

MAY 2021
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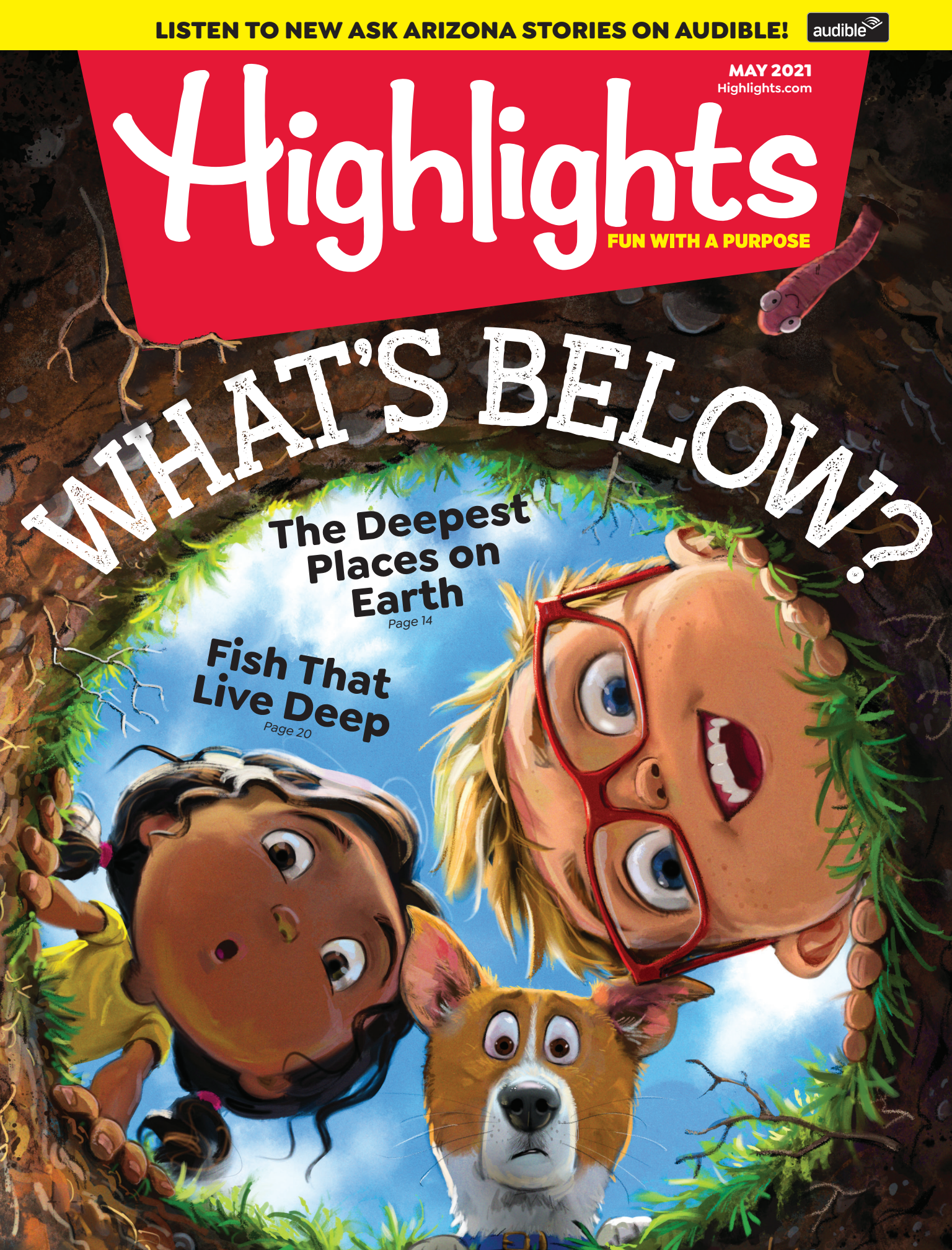
Highlights

FUN WITH A PURPOSE

WHAT'S BELOW?

