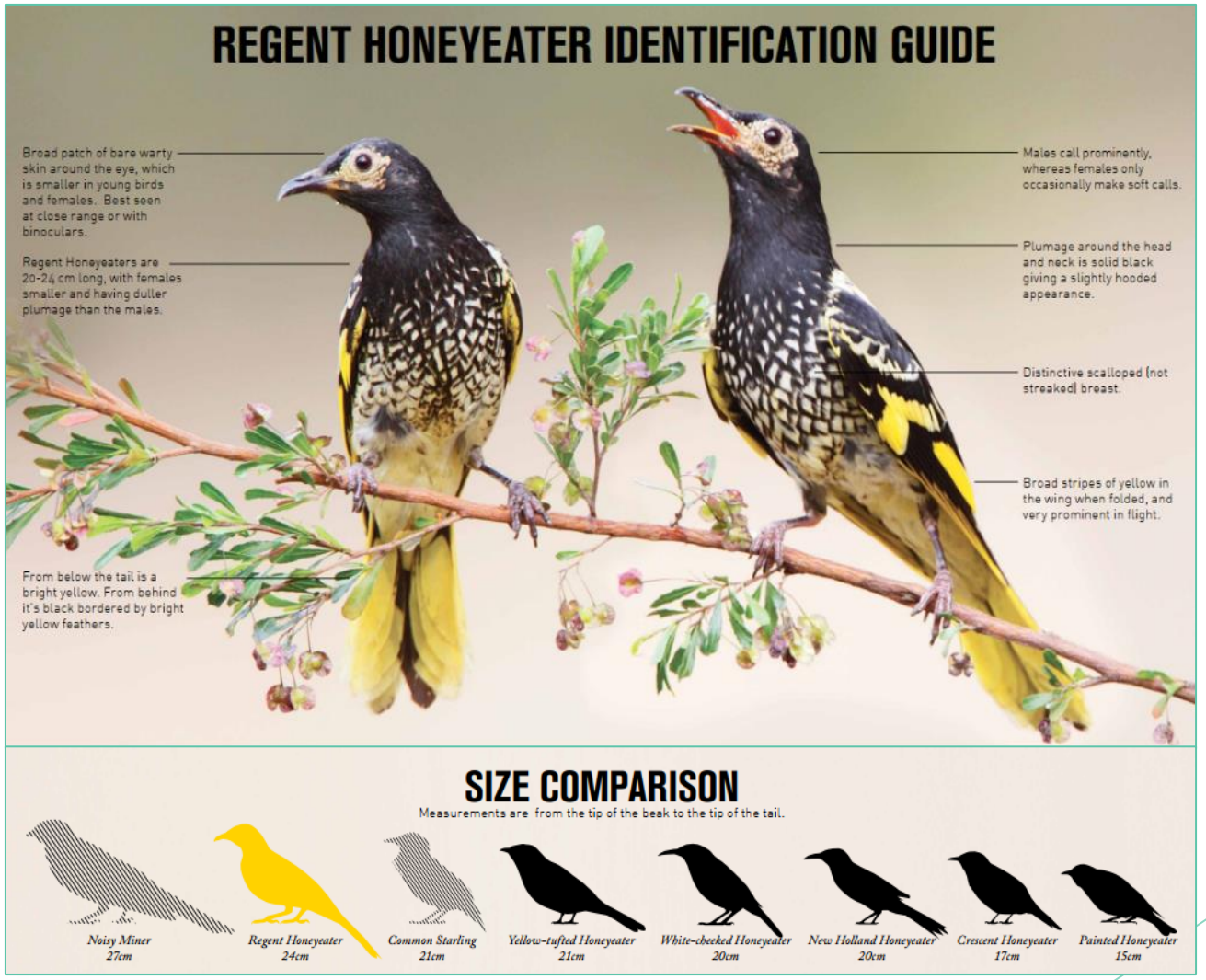
Swift Parrots & Regent Honeyeaters

Monitoring two spectacular species on the brink of extinction

birdlife AUSTRALIA

Image: Dean Ingwersen

Field identification

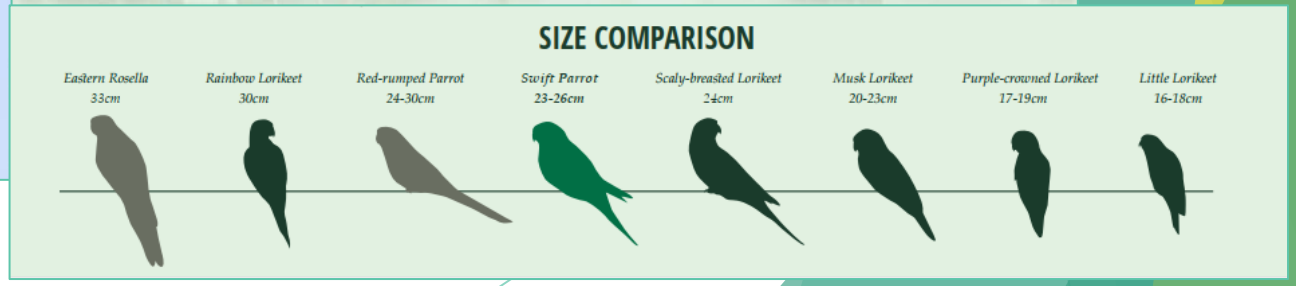


birdlife AUSTRALIA

standing together to stop extinctions

Field identification

Image: Chris Farrell

