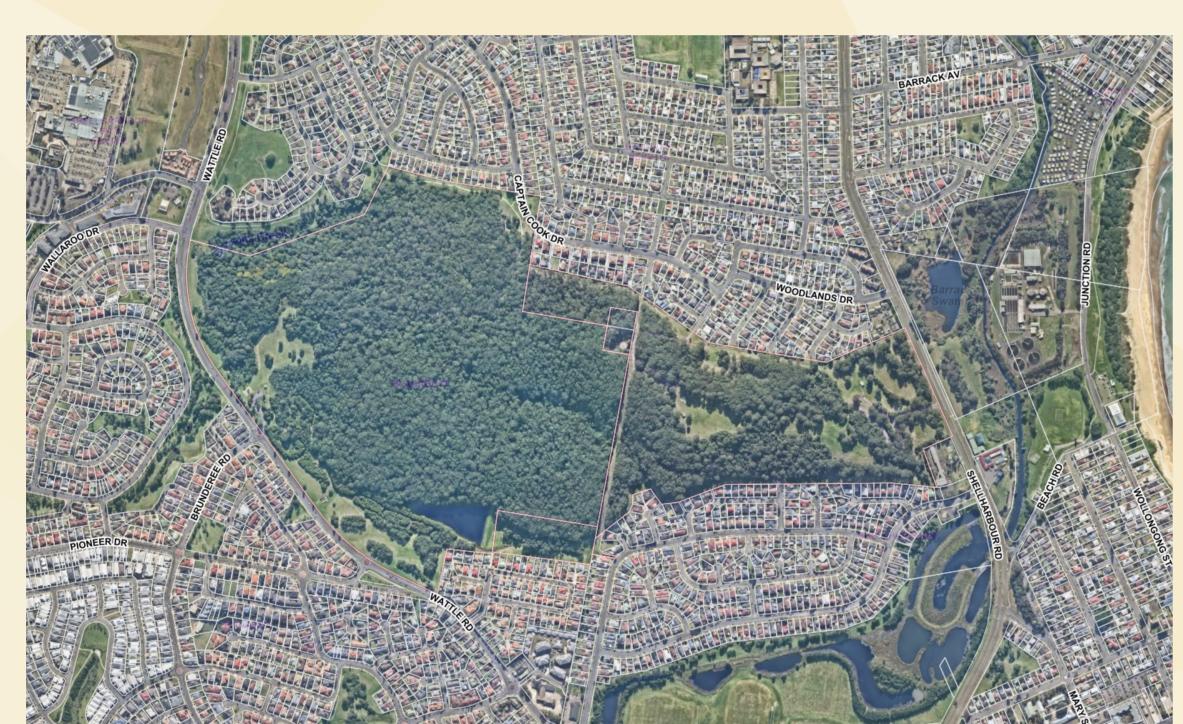


BLACKBUTT FOREST CAMP

Did you know that Blackbutt Forest Reserve is home to an important maternity camp of Grey-headed Flying-foxes?

