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Discovery

Scripture & Science for Kids





MIGRATION CHAMPION

ERIC LYONS

Every year, millions of people travel to see the mountains of East Tennessee, the white, sandy beaches of Florida, the giant Redwood trees of California, and the wildlife of Alaska. Can you imagine how difficult these journeys would be without the help of maps, signs, satellites, or compasses? We simply could not go very far on Earth and expect to reach our intended destination without certain navigational aids.

In view of how much humans depend on things to help them travel, have you ever considered the various migratory animals that travel thousands of miles without outside assistance? The Arctic tern is just one of many animals that travels great distances around the world without the help of navigational devices or “tourist guides.” As the name implies, Arctic terns live in the Arctic regions of the Earth. During the spring, they breed and raise their young in such places as Canada, Greenland, and northern Russia. They feed on insects, worms, fish, and crustaceans. Then, in the fall of the year, they begin their migration south, to their Antarctic winter feeding grounds.

This journey is no walk in the park. Arctic terns fly thousands of miles in only a few weeks to reach their destination. One Arctic

tern was tracked migrating from above the Arctic Circle in northern Russia all the way to Australia—a trip of 14,000 miles. Another Arctic tern (weighing only a few ounces) was tagged in Canada before it was old enough to fly. Just 90 days later, however, it was picked up in southern Africa—9,000 miles away. No wonder so many people call this bird the “Migration Champion.”

What’s even more amazing than the distance Arctic terns can fly is their return home in the spring. **Without help from a map, a compass, or even a parent, Arctic terns can fly more than 10,000 miles back to where they hatched as a baby bird.** Scientists have studied the migration of Arctic terns for decades and still cannot adequately explain this “age-old riddle.” Try as they might, evolutionists can only offer woeful (and often contradictory) theories, at best. Christians, on the other hand, have no problem explaining this amazing bird: the all-knowing, all-powerful Creator endowed it with the amazing trait we call “instinct.”

AMAZING TRAVELING TURTLES

KYLE BUTT

The race was on. The prize was one million dollars. The goal was to travel across the Mojave Desert. The vehicles in the race cost lots of money. They were loaded with all kinds of devices to help them steer, avoid dangerous obstacles, and keep them on course. These vehicles were supposed to travel 142 miles to their destination. But something happened. None of the vehicles finished the race. In fact, they all wrecked, broke, or quit working. The one that went the farthest only went 7.4 miles, and then it ran into something and caught on fire. What was the problem? There were no drivers. The vehicles were robots. Intelligent engineers were trying to build machines that could travel 142 miles without drivers. But they failed.

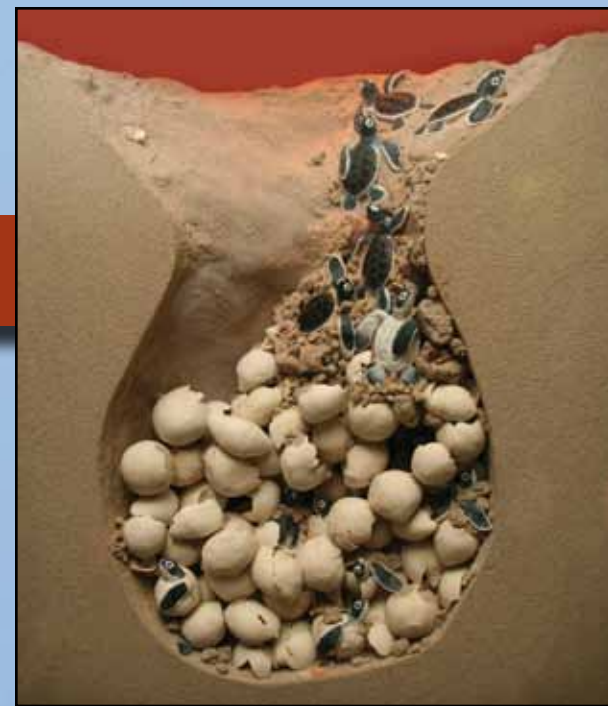
Did you know that God successfully designed animals that accomplish even greater things than going 142 miles across a desert? That’s right. One of these animals is the sea turtle. Sea turtles are amazing be-

cause they have built-in systems that help them travel thousands of miles through the oceans and get to exactly where they want to go.

Mother sea turtles crawl onto beaches, dig holes in the sand, lay their eggs, cover them up, and crawl back into the ocean. When the baby turtles hatch, they dig out of the sand and crawl toward the water. When they reach the water, their built-in guiding system helps them swim out into the deep water. Once they are out of sight of the beach, they do not get turned around and accidentally swim back. They are so well-designed that they swim to special feeding areas thousands of miles away from the beach where they were born.

After many months of traveling thousands of miles, the females return to the exact same beach where they were born. There they lay their eggs and the process starts again. How do the turtles find their way back? Scientists aren’t sure. They think that the turtles have a way to use the Earth’s magnetic field to find their way home.

