

Managing, Conserving & Normalising



FLYING- FOXES

Matthew Mo &
Libby Timmiss





We acknowledge the **Birpai people**, the Traditional Custodians of the land on which we gather today, and pay our respects to their Elders past and present.

We also acknowledge the Traditional Owners of the multiple lands that we work on, recognising that the boundaries of NSW do not define traditional boundaries.

We extend that respect to all Aboriginal and Torres Strait Islander peoples here today.

Photo: Shane Ruming

Aboriginal Languages and Nations in NSW & ACT map: produced by Reconciliation NSW for a general reading audience and it not definitive. The information on which the map is based is contested and may not be agreed to by some traditional custodians. The borders between groups are purposefully represented as slightly blurred. They do not claim to be exact.

Monitoring flying-foxes in NSW

- **Ongoing participation in the National Monitoring Program**
 - Co-ordinating ~150 counters
 - Collating data for population estimates
- **Review of current counters**
- **Provided an information & training session for Hunter-Central Coast stakeholders**
- **Regional visits**



Photos: Matthew Mo

Nov 2022:

- ~184,071 flying-foxes counted in NSW
- 133 camps checked

Feb 2023:

- ~236,950 flying-foxes counted in NSW
- 172 camps checked
- +56 camps not checked last census

May 2023:

- ~203,117 flying-foxes counted in NSW
- 142 camps checked
- +20 camps not checked last census



Monitoring flying-foxes in NSW

- Ongoing participation in the National Monitoring Program
- **Review of current counters**
 - Identifying sites without a counter and inactive counters
 - Confirming counter participation & reaching out to potential counters (e.g. Councils)
 - Connecting volunteers to succession plan & knowledge-share
- Provided an information & training session for Hunter-Central Coast stakeholders
- Regional visits



Camp ID	Updated NSW Camp Name	Review Notes
nsw8	Narellan, Cross Creek	
489	Campbelltown, Bow Bowling Creek	confirmed
482	Macquarie Fields, Bingara Rd	confirmed
234	Clyde, Duck River	NO: Ray G; Sarah B
490	Wetherill Park, Prospect Creek	confirmed
25	Cabramatta, Cabramatta Creek	confirmed
483	Oatley, Myles Dunphy Reserve	confirmed
97	Agnes Banks, Yarramundi Reserve	EMAILED: Hawkesbury Council
1032	Windsor, South Creek	EMAILED: Hawkesbury Council
nsw9	Brooklyn, Brooklyn Rd	confirmed
nsw10	Galston, Still Creek	EMAILED: Hornsby Council
52	Kiwarra, Talawahl State Conservation Area	Not since Nov 2021
617	Lansdowne Forest, Pipeclay Creek	Not since Nov 2021
113	Monkerai, Stony Creek	Not done recently
131	Moorland, Pipeclay Creek	
640	Mungo Brush, Tamboi track	
251	Red Head, Diamond Beach Rd	Not since May 2019
107	Smiths Lake, Amaroo Dr	confirmed

Monitoring flying-foxes in NSW

- Ongoing participation in the National Monitoring Program
- Review of current counters
- **Provided an information & training session for Hunter-Central Coast stakeholders**

Attended by representatives from 6 councils and 2 wildlife rehabilitation organisations

- Regional visits

Photos: Matthew Mo, Libby Timmiss



Monitoring flying-foxes in NSW

- Ongoing participation in the National Monitoring Program
- Review of current counters
- Provided an information & training session for Hunter-Central Coast stakeholders
- **Regional visits**
 - Meeting with stakeholders
 - Visiting roosts and rehab facilities
 - Participating in regional surveys
 - ✓ *November:* Sydney Northern Beaches
 - ✓ *February:* Hunter Central Coast
 - ✓ *May:* Byron, Ballina & Tweed Shire
 - ✓ *August:* Port Macquarie-Hastings & MidCoast



Using rescue records as a proxy of entanglement frequency

- Wildlife rehabilitation licences require annual records of rescues and rehabilitation undertaken to be submitted.
- This provides a dataset that represents indicative frequency of different incidents.
- Work is underway to use this dataset to better understand annual patterns of wildlife entanglements.