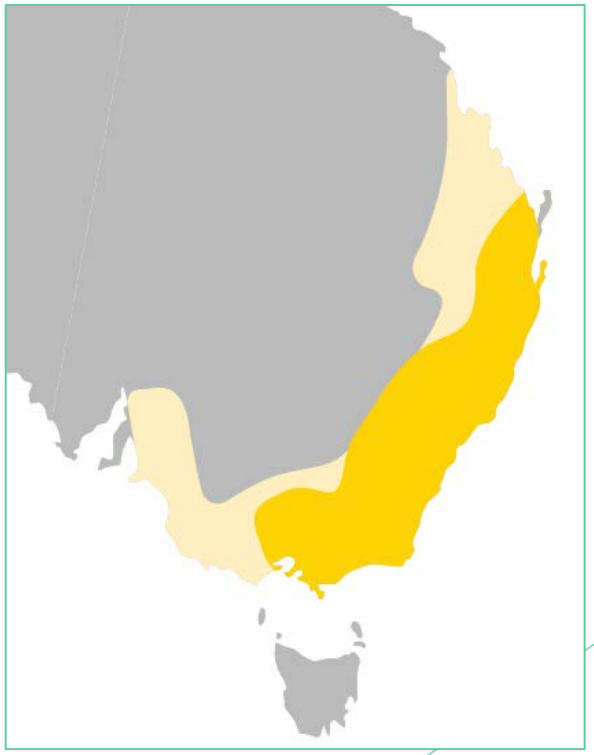


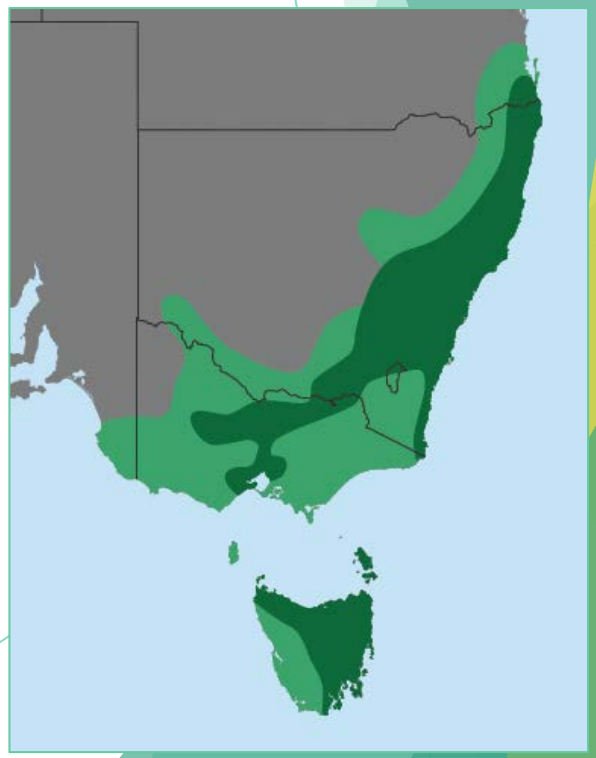
birdlife AUSTRALIA

standing together to stop extinctions

Shared similarities

- Distribution and habitat
- Highly mobile – Migratory / Nomadic movements
- Foraging requirements
- Both listed federally as **Critically Endangered.**



