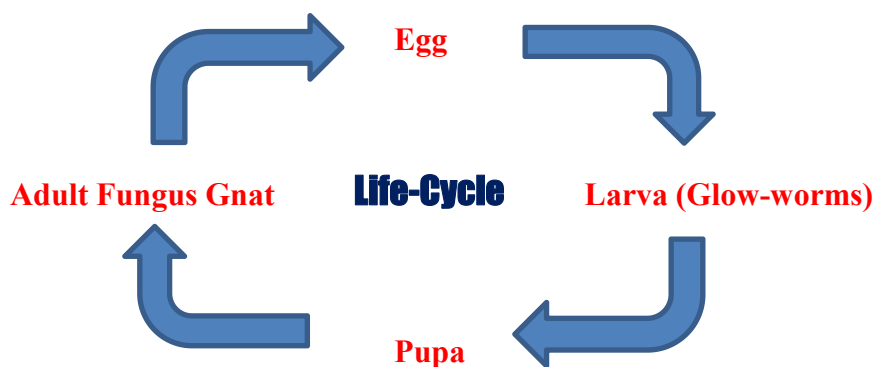


## Nature's Magic Light Show

*Your eyes adjust to the darkness of the forest. A trickle of moonlight filters through the dense canopy of towering ferns. Branches crunch beneath your feet as you venture deeper into the shadows. But then, as if by magic, the leaf-littered path lights up. You're surrounded by the blue-green glow of hundreds of twinkling fairy lights. Welcome to the dazzling world of the glow-worm.*

Glow-worms provide one of nature's most magnificent displays. But what exactly are these strange creatures that light up the night? Why do they glow? And where do you find them?

Glow-worms are actually *larvae* not worms. *Larvae* are the young of animals which go through a *metamorphosis*, or change, before taking on their adult appearance. For example, caterpillars are the *larvae* of butterflies, and tadpoles are the *larvae* of frogs. The glow-worms you see in Australia are the *larvae* of a mosquito-like fly called a fungus gnat. This type of glow-worm can only be found in Australia and New Zealand.



The fungus gnat lays over one hundred eggs which hatch into larvae after approximately three weeks. This larvae stage lasts for between five and twelve months, and

during this time they will *moult* or shed their skin several times. After their final moult, they will form a *pupa* and will emerge around a week later as an adult fungus gnat. Adult fungus gnats do not have working mouth-parts and are unable to eat. They only survive for a few days using the food stores they have built up as larvae. This gives them enough time to breed and lay eggs.

## **No need for torches**

Imagine walking through a cave, the ceiling twinkling like a star-lit sky. Or picture a river bank that dazzles like it's strewn with Christmas lights. It's hard to believe that this enchanting display is because of the larvae of a fly. So how do they create their magic?

Glow-worms are *bioluminescent*. This means that they make their own light. They do this through a chemical process which releases energy as a blue-green light. This is very different from other types of light which are generated from heat, such as the light given off by the sun and light produced by electricity.

Glow-worms are not the only animals to boast the remarkable ability to create light. Fireflies are one of the best known bioluminescent species. They use their light to attract a mate. However, most bioluminescent animals are found in the ocean. If you have ever visited an aquarium you may have seen the glowing jellyfish. Their ability to glow helps them defend themselves. One type of jellyfish can even detach its glowing tentacle to confuse a predator.

This ability to make light can prove very useful in the animal world. Not only can they use light to communicate, but they can use it to defend against predators. In the case of the glow-worms, their light has a far more sinister purpose.

## **Fatal Attraction**

However innocent the glow-worm may appear, they are, in fact, *carnivorous* or meat-eating hunters. Their mouth contains rows of sharp teeth. But don't worry, the glow-worm's diet doesn't involve anything much bigger than a cockroach.

As glow-worms can only move slowly over a small distance, they have devised an effective way to hunt. Glow-worms make *snares* to catch their prey in a similar way to a spider making a web. They produce long, silky threads which they coat with sticky droplets that act like blobs of glue. These silk threads hang down like fishing rods. Glow-worms use their glowing light to lure moths, mosquitos and other small creatures towards their trap. Once caught, there is no escape from the sticky thread. The glow-worm reels in its catch and enjoys its feast. Scientists believe that glow-worms can vary the intensity of their light depending upon how recently they have eaten. So the hungrier the glow-worm, the brighter its light.

## **Where to go to see them glow**

Glow-worms thrive in shady, damp places and are often found in caves and tunnels in rainforest locations.

The largest colony of glow-worms can be found at Natural Bridge, Springbrook National Park, on the Gold Coast. Hundreds of people visit every night to see the glow-worms in their cavern environment.

For a quieter experience, visit Melba Gully in The Great Otway National Park, one of the wettest locations in Victoria. The dense forest provides a great location to spot glow-worms along the side of the walking tracks and banks of creeks.

Near Lithgow in The Blue Mountains, an unused railway tunnel has been inhabited by glow-worms. If you venture to the middle of the tunnel, you can even see them during the day.

The glow-worm cave in the Tamborine Mountains, Gold Coast, was purposely built to help conserve glow-worm populations. The cave is maintained to provide a perfect habitat for the glow-worms to breed. It's also a great place to view them in a monitored environment.

### **Please don't put out our lights**

Until recently, there had been very little research into the Australian glow-worm. However, scientists now recognise the importance of studying these magnificent creatures and the need to protect them. Although there have been only three defined species of glow-worm recognised in Australia, it is now estimated that there may be as many as twelve species. Only recently, a new colony was discovered in Mount Buffalo National Park. This colony is thought to be closely related to the New Zealand glow-worm.

But changes in climate and human impact are putting the Australian glow-worms in danger. If you are fortunate enough to get the opportunity to visit glow-worms, then please remember to respect these delicate creatures. Always keep to walkways, never shine your torch directly at the glow-worms and do not touch them. That way, we can preserve the magic of the glow-worms for generations to come.