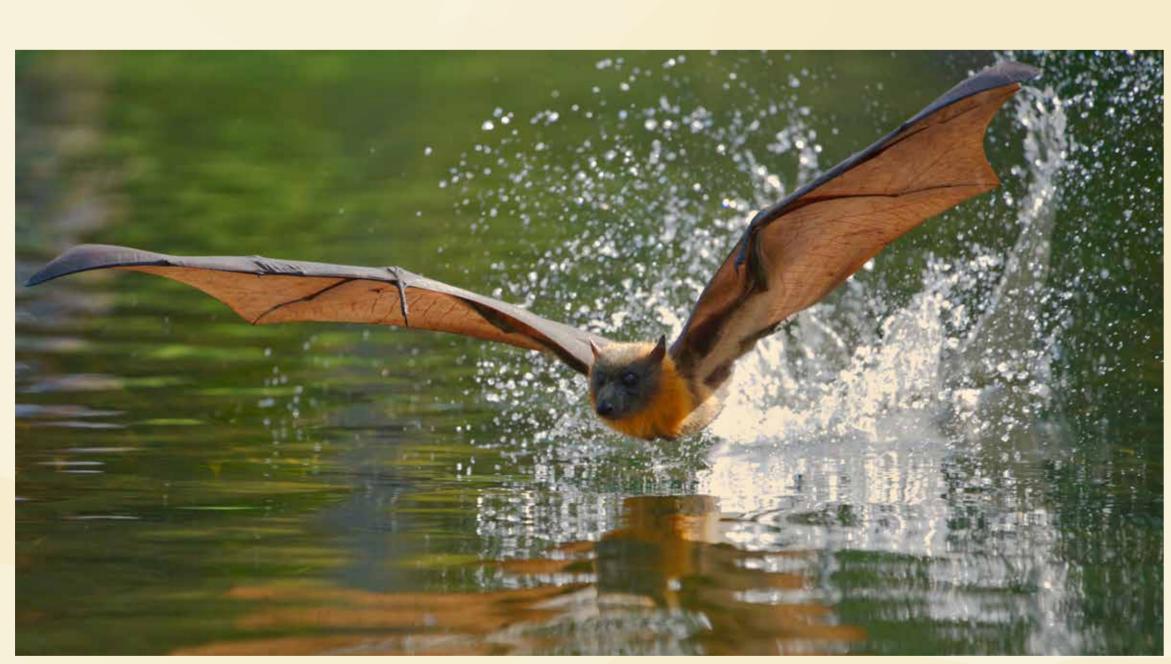
Blackbutt Forest is a significant patch of local bushland, containing nearly 70ha of vegetation across the suburbs of Blackbutt and Barrack Heights. The Not all Flying-fox camps are used as a maternity camp, where annual breeding landscape has been carved through ancient erosion processes, and is part of what is known as the Sydney-Gunnedah-Bowen Basin System.

The Reserve is home to a diverse range of plants and animals, including those threatened with extinction like the Spiked Riceflower and Grey-headed Flying-foxes. It is also home to special and rare ecosystems known as an Endangered Ecological Community, including Illawarra Subtropical Rainforest and Illawarra Lowlands Grassy Woodlands.



Aerial image of Blackbutt Forest by Shellharbour City Council.

Blackbutt Forest provides an abundance of native and seasonal food resources for Grey-headed Flying-foxes. Blackbutt Dam provides a permanent water supply that's perfect for sunset dips before a night out foraging. Flying-foxes drink in a most unconventional way. They drench their belly fur by trailing their bodies along the water surface, before heading to a nearby tree to hang upside down and lick the water off their fur.



OUR COASTAL CRÈCHE

The Blackbutt Reserve camp is known as a maternity camp, where young Grey-headed Flying-foxes are born from September to October.

and rearing of young takes place. Here at Blackbutt though, we have been lucky enough to see Flying-fox pups appear every year since the camp was first established in late 2010. After the adults mate in late summer through to autumn, a single pup is born in late spring.