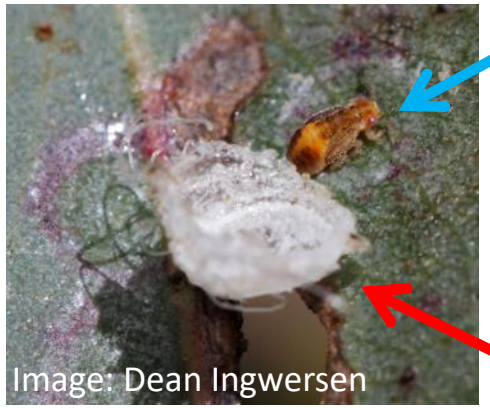


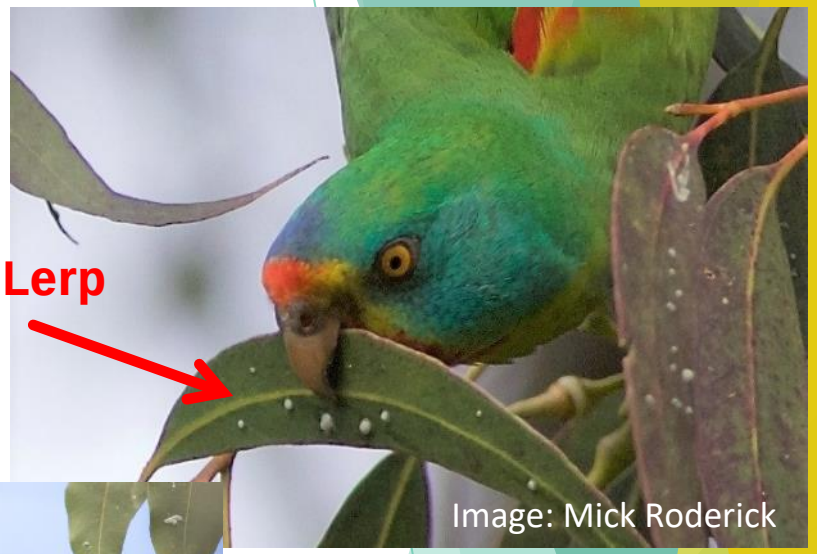
birdlife AUSTRALIA

standing together to stop extinctions

Shared similarities

- Distribution and habitat
- Highly mobile – Migratory / Nomadic movements
- Foraging requirements
- Both listed as **Critically Endangered.**





2022 captive-released Regent Honeyeater 'lerping'

