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Science blog

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SCIENCE BRIEFS

'08 ozone hole ranks fifth largest on record

This year's ozone hole over Antarctica was the fifth biggest on record, reaching a maximum of 10.5 million square miles in September, NASA says. That's considered "moderately large," NASA atmospheric scientist Paul Newman said. Last year, the hole was 9.7 million square miles, about the size of North America. For 30 years, NASA has tracked the size of the hole, which is an area of depletion in the stratospheric ozone layer, which blocks harmful ultraviolet rays from space. Created by human-produced gases, the ozone hole generally forms in August and grows to its maximum size in September or October before breaking up.

Fungus might be killing bats in U.S. Northeast

Something is killing the little brown bats of the Northeast, and a fungus might be the culprit. David S. Blehert of the U.S. Geological Survey's National Wildlife Health Center in Wisconsin and colleagues identified a fungus linked to white-nose syndrome, a condition that has affected bats in recent winters in upstate New York, Massachusetts and Vermont. The fungus might cause the bats to starve as they hibernate, the researchers said. The fungal infection might make the bats wake up more often, and since each period of wakefulness uses up vast supplies of fat, the bats might deplete their energy reserves much sooner than normal. A paper on the fungus was published in the online edition of *Science*.

Chicken population becoming less diverse

Scientists are worried about a lack of genetic diversity in chickens that are raised for meat and eggs. At least half of the diversity of ancestral breeds has been lost, William M. Muir of Purdue University and colleagues report in the *Proceedings of the National Academy of Sciences*. That could make chicken production more susceptible to disease outbreaks for which resistant genes have disappeared. Sampling about 2,500 birds, the researchers looked at several thousand instances of genetic variation and used that to estimate what a hypothetical ancestral population looked like genetically. Their findings indicate that most of the diversity was lost with the advent of wide-scale commercial production in the 1950s. Only a handful of the hundreds of breeds have been crossed to produce broilers and layers.

Frozen mouse's tissue used to produce clones

A research team from the Institute of Physical and Chemical Science has made a clone using tissue from a mouse that was frozen for 16 years, an advancement that could lead to the cloning of extinct animals such as mammoths. The newborn mouse is the first animal to be cloned from frozen animal tissue; previous cloned animals were produced from living cells. In this case, nuclei from brain and blood cells were taken from a frozen mouse and inserted into an ovum from a healthy mouse. Four mice were born as a result. The research appeared in last week's issue of the *Proceedings of the National Academy of Sciences*.

— From wire reports

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A mammoth (mastodon, really) of a dig

This tooth was the first find in what has become a five-year dig of a mastodon.

ERIC ALBRECHT | DISPATCH PHOTOS

Dale Gnidovec, an Ohio State University geology professor, leads the dig of the Darke County mastodon, an ice-age creature. The first bones were discovered in December 2002, and Gnidovec has led crews of volunteers each summer since then.

Volunteers have spent five summers pulling ice-age bones from a Darke County farm field

By Kevin Mayhood
THE COLUMBUS DISPATCH

ROSSBURG, Ohio — A minute's walk from the only stoplight in this western Ohio town, a dozen men, women and children delicately dig and sift through the dirt in a small pasture.

"Just 8 inches down is 12,000 years old," said Tom Kitchen, a West Jefferson Middle School teacher and occasional volunteer here.

At that depth, dozens of volunteers, led by Ohio State University geology professor Dale Gnidovec, have spent the past five summers uncovering the Darke County mastodon.

"I thought we were done, but we had a backhoe out here, scraping off an inch at a time around the perimeter of all we'd dug by hand," Gnidovec said. "He uncovered four more bones."

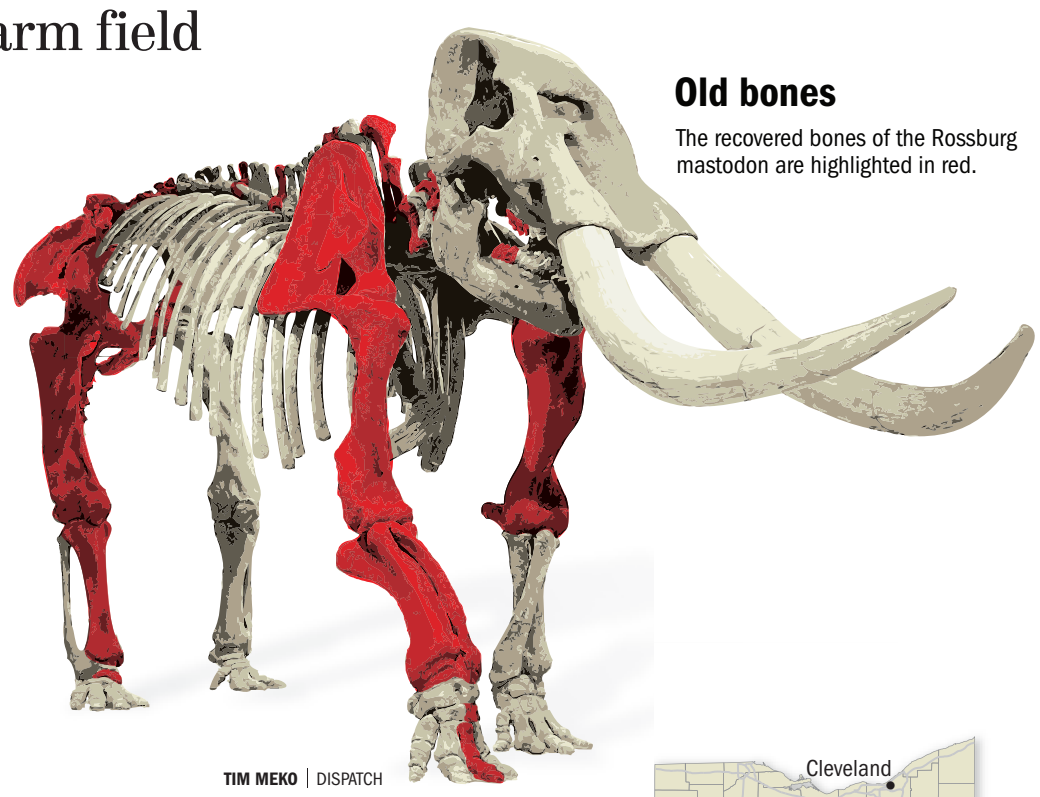
That was late September.

Three weeks later, the backhoe uncovered two more bones. Gnidovec estimates that he and his crew members have uncovered about half the skeleton, scattered in no apparent pattern just beneath the surface.

See **MASTODON** Page **B7**

Old bones

The recovered bones of the Rossburg mastodon are highlighted in red.



TIM MEKO | DISPATCH

American mastodon

(Mammut americanum)

Mastodons were sturdy elephantlike animals that roamed open swamp areas and spruce forests.

▶ **Size:** Mastodons stood about 9 feet tall at the shoulder and weighed 4 to 5 tons.

▶ **Distinctive qualities:** Cone-shape teeth, shaggy hair, long tusks

▶ **Where found:** The mastodon lived across North America during the ice age. It was hunted by early humans. In Ohio, most complete specimens have been found in the sediments of former glacial lakes where they broke through the ice in winter or became bogged down in mud. Some specimens show evidence of having been butchered by Paleoindians.

▶ **Extinction:** About 10,000 years ago

▶