CELEBRATING 125 YEARS OF EXPLORATION

NORWAY'S RUGGED COAST **MAPPING A NEW AMERICA** 

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# NATIONA GEOGRAPHIC

THE MONSTER STORM

The greatest storm chaser, Tim Samaras devoted his life to unlocking the mysteries of extreme weather.

Then came the tornado of May 31.

Samaras deploys



inthya Patricia López No



### TURKEY

BOSPORUS DIG Istanbul, Turkey Oil lamp, A.D. 400-500

There's no easy way to excavate for artifacts in a city of more than 13 million. But work on a new rail line to run beneath the strait that divides the city has offered glimpses of the people and empires that have come and gone here for over 8,000 years.





#### TEMPLE MOUNT Jerusalem, Israel Clay seal, 700-600 B.C.

Sacred to Judaism, Christianity, and Islam, this 36 acre site has been mostly under Muslim control since A.D. 638. Digging a new entry for a mosque in 1999 produced 6,000 tons of artifact-laden debris, an unprecedented window on the past.

## **Excavation Impossible**

**BEARING ANCIENT HEBREW LETTERS,** the seal shown above came from a construction site at the Temple Mount, one of the world's holiest places. Digging is usually forbidden there, so archaeologists have taken advantage of the opportunity to sift through rubble filled with everything from arrowheads and coins to jewelry and combs. Formal archaeology can't be carried out in many places. Reasons vary: war and its aftermath, political disputes, deep-seated religious differences, cities too crowded to allow for excavation.

Sometimes—say, by dint of urban renewal—discoveries happen serendipitously. But at a growing number of sites, technologies such as ground-penetrating radar, laser scans, and virtual models are uncovering troves of information, with no digging at all.

—A. R. Williams



#### **ROYAL MAUSOLEUM**

Xian, China

Bronze swan, 221-210 B.C.

China's first emperor planned a large funerary complex. His tomb and its possible treasures remain unexcavated, awaiting new techniques in artifact conservation. In 1974 his terra-cotta army was discovered, but experts have only recently learned how to preserve the paint on the figures.

LAOS

CHINA



Xiangkhoang, Laos

Stone urn, 500 B.C.-A.D. 500

Unexploded bombs from the 1960s and '70s, during the civil war, make it risky to examine the hundreds of jar-shaped stones, some ten feet tall, found in northern Laos. A study in the 1930s identified them as funerary urns.



Stone figurine, 2600-1900 B.C.

Salts in the groundwater are causing exposed brick buildings to crumble at the site of this early city from the Indus civilization. It was discovered in 1922 and excavated on and off until 1965. Pakistan's government has halted further digging.

