

# Australian flying-foxes

## What can we do to manage human/flying-fox conflicts?

### Approaches tried in the past to manage flying-foxes and camps have included:

- Aggressive, destructive disturbances (explosives, diesel spray, fires) at camps to try to get bats to abandon the sites or disperse from the area.
- Shooting bats in camps and on crops.

### Why shouldn't we use these options?

- Many flying-foxes are threatened species and environmental laws are in place to conserve their populations and to restrict actions that can be taken.
- Our attitudes towards nature now include treating wildlife humanely.

### More recently, less destructive methods such as loud noise have been used to disperse camps. However:

- Moving camps that contain threatened species generally is both costly and time-consuming, requiring approvals of government agencies, significant planning, large budgets, co-operation between affected groups and long-term commitments.
- Dispersing camps to new areas often only moves them into someone else's backyard, which creates further conflict and is not socially responsible.

Moving forward, it is important to implement management programs that increase acceptance of flying-foxes, avoid conflict where possible, and better manage conflict when it does occur.

### Better solutions include:

- Netting commercial and residential fruit trees with wildlife-friendly netting (netting that does not cause entanglement and death).
- Managing camps to ensure an ongoing supply of roost trees and minimise incursion onto adjacent properties.
- Protection and enhancement of native food sources.
- Commitment on the part of management agencies to include bats as key components of the natural ecosystem.
- Effective public education programs to demystify flying-foxes and their behaviours and make the general public aware of their importance.

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Flying-foxes don't perceive a difference between urban areas and the many other habitats they migrate between in search of food. As the loss of native bush continues and the impacts of a changing climate increase in severity, urban areas will become even more important to flying-foxes and other wildlife.

These changes challenge us to become better educated and more tolerant of flying-foxes in our backyards, and to be mindful of the problems the animals face as well as the important roles they play in maintaining healthy forests.

Flying-foxes (also known as fruit bats) are the largest bats in the world, and they're quite different from the microbats.

They use night vision instead of echolocation to navigate, they feed on fruit and blossoms rather than insects, and they roost in large groups called camps, hanging in tree branches rather than in caves or tree hollows.

## Quick facts about Australia's flying-foxes

### How are they going?

All flying-foxes are protected by law in Australia. Spectacled and Grey-headed Flying-fox populations have suffered dramatic declines, due to loss of feeding habitat and persecution and killing by humans, and they are now listed as vulnerable to extinction under environment laws.



Grey-headed Flying-fox  
Photo: Nick Edards

### How do they reproduce?

Reproduction is a full-time occupation for female flying-foxes once they reach the age of 2 or 3. They have one young each year – gestation lasts 6 months and pups nurse from their mothers for 5-6 months.

Males start approaching females in the camps several weeks before they successfully mate, but play no role in nurturing the young. The three larger species have their young in spring, while Little Red Flying-foxes give birth in autumn.

### What do they eat?

- Flying-foxes feed in the forest canopy and eat a diverse range of plants. For example, Grey-headed Flying-foxes eat fruit from over 50 species of rainforest trees and vines, blossoms from nearly 60 species of eucalypts, melaleucas and banksias, and various introduced and cultivated fruits.
- Flying-foxes provide essential services to these plants and forest ecosystems, by pollinating flowers and dispersing seeds.
- The flowering patterns of most eucalypts are irregular and erratic. As a result, the distribution of feeding areas for flying-foxes varies substantially from year to year and from place to place.

### Where do they go?

- Australia's flying-foxes are remarkably adept at tracking food over long distances and the migration paths of individuals vary widely as do the distances they travel.
- Some Grey-headed Flying-foxes have been tracked moving 500 km in 48 hrs, whereas others live in a single camp for many years.
- Many flying-foxes have a long-distance, nomadic lifestyle, feeding on a wide range of plants in hundreds of forest types as they travel across the Australian landscape.











Photo: Vivienne Jones

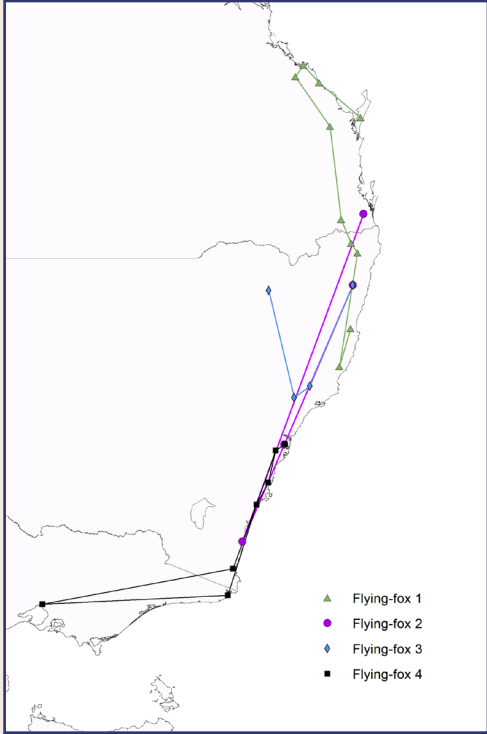
Photo: Vivienne Jones



There are about 60 species of flying-foxes world-wide, found primarily in tropical and sub-tropical areas. The Australian mainland has four species of flying-fox, all of which are protected species.

