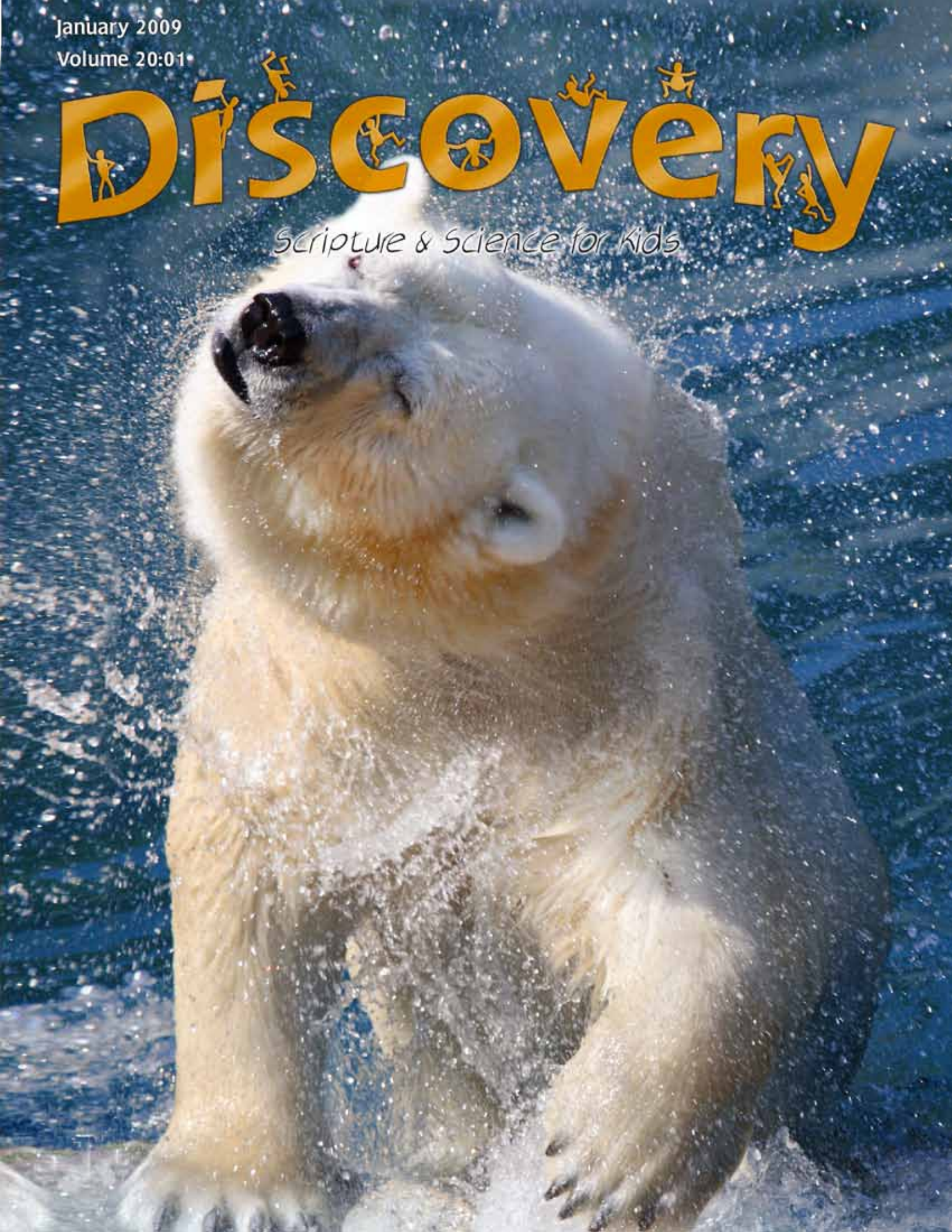


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Scripture & Science for Kids



THE LEOPARD OF THE SEA

DAVE MILLER

Dotted with black blotches on its otherwise grayish-white underside, the most ferocious seal in the pack ice of the Antarctic is appropriately named Leopard seal. The only seal to prey on other seal species, the Leopard seal is a marvel of divine design. With a large, powerful, almost reptilian-looking head, no ears, a sinuous neck, a slender body, and long, powerful flippers, Leopard seals are designed for speed. Adult leopard seals can reach lengths up to 12 feet and weigh over 750 pounds. Their long, streamlined bodies have smooth skin that helps them slice easily and swiftly through water. Their nostrils are positioned on top of their muzzle—perfect for breathing in a watery environment. Their bodies are insulated from frigid waters by a thick layer of fat called blubber.