Photo: Matthew Mo

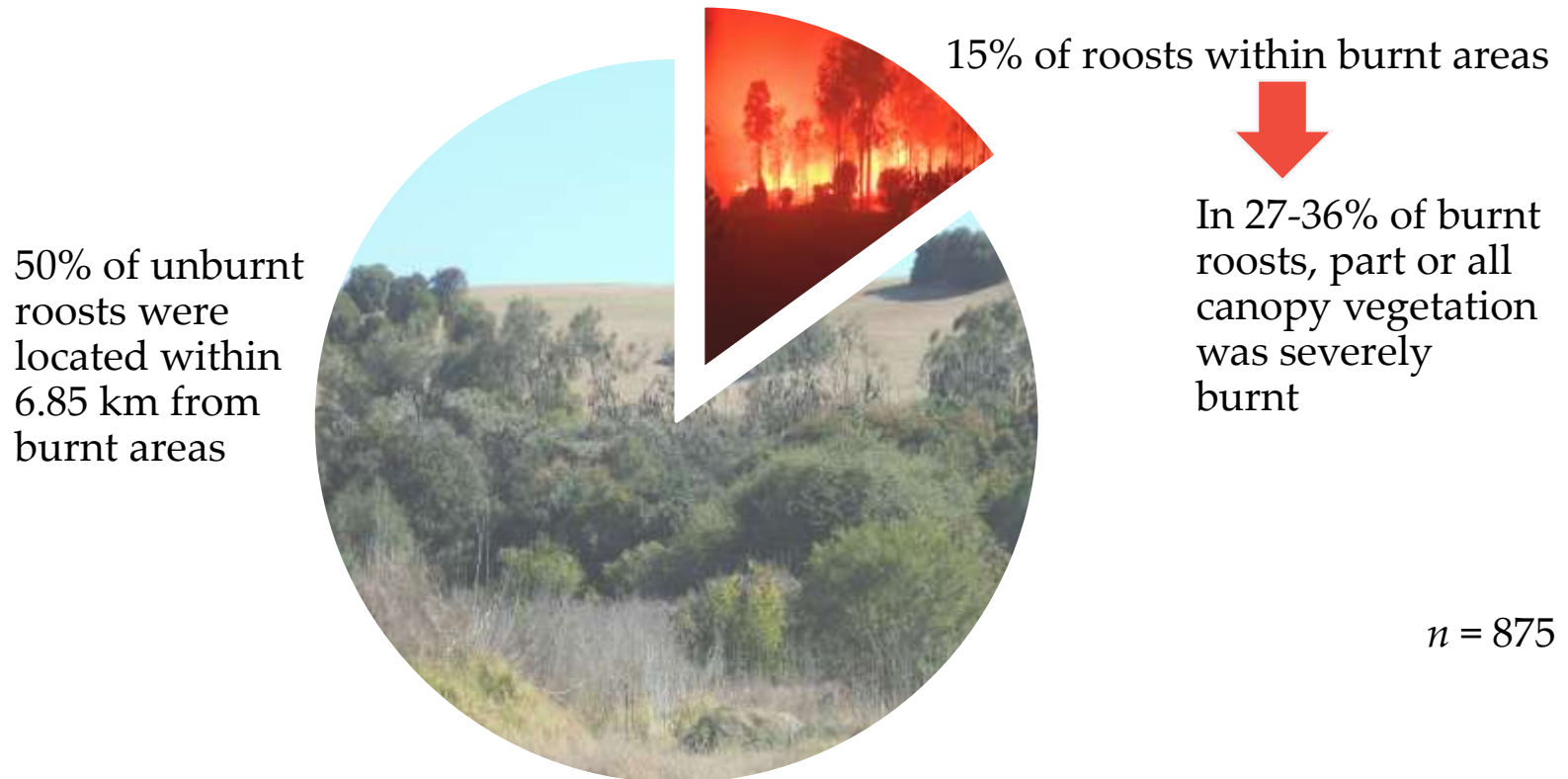


Photo: Kevin Dodds



Assessment of bushfire impacts on grey-headed flying-fox roosts

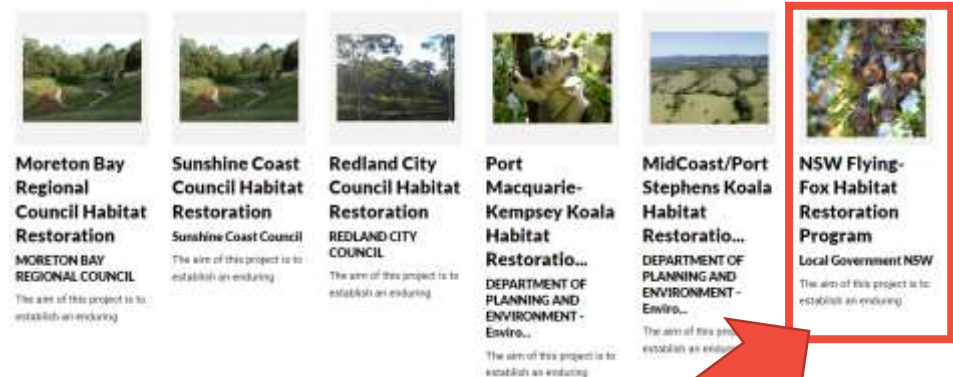
- NSW DPE and Western Sydney University collaboration
- Scientific paper submitted to *Global Ecology & Conservation*





Flying-fox Habitat Restoration Program – update

- Administered by Local Government NSW on behalf of DPE
- Funding 14 local councils for 16 projects
 - 13 are projects restoring roost habitat
 - 3 are projects restoring foraging habitat
- A particular focus this year has been establishing the projects in the ALA Habitat Restoration Hub



Public education events



Courtesy of Lake Macquarie Landcare



Photos: Matthew Mo

Getting flying-foxes better represented within broader ecological management



Flying-fox management

Wildlife management

Getting flying-foxes better represented within broader ecological management

