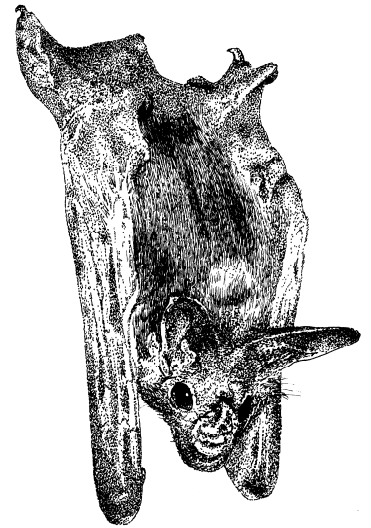


Tropical Factsheets

Microbats

- Microbats are small bats of less than 170 grams, with a wingspan of less than 30cm. (The exception is the Ghost Bat.)
- They are insectivorous and carnivorous.
- They roost in dark places, such as crevices, caves, tree holes, folded leaves, under bark and even in roofs!
- They roost with their wings folded against their sides and their heads pointing down.
- They hibernate during cold months.
- They have one claw on their forelimbs.
- Micros navigate by **sonar or echolocation**, producing pulses of high pitched sound and navigating by listening for the echoes. Therefore microbats often have **large, sensitive ears**.
- They are very social, roost together in large groups or colonies.
- The newborn baby at first hangs onto its mother using its claws and teeth attached to her nipple as she flies around.
- Later the hairless youngsters stay at the roosting site huddled together with one mature female left behind as the **baby-sitter**.
- Their mother finds her own baby among thousands by using her sense of **smell**.
- Females don't spend much time with males. The males rove around, while the females live in their own close groups and colonies.



Ghost Bat

Sonar is a way of detecting objects using sound.

- Like boats which use sound navigation to avoid hitting underwater reefs or rocks, micros also measure **distance** with sound.
- The sound is produced in their voice box and is 'beamed out' through their mouth or nose at rates of about 200 pulses per second.
- They hear the reflection of the sound waves as sonar echoes.
- These echoes are processed in the bat's brain to form a visual image of the world. This image is very accurate.
- Echolocation is used for avoiding collisions with objects, and also for hunting prey. Small prey is seized with the mouth. Large prey is sometimes seized with the wings.

- **Nose-sonar** bats are usually very bizarre-looking.
- They usually have big ears with horn-like shapes and trumpets on their faces to catch and focus the faint sonar echoes.
- They fly with their mouths closed and have folds of skin around their nose to 'beam' the sound.
- **Mouth-sonar** bats fly with their mouths open and they usually don't have facial decorations.

Some Wet Tropics microbats

Golden-tipped bat (*Kerivoula papuensis*)

- This bat has dark brown, woolly fur with golden tips to the hairs.
- It is **only 6cm long**.
- It eats mainly spiders, but also beetles and moths.
- Its sonar is so accurate it can detect **spider webs**. It hovers and picks its prey from the web.
- It has the quietest sonar of all Australian bats.
- It flies very slowly, and can hover for long periods compared to other bats.



Golden-tipped Bat

Ghost bat (*Macroderma gigas*)

- It is one of the largest micro-bats in the world. It weighs 150 grams, about the size of a Magpie-lark.
- It is Australia's only carnivorous bat. It eats frogs, lizards, birds, small mammals (including other bats) and large insects.
- It has a long, simple nose-leaf. Because its sonar is weak, it has good vision and huge ears to listen for noises made by prey. It swoops down, covering its prey with its wings and killing it with powerful bites.
- It hunts prey from surfaces (called **gleaning**) and also captures insects from the air (called **hawking**).
- In the daytime it roosts in caves, mines and deep rock fissures.



Large-eared horseshoe bat (*Rhinolophus philippinensis*)

- This bat occurs in tropical rainforests and roosts during the day in small colonies in caves.
- These little ‘flying mice’ have tiny eyes.
- It has an elaborate nose-leaf. The u-shaped lower part of its nose looks like a **horseshoe**.
- It feeds on flying insects such as moths.
- It flies at night in search of flying insects which it detects by using sonar calls which bounce off objects and return signals to its very **large, sensitive ears**.

Northern freetail bat (*Chaerephon jobensis*)

- This is one of the commonest of the microbats.
- It is also called **freetail** bat because its tail isn’t connected to its wings.
- It is found in urban areas where it roosts in house roofs. (For information on how to build a bat box see www.sydneybats.org.au)
- It is small and weighs only 30 grams.
- It has big ears and a face like a cocker spaniel. It has very short hair and a long tail.

Large-footed mouse-eared bat or Northern myotis (*Myotis moluccarium*)

- This bat lives near still water, like lagoons and dams. It flies across the water and rakes it with its large claws to catch aquatic insects.
- It often roosts under bridges above rivers.
- During mating periods, one male and several females form small groups. The males are very territorial at the roost sites and will fight off other males.

Tube-nosed insectivorous bat (*Murina florium*)

- This bat has long tubular nostrils extending from the end of its nose.
- It likes misty mountain areas. When roosting it wraps its wings around itself to prevent its fur from becoming soaked with rain, and to reduce heat loss.
- It feeds on flying insects.