Another masterfully engineered feature of this carnivore is its impressive hunting capability. The Leopard seal diet consists of penguins, fish, squid, krill, and various species of other seals. Hungry Leopard seals may burst through a spot of ice near a penguin rookery in an attempt to grasp a penguin chick above. Or, they may lie in wait by an icy ledge, pouncing on the first penguin to dive into the water. With its huge mouth and massive lower jaw, the Leopard seal is equipped with long, complex teeth. Its sharply-pointed molars are well-designed for cutting and tearing. The seal has uniquely shaped cheek teeth that act as a strainer, allowing the seal to strain krill out of seawater. Combined with exceptional sight and smell, Leopard seals are among the skilled predators of the Antarctic.

God's creatures are so amazing and mysterious in their design that scientists still have much to learn about the Leopard seal—from its reproductive behaviors, to its migration habits, to its place in the greater ecosystem. The only known animal to prey upon Leopard seals is the Orca—the killer whale. Leopard seals come on land only during the breeding season, and then only in pairs or small groups. Females dig a hole in the ice where they give birth to a single pup. The female protects the pup until it can take care of itself. The Leopard seal is yet another example of the ingenious invention and skillful marvels of God.



ANTARCTICA AND THE ARCTIC —NOT ALWAYS ICY

ERIC LYONS

If you could travel to the southern most point on Earth, you would reach the South Pole, which is on the continent of Antarctica. If you could travel to the northern most point on Earth, you would reach the North Pole, which is in the middle of the icy Arctic Ocean. One thing you would surely want to take with you, whether visiting Antarctica or the Arctic, is a coat. Both places are extremely cold and icy.

Today, Antarctica is covered by roughly seven million cubic miles of ice, which represents 90% of all the ice on Earth. Scientists believe that the continental ice sheet at the South Pole is about 9,000 feet thick. What's more, the average temperature at the South Pole is nearly minus 50 degrees Celsius. The Arctic isn't much warmer, with an average winter temperature of minus 40 degrees Celsius.

Interestingly, neither Antarctica nor the Arctic has always been the frigid, icy areas that they are today. Scientists know that the South Pole was once warm

and green. Thousands of years ago, its climate was almost sub-tropical—more like that of the central part of the United States. The fossil record indicates that in the past, Antarctica was lush with ferns, flowering plants, and conifer trees, and was the home of at least six different kinds of dinosaurs.

The Arctic was equally as sub-tropical. The fossil record indicates that freshwater ferns once thrived in the Arctic Ocean, while breadfruit trees, which today flourish in warm places like Hawaii, once grew in Greenland (inside the Arctic Circle). Even climate sensitive turtles and crocodile-like creatures once lived in the Arctic.

The fact is, our planet has gone through various stages of warming and cooling throughout its history. At one time, ice covered more of the Earth than at present; at another time, even the Earth's Arctic and Antarctic regions were virtually ice-free.

We do not know for certain what caused the Earth to be warmer or cooler in the past (surely the affects of Noah's Flood played a major role). What we do know is that our forefathers have been on the Earth "from the foundation of the world" (Luke 11:50-51; Genesis 1-2). They survived times when the Earth was cooler, as well as when the Earth was warmer. Our presence on Earth in the 21st century is simply more evidence that God ultimately is in control, and man will continue the cycle of life on Earth until our Creator returns (2 Peter 3:10-13).



THE POWERFUL, PREDATORY

POLAR BEAR

KYLE BUTT

This massive creature can grow to be 10 feet long and weigh over 2,000 pounds. It is the world's largest land living predator. With its 42 razor-sharp teeth, it can consume 100 pounds of food in a single meal. Although many pictures and postcards present this animal as cute and cuddly, the polar bear is one of the world's most efficient predators.