birdlife AUSTRALIA

standing together to stop extinctions

Swift Parrot status & trajectory

2011 population estimate

Approximately 2000 birds in the wild

2020 population estimate

Approximately 750 birds in the wild

Predicted trends

Extinct as soon as 2031

Image: David Jenkins

RED LIST

CRITICALLY ENDANGERED

CR

birdlife AUSTRALIA

standing together to stop extinctions

Regent Honeyeater status & trajectory

Late-80's population estimate

Approximately 1500 birds in the wild

2010 population estimate

350-400 mature birds in the wild

2022 projected trend without intervention

Extinct within 20 years

RED LIST

CRITICALLY ENDANGERED

CR

birdlife AUSTRALIA

standing together to stop extinctions

Threats

- A species facing a litany of cumulative threats. These are:
  - **Habitat destruction** – historical losses, commercial logging, agriculture, urban development, illegal firewood harvesting;
  - **Habitat degradation** – fires, incompatible land management;
  - **Competition and habitat exclusion** – Noisy Miners and other territorial nectar-sippers;
  - **Nest predation** – Birds and mammals (Swifties - introduced Krefft's (Sugar) Glider);
  - **Climate change** – altered flowering patterns, declining habitat condition, fire regimes;
  - **Collision mortality** – fences, windows and vehicles
- **All threats are pushing the species towards perhaps the most feared threat = <u>Small population size and poor genetic diversity.</u>**

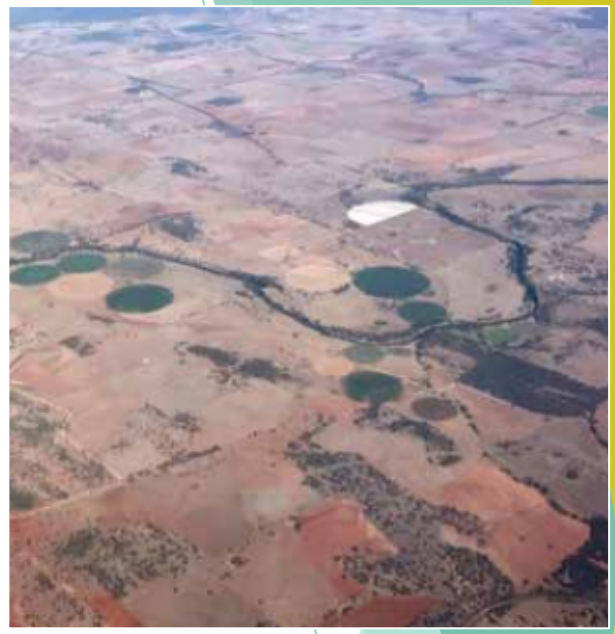


Image: Daniel Muscat

birdlife AUSTRALIA

standing together to stop extinctions

What is being done?

Habitat management

- Noisy Miner management
- Mistletoe inoculation
- Nest protection measures
- Trialling glider mitigation methods

Community engagement

- Volunteer-driven monitoring and habitat restoration.
- Workshops, school visits and other events, printed resources.

Field research and monitoring

- Captive breeding and releasing of Regent Honeyeaters
- Long-term breeding range research by ANU's Difficult Bird Research Group
- Long-term mainland monitoring by volunteers

Habitat protection

- Private land conservation/covenanting
- National Parks estate and other public reserves


Image: Dejan Stojanovic


Image: Chris Tzaros

birdlife AUSTRALIA

standing together to stop extinctions

Why conserve Swifties and Regents?