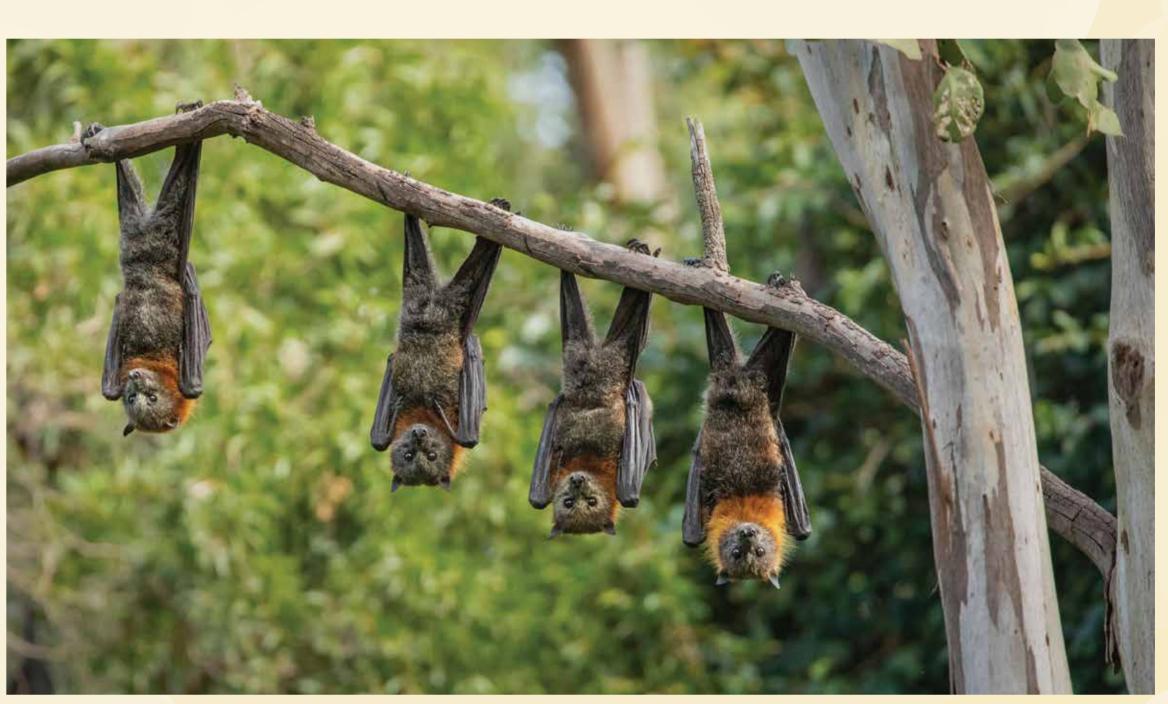
Mother with large pup.



Grey-headed Flying-foxes are prey for large birds such as this Powerful Owl. Image by Martin Potter – Illawarra Birders.

Pups spend the first six weeks of their life clinging to their mother's belly fur, feeding on milk and being carried each night as the mother flies out in search of food. When the pup grows too big to be carried, they remain close to their mothers in the canopy, feeding during the day and learning to fly. At night, larger pups are left together in a 'crèche tree,' selected for its dense canopy cover that offers greater protection for the pups from potential predators such as large forest owls.

When the mother returns from foraging at dawn the following morning she can identify her pup by its unique smell and call. Pups remain dependent on their mothers for the first five to six months of their life, before learning to forage at night and care for themselves.



Grey-headed Flying-foxes hanging out at Blackbutt Forest. Image by Lachlan Hall.

These extremely social mammals spend the daylight hours hanging out in the canopy catching up on their sleep, before flying out at dusk in search of food. The Blackbutt camp population of Grey-headed Flying-foxes ranges from approximately 1,000 to 6,000 individuals, depending on the seasonal food resources available in the Illawarra region. The camp is one of a network of hundreds of camps along the east coast of Australia. Camps are generally only found within 200 km of the eastern coast of Australia, from Rockhampton in Queensland to Adelaide in South Australia. However, in times of food shortages, they may be found in unusual locations.



Image by WIRES. ©

These charismatic creatures are regular regional and interstate travellers, with individuals often moving between camps. Recent research indicates Greyheaded Flying-foxes may travel over 2,000km a year, up and down the east

Grey-headed Flying-fox skimming a pond to drink.





With a wingspan of 1 - 1.4 metres, the iconic Grey-headed Flying-foxes are Australia's largest bat species. They are the only species of Mega Bat that are endemic to Australia – that is, they do not live anywhere else in the world.



Grey-headed Flying-fox flying at Blackbutt Forest, showing it's delicate wing membrane. Image by Lachlan Hall.