Polar bears live in the Arctic region near the outer edges of the North Pole. This area is freezing cold, and can reach temperatures of -50 degrees Fahrenheit. Polar bears, however, are not bothered by the extreme cold, because God designed them with special features that help them stay warm. These bears have two fur coats, an outer coat composed of longer hairs that are transparent, and a thick inner coat. In addition to this thick fur, God designed polar bears with a layer of blubber that can be as much as four inches thick. Furthermore, the bears have small ears and tails, which help keep the bear from losing heat from these two areas.

Have you ever walked on ice? If you have, you know that it is very slippery and can be difficult to keep your balance. How do huge polar bears keep from slipping and sliding all over the ice? Again, God gave the bears special features to cope with the ice. Polar bears have massive paws that can be 12 inches across. These paws are so big that they act like snow shoes and keep the bears from sinking deeply into snow. Imagine a paw as wide as a one-foot ruler! Also, on the pads of their paws, the bears have tiny bumps called papillae (puh-PIH-lee) that give them traction. The bears also have fur that grows between their toes and foot pads, giving them additional traction. It is like they have been given their own set of snow tires.

Polar bears eat mostly seals. They have an amazing sense of smell, and can use their noses to locate seals a mile away. Often, the bears find a small hole in the ice where seals come to the surface to breathe. The bears then wait patiently. Sometimes they have to wait for hours, and sometimes it can take days. When the seal finally appears, the bear pulls it out of the hole and eats a meal. But seals are not the only thing polar bears eat. They will eat just about any-



thing. Sometimes they eat walrus (which can be twice as large as the bears). Polar bears have been known to eat muskoxen, whales, berries, birds, eggs, carcasses of dead animals, and even other polar bears! These creatures will eat just about anything that comes along.

One thing they do not eat is penguins. Many people have the idea that polar bears and penguins live together, since these animals both live in very cold regions. But that is not true. Polar bears live at the northern part of the Earth and penguins live in the southern part of the globe. Polar bears have never see penguins, unless they live in a zoo and their cage is next to the penguin exhibit.

Polar bears are excellent swimmers. They use their huge front paws as massive paddles under water, while their hind legs act as rudders to steer them. These bears can swim very long distances in very cold water. Once, a polar bear was recorded to swim over 60 miles! They can dive to catch food, as well, although most of their hunting is done on the ice.

When polar bears are born, they do not look like efficient predators. They weigh about one pound at birth, are only about one foot long, and are blind and toothless. Polar bear mothers usually give birth

to two cubs in a den that she digs in the snow. She and the cubs stay in the den for many months. During that time, the mother does not eat or drink anything. Yet she still has enough energy to produce the milk that the baby cubs must have in order to survive. Polar bear cubs usually stay with their mother for about two and a half years. During that time, they learn to hunt and survive by following their mother and other bears.

God designed polar bears to be the perfect polar predators. He gave them all the necessary tools to stay warm, keep their balance on ice, smell food far away, and hunt successfully. Polar bears could not have evolved. Without all of their God-given tools, they could not survive in their frigid habitat.



ACTIVITY PAGES



MATCHING

- _____ The southern most point on Earth
- _____ Located in the middle of the icy Arctic Ocean
- _____ Ninety percent of all the ice on Earth is on this continent
- _____ The world's largest land living predator
- _____ This animal is classified as a pinniped
- _____ Often hunts penguins
- _____ The only known animal to prey upon Leopard seals
- _____ Means foot

- | | |
|-----------------|---------------|
| A. Pedis | E. Polar Bear |
| B. Killer Whale | F. North Pole |
| C. South Pole | G. Antarctica |
| D. Leopard Seal | H. Walrus |

ON A SEPARATE SHEET OF PAPER

- List three reasons why we know that neither Antarctica nor the Arctic has always been the frigid, icy areas that they are today.
- Choose the Leopard seal, walrus, or polar bear and write a paragraph about its God-given design.