Presentations to environmental community groups



Getting flying-foxes better represented within broader ecological management

Representation at



Flying-fox roost management in NSW

- Since the last resort option is largely ineffective, a land manager can progress through the entire hierarchy of management options and still have a dissatisfied community.



Community engagement



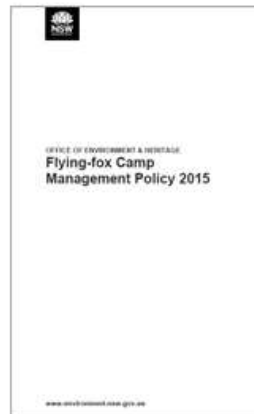
Level 1
Routine actions



Level 2
Creating buffers



Level 3
Dispersal



Footage: Shannon Greenfields

Getting flying-foxes better represented within broader ecological management



Royal Zoological Society
of New South Wales

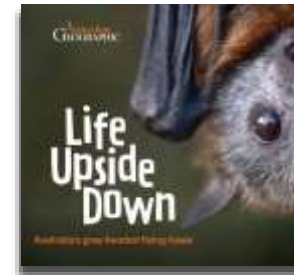


Getting flying-foxes better represented within broader ecological management

“Normalising” flying-foxes



Excerpts courtesy of Garry Fleming and Weldon Kids Pty Ltd.



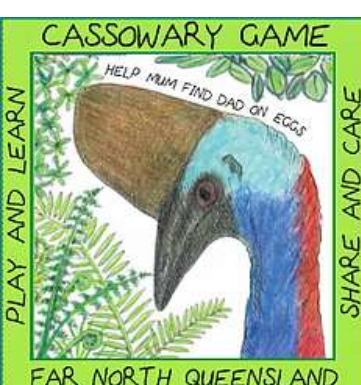
Book covers courtesy of Doug Gimesy and Abdo Books



