

# Tropical Factsheets

## Leeches

- Leeches are **Annelids** (or *segmented worms*) and are closely related to earthworms.
- There are over 100 different leech species in Australia.
- Leeches have 34 segments, with a powerful sucker at the end.
- Leeches breathe through their body walls.
- Australian leeches vary in size from 7mm up to 200mm when extended.
- They are commonly found in dimly lit places. Most leeches live in freshwater but some live on land, in damp areas of tropical rainforests.
- In Australia's tropical rainforests the most common leech is the land-dwelling **jawed leech** (*Gnatbobdellida libbata*).
- Leeches are **hermaphrodites**. Each leech has both male and female sex organs. Leeches die after they have reproduced **once or twice**.
- Leeches are an important part of forest and stream ecosystems because they act as **both predators** and **prey** in the life cycle of many animals.
- Leeches are **carnivorous**. Some prey on **invertebrates**. They feed on insect larvae, snails, crustaceans and other worms. Their digestive enzymes process their food within a **few days**.
- Other leeches feed on the blood of **vertebrates** such as amphibians, birds, reptiles, fish and mammals - including humans! Animals that feed on blood are called **sanguivorous**. Leeches need symbiotic bacteria to help digest their blood meals which can take **weeks or even months**.
- Leech bodies are covered with **receptors** so they can detect warm-blooded animals by sight, smell, vibrations and temperature.
- They can also sense **carbon dioxide** in the air. This indicates there is a breathing animal nearby, which could be their next prey!
- In wet weather the leech waits in foliage or on the forest floor to attach itself to a passing warm-blooded animal. It will **wave** its head and body around, looking for signals that food is nearby.
- Birds, fish and frogs get their revenge on these bloodsuckers by feasting on them. (Pittas feed leeches to their chicks.) Other **predators** of leeches are turtles, and the larvae of damselflies and dragonflies.



- Rainforest **bushwalkers** are a very convenient food source because they brush against low foliage or sit on damp logs or rocks. A waiting leech can easily hitch a ride and grab a snack. When leeches are aware of a meal nearby, they climb the victim's legs and attach themselves to the first area of bare flesh.
- Leeches use **suckers** on each end of its body to loop swiftly in pursuit of its host. Once the leech is on the host it looks for a shadowy, protected spot. It holds on tightly with the larger sucker at its mouth, then cuts a hole in the host with its sharp teeth.
- The leech releases an **anaesthetic** in its saliva which numbs the skin and keeps the host from knowing it is sucking their blood.
- Leeches also release an anti-coagulant called **hirudin** which stops blood from clotting and keeps it flowing for as long as the leech is feeding. This anti-coagulant also stops the victim's blood from clotting in the gut of the leech and giving them digestive problems.
- Leeches can consume several times their own weight in just one bloody meal. It can be up to **five times** heavier than it was at the beginning of its meal.
- When they are full of blood they drop off and find a dark spot to rest and digest their meal.
- After a good feed, a leech can survive several months to a year before feeding again.
- **It is difficult to outwit leeches.** To keep leeches from biting you, avoid brushing against low vegetation in damp or wet places.
- Cover your socks and shoes with **eucalyptus oil or soap**. The lather repels leeches. You can also wear **pantyhose** on the outside of socks and long pants to keep leeches off your legs.
- If you apply insect repellent to your socks and shoes, **keep clear of creeks so you don't pollute the water.**
- To **detach a leech, carefully** expose the leech to heat such as a lighted cigarette or a flame or try sprinkling it with salt, tea tree oil, eucalyptus oil, alcohol or insect repellent. **Don't pull leeches off.** This can tear the skin which may then become infected.
- If you just want to move the leech on, slide a fingernail under the biting end. (The **hirudin** might cause the bite to bleed for some time, and the bites are often itchy.)
- Leeches can be dangerous if they fasten themselves to an **eyeball**. The only safe thing to do is wait for 15-40 minutes until the leech detaches itself and drops off. Don't pull the leech off and don't apply salt or you may damage your eye.
- **People use leeches in medicine.** They are important source of **anti-coagulants** to prevent blood clots from forming in patients. (Blood clots cause strokes.) Leeches produce **vasodilators**. Leeches are used in **plastic surgery** to prevent bruising and in re-attaching amputated limbs.