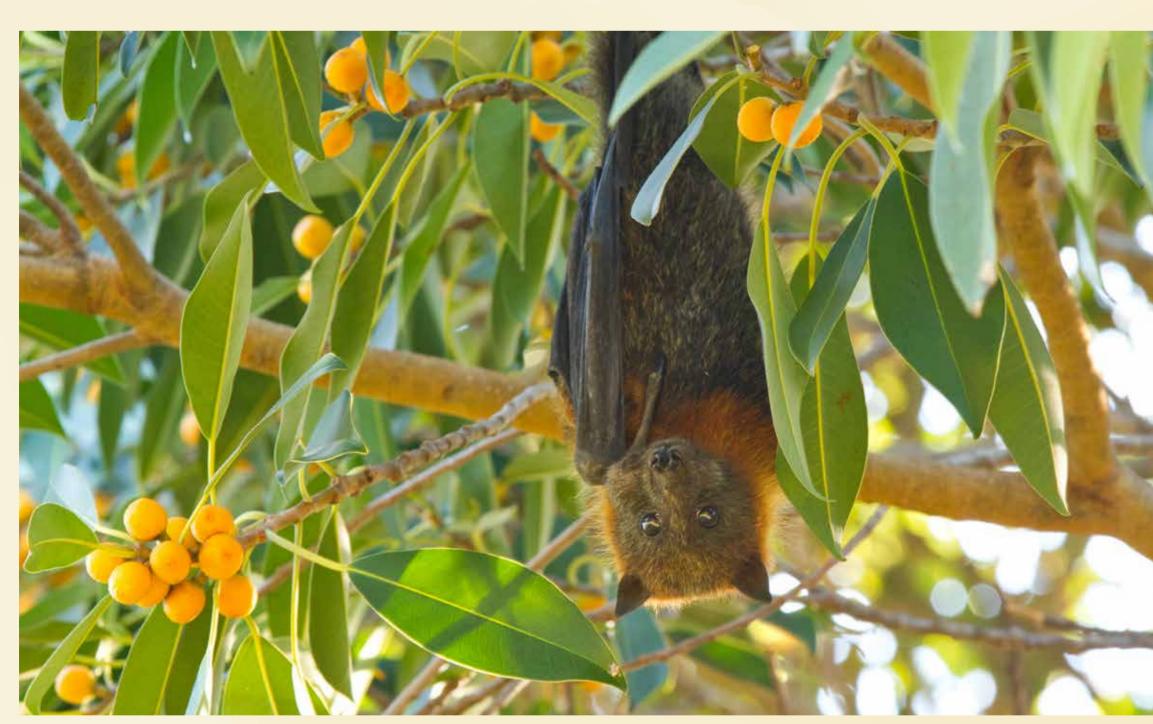


Image by Andrew Mercer ⊗

OUR AUSSIE FLYING FOREST REGENERATORS

At dusk and in the evenings, you may see Grey-headed Flyingfoxes flying overhead as they fly out in search of food.

Grey-headed Flying-fox are exclusively vegetarian. Blossoms, nectar and fruit from flowering Eucalypts, Paperbarks, Banksias and rainforest fruiting species are their favourite foods of choice.



While foraging on blossoms with their long tongues, their pointed noses and fur becomes covered in pollen. When the flying-fox moves to the next tree, it spreads the pollen, allowing crosspollination of the plants.

