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# Discovery

*Scripture & Science for Kids*





# "OH, WHAT GOD HAS DONE!"

ERIC LYONS

ON MAY 24, 1844, SAMUEL MORSE, WHO INVENTED THE TELEGRAPH SYSTEM AND MORSE CODE, SENT THE VERY first telegraph from Washington, D.C. to Baltimore, Maryland. This message consisted of a brief quotation from Numbers 23:23 (KJV): "What hath **God wrought!**" ("Oh, what God has done!"—NKJV.) Samuel Morse boldly testified to what everyone should understand: design demands a designer. Morse's code and the telegraph system were the immediate effects of a designer: Samuel Morse. But, the grand Designer is God, Who created Mr. Morse and every

material thing that Samuel Morse used to invent his telegraph system. Samuel Morse recognized this marvelous, self-evident truth. Should we not recognize it as well, especially in view of the amazing creatures that inhabit Earth?

Indeed, nature testifies loudly to what "**God has worked!**" In truth, "the whole earth is full of **His** glory" (Isaiah 6:3). "**He** Who built all things is **God**" (Hebrews 3:4).



## SCIENTISTS

ESTIMATE THAT FOUR OUT OF EVERY TEN SPECIES OF insects are beetles, including click beetles, dung beetles, Rhinoceros beetles, ladybugs, and boll weevils. In one sense, beetles are common creatures. That is, they are commonly **seen** creatures. But don't think of them as unremarkable animals: beetles do some exceptional things that testify to a grand Designer. Consider, for example, the bombardier beetle.

What is so special about this little bug? Of all the things to consider in life, why would a one-half-inch-long, average-looking beetle be worthy of space in *Discovery* magazine? Because this beetle is a ticking time bomb.

No, the bombardier beetle does not have explosives tied to its back. It doesn't carry around a miniature stick of dynamite. Nor are its insides full of nitroglycerin (nie-truh-GLIS-er-in)—the explosive liquid present in dynamite and other explosives. What does the bombardier beetle possess that makes it so unique? This little bug has tiny glands inside its body that hold two harmless chemicals known as hydroquinones (hi-dro-KWI-nons) and (the more familiar) hydrogen peroxide. The bombardier beetle secretes these chemicals into a kind of "holding area" or "storage tank." Then, if the beetle senses danger and is agitated by an attacker, it quickly moves the chemicals from its storage tank into yet another chamber, which could be called the "explosion chamber." In this compartment, the beetle secretes special catalyst enzymes into the once-harmless chemical mixture, making a toxic spray that reaches 212 degrees Fahrenheit (or 100 degrees Celsius)—the temperature at which water boils.

Amazingly, the beetle doesn't blow up. It doesn't develop a high fever and die. The noxious spray doesn't eat through the chamber walls and kill the beetle. No, the

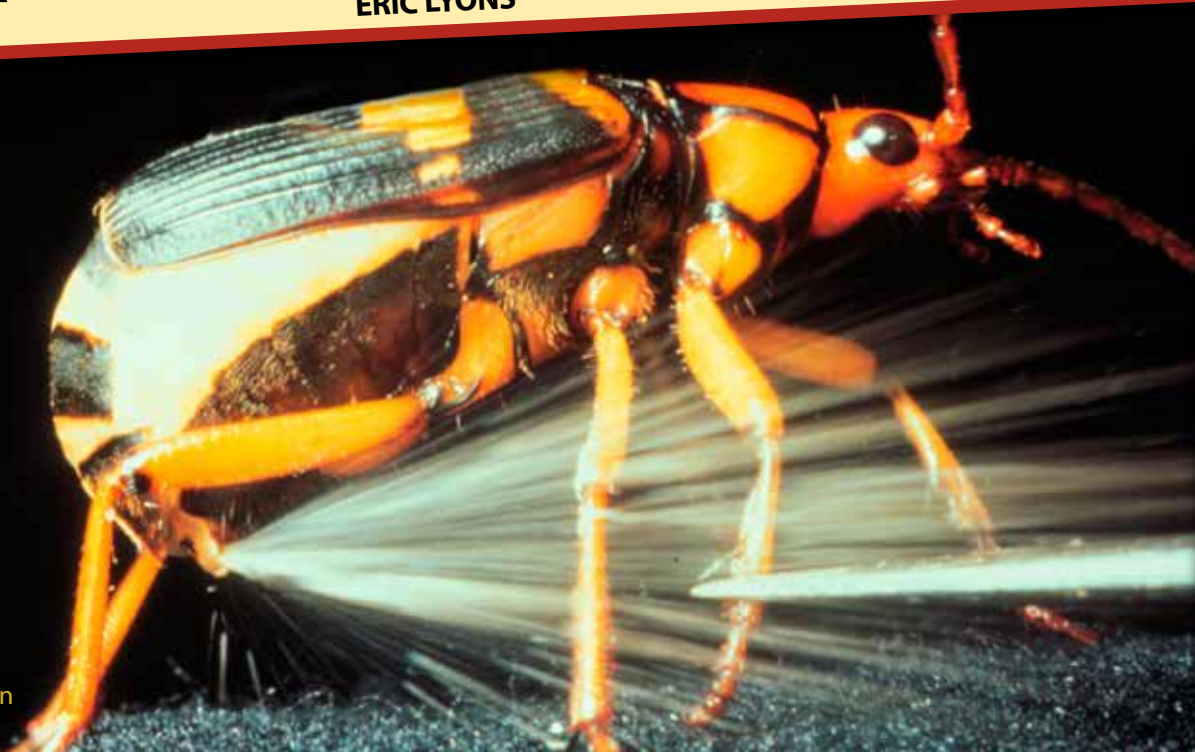
beetle sizes up its attacker and quickly rotates two rear nozzles at the end of the explosion chamber so that they point in the direction of the attacker. The bombardier beetle then fires the boiling-hot mixture toward the enemy with pinpoint-accuracy in a high-speed, machine-gun-like fashion—at about 500 "rounds" (pulses) of toxic spray per second.

