

# Meet Sydney's Microbats



## Bat Facts

- Microbats are small, insect eating flying mammals. Some weigh less than a 10 cent coin and fit in the palm of your hand!
- There are just under 20 species of microbat in Sydney, making them the most common and diverse mammal group surviving in our city. Microbats make up almost a quarter of Australia's native mammals.
- Microbats are nocturnal and eat masses of flying insects, such as beetles, moths and mosquitoes.
- Unlike flying foxes, microbats hunt by making very high frequency 'calls' that humans can't hear. This is known as echolocation.

## What do they need to survive and where do they live?

Microbats need an abundant supply of insects to eat and clean water to drink. They feed along creeks, forest edges, wide tracks through bushland and around large trees. Bushland remnants are prime habitat, especially on fertile clay soils in the upper north shore. Other important habitat includes parks and reserves, rural land and some residential areas. Bats roost in hollows inside old eucalypts during the day. Caves, rock overhangs, culverts and bridges are used as roosts by some species.

## Threats to bats

- Loss of bushland, especially large, old trees with hollows.
- Predators such as cats, rats and possums.
- Lights – some bats can be sensitive to bright lighting at night.
- Other animals that nest in tree hollows and potentially out-compete bats for roost sites such as Lorikeets, Indian Mynahs and feral honey bees.
- Noise – some bats avoid crossing roads and noisy areas.
- Pollution of waterways from urban or agricultural runoff.

### 1 Large-eared Pied Bat *Chalinolobus dwyeri*

A striking glossy black bat with two white stripes of fur beneath the body. It roosts in sandstone caves, making the wider Sydney area one of its strongholds, although it is not known from most of suburbia. It has been found in Pittwater, Camden, The Hills and the Royal National Park. *NSW Status:* Vulnerable. Urban sensitivity: Insufficient data, likely to be sensitive. *Photographer:* M Pennay.

### 2 Gould's Wattled Bat *Chalinolobus gouldii*

A bat with dark black fur on its head and shoulders. It is Sydney's most common bat species, found in many habitats including urban areas such as Centennial Parklands and the Royal Botanic Gardens, as well as in residential and rural areas and Sydney's National Parks. It flies in open areas, trying to catch insects, even around streetlights. *NSW Status:* Protected. Urban sensitivity: Tolerant. *Photographer:* M Pennay.

### 3 Chocolate Wattled Bat *Chalinolobus morio*

The chocolate colour of this bat's fur is what gives it its name. This species prefers bushland patches larger than 6 hectares in leafy suburbs such as Terrey Hills, St Ives and Berowra, and also along the urban/rural fringe of Sydney in suburbs such as Blacktown and The Hills. *NSW Status:* Protected. Urban sensitivity: Moderately sensitive. *Photographer:* P German.

### 4 Eastern False Pipistrelle *Falsistrellus tasmaniensis*

Large for a microbat (6-7cm long) this bat is most often found at higher altitudes, such as the Blue Mountains. It prefers to roost in tree hollows and forage within the canopy. It has been found occasionally in Sydney including Cumberland State Forest, Berowra and suburbs on the Cumberland Plain such as Camden and Box Hill, but not in highly urbanised areas. *NSW Status:* Vulnerable. Urban sensitivity: Highly sensitive. *Photographer:* P German.

### 5 Little Bentwing Bat *Miniopterus australis*

This smaller bentwing bat appears to be a recent arrival in Sydney from the north coast. Its natural roosts are caves, but in Sydney it mostly roosts in human made structures. It is only found around the outskirts of Sydney in the least urbanised areas, especially in the north. *NSW Status:* Protected. Urban sensitivity: Tolerant. *Photographer:* P German.

### 6 Eastern Bentwing Bat *Miniopterus schreibersii oceanensis*

Commonly encountered throughout Sydney in residential and non-residential areas. It is sensitive to urban development, and is mostly found along creeks and waterways in less disturbed areas. *Myotis* can roost in tree hollows, but are often found beneath bridges. Recently it has been found at Narrabeen Lagoon and larger creeks in Glenorie, Bringelly and Cattai and also in Royal National Park. *NSW Status:* Vulnerable. Urban sensitivity: Very sensitive. *Photographer:* P German.

### 7 East-coast Free-tailed Bat *Mormopterus norfolkensis*

A fast flying species of the east coast, it prefers open spaces, particularly fertile farmland with scattered paddock trees and vegetated creek-lines. It is known mostly from the Cumberland Plain and roosts in small colonies within tree hollows. Recently a large colony was discovered roosting in old mangroves on the Hunter River. *NSW Status:* Vulnerable. Urban sensitivity: Moderately sensitive. *Photographer:* P German.

### 8 Eastern Free-tailed Bat *Mormopterus ridei*

This bat belongs to a group with mouse like tails; it is one of the fastest flying of all bats and is suited to foraging in open areas. It is one of Sydney's most common and widespread species, found in a wide variety of habitats including creeks, reserves, golf courses, ovals and farmland. *NSW Status:* Protected. Urban sensitivity: Tolerant. *Photographer:* P German.

