



A Publication of Alpha Omega
Institute

January/February 2002

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LIGHTS IN THE DARK

God created the ocean full of all kinds of wonderful creatures. Some fish live at or near the bottom, thousands of feet below the surface where the temperature of the water is barely above freezing and the pressure is strong enough to crush the human body. At these great depths live some fascinating, bizarre, and even scary looking creatures.

Deep in the sea, below 3,300 feet, there is no sunlight. The only light is made by some of the creatures who live there.

Amazingly, almost every deep sea creature has luminescent (light) organs, which produce light where there is no natural light. This design, called bioluminescence,



This female black seadevil has a "headlight" above her mouth that she can turn on and off. Her husband is permanently attached to her head.

comes from organs called photophores which hold millions of light-producing bacteria.

These photophores are found on some of the strangest parts of

these deep sea creatures. Some fish have a "fishing rod" growing from the snout ending in a glob of light. Some have the light organ on their tongues, while others have rows of lights running along their body. Because these bioluminescent creatures are hardly ever seen by humans, we can only guess what

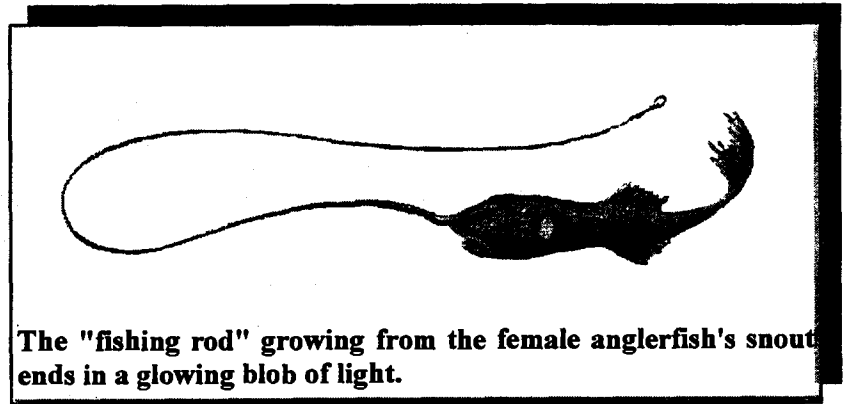
they use this special light for. Perhaps it is to help them see in the dark, or to lure prey to its mouth, or to scare

away an enemy, or to attract a mate. Also, these animals have big well-developed eyes that seem to be designed to see the special colors of bioluminescence.

Bioluminescence is called "cold" light, and is made by special chemicals combining in such a way that little or no heat is given off. Light bulbs, candles, and oil lamps make incandescent light or "hot" light (more heat is produced than light). Plants and animals cannot make this "hot" light without burning up.

Since a variety of plants, animals, and bacteria use bioluminescence, scientists are having a difficult time trying to explain why so many different

kinds of life can light up. Some evolutionary scientists believe that millions of years ago when the Earth was a young planet, there was no oxygen in the atmosphere. If there were living things on Earth, as many evolutionists believe, they must have needed other elements for life. As oxygen gradually formed in the atmosphere, it was poisonous to life on earth. As a result, living things would have had to develop a use for it or die. Therefore, some scientists believe all life forms glowed or flashed in the early ages since they processed the oxygen in



The "fishing rod" growing from the female anglerfish's snout ends in a glowing blob of light.

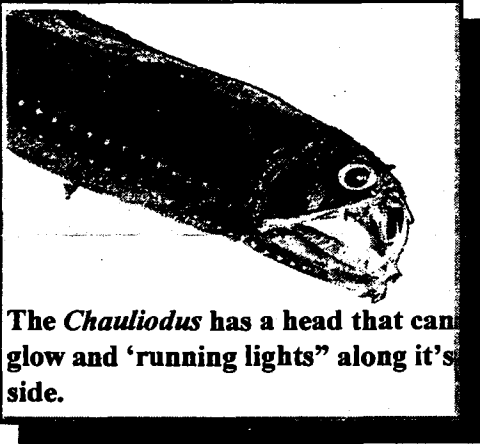
order to produce light.

Slowly, after millions of years, higher forms of life got used to the oxygen and eventually came to depend on it for survival. On the other hand, some primitive bacteria didn't change much beyond their earliest forms and simply went right on glowing. Certain higher forms of life, among the insects and fishes, began to make even more uses of their light.