Evolutionists allege that this amazing insect is the product of millions of years of evolution. Can you imagine the evolution of a bombardier beetle? If this theory were true, then there had to have been a time when the bombardier beetle did not produce a toxic spray. There had to have been a time when it didn't store a 212-degree-mixture. There had to have been a time when it had never shot anything out of its back end as hot as boiling water. If so, what would have happened the first time the beetle evolved the ability to mix a boiling-hot solution, without already having a storage tank in place that could withstand such temperatures? What would have happened the first time this beetle ever blew a "bomb" out its backend? Why did the beetle not blow up the first time it ever created a "bomb"? The answer: because the bombardier beetle did not evolve by time and chance, and unintelligent, natural processes over millions of years. Common sense calls for a Creator Who made this insect with all of its necessary parts in place at the same time—at Creation. The amazing defense mechanism of the bombardier beetle declares the glory of God and defies the theory of evolution.



## THE BOMBARDIER BEETLE: A BOMBHELL FOR EVOLUTIONISTS

ERIC LYONS



Picture used with permission from Dr. Thomas Eisner



# SUPER SEAHORSES

ERIC LYONS

**THE SEAHORSE IS ONE OF THE MOST CURIOUS-LOOKING ANIMALS ON THE PLANET. THOUGH IT HAS A head like a horse, eyes like a lizard, a tail like an opossum, and can swim like a submarine, the seahorse is considered a fish. Scientists put seahorses in the pipefish/sea dragon family and refer to it as *Hippocampus*, a name derived from two Greek words: *hippo*, meaning "horse," and *campus*, meaning "sea creature."**

## Submarine-Swimming Sensations

Most fish swim horizontally by moving their bodies back and forth, from side to side, somewhat like a snake wriggles. Seahorses, on the other hand, are upright and swim vertically—like a submarine that can go up and down. How do they accomplish such a feat? A seahorse has one fin on its back and one on each side of its neck that help to propel it. But what helps maintain its balance as it goes up and down in the water is the gas within its swim bladder. Like a well-designed submarine that manipulates gas in order to submerge and resurface while remaining parallel to the water, the seahorse can alternate the amount of gas in its bladder to do the same. The life of the seahorse is dependent on a perfectly designed bladder. With a damaged bladder (or without a bladder altogether) a seahorse would sink to the ocean floor and die. One wonders how evolutionists can explain the evolution of the swim bladder if sea-



horses have always needed them to survive. If they have always needed them, then they must have always had them, else there would be no seahorses. But there are seahorses—and small though they be, they stand as powerful witnesses for the Creator.

## Mr. Mom Defies Evolution

Female dogs have puppies. Female cats have kittens. Female horses (called mares) have baby horses (called foals). Women, not men, become pregnant, and carry and deliver babies. With seahorses, however, things are different. Seahorses are the only known animals in which the males actually get pregnant, carry the babies, and give birth.

God designed the male seahorse with a special kangaroo-like pouch near its belly. At just the right time during the courtship, the female seahorse deposits hundreds of eggs into the pouch of the male, where he fertilizes them. For the next few weeks, the male seahorse carries the unborn seahorses, before squirting the fully formed babies out of the pouch.

