

## EARTH: SEASONS

## SHIFTING SUNLIGHT

The town of Rjukan, Norway, doesn't get any sunlight for six months out of the year. But the city's dark days may be ending. The town is installing a system of mirrors to reflect a patch of sunlight roughly the size of a tennis court onto the city.

Rjukan is so dark because of its location. Earth spins on a tilted *axis*, so northern areas like Norway lean away from the sun from September to March. That means the winter sun rises just above the horizon before setting again. Rjukan also sits at the bottom of a valley, and nearby mountains completely block the low sun.

Three overlapping 17 m<sup>2</sup> (183 ft<sup>2</sup>) mirrors were recently installed in the mountains to reflect sunlight onto the town square. Computer-controlled motors rotate the mirrors so they follow the sun's path, turning them into *heliostats*, or sun-tracking devices. "It's been a challenging project in a very remote location," says project manager Olav Hale. He looks forward to watching the sunlight stream in after the official opening this fall.

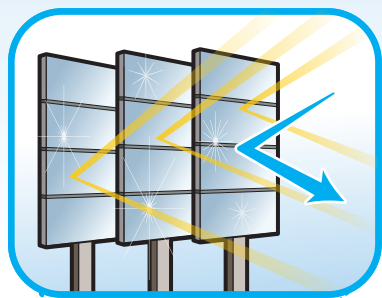
—Stephanie Warren

## LET THERE BE LIGHT

As Earth moves around the sun, one hemisphere is tilted toward the sun and one is tilted away. From September to March, when the northern hemisphere leans away, the sun doesn't rise high enough to shine over the mountains surrounding the town of Rjukan in Norway.



**EARTH'S TILT:** In the winter, the North Pole tilts away from the sun.



MIRRORS

450 meters  
(1,500 feet)AREA IN  
SHADOW

RJUKAN, NORWAY

MOUNTAIN  
BLOCKING  
THE SUN800 meters  
(2,600 feet)

NOTE: IMAGE NOT DRAWN TO SCALE

PAGE 6: KATE FRANCIS; PAGE 7: MARK GURNEY/AP PHOTO (LEFT); NUMBERS TOP TO BOTTOM: ISTOCKPHOTO.COM/THINKSTOCK; ISTOCKPHOTO.COM (2); NASA/JPL-CALTECH

## BIOLOGY: CLASSIFICATION

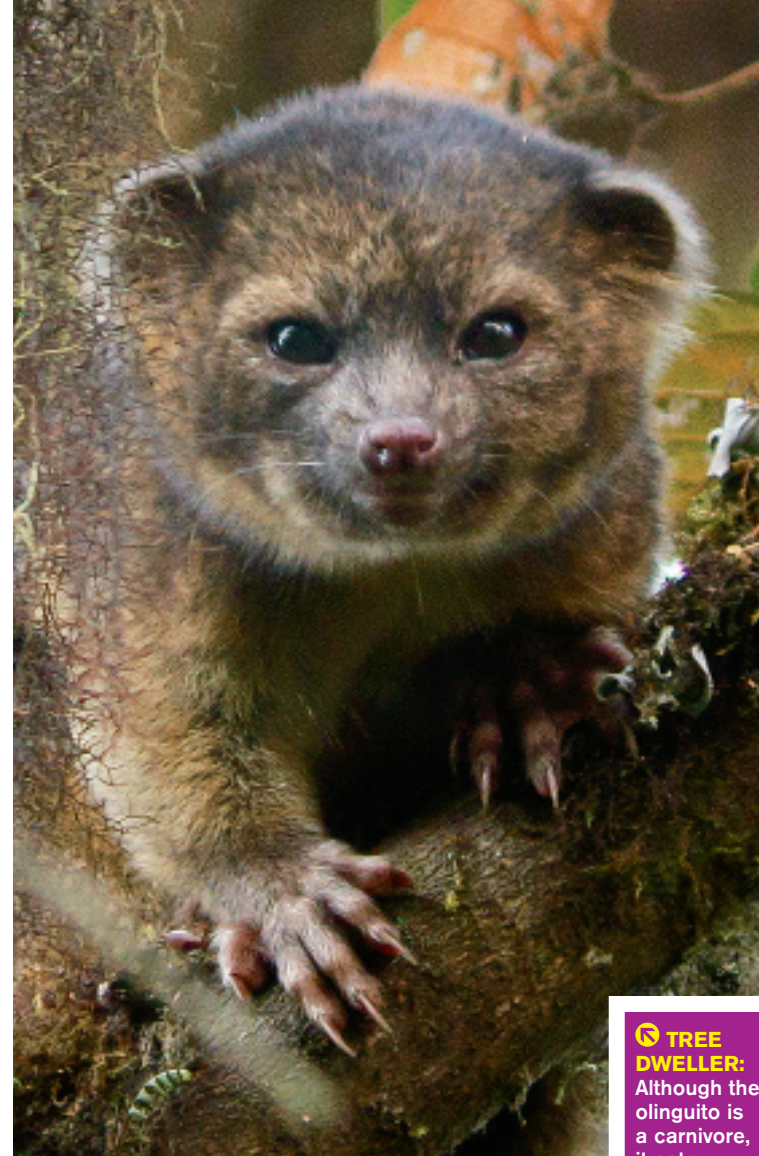
## CUTE NEW CREATURE

Say hello to the olinguito. At 0.9 kilograms (2 pounds), it's the smallest member of the raccoon family. It's also the first new carnivore species to be discovered in North or South America in 35 years.

People knew the animal existed—it had lived in zoos and even been catalogued by museums. But scientists had mistaken it for a different species until they took a closer look.

"It's remarkable that today, with so much technology and environmental degradation, there are still big surprises like the olinguito to discover," says Miguel Pinto, who studies mammals at the American Museum of Natural History in New York City.

—Jennifer Abbasi



**TREE DWELLER:** Although the olinguito is a carnivore, it eats mostly fruit.

NUMBERS  
IN THE NEWS

233,000

Volume of molasses, in gallons, that recently leaked from a pipeline into the ocean near Honolulu, Hawaii—killing thousands of fish.

202,586

Number of applicants to the Netherlands-based project Mars One, as of September 2013. Several people will be chosen to travel to Mars in 2022—and never return to Earth.

PLAY  
A GAME  
ONLINE  
[www.scholastic.com/scienceworld](http://www.scholastic.com/scienceworld)

38,000

Number of personal Facebook accounts to which agents from 74 governments requested access in the first half of 2013 as they investigated crimes like robberies and kidnappings.



120

Length, in meters, of a sushi roll made by hundreds of kids at a festival in Tokyo, Japan.

10

Number of supermassive black holes NASA recently discovered using a powerful telescope.



5

Height, in meters, of the largest domino tower ever built. It took structural engineer Tom Holmes 7.5 hours to build it in Bristol, England.