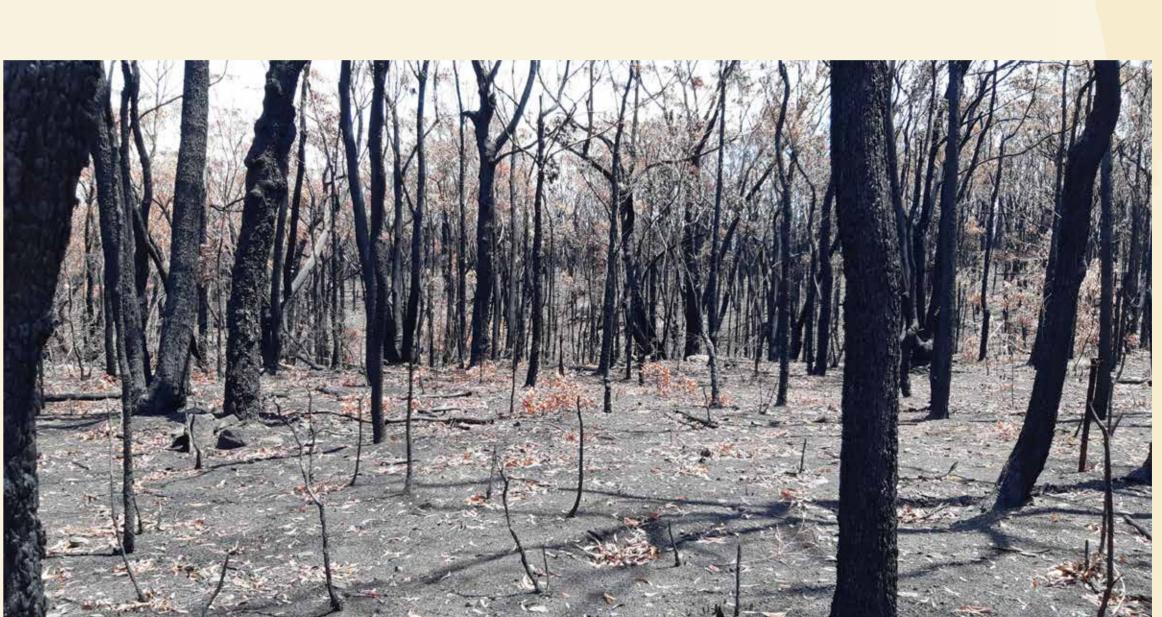
When foraging on fruit, they can distribute up to 60,000 seeds from over 50 different rainforest trees and vines in a night throughout the landscape, by either spitting out or passing the seeds in their own selfmade fertiliser. The spreading of seeds is especially important after bushfires.

seed-spreading and pollination can occur over long distances, with individual flying-foxes

known to travel up to 300km in a night. It is these large distances and the flying-foxes ability to carry large seeds and quantities of pollen, that distinguish them from other pollinators such as bees.

Grey-headed Flying-foxes are the gardeners of the forest, ensuring the essential pollination role is performed to allow fruit to form. By spreading pollen over large distances, they help contribute to a resilient plant seed bank and increase the greater genetic diversity and overall health of our east coast Threatened Grey-headed Flying-fox at Blackbutt Forest. Image by Lachlan Hall. forests. Many species of plants and animals depend on their nightly duties. adverse climatic and environmental events such as bushfires, droughts and floods.

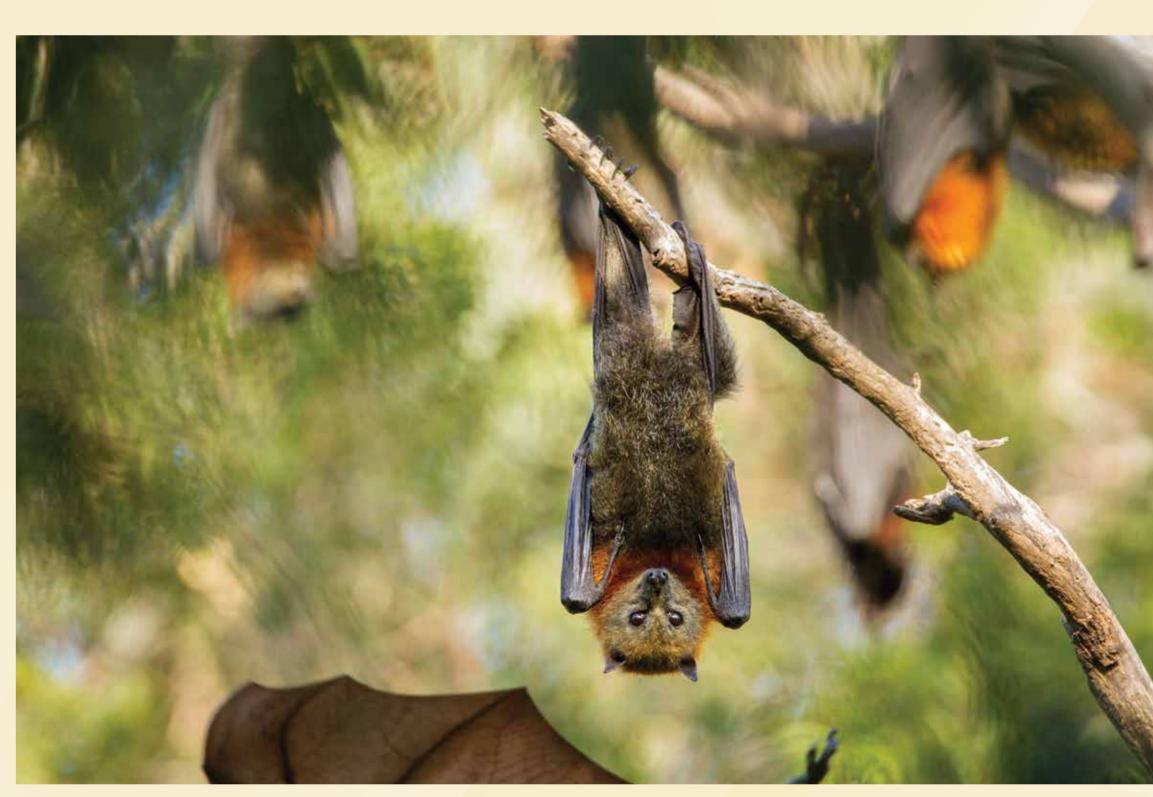
scale of the fires has led to significant death of canopy vegetation, with the areas. heat killing entire seed banks of ecosystems that are not adapt to fire such as rainforests. These forest will rely significantly on the Flying Foxes seed dispersal ability to bring back species that have been lost in the fires.