Excerpt courtesy of Matilda Bishop and the Bats and Trees Society of Cairns

Getting flying-foxes better represented within broader ecological management

“Normalising” flying-foxes



Getting flying-foxes better represented within broader ecological management

“Normalising” flying-foxes

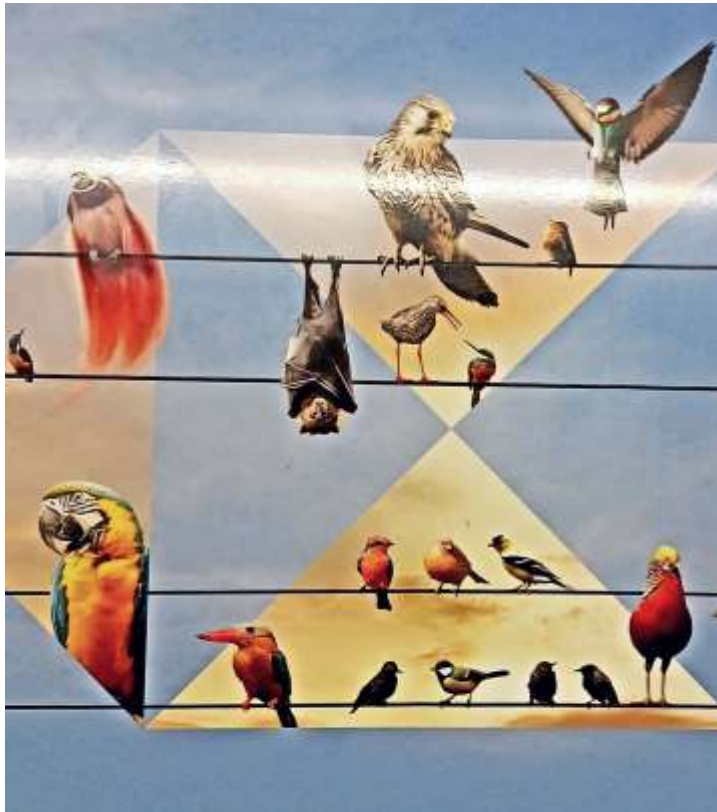


Photo: Jane Beal, University of La Verne



Photo: Matthew Mo Courtesy of Mandy Schöne-Salter



Getting flying-foxes better represented within broader ecological management

“Normalising” flying-foxes



Photo: Jack Herington,
Lismore City Council

Getting flying-foxes better represented within broader ecological management

“Normalising” flying-foxes



Photo: Australian Museum



Photography within courtesy of Doug Gimesy and Jake Wilton

Getting flying-foxes better represented within broader ecological management

“Normalising” flying-foxes





Getting flying-foxes better represented within broader ecological management

“Normalising” flying-foxes

- A vision that the next generation perceives flying-foxes the same way as other native wildlife



What do you see in this footage?

- A “*plague*” of flying-foxes
- or
- A wildlife spectacle

Footage: Libby Timmiss



Please get in contact! flying.fox@environment.nsw.gov.au

Recent publications



Managing the grey-headed flying-fox as a threatened species in New South Wales two decades on: contentious issues for horticulturalists and communities
Australian Zoologist, 2023



Managing the grey-headed flying-fox as a threatened species in New South Wales two decades on: threats and conservation issues
Australian Zoologist, 2023



An investment toward non-lethal crop protection measures for a threatened species in New South Wales: the Flying-fox Netting Subsidy Program
Australian Zoologist, 2023



Synchronous abortions in the grey-headed flying-fox
Pacific Conservation Biology, 2023

ADDITIONAL SLIDE – IF THERE'S TIME

Heat stress research project – update

- Collaboration between DPE, Western Sydney University and Campbelltown Council
 - with additional funding from World Animal Protection
- Project initiated during 2020



- No extreme heat events have occurred since project started
- This coming summer will be the fourth summer of data collection



Photo: Eliane McCarthy



Camera trap footage

ADDITIONAL SLIDE – IF THERE’S TIME

Pup mortalities from unseasonal cold weather

- Data collation led by DPE with contributions from:
 - ACT Wildlife
 - Australasian Bat Society
 - Bat Conservation and Rescue Queensland
 - Bathurst Regional Council
 - Mid-Western Regional Council
 - Northern Tablelands Wildlife Carers
 - WIRES



Photo: Bel Manria



ADDITIONAL SLIDE – IF THERE’S TIME

Pup mortalities from unseasonal cold weather

Locations (north to south)	No. pup deaths
Cooyar, Qld	113
Tenterfield, NSW	152
Tamworth, NSW	19
Mudgee, NSW	7
Bathurst, NSW	37
Cowra, NSW	299
Canberra, ACT	32
Wagga Wagga, NSW	10



Photo: Bel Manria