If nothing like this process is known in the animal kingdom, why would anyone think that evolution can logically explain it? How do undirected time and chance stumble across a different and better way for a particular kind of fish to have babies? Did the first male seahorse to give birth simply have an irritable wife who refused to have babies unless he carried and birthed them? Suffice it to say, seahorses are as baffling to the theory of evolution as duck-billed platypuses. These unusual animals cry out for a creative Creator, Who cannot be contained in the naturalistic box of evolution. As the patriarch Job asked, "Who... does not know that the hand of the Lord has done this, in whose hand is the life of every living thing?... Ask the



Male seahorses actually get pregnant, carry the babies, and give birth.



beasts, and they will teach you...and the fish of the sea will explain to you" (Job 12:9-10,7-8).



## Did You Know?

### The Perfectly Designed Prehensile Tail

The tail of a seahorse is wonderfully designed. As with the opossum and certain monkeys, God gave the seahorse a prehensile (pre-HEN-sul) tail. A prehensile tail is one that can wrap around and hold things. Seahorses use their tails to wrap around seaweed and anchor themselves so that fast-moving water currents do not carry the rather slow-moving seahorses far away from their homes.





# ACTIVITY PAGES



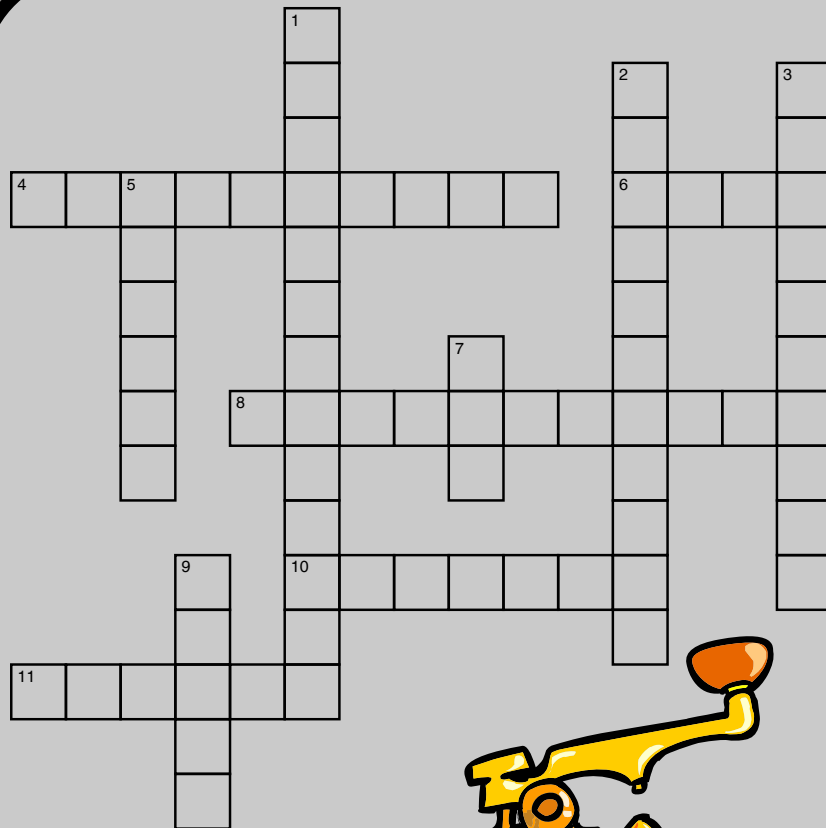
## CROSSWORD CHALLENGE

### Across:

- Beetle that produces a toxic spray that reaches 212 degrees Fahrenheit
- Gives birth to baby seahorses—the male or the female?
- The name scientists use for sea-horse
- Book of the Bible in which you find: "What hath God wrought!"
- Greek word for "sea creature"

### Down:

- The chemical (besides hydrogen peroxide) that the bombardier beetle mixes with catalyst enzymes to form a toxic substance
- Invented the telegraph system and Morse Code
- A tail that can wrap around and hold things
- The main body of a squid
- He Who built all things
- Greek word for horse



## FILL IN THE BIBLE VERSES (NKJV)

- "Who...does not know that the hand of the \_\_\_\_\_ has done this, in whose hand is the life of every living thing?... Ask the beasts, and they will teach you...and the fish of the \_\_\_\_\_ will explain to you" (Job 12:9-10,7-8).
- "Holy, \_\_\_\_\_, holy is the Lord of hosts; the whole \_\_\_\_\_ is full of His \_\_\_\_\_" (Isaiah 6:3).
- "For every house is built by \_\_\_\_\_, but He who built all things is \_\_\_\_\_" (Hebrews 3:4).

