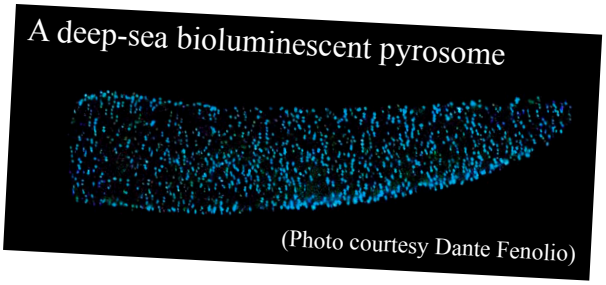
10 things you should know about...

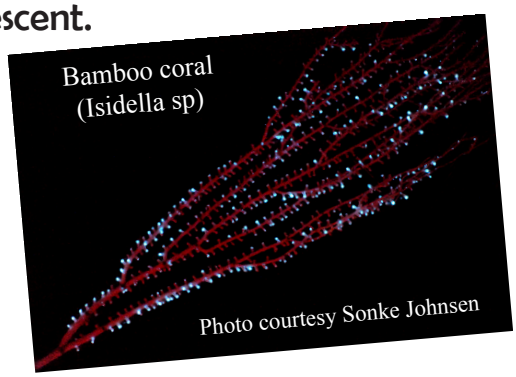
Bioluminescence

1. Bioluminescence is living light. It is light made within the body of living things.



2. Bioluminescence is common in the deep-sea. Scientists estimate that 9 out of 10 deep-sea animals are bioluminescent.

3. Bioluminesce is rare on land. Examples include fireflies, click worms, glowworms, and some fungi. There are no known bioluminescent land vertebrates (animals with backbones).

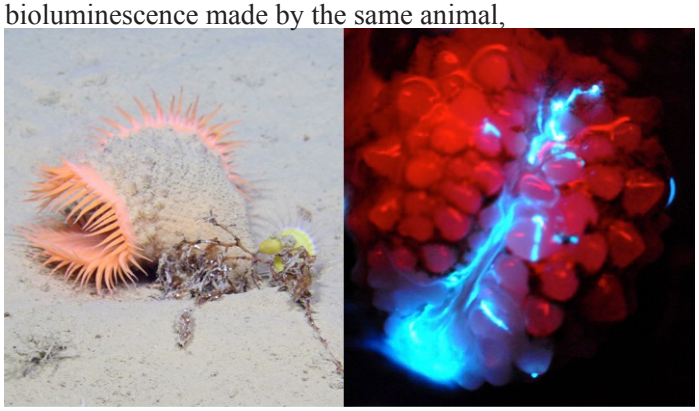


4. Unlike light from the sun or a light bulb, bioluminescent light does not create heat.

5. Bioluminescence is created through a chemical reaction within living things. The exact chemicals depends on the kind of animal (living thing).

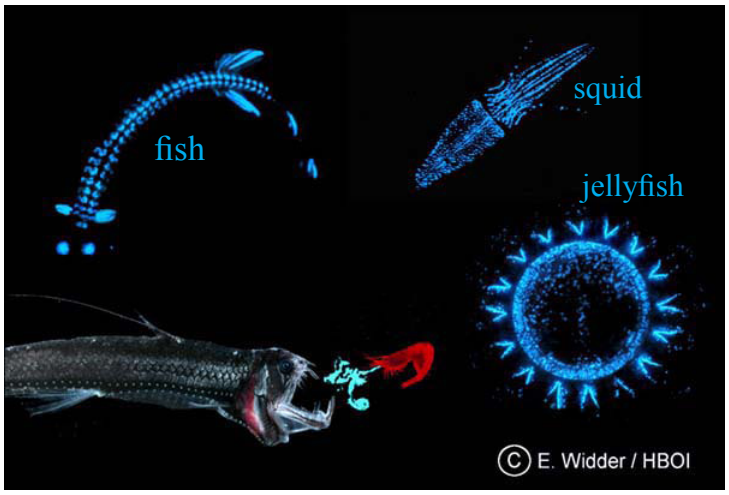
6. The generic name of the chemicals that mix to create bioluminescence are called luciferan and luciferase. Together with oxygen, they create the glow.

A deep-sea anemone photographed with white light. The bioluminescence made by the same animal,



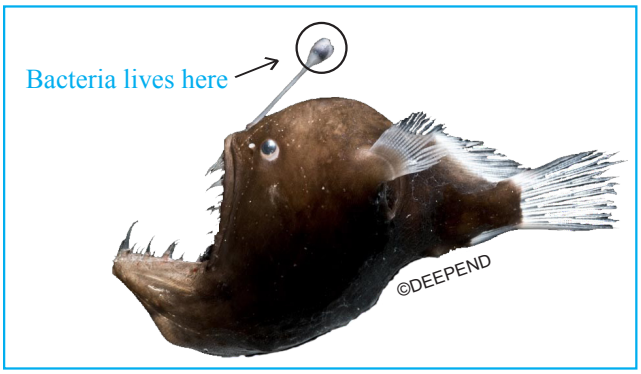
Courtesy Bioluminescece and Vision 2015 NOAA OER

7 In the deep sea, jellies, squid, octopus, coral, seastars, crustaceans, and many species of fish are bioluminescent. It is estimated that 50% of jellies (this includes jellyfish, comb jellies, and other jelly-like animals) are bioluminescent. Many deep-sea fish are bioluminescent. Ten-percent of sharks are bioluminescent!



8 Animals use bioluminescence to communicate (talk), to lure or trick prey, to avoid or escape from predators, and as a camouflage.

9 Some animals create their own light. Some have a **symbiotic** relationship with bacteria and the bacteria create the light. **Symbiotic** means a relationship that benefits one or both living things. The glow of an anglerfish's lure is made by bacteria.



10 Depending on the kind of animal, bioluminescent light comes in many colors from green, blue, red, purple, and yellow. Most deep-sea bioluminescence is blue-green.