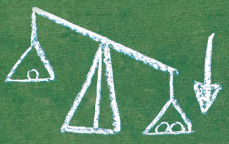


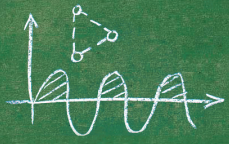


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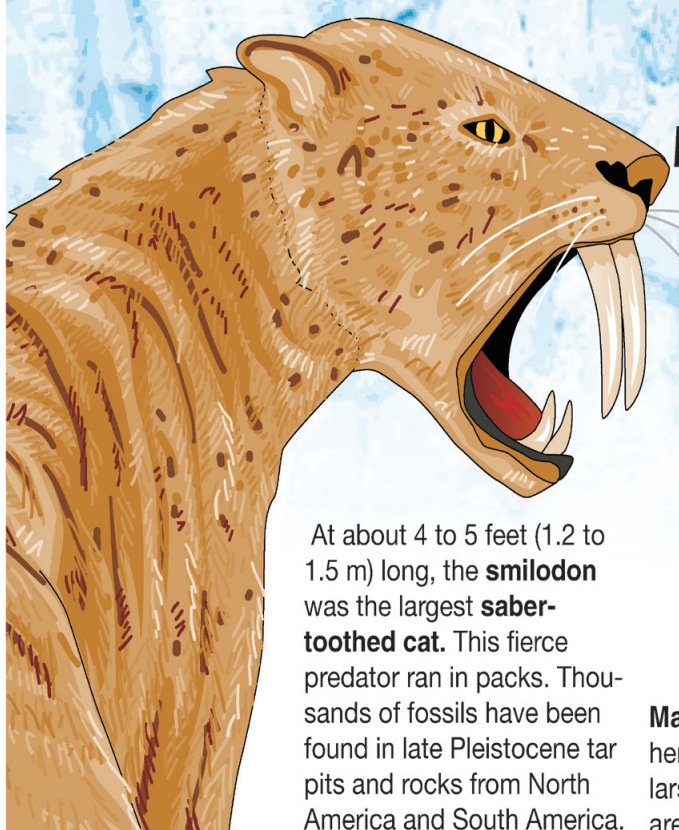


WORLD OF WONDER

Exploring the realms of history, science, nature and technology

THE ICE AGES

Ice ages are periods of time when large areas of the Earth are covered by ice sheets. There have been an estimated 11 ice ages during the Earth's 4.6 billion years of existence. You might be surprised to know that we are currently living in an ice age called the Quaternary ice age. It began about 2.6 million years ago and continues today.



At about 4 to 5 feet (1.2 to 1.5 m) long, the **smilodon** was the largest **saber-toothed cat**. This fierce predator ran in packs. Thousands of fossils have been found in late Pleistocene tar pits and rocks from North America and South America.

The basics

During an ice age, the weather has cold spells called **glacials** and warm spells called **interglacials**.

Many glacial advances and retreats have occurred over the last billion years, and they have had an enormous impact on the landscape.

Changing landscape

As glaciers and ice sheets advance and retreat, they change the surface of the Earth, forming lakes, moving rivers, eroding land and depositing sand, gravel and rocks along their paths.

It is estimated that more than 60 glacial advances and retreats have occurred during the last 2 million years.

The Great Ice Age

The current ice age, known as the **Quaternary glaciation**, peaked about 20,000 years ago, and its active glacial period ended about 11,700 years ago. Since then, we have been in an interglacial period.

Today, about 10% of the Earth's land is covered by glaciers. During the peak of this ice age, 32% of the land was covered by ice.