## TRUE OR FALSE

- \_\_\_ Samuel Morse believed in the General Theory of Evolution.
- \_\_\_ The design of a bombardier beetle defies evolutionary explanations.
- \_\_\_ Bombardier beetles are full of nitroglycerin.
- \_\_\_ The giant squid is simply a mythical creature.
- \_\_\_ Because the giant squid is so big, it swims very slowly.
- \_\_\_ Like a well-designed submarine that manipulates gas in order to submerge and resurface while remaining parallel to the water, the seahorse can alternate the amount of gas in its bladder to do the same.
- \_\_\_ Seahorses show no indication of being designed by an intelligent Designer.
- \_\_\_ The giant squid can swim at great speeds, using its perfectly designed biological jet-like pump to eject water out of two little openings in its mantle.
- \_\_\_ Male seahorses give birth to their fully formed babies.
- \_\_\_ The bombardier beetle blows a hot spray out of its mouth when attacked.



Dear Digger Doug,  
How long does it take for the lava to flow out of the center of the Earth and to erupt out of the volcano and become igneous rock?

—J.M. Gilbert, Martin, TN

Dear J.M.,

I can see you like volcanoes. So do I! They are an awesome part of God's creation. Volcanoes are mountains that have pools of molten rock inside. Eventually, pressure builds up until it has to find somewhere to escape. It then forces its way up through "fissures," which are cracks in the Earth's surface. Once the hot magma passes through the Earth's surface, it is called lava. Igneous rocks form whenever the lava cools down and turns into rock.

How long does this process take? It certainly does not take millions of years. The fact of the matter is, there is no certain amount of time that it takes volcanoes to erupt. Some very active volcanoes can erupt every few months. Mt. Etna, in Sicily, is an example of this kind of volcano. Other volcanoes erupt every 5-10 years. And some volcanoes may erupt once in a thousand years. We do know that most of the time, the volcanoes that erupt often are much smaller and produce small explosions and ash clouds. But the ones that take longer to erupt have time to build up more force and erupt in much larger explosions. Thanks for your good question.







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ADDRESS SERVICE REQUESTED

# The Giant Squid

BO LYONS

## HUNDREDS OF YEARS AGO, SAILORS WERE TERRIFIED OF A MYSTERIOUS SEA MONSTER THEY CALLED THE

Kraken. They described this creature (with some exaggeration, no doubt) as a giant monster with ten huge arms, long enough and strong enough to engulf and sink one or more ships!

Today, scientists believe that what the sailors witnessed was actually a giant squid (or perhaps a colossal squid). The giant squid is one of the most well known members of the mollusk family. It can grow to nearly 50 feet long and weigh more than 600 pounds (making it and the colossal squid the largest invertebrates in the world). The giant squid lives so deep in the ocean that few sightings have been recorded by scientists. Until 2006, this peculiar creature had never even been caught on film.

The giant squid is so big and ferocious that it appears to have very few natural predators besides the Sperm Whale. And, even though the Sperm Whale may eventually get the best of the giant squid, more than a few Sperm Whales bear scars from being cut with the serrated suction cups on

the squid's arms. (Apparently, this squid can put up a fight.)

Evolutionists think that the giant squid somehow evolved its amaz-

ing plate-sized eyes, which enable it to see remarkably well under water. The giant squid can swim at great speeds, using its perfectly designed biological jet-like pump to eject water out of two little openings in its main body (called the mantle). Yet evolutionists expect us to believe this creature evolved by time and chance over millions of years. Does that make any sense? Not at all.

Design demands a designer. Tentacles do not "just happen." Eyes do not "just appear." And jet-like pumps are not the result of mindlessness. The amazing giant squid was designed and created by God on the fifth day of creation.



## ANSWERS

**CROSSWORD CHALLENGE:** Across: 4. bombardier; 6. male; 8. *Hippocampus*; 10. numbers; 11. *campus*; Down: 1. hydroquinones; 2. Samuel Morse; 3. prehensile; 5. mantle; 7. God; 9. *hippo*.  
**TRUE OR FALSE:** 1-F; 2-T; 3-F; 4-F; 5-F; 6-T; 7-F; 8-T; 9-T; 10-F.  
**FILL IN THE BIBLE VERSES:** 1. Lord, sea; 2. holy, earth, glory; 3. someone, God.  
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