Areas recovering from severe bushfire damage benefit from Grey-headed Flyingfoxes dropping seeds. Image by Caren Taylor.

BATTLING FOR SURVIVAL

Sadly, the Grey-headed Flying-fox is threatened with extinction, having experienced a dramatic decrease in the population over the past 50 years as a result of extensive clearing of forests along Australia's east coast.



Without them local ecosystems would suffer, and struggle to regenerate after It can be hard to believe that this social species could be in such peril when you watch an entire camp exit to forage on dusk, or walk through a noisy camp on a hot day. It is the loss of essential foraging and roosting habitat across its range due to extensive development for urban growth that has The recent Black Summer bushfires throughout Australia have had devastating resulted in the establishment of a high number of new camps. They have impacts on many of our local forest ecosystems. The intensity and wide spread adapted to foraging fruit of non-native and landscape plants grown in urban





Our rapidly changing climate is also contributing to the concerning decline in the numbers of Grey-headed Flyingfoxes. These sensitive animals are particularly susceptible to heat, and in recent years unforgiving Aussie summers have led to large scale death of Flying Foxes, including babies that are especially vulnerable during heat events. Here in Shellharbour, climate modelling shows the region is expected to see more hot days above 35°C in the future.



Crib full of 2–3 week old baby Grey-headed Flying-foxes in care. <mark>lmag</mark>e by Wcawihinfo.

Disturbances to the Flying-fox camp within Blackbutt Forest, predominately occurs during the day, when the animals are sleeping or resting after being out foraging all night. It is often during the summer months when temperatures are high that disturbance to the camp becomes an extra stress to the animals. Activities such as mountain biking or large groups of people around the camp can lead to additional stress and disturbance. It is important that as a community we minimise impacts on these important threatened animals.

THE HOME FRONT

You can help these essential pollinators by participating in native tree planting days, introducing native plants to your own garden at home, and using wildlife friendly netting on your fruit trees. Wildlife friendly fruit tree netting has a mesh size of less than 5mm. You shouldn't be able to fit your finger through the holes in this type of netting. Netting should also be securely attached to ensure wildlife can't get in. Alternatively, you can consider individually bagging individual fruits, rather than netting the whole tree.

Spread the word about the essential role Grey-headed Flyingfoxes play in pollinating native plants and regenerating our forests, and help these important animals thrive in our rapidly changing world.



Image by WIRES.

BATS AND YOUR SAFETY

Contrary to popular thought, Flying-foxes are extremely clean animals that spend much of their day grooming and cleaning themselves.

