

*What are fireflies?* Fireflies are beetles, which means they have their front wings hardened but do not use them to fly with (they are called elytra; singular is elytron). Instead, when they fly, sometimes not very well, they use their second pair of wings only. Perhaps you have seen the clumsy flight of a Christmas beetle? You can see the front wings of a Christmas beetle held out at the sides of the body, and the flight is usually slow and even a bit clumsy. Fireflies are not strong fliers, and for some types only the males can actually fly, the females have reduced wings and can't fly at all.

But there is a reason why we call them fireflies. They can produce light and it is an amazing phenomenon, as it is almost 98% light and only 2 % heat.

The light is produced in special organs (called light organs) at the end of their abdomens (tail) on the underside. In our Australian fireflies the last two segments of the underside of the



abdomen are white. These pictures are of *Atyphella scintillans* taken in the Gold coast hinterland. The white light organs contrast with the other segments in front of them which are black.



These marvellous pictures from Maureen Gubbels Gold coast hinterland in September 2022 clearly show the dark front wing and expanded semitransparent hind wing and as a bonus the right picture has its light turned on.

*What are they doing with that light?* Fireflies, especially the males are engaging in a frantic mating dance to find and mate with a female. Their light is flashing on and off at regular intervals (and sometimes not so regularly when they see other lights, or you catch some and secure them temporarily in a lidded glass bottle). Always release them afterwards.

*What about glowworms?* In Australia we tend to use our terms pretty specifically, fireflies are beetles which produce light which is flashed on and off at regular intervals, and glowworms are the larvae of a fly that also produce light but for a different purpose, they just turn their light on and off to attract prey, which comes in to investigate and gets all tangled up in the sticky snares that the glowworm has produced.

It is different overseas. The terms may be used interchangeably. There are members of the family Lampyridae (that is the family our fireflies belong to) which have males that do not produce light, but they have a large female that retains her larval form and glows, and this is probably the glowworm of the “Glow little glow worm” song. Species of this glowworm are common in England and also in India where they are known as the Indian glowworm and are quite famous. Of course fireflies get different names too. They might be called lightning bugs in the USA where they are very common.