



# Bioluminescence

Bioluminescence is the ability an **organism**, or living thing, to glow. Bioluminescence is an **adaptation** that helps a living thing survive in its habitat.

*What do you see in summer that glows?*

## What Organisms Glow?

When we think of living creatures that glow most of us think of **fireflies**. Jellyfish, sharks, squid, mushrooms, plankton, and bacteria can also be bioluminescent. The ocean is home to most bioluminescent organisms and most of those live at depths where there is very little sunlight.

## How Do They Glow?

Many living things have an organ in their abdomens that produce a chemical reaction that makes them glow. Some organisms that are not bioluminescent use other organisms to make them glow. Midshipman fish eat tiny glowing shrimp. The Hawaiian bobtail squid uses bacteria to produce its blue-green glow.

## How Does Glowing Help?

Bioluminescence is used by organisms to hunt, communicate, reproduce, and as a defense mechanism. Some squid release glowing fluid to confuse predators while they escape. Bioluminescence helps fireflies attract mates and mushrooms attract insects that help collect and spread their spores. Angler fish use a glowing lure created by bacteria to catch prey.

## Did You Know?

- Bioluminescence means "living light" in Latin.
- Bioluminescence cannot be seen in daylight. Some fish use it to **camouflage** with sunlight.
- Almost all deep-sea creatures are bioluminescent.
- Bioluminescence is sometimes called "cold light" because it requires and creates no heat.
- Caves in New Zealand glow with the light of the larvae of a fungus gnat.
- Some land snails lay eggs that glow. The young have a green glow around the mouth and emit yellow flashes.
- Bioluminescent plankton called dinoflagellates cause the surface of the ocean glow at night.
- Glowing mushrooms use the same chemical that makes fireflies glow.

Angler fish