One thing is for sure. Intelligent humans haven’t learned to build robotic vehicles that can travel just 142 miles by themselves. But sea turtles can travel thousands of miles back to the exact same beach where they were born. Therefore, we know the turtles must have been designed by Someone more intelligent than humans. The truth is, God designed the turtles and gave them their built-in guiding system.



The Right Travel Schedule of Great Whales

CALEB COLLEY

Although great whales are found in all oceans, they still migrate... a lot. Generally, these giant mammals travel to cold waters for feeding, and to warmer waters to give birth. Southern right whales, blue whales, grey whales, humpbacks, and northern right whales all have slightly different migration patterns. Whales depend on migration for survival.



For example, the humpback whale, whose Latin name means "big-winged New Englander," is known for its spectacular leaps and long, white side flippers. About 100 humpback whales arrive on Stellwagen Bank, a newly designated marine area



off Massachusetts, in the spring. There, they feed on slender, five-inch-long fish called sand lance.

Each winter, gray whales pass by the western overlooks of Cabrillo National Monument in California. After spending the summer feeding in the food-rich waters of the Arctic, the whales swim south along the coast to the Baja bays, where they mate and nurse their young. Blue whales also spend the winters in temperate and subtropical regions, migrating to the polar regions in the spring and summer to feed in the water of melting icepacks.

Evolution has no good explanation for whale migration. Why do whales "automatically" go to cold waters to eat enough food to sustain them during the mating season, when they eat much less? Why do whales consistently go to warmer waters to birth their young? Surely no human being informed them that warmer water is better for young whales.



In fact, evolution cannot explain why the first whales "decided" to migrate in order to survive. The only sensible explanation is that God gave whales the necessary instinct to travel and behave in precisely the ways that allow them to survive. The Bible teaches that God, the Creator of all things, has power over all animals, even massive creatures such as whales (see Genesis 6:20; Jonah 1:7; 2:10; Deuteronomy 7:22; Job 40:15-24).

Have Tuxedo, Will Travel

CALEB COLLEY

Evolutionists have trouble understanding why and how any birds "developed" the instinct to migrate. Penguins present a huge challenge to those who refuse to believe in God.

Penguin species are found on every continent in the Southern Hemisphere. Some species spend as much as 75 percent of their lives in the water. Penguins are the only birds that swim to migrate. When it gets cold, some penguins migrate to the west coast of South America, to places like Tetas Point in northern Chile, or to the east coast of South America, as far north as Rio de Janeiro in Brazil. Penguins can zoom underwater at speeds of 25 miles per hour. They migrate up to 5,000 miles, swimming in the coldest water on Earth.



Each year, at exactly the right time, thousands of emperor penguins in Antarctica migrate to a specific spot where the ice is thick, so that when their chicks hatch, they won't fall through melting ice. This spot is also protected from the harsh winds, which can reach 186 miles per hour and temperatures that can reach -140 degrees Fahrenheit.



Evolutionists say that the first penguins evolved about 30 or 40 million years ago. But how did the first penguins know how to migrate? Certainly no one explained the process to them. What made them migrate in precisely the right direction and at exactly the right time? Evolution cannot explain why penguins (or any other birds) migrate in order to survive. Penguin migration shows that God designed penguins for life in the sea and on land, and provided them with the instinct to migrate in exactly the right way to preserve their kind.

ACTIVITY PAGES



SOLVE, FIND, AND CIRCLE



- Travels 3,000 miles to winter in the Oyamel forests of Central Mexico

- A scientist who studies insects

- Was tracked migrating 14,000 miles one-way

- This bird spends 75 percent of its life in the water

- Returns to the same beach on which it was born to lay her eggs

- About four billion of these enter our atmosphere each day

- Is known for its spectacular leaps and long, white side flippers

- Brought the Universe and everything in it into existence

- Arctic terns live in the warmer regions of the world.
- Baby sea turtles can only swim in the oceans with help from their parents.
- Penguins pose a huge challenge for those who refuse to believe in God.
- The theory of evolution is able to explain migration habits of various animals.
- The Monarch migration takes up to three or four generations of butterflies to complete the entire process.
- Penguins migrate to an area that can reach -140 degrees Fahrenheit.
- Without help from parents, Arctic terns can fly more than 10,000 miles back to where they hatched as baby birds.
- God is an adequate explanation for an animal's instinct and sense of direction.