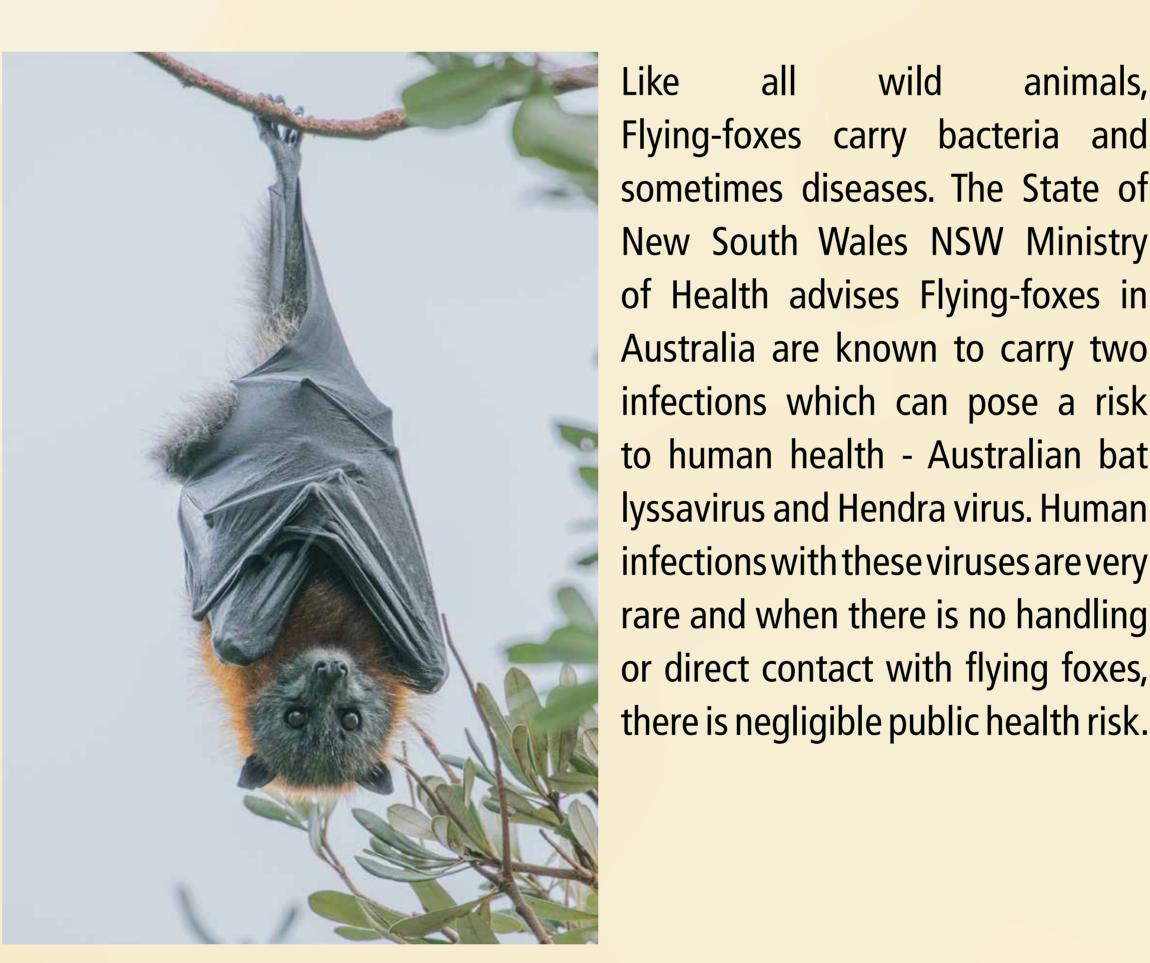
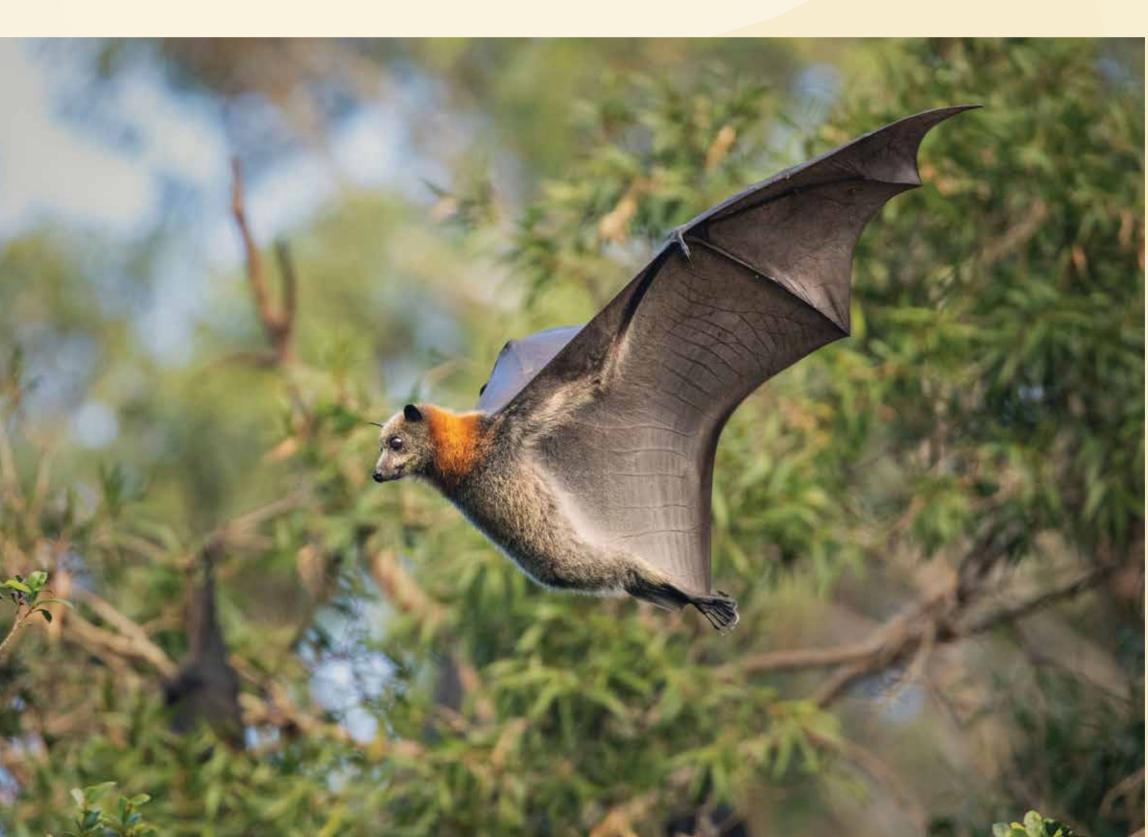