	Spectacled Flying-fox ( <i>Pteropus conspicillatus</i> )	Black Flying-fox ( <i>Pteropus alecto</i> )	Grey-headed Flying-fox ( <i>Pteropus poliocephalus</i> )	Little Red Flying-fox ( <i>Pteropus scapulatus</i> )
Image	 <small>Photo: Steve Parish</small>	 <small>Photo: Vivien Jones</small>	 <small>Photo: Nick Edards</small>	 <small>Photo: Vivien Jones</small>
Range				
Weight	500–900 g	700–1000 g	600–1000 g	300–600 g

Distribution maps modified from B. Roberts and L. Hall unpublished 2011

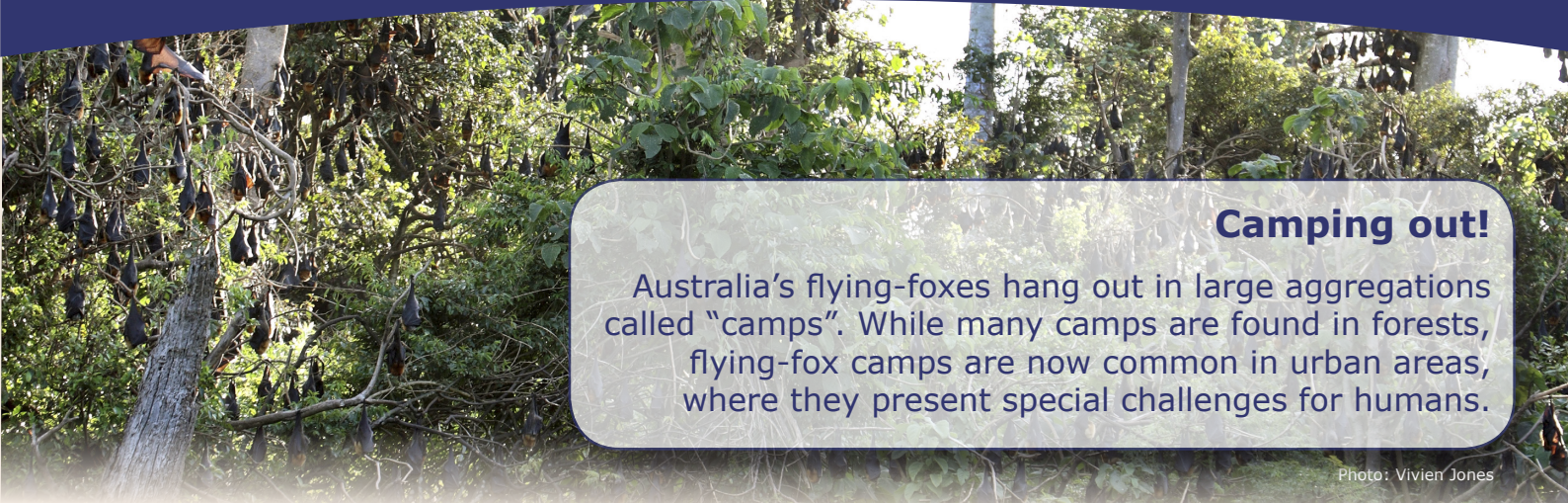


Long distance migration paths of four Grey-headed Flying-foxes showing the inter-connectedness of the population throughout its range.

Data source: P. Eby, J. Nelson, B. Roberts and C. Tidemann.



Photo: Vivien Jones



### Camping out!

Australia’s flying-foxes hang out in large aggregations called “camps”. While many camps are found in forests, flying-fox camps are now common in urban areas, where they present special challenges for humans.

Photo: Vivien Jones

### Why do flying-foxes use camps?

- For resting close to feeding areas that are usually within 20 km of camps, although some flying-foxes forage as far as 50 km away.
- For finding mates, giving birth and nursing pups.
- For refuges for flightless young that are left unattended while the adults are out foraging at night.
- For stopover habitats during migration flights.



Photo: Vivien Jones

### What are camps like?

- Most camps are found at low elevations, on flat land or moderate slopes and near waterways (the same kinds of areas that people prefer for building towns and for agriculture).
- The number of animals in a camp varies considerably through time and can change rapidly, primarily in relation to the amount of food available in the local area.
- In south-east Australia, the majority of camps are used infrequently, although at times tens of thousands of animals can be present. Some are used in a regular, seasonal pattern but are empty for certain months each year.
- A few camps are occupied continuously because they are close to areas with a high diversity of plants that provide year-round food for flying-foxes – usually, these camps are found in tropical or subtropical areas, often near rainforest.
- Extensive gardens in cities have created diverse urban woodlands and flying-foxes are now a constant presence in metropolitan Brisbane, Newcastle, Sydney, Melbourne and, most recently, Adelaide, as well as several smaller cities and towns.



Photo: A Natural History of Australian Bats – Working the Night Shift

### Conflicts between flying-foxes and humans

When flying-fox camps become established in urban centres, people living nearby are generally accommodating of them so long as camps are small and there is sufficient native food to support the animals.

However, conflicts arise when abundant food attracts large numbers of flying-foxes or when native food is reduced and animals turn to cultivated fruit. When conflict occurs, it is usually over nuisance issues (smell, noise), defoliation of branches, concerns about diseases, and damage to commercial or residential fruit crops.

People living near flying-fox camps need support to better understand the behaviours and conditions that bring about large temporary influxes of flying-foxes into urban areas, and the management options that are currently available.



Photo: Vivien Jones