Woolly mammoth

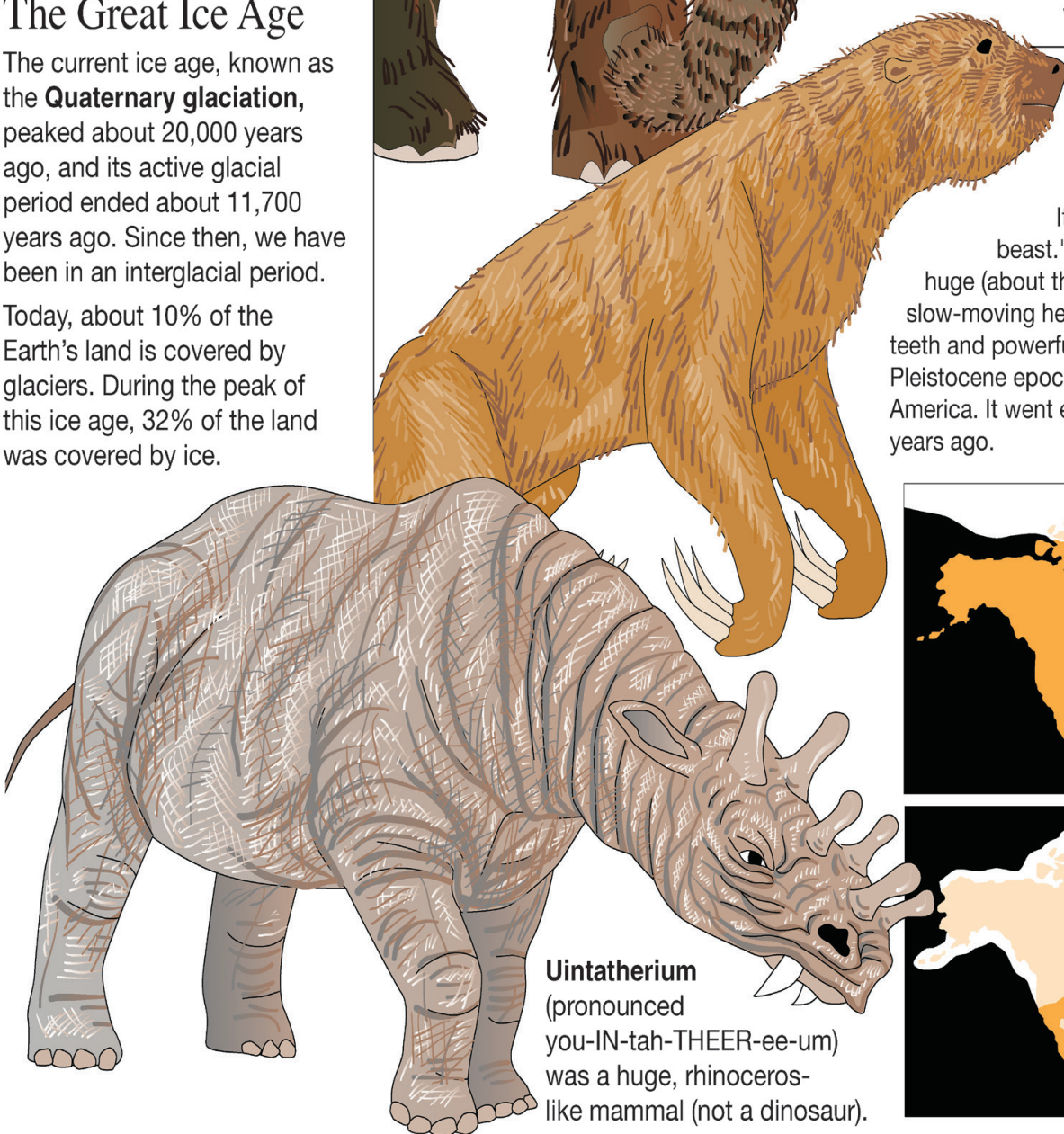


Unlike the dinosaurs, woolly mammoths did share the Earth with humans. They lived about 10,000 years ago. Now extinct, these herbivorous mammals lived in the tundras of Asia, Europe and North America. Closely related to modern-day Indian elephants, these giants grew to weigh about 3 tons (2.8 metric tons). Frozen, naturally mummified mammoths have been found in Siberian ice.

It is estimated that about 1/3 of the Earth was covered in ice, and some of the ice sheets were up to a mile thick.

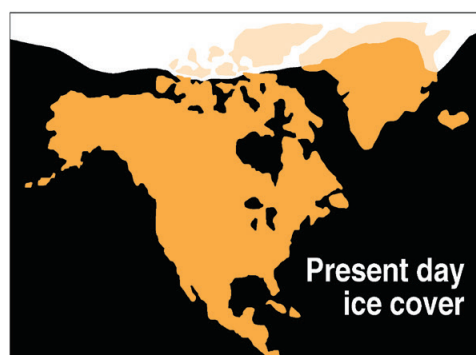
Megatherium

(pronounced MEG-ah-THAIR-ee-um) was a giant ground sloth. Its name means "great beast." Megatherium was a huge (about the size of an elephant), slow-moving herbivore with peg-shaped teeth and powerful jaws. It lived during the Pleistocene epoch in what is now South America. It went extinct about 11,000 years ago.

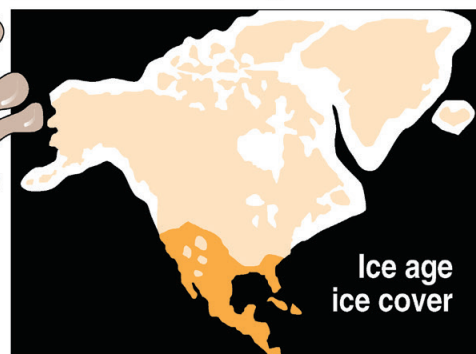


Uintatherium

(pronounced you-IN-tah-THEER-ee-um) was a huge, rhinoceros-like mammal (not a dinosaur).



Present day ice cover



Ice age ice cover

Did you know?

Over the course of millions of years, scientists believe that the Earth has experienced at least five major ice ages:

Huronian, Cryogenian, Andean-Saharan, Late Paleozoic and Quaternary.

Most of Canada was covered with ice just 20,000 years ago.

Today, we are still in an ice age, since there are two major continental ice sheets on Earth: **Greenland and Antarctica.**

Dwarf woolly mammoths survived on an isolated island as recently as 5,000 years ago before becoming extinct.

Louis Agassiz, a Swiss-born American zoologist, geologist and paleontologist, was one of the first scientists to study ice ages. He proved that the movement of the glaciers created lakes and shaped landscapes.

Ice age people lived 35,000 years ago. They hunted mammoths and other creatures for food and clothing. Nothing would have been wasted.

About 18,000 years ago, there were glaciers in Hawaii.

Today, glaciers store about 75% of the world's fresh water.

If all land ice melted, the sea level would rise approximately 230 feet (70 m) worldwide.

North America's largest glacier is the **Bering Glacier** in Alaska, measuring 127 miles (204 km) long.

From the 17th century to the late 19th century, the world experienced a "little ice age," when temperatures were consistently cool enough for significant glacier advances to occur.

When glacial ice is compressed, air pockets are forced out and it becomes very dense. This dense ice absorbs all other colors in the spectrum and reflects primarily blue, giving the glacier a blue appearance.

Most of what we know about ice age animals is from studying fossils.

SOURCES: World Book Encyclopedia, World Book Inc.; <https://www.ducksters.com>; <https://study.com>; Glacier National Park; <https://kidskonnnect.com>; <https://online.kidsdiscover.com>; <https://www.history.com>

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