Pollination


Image: Chris Tzaros


Image: Tim Paasila

Flagship species


Image: Chris Tzaros

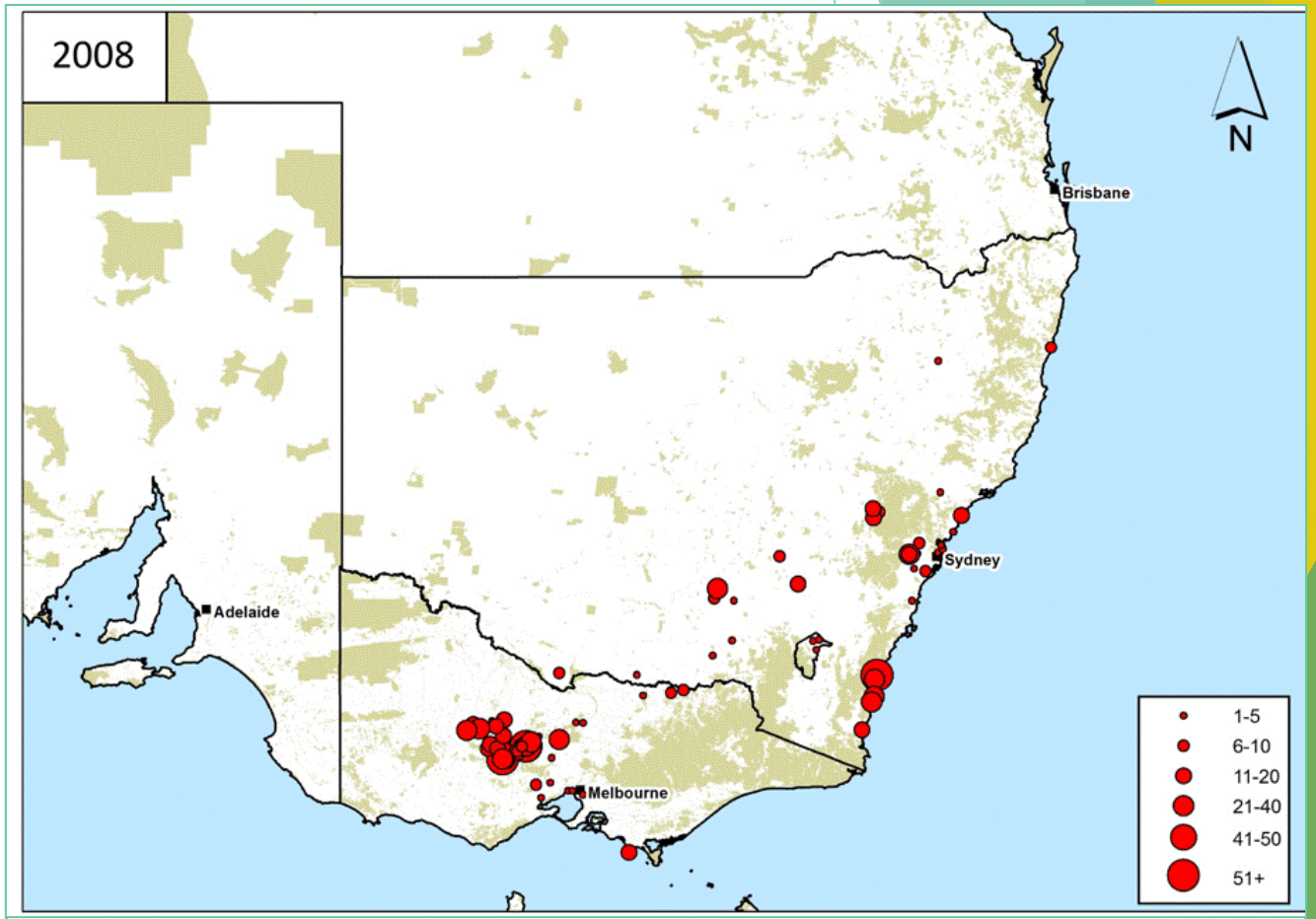

Image: Chris Tzaros

birdlife AUSTRALIA

standing together to stop extinctions

Monitoring: Biannual Swifty & Regent counts

- 25+ years of monitoring two critically endangered species across mainland SE Australia – **Swift Parrots & Regent Honeyeaters.**
- Traditionally, search methods have been unstructured and a 'roaming' type approach.
- The aims were (and continue to be) to cover as much habitat as possible across the mainland.
- Invaluable data collection
- Providing valuable insight into movements over space and time



Animation: Time-lapse of Swift Parrot records across mainland range from 2008-2019.

birdlife AUSTRALIA

standing together to stop extinctions

Knowledge gaps with traditional approach

- Scale of survey effort not definitively known
- Zero counts typically not captured – these are incredibly valuable!
- Habitat conditions not consistently recorded
- Lesser known habitats surveyed less frequently – or not at all


Image: Dean Ingwersen


Image: Chris Tzaros

birdlife AUSTRALIA

standing together to stop extinctions

Monitoring: NRHMP in the North East

- National Regent Honeyeater Monitoring Program (NRHMP) established in 2015 between ANU and BirdLife Australia.
- Addressing knowledge gaps and trying to improve breeding detection.
- Surveys conducted privately by BirdLife staff on public land.
- Biannual monitoring periods in Spring and early Summer.
- 5-minute/50-metre radius method & flowering assessment (with call playback).