Image by WIRES.

Flying-foxes carry bacteria and sometimes diseases. The State of New South Wales NSW Ministry of Health advises Flying-foxes in Australia are known to carry two infections which can pose a risk lyssavirus and Hendra virus. Human infections with these viruses are very rare and when there is no handling or direct contact with flying foxes,

Australian bat lyssavirus can only be transmitted to humans when infected flying fox saliva comes into contact with human tissue through an open wound or mucus membrane e.g. eyes, nose and mouth. Therefore it is very important that flying foxes are not handled. Humans are not exposed to the virus if flying foxes fly overhead or feed or roost in gardens. Nor is it spread through droppings or urine, or if one lives, plays or walks near their colonies.

If you find a sick, injured or orphaned flying-fox please do not attempt to touch or capture it. Please report the injured animal to WIRES Wildlife Rescue on 1300 094 737.



Grey-headed Flying-fox at Blackbutt Forest. Image by Lachlan Hall.

to human health - Australian bat FLYING FOX CAMP MANAGEMENT

Flying Foxes and their camps are protected under NSW Legislation. The Blackbutt Forest Camp is regularly monitored. The numbers of Flying-foxes are recorded to assist in understanding the movement of the camps, and assist in the ongoing management of these animals that are crucial to the health of east coast forests.