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DEEP DIVE

By Megan Sever

Scientists who explore the deepest places on Earth must be brave. They don't know what they'll find. They may face incredible obstacles and dangers along the way. And often, they may not even know if they have found their destination. Here are some of the deepest places scientists have studied.

DEEPEST-KNOWN CAVE SYSTEM

Veryovkina Cave, Georgia
(near the Europe-Asia border)

Caves are huge, interconnected holes underground. Scientists think that tens of thousands of cave systems lie under our feet, not yet discovered.

Veryovkina Cave is currently the deepest-known system. In 2018, speleologists (scientists who study caves) and spelunkers (cave explorers) reached what may be the bottom at 7,257 feet. It takes three days to get to that spot. Scientists have to camp at different depths

in the cave to get there. They squeeze through tiny openings to get from one cavern to another. Dangers, such as rockfalls and floods, lurk at every turn.

Why risk it? Scientists could develop new medicines from microbes found in cave samples. Caves also record ancient life and past climates.



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DEEPEST PART OF OCEAN

Mariana Trench, Pacific Ocean

South of Japan lies the deepest place on Earth: the Mariana Trench. The lowest point is called Challenger Deep. It's 36,070 feet deep—almost 7 miles!

The Mariana Trench is in a subduction zone, where one tectonic plate dives under another. The biggest earthquakes on Earth occur in subduction zones. Studies of these zones helped scientists confirm the theory of plate tectonics, which explains how plates move and why earthquakes and volcanoes occur.

Pressure in Challenger Deep is bone-crushing, but life still exists. Giant amoebas, sea cucumbers, and enormous shrimplike creatures are common.

Very few people have been to the bottom of Challenger Deep. In 2020, astronaut and oceanographer Kathy Sullivan went there. She is the first person to walk in space and reach the deepest part of the ocean!