Image: Dean Ingwersen


Image: Chris Tzaros

Survey effort summary:

- 1214 surveys completed between 2016-2022 (across 102 sites).

birdlife AUSTRALIA

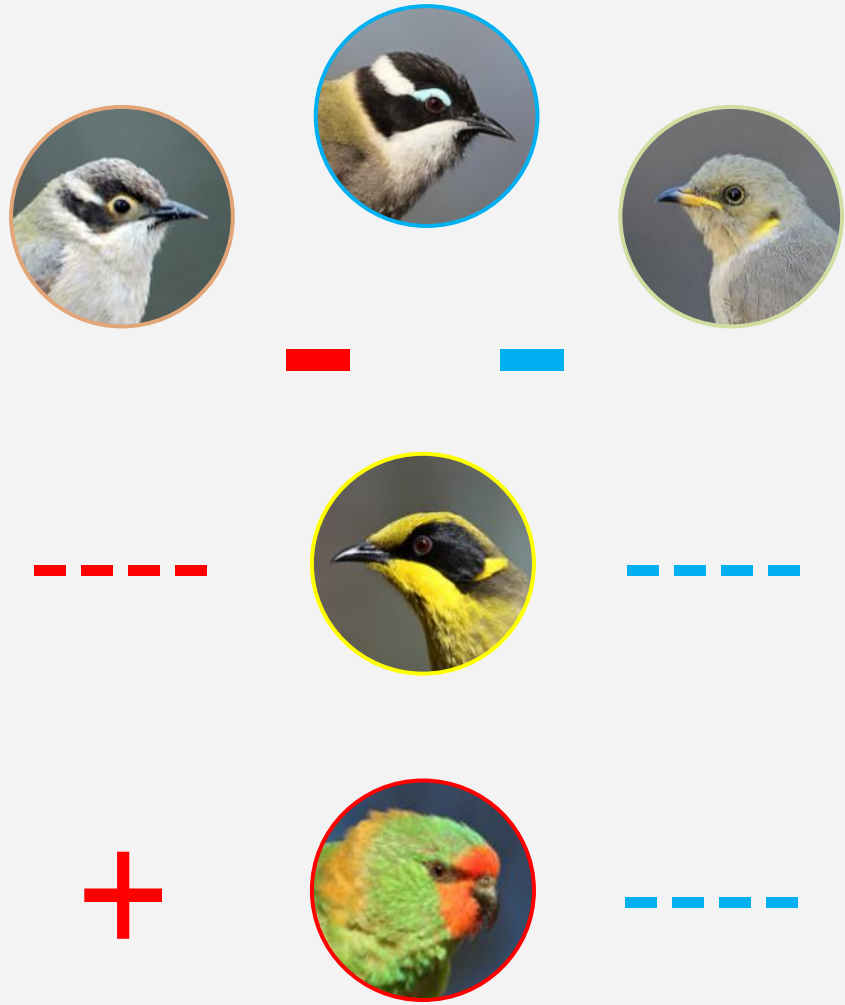
standing together to stop extinctions

NRHMP results in the North East

- Three rainfall classes:
  - Average years (2016-18);
  - Below average ‘Drought’ years (2019-20); and
  - Above average ‘Wet’ years (2021-22)
- Generally, woodland birds declined in drought and increased in wet years. Similar trend among small resident WB’s (<63g).
- 16 threatened species were recorded, showing similar responses.
- Interestingly, 12 WB species increased in abundance during drought conditions*.
- 12 species also responded positively to wet conditions.
- Just one pair of Regents detected during this period in the North East.
- Five nectar sipper species provided insights into potential responses by Regents to climatic variability.