FILL IN THE BLANKS

- Our forefathers have been on the Earth "from the _____ of the world" (Luke 11:50).
- A thick layer of fat in animals like the walrus is called _____.
- Leopard seals are _____ for speed.
- A _____ can hold its breath for up to 30 minutes.
- Man will continue the cycle of life on Earth until Jesus _____.

TRUE OR FALSE

- _____ Antarctica and the Arctic have always been the frigid, icy areas that they are today.
- _____ Dinosaur fossils have been found on the continent of Antarctica.
- _____ Leopard seals are among the skilled predators of the Arctic.
- _____ Polar bears can consume 100 pounds of food in a single meal.
- _____ The Bible teaches that God created all animals on days five and six of Creation.
- _____ Walrus teeth are just for show.
- _____ The Leopard seal's design proves evolution.
- _____ The South Pole was once warm and green.
- _____ Polar bears live near the South Pole.
- _____ A walrus does not have blubber.

PUMPKIN CONTEST WINNERS



1st Place
"Dino Burger"
Job Nicholas (age 6)



2nd Place
Song Nicholas



3rd Place
Hanna Barber

Dear Digger Doug,

Why do alligators have bumps on their backs?
—Cora, Kuna, ID

Dear Cora,

Thank you for sending me this good question. An alligator's body is "armored." It is covered by scales. The skin on the alligator's back is covered with plates made of bone. These bony bumps are called osteoderms (AH-stee-oh-durms) or scutes (skyoots). They are found in lots of living and extinct reptiles. These plates form a layer that protects the alligator's organs. It is very hard to penetrate the skin on an alligator's back. The alligator also has a strong tail that propels it through the water, and the alligator's powerful jaws can crack a turtle shell. God designed the alligator to be a potent predator that helps maintain balance in the animal kingdom.





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ADDRESS SERVICE REQUESTED

The Wonderous Walrus (and His Terrific Tusks)

CALEB COLLEY

The walrus is a huge pinniped (“pinni” means wing or fin, and “pedis” means foot), that lives in both the Atlantic and Pacific Oceans. The walrus is famous for its tusks, which can grow to four feet long in males. But these enormous canine teeth are not just for show. God created the walrus’ tusks with several important jobs in mind.

First, the walrus uses tusks for support. The teeth grip the edge of the ice, hold the walrus in place, and even haul him up onto the ice. This is particularly amazing, because walrus can weigh over 3,000 pounds, and are eight to 12 feet long. The tusks also are perfect for poking holes in ice to allow the walrus to breathe (he can hold his breath

for 30 minutes). Furthermore, the walrus uses his tusks to establish dominance during the breeding season. The walrus with the longest tusks are in charge of the herd. The walrus uses its tusks to defend itself against predators, such as polar bears and killer whales.

There’s one other thing we quickly notice when we look at the walrus: the wrinkled, rough, thick skin that stretches over the walrus’s whopping body. The skin can be a full six inches thick, and is covered with short hair. The thick skin, along with the walrus’s high amount of blubber (fat), protects the walrus from freezing temperatures in the Arctic.

Yet another amazing thing about the walrus is invisible from outside. The walrus has two air sacs in his throat. This allows him to keep his head comfortably above water, just as if he had a floatation device attached to his neck. Therefore, a walrus can sleep in the water without worrying about drowning. The air sacs also allow the male walrus to make a bell-like sound to attract females.

The powerful, peculiar walrus did not simply “decide” to develop his tusk, skin, and special respiratory system. God, nature’s great Designer, provided the walrus with the best characteristics for survival.



ANSWERS

TRUE OR FALSE: 1. F; 2. T; 3. F; 4. T; 5. T; 6. F; 7. F; 8. T; 9. F; 10. F.
 MATCHING: 1. C (South Pole); 2. F (North Pole); 3. G (Antarctica); 4. E (Polar Bear); 5. H (Walrus); 6. D (Leopard Seal); 7. B (Killer Whale); 8. A (Pedis).
 FILL IN THE BLANKS: 1. foundation; 2. blubber; 3. designed; 4. walrus; 5. returns.
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