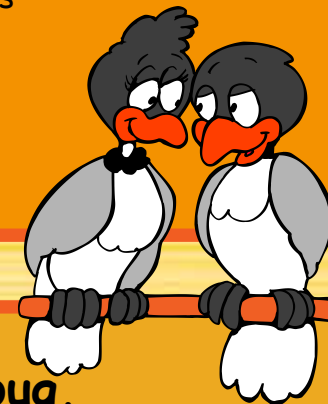
TRUE OR FALSE



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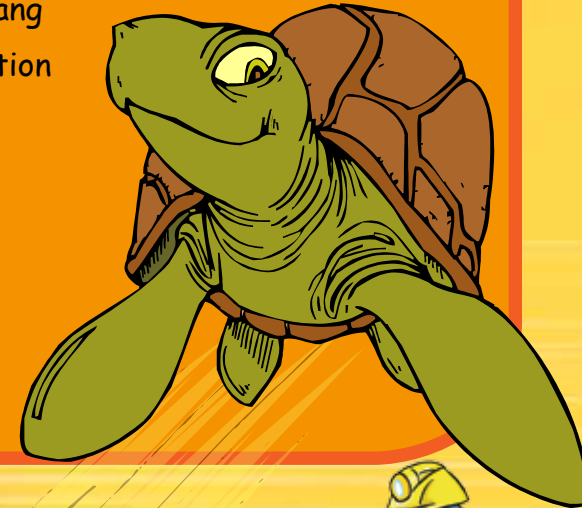
(Circle the correct answer)

- Found on every continent in the Southern Hemisphere
A. Monarch butterfly
B. Sea Turtle
C. Penguin
- The only bird that swims to migrate
A. Arctic tern
B. Kiwi bird
C. Penguin
- The kind of rock left over from meteor collisions
A. Chalk
B. Sandstone
C. Breccia



MULTIPLE CHOICE

- A scientist who studies insects
A. Insectscientist
B. Insectologist
C. Entomologist
- Animal migration instincts are best explained by
A. Intelligent Designer (God)
B. Big Bang
C. Evolution



Dear Digger Doug,

My science book says that meteors hit the Earth and left craters. It has a picture of a crater in the Arizona desert. What happens to meteors after they hit the ground?

—Kayla, Wasilla, AK

Dear Kayla,

I appreciate the fine question, and I always enjoy hearing from *Discovery* readers. Over time many objects have collided with the Earth and Moon. Each day as many as four billion meteoroids enter our atmosphere. Because God has shielded us with a protective atmosphere, most meteors burn up before they ever reach the ground. When this happens, we may enjoy seeing a special light show in the sky! Smaller meteorites do not have noticeable effects.

Many meteorites actually explode when they hit the ground, leaving a crater. A special kind of rock, breccia, is left over from meteor collisions. Because the moon has no atmosphere and is not geologically active, we can still see many of the Moon's craters. On Earth, however, the atmosphere, water, and geological shifts have hidden most craters.





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ADDRESS SERVICE REQUESTED

MIGRATING MONARCHS

DAVE MILLER

Beginning in late August every year, large masses of Monarch butterflies leave Canada and the northern United States (in the area of the Great Lakes) to travel about 3,000 miles to winter in the Oyamel forests of Central Mexico. The trip can take three to four months, traveling as fast as 12 miles per hour and 50 miles per day. Along the way, new butterflies are born, replacing those that die during the trip. Arriving at their destination, the butterflies cluster in large numbers on the



branches and trunks of the Oyamel trees, staying fairly still and conserving their energy. While wintering in Mexico, between 40 and 60 percent will die.

The return trip begins in late February and early March. More butterflies will be born along the way to aid in the spring flight back to Canada. In fact, the entire process of Monarch migration takes up to four generations of butterflies. Monarchs are the only butterflies to make such a long, two-way migration every year. Unlike birds and whales, the Monarchs that left Canada typically do not make the entire round-trip. It is thought

that the first generation may reach as far north as Texas and Oklahoma during the spring migration. It is the second, third, and fourth generations of offspring that return to the north in the spring.

Entomologists (IN-tuh-MOLL-uh-justs)—scientists who study insects—remain baffled by many aspects of the Monarch butterfly. Though many guesses have been put forward, no one knows for sure why Monarch butterflies even migrate, why they fly so far, how they find their wintering sites each year, or why they travel to the same winter roosts—often to the exact same trees. No one knows exactly how their homing system works.

Even as God caused Job to realize that we humans do not understand many of the mysteries and wonders of God's Creation (Job 38-41), so scientists continue to try to unravel the unsolved mysteries of Monarch butterfly migration. Migration is yet another proof of the divine Designer Who created all things and wove His wisdom into the intricacies of His Creation.



ANSWERS

(Entomologists): 5. A (Intelligent Designer).
 4. Penguin; 5. Sea turtle; 6. meteoroids; 7. Humpback whale; 8. God. MULTIPLE CHOICE: 1. C (Penguin); 2. C (Penguin); 3. C (Breccia); 4. C.
 TRUE OR FALSE: 1. F; 2. F; 3. T; 4. F; 5. T; 6. T; 7. T; 8. T. SOLVE, FIND, AND CIRCLE: 1. Monarch butterfly; 2. Entomologists; 3. Arctic tern.
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