- = Negative response
+ = Positive response
---- = Neutral response

Red = Drought; Blue = Wet



birdlife AUSTRALIA

standing together to stop extinctions

NRHMP benefits in the North East and beyond

- **Providing important context to the species wider range from a population perspective.**
- **Aimed at detecting breeding attempts to allow for targeted management.**
- **Gathering critical habitat productivity/condition data**
- **Insights into woodland bird community responses**
- **Informs future monitoring needs (2022/23 surveys)**

Image: Dean Ingwersen

Mistletoes could moderate drought impacts on birds, but are themselves susceptible to drought-induced dieback

Ross Crates[1], David M. Watson[3], Gregory F. Albery[4], Timothée Bonnet[2], Liam Murphy[1], Laura Rayner[1], Dejan Stojanovic[1], Chris Timewell[5], Beau Meney[5], Mick Roderick[5], Dean Ingwersen[5] and Robert Heinsohn[1]

[1]Fenner School of Environment and Society, and [2]Research School of Biology, Australian National University, Linnaeus Way, Acton, Canberra 2601, Australia
[3]School of Agricultural, Environmental and Veterinary Sciences, Charles Sturt University, Albury, New South Wales, Australia
[4]Department of Biology, Georgetown University, Washington, DC, USA
[5]BirdLife Australia, Carlton, Melbourne, Australia

birdlife AUSTRALIA

standing together to stop extinctions

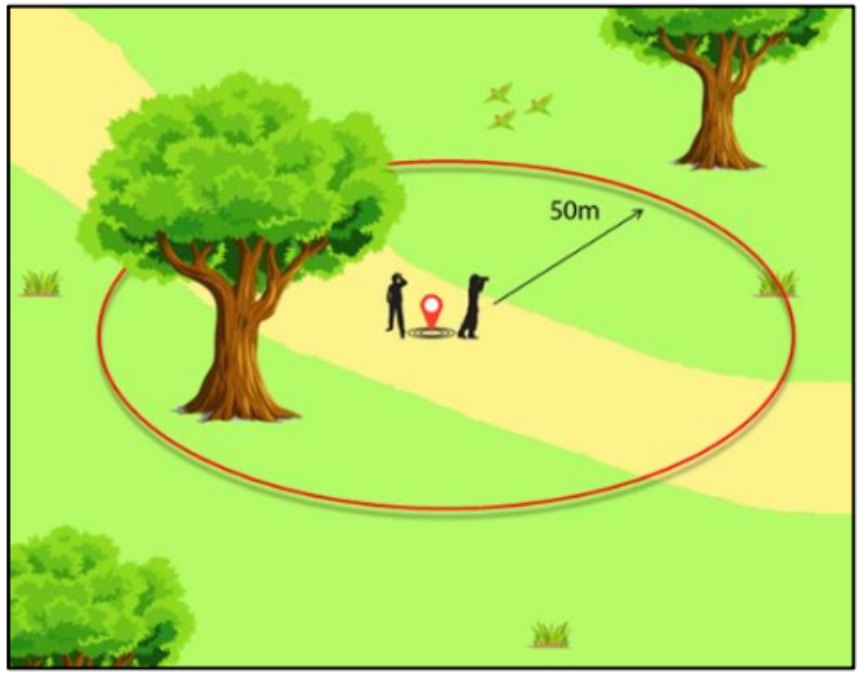
Swift Parrot Search – A revised approach

Bird survey:

- Record counts and behaviour of Swift Parrots strictly within both a 5-minute period and the circular, 50-metre radius;
- If possible – also record counts of all other occurring woodland birds using this method.

Habitat assessment (within the 50m radius, no time limit):

- Estimate the flowering intensity of eucalypt and mistletoe species present (plant species options are pre-filled based on what has been identified to occur at each unique site);
- The presence of lerp;
- The status of Golden Wattle;
- The presence of available freshwater.



Currently 1,995 sites available on public land across mainland SE Australia.