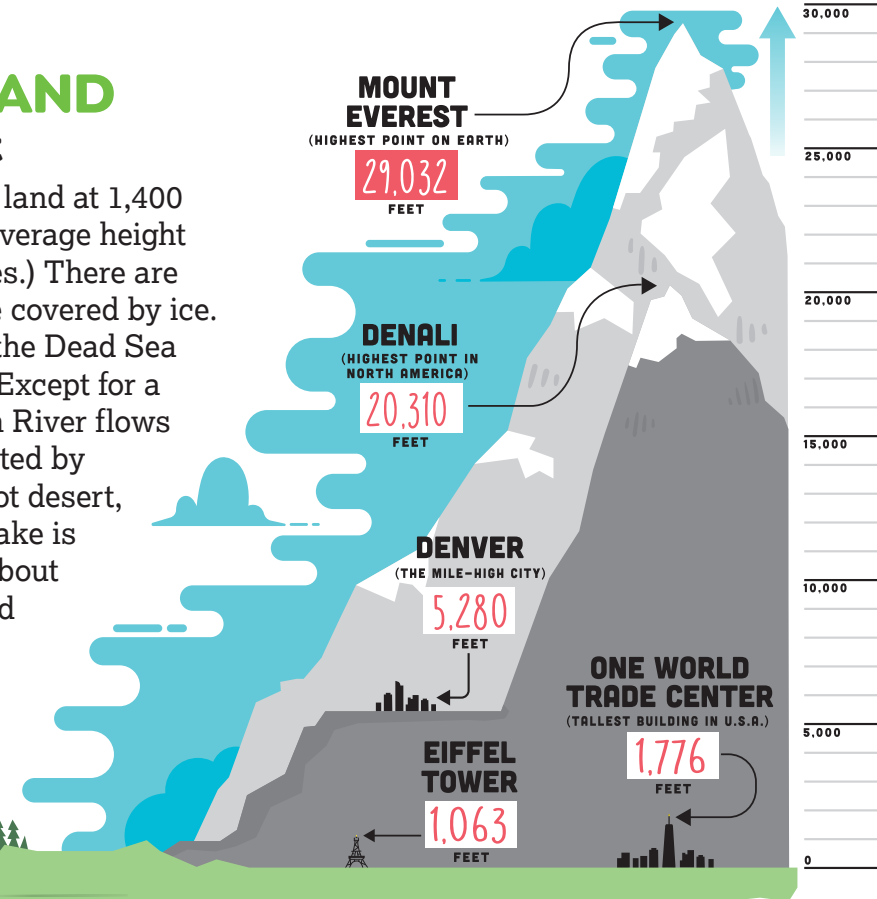


LOWEST SPOT ON LAND

Dead Sea, the Middle East

The Dead Sea is the lowest point on land at 1,400 feet below sea level. (Sea level is the average height of the ocean water along Earth's shores.) There are lower spots in Antarctica, but they are covered by ice.

Ten times saltier than ocean water, the Dead Sea is very dense: you literally can't sink! Except for a few seasonal streams, only the Jordan River flows into it (and much of that water is diverted by people). No water flows out. It's in a hot desert, and water evaporates faster than the lake is refilled. All of this lowers the sea by about 3 feet per year! Scientists think it could go dry in a few decades. Despite its name, the Dead Sea holds life. A few kinds of algae and bacteria love its salty water. So do people!



DEEPEST LAKE

Lake Baikal, Siberia, Russia

At just over a mile deep (5,387 feet), Lake Baikal is the deepest inland body of water. It's also the oldest freshwater lake (25 million years) and the largest: it holds as much water as all the Great Lakes combined.

Scientists love studying Lake Baikal. It's home to thousands of animals and plants, many of which live nowhere else. The Baikal seal is the only known seal that lives its whole life in fresh water, and the lake's big and small golomyanka are two of the few fish species that give birth to live young.

Scientists study sediments beneath the lake that record climate history, such as when ice ages come and go. They also study the lake because it's in a rift zone, where a tectonic plate is splitting apart, causing earthquakes.

(Continued on next page)

DEEPEST IN THE U.S.

Marvels of nature exist throughout the world. Here are some of the deepest-known places that scientists have studied in the United States. What natural wonders are near you?

Deepest Lake

Crater Lake, Oregon

At 1,943 feet deep, Crater Lake is as deep as three Washington Monuments stacked up, topped by the Statue of Liberty. Rain and snow are the lake's only sources of water. That's why the lake is stunningly clear—there's no sediment carried in by rivers to muddy it up.

Lowest Point

Badwater Basin, Death Valley National Park, California

Badwater Basin lies 282 feet below sea level. In 1913, the hottest temperature in the world was recorded there: 134 degrees! Badwater Basin is the starting place of a 135-mile ultramarathon that takes place over two days in July, when temperatures often top 120 degrees. Whew!

Deepest Limestone Caves

Tears of the Turtle Cave, Montana, and Lechuguilla Cave, Carlsbad Caverns National Park, New Mexico

At 1,629 and 1,604 feet deep, Tears of the Turtle Cave and Lechuguilla Cave are about 1.5 times as deep as the Eiffel Tower is tall.