### 9 Large-footed Myotis *Myotis macropus*

Australia's only fishing bat, with extra long toes that it uses to trawl through the water to catch tiny fish and aquatic insects from the surface of creeks and lakes. It is sensitive to urban development, and is mostly found along creeks and waterways in less disturbed areas. *Myotis* can roost in tree hollows, but are often found beneath bridges. Recently it has been found at Narrabeen Lagoon and larger creeks in Glenorie, Bringelly and Cattai and also in Royal National Park. *NSW Status:* Vulnerable. Urban sensitivity: Very sensitive. *Photographer:* P German.

### 10 Lesser Long-eared Bat *Nyctophilus geoffroyi*

A smaller long-eared species that is otherwise very similar in appearance to Gould's long-eared bat. It has mainly been found in bushy areas of Sydney and in some urban areas. Both of the long-eared bats roost in tree hollows, but can also be found under shedding bark. *NSW Status:* Protected. Urban sensitivity: Moderately sensitive. *Photographer:* M Pennay.

### 11 Gould's Long-eared Bat *Nyctophilus gouldii*

Long-eared bats have huge ears which they use to detect the noise made by insects. This bat flies slowly and is one of the only species that can snatch insects off the ground and vegetation. It seems to prefer large patches of bushland (> 30 hectares) and rarely ventures into the suburbs. Most records are from national parks or reserves, and from bushland in leafy suburbs, such as the Pennant Hills area. *NSW Status:* Protected. Urban sensitivity: Moderately sensitive. *Photographer:* M Pennay.

### 12 Eastern Horseshoe Bat *Rhinolophus megaphyllus*

Sydney's only species of horseshoe bat, named for its distinctive nose. It is very sensitive to disturbance and is mostly restricted to Sydney's national parks and nearby bushland, where it roosts in sandstone caves. *NSW Status:* Protected. Urban sensitivity: Highly sensitive. *Photographer:* M Pennay.

### 13 Greater Broad-nosed Bat *Scoteanax rueppellii*

Big and strong (for a microbat!), it prefers to forage along the edges of bushland or around the edge of scattered trees where it often hunts Christmas beetles. In Sydney, most records are from western Sydney, particularly the Cumberland Plain area. One hot-spot is Annangrove along Blue Gum Creek. It hasn't been found in areas of high urban density. *NSW Status:* Vulnerable. Urban sensitivity: Moderately sensitive. *Photographer:* M Pennay.

### 14 Eastern Broad-nosed Bat *Scotorepens orion*

This broad-nosed bat prefers areas with a moderate amount of trees including farmland, low-density residential areas, and creek lines on the Cumberland Plain. It is not usually found in urban areas, although it has been found in suburbs that occur on fertile soils such as Parramatta, Fairfield, Campbelltown, St Ives and Box Hill. *NSW Status:* Protected. Urban sensitivity: Moderately sensitive. *Photographer:* M Pennay.

### 15 White-striped Free-tailed Bat *Tadarida australis*

Sydney's largest microbat, with bright white stripes along the inside of its wings and chest. Unlike other microbats, it has a call that can be heard by humans (listen for a repeated ping at night). It is one of Sydney's most widespread species. It roosts in old buildings as well as tree hollows. It has been found roosting at Sydney Olympic Park and heard in the Sydney Botanic Gardens. *NSW Status:* Protected. Urban sensitivity: Tolerant. *Photographer:* M Pennay.

### 16 Large Forest Bat *Vespadelus darlingtoni*

Despite its name this bat weighs about the same as a 10 cent coin! It is one of Sydney's two species of forest bat that is largely restricted to bushland, where it roosts in tree hollows and forages in gaps in the tree canopy. It is known from a range of habitats in western Sydney and in more leafy suburbs, but not more highly urbanised areas. *NSW Status:* Protected. Urban sensitivity: Insufficient data, likely to be sensitive. *Photographer:* P German.

### 17 Little Forest Bat *Vespadelus vulturinus*

Sydney's smallest bat weighing just 4 grams! It roosts in tree hollows and forages in bushland reserves and all but the most urbanised parts of Sydney. Recent research suggests it is less common in areas with housing density above 3 houses per hectare. It prefers areas where there are lots of moths, such as on the fertile soils of the Cumberland Plain. *NSW Status:* Protected. Urban sensitivity: Moderately sensitive. *Photographer:* P German.

The Yellow-bellied Shearwater Bat *Saccolaimus flaviventris* and the Eastern Cave Bat *Vespadelus troughtoni* have also been recorded in Sydney, but very infrequently.

Looking for more information about bats? Please see fact sheets on a range of issues at the Australasian Bat Society ([www.ausbats.org.au](http://www.ausbats.org.au)) or Ku-ring-gai Bat Conservation Society ([www.sydneybats.org.au](http://www.sydneybats.org.au)).

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