Designed to answer pressing questions and complement existing methods!

birdlife AUSTRALIA

standing together to stop extinctions

Aims of Swift Parrot Search

- Strengthen overall monitoring
- Deepen our understanding around what influences the availability of key food resources such as eucalypt blossom.
- Identify the specific drivers causing a shift in the way Swift Parrots use mainland habitats.
- Determine what the precursors are to optimal foraging conditions and increase our capacity to predict these events ahead of time.
- Overall - allowing our conservation actions to become more targeted.
- Flow-on benefits for Regents Honeyeaters and other species.


Image: Chris Tzaros

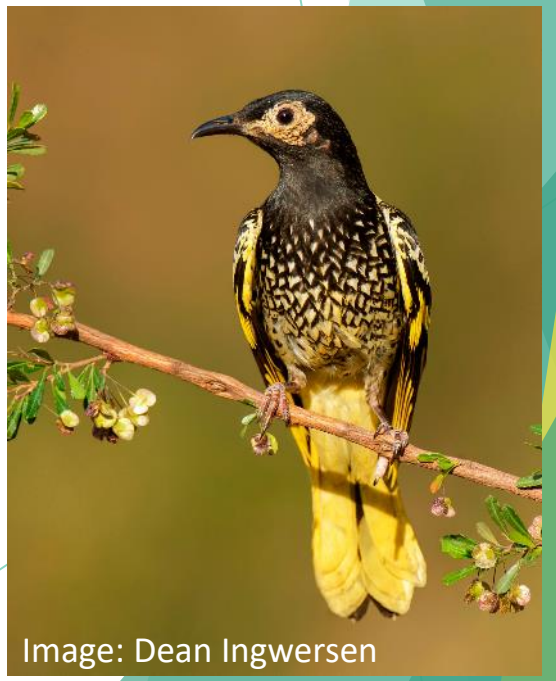


Image: Dean Ingwersen

birdlife AUSTRALIA

standing together to stop extinctions

Regional coordinators – An important link

- Provide local expertise and assist in promoting local data collection.
- Ensuring that as many sites as possible are surveyed.
- Personalised engagement and connection among local community.
- Giving back a sense of regional ownership in bird monitoring and conservation.

Registrations via the SPS webpage are essential!


Image: Chris Tzaros


Image: Philip Dubbin

birdlife AUSTRALIA

standing together to stop extinctions

2021 results from the inaugural year

- 3,344 surveys completed across the first two years.

  - Round 1 = 57% surveys; Round 2 = 30% surveys

- Swift Parrots detected during 100 of these surveys (2.9%)

  (VIC = 87; ACT = 4; NSW = 9; QLD = 0)

- >190 bird species recorded to date

88% of surveys were accompanied by a flowering assessment!


Image: Chris Tzaros


Image: Chris Tzaros

birdlife AUSTRALIA

standing together to stop extinctions

Sites in the North Central CMA region (& surrounds)

- Boweya (7 sites)
- Chiltern (50 sites)
- Warby-Ovens National Park (18 sites)
- West Wodonga (6 sites)
- Yackandandah (4 sites)

Total of 85 sites

NSW Riverina sites – 26 sites

- Bethungra (5 sites)
- Kapooka (7 sites)
- Kyeamba (4 sites)
- Livingstone National Park (5 sites)
- Tarcutta (5 sites)

NSW Murray sites – 20 sites

- Mulwala (5 sites)
- Talmalmo (9 sites)
- Thurgoona (6 sites)

Image: Chris Tzaros

birdlife AUSTRALIA

standing together to stop extinctions

2023 survey dates and links

Round 1: Sat 22 April to Sun 4 June

Round 2: Sat 15 July to Sun 27 August

Registrations via the SPS webpage are essential!

Birdata
https://birdata.birdlife.org.au/

Swift Parrot Search
https://birdlife.org.au/events/swift-parrot-search/

Email us:
swiftparrot@birdlife.org.au

birdlife AUSTRALIA

standing together to stop extinctions