THE ECLIPSE GUY

BY MEGAN KOPP

Hans-Walter Untch/istockphoto.com

Manfred Konrad/istockphoto.com

Sam Logan (Earth Courtesy NASA)

Courtesy David Makepeace

David Makepeace is not only an eclipse-chaser, he's an eclipse educator, bringing his films, experiences, and hands-on workshop to classrooms.

China or Mongolia? It's a tough decision for David Makepeace — Canada's busiest eclipse-chaser. The next total solar eclipse is the summer of 2008, and it's tough to decide which spot offers the best view.

IN THE SHADOW OF THE MOON

For most people, witnessing a total solar eclipse is something that might happen once in a lifetime. Total solar eclipses don't happen every day; in fact they don't even happen every year. But when they do, it's a powerful experience.

"You get to see the mechanics of the solar system at work," says Makepeace, a member of the Royal Astronomical Society of Canada.

When the Moon passes between the Sun and the Earth and the Moon's shadow sweeps across the Earth, daylight turns to darkness. Birds stop singing. Bats come out of their roosts. Flowers close their petals. Venus and Mercury appear in the sky. Bursts of lights called Baily's beads appear on the leading edge of the Moon just before the soft wavy light of the Sun's corona is seen.

MAGICAL MINUTES

Stay in one place your whole life, and the chance of seeing this cosmic coincidence is super slim. The path of a solar eclipse is less than 200 kilometres wide.

"To be an eclipse-chaser, you need to like to travel," says Makepeace. To catch the eclipse in Antarctica in 2003, this eclipse-chaser joined 100 people from 15 different countries on a Russian icebreaker, travelling from South Africa toward Tasmania. The trip took one month; the eclipse lasted one minute, 14 seconds. In the Australian Outback in 2002, the eclipse raced by in 24 seconds. On the steps of Fatehpur Sikri (one of India's historic sites built in the 16th century) in 1995, the show was over in less than a minute.

Makepeace has spent thousands of dollars and months of his time criss-crossing the globe to bathe in the Moon's shadow in Brazil, India, Aruba, Turkey, Zambia, Australia, Antarctica, and Libya. So far, this eclipse enthusiast has nine total solar eclipses, three annular eclipses, and two partial eclipses under his belt. [See sidebar above.]

The most obvious question is why. Like many eclipse-chasers, Makepeace traces his enthusiasm to a certain time and place: Baja, Mexico, 1991. The nearly seven minute long total eclipse changed Makepeace's life.

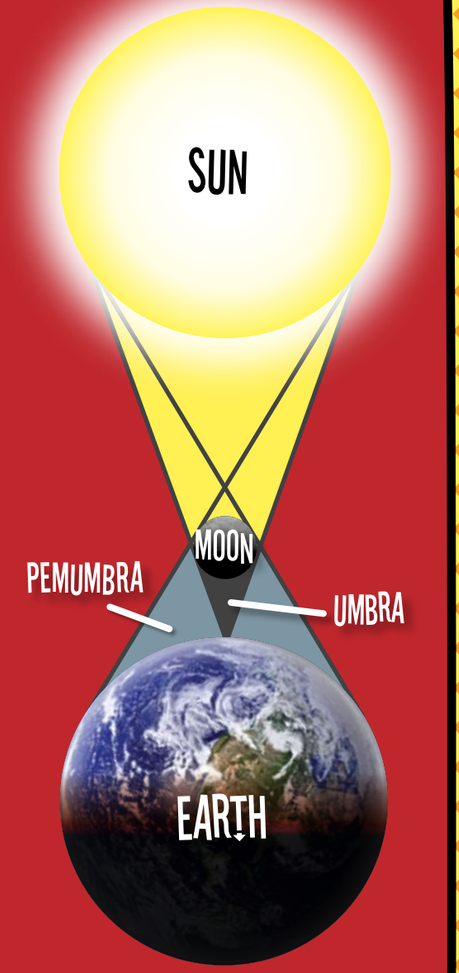
He explains the experience this way: "It reached into me, like a big finger and said 'you follow me'." Well, why not?

AN ECLIPSE BY ANY OTHER NAME

A **total solar eclipse** happens when the Moon, at exactly the right distance above Earth, moves directly between the Sun and the Earth, covering the Sun completely. In a **partial eclipse**, the Moon covers only a portion of the Sun. This type of eclipse is more commonly seen.

WHERE AND WHEN TO FIND A TOTAL SOLAR ECLIPSE

AUGUST 1, 2008	Arctic, Russia, Mongolia, and China
JULY 22, 2009	China and the Pacific Ocean
JULY 11, 2010	South Pacific Ocean, Cook Islands, French Polynesia, Easter Island, and extreme southern Chile
NOVEMBER 13, 2012	Northern Australia and the Pacific Ocean
MARCH 20, 2015	North Pole and the Norwegian Sea



EXPLAINING AN ECLIPSE

Big ball, little ball, light source — that's about all it takes to de-mystify a solar eclipse.

Makepeace uses a blow-up Earth ball, a smaller white ball (the Moon), and a light (the Sun) to show school groups how the Moon moves between the Earth and the Sun to block the glowing orb from our view.

Because of angles, distance, and size of the objects, the full shadow (called the umbra) only falls on a small strip of Earth (tracking thousands of kilometres in length, but only about 200 kilometres wide). This is where you will see a total eclipse. Stand in the larger outer shadow (the penumbra), and you will see a partial eclipse.