This evolutionary story has some very big problems. One problem is that evolution requires lots of long ages of time in order to even have a chance of working. Yet, the Bible and continuing scientific research indicate that the earth is young.

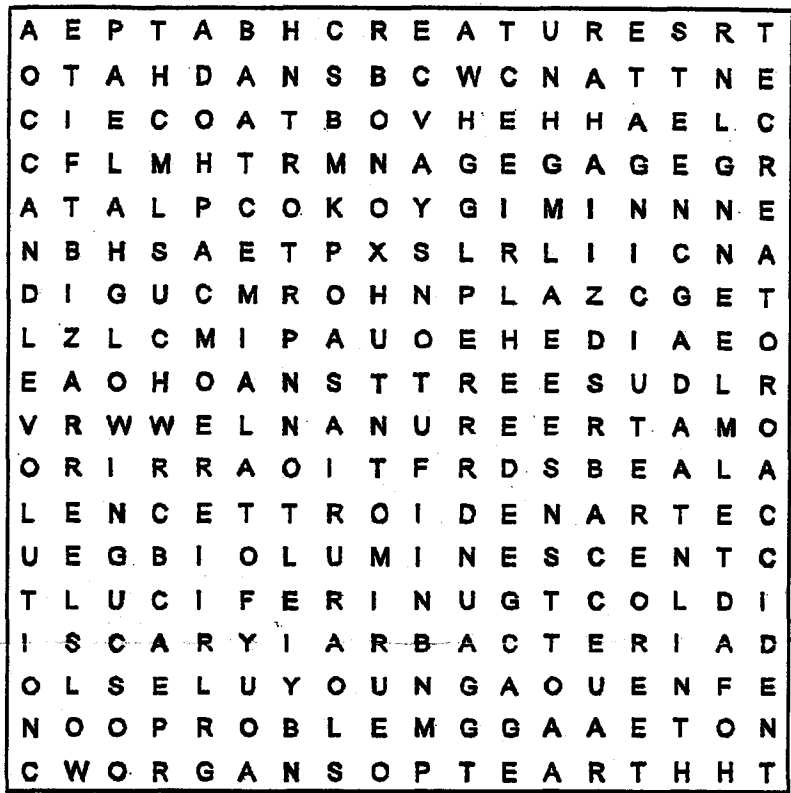
Another problem is that evolution teaches the early atmosphere of the earth never had oxygen. Yet, we find rocks today that show there has always been oxygen upon the earth.

Also, where did the special chemicals (luciferin and luciferase) that produce bioluminescence come from? Living light is produced when



The *Chauliodus* has a head that can glow and 'running lights' along it's side.

luciferin combines with oxygen taken from air or water, but the chemical reaction will only take place when there is luciferase present. How was this "simple" life surviving while either of these chemicals developed slowly by chance and accident? Both would have had to evolve at the same time! Neither is any good without the other. Slow and gradual steps will not work. You have to have all or you get none. The only way to get it all is by intelligent design. Bioluminescence demands a designer (creator) and that Creator is God.



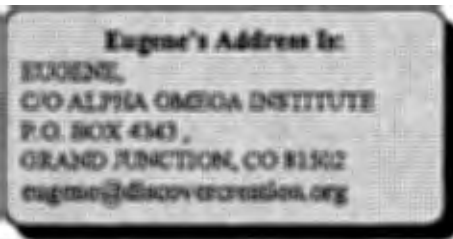
WORD LIST

- | | | |
|----------------|-------------|-------------|
| ACCIDENT | CREATURES | INTELLIGENT |
| ATMOSPHERE | DARK | LUCIFERIN |
| BACTERIA | DESIGN | OILLAMPS |
| BIOLUMINESCENT | EARTH | ORGANS |
| BIZARRE | EVOLUTION | OXYGEN |
| CANDLE | FASCINATING | PHOTOPHORES |
| CHANCE | FREEZING | PROBLEM |
| CHEMICAL | GLOWING | SCARY |
| COLD | GRADUAL | SLOW |
| COLOR | HEAT | SUNLIGHT |
| CREATOR | HUMAN | TEMPERATURE |

WORD SEARCH



Look for the words hidden in the puzzle above from words in the Word List. The hidden words might be up and down, sideways, or slanted (not backwards).



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