Deepest Volcanic Fissure

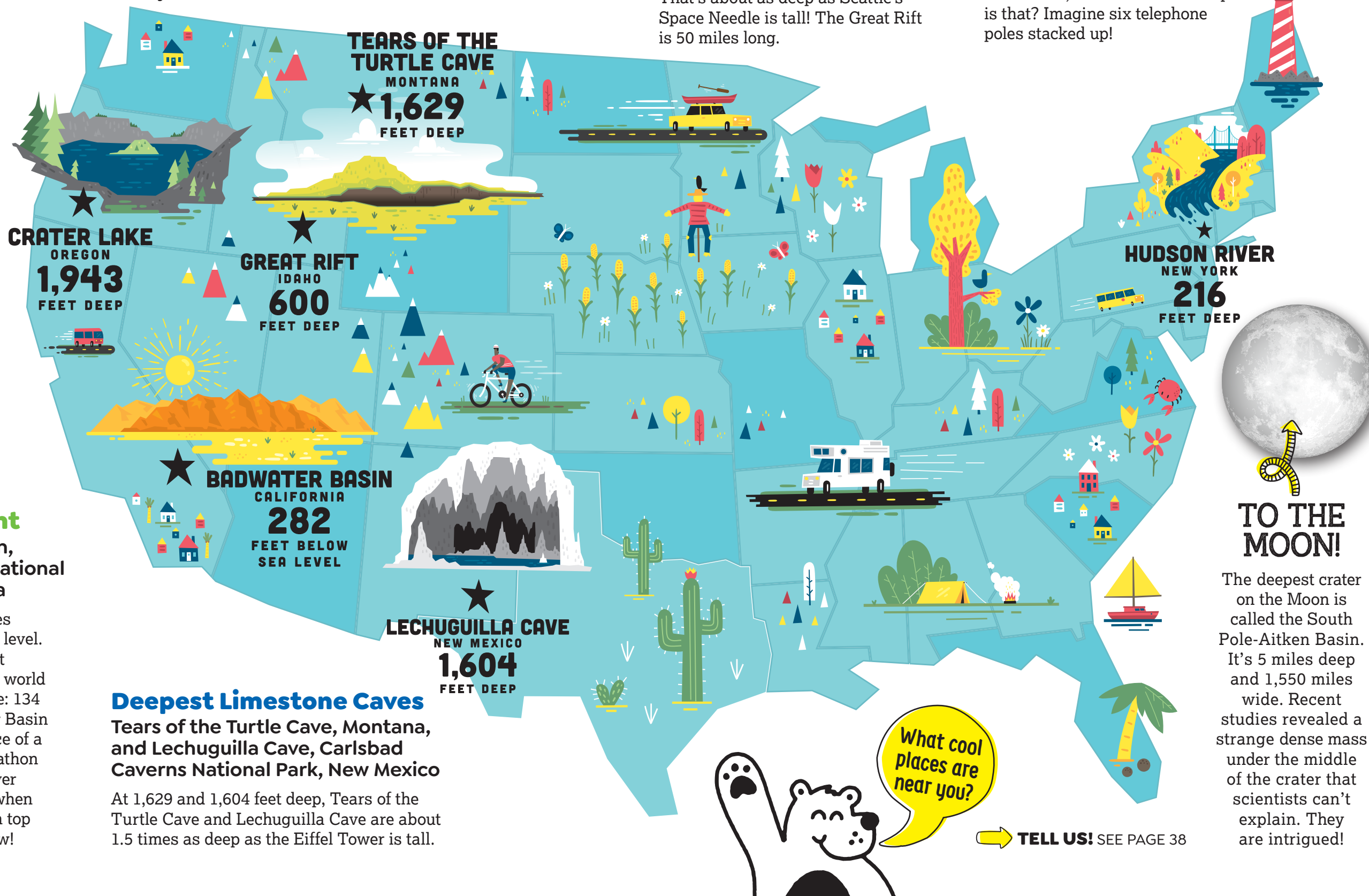
Great Rift, Craters of the Moon National Park, Idaho

The Great Rift is 600 feet deep. That's about as deep as Seattle's Space Needle is tall! The Great Rift is 50 miles long.

Deepest River

Hudson River, New York

The Hudson River is 216 feet deep at its deepest point, near West Point, New York. How deep is that? Imagine six telephone poles stacked up!



TO THE MOON!

The deepest crater on the Moon is called the South Pole-Aitken Basin. It's 5 miles deep and 1,550 miles wide. Recent studies revealed a strange dense mass under the middle of the crater that scientists can't explain. They are intrigued!

➡ **TELL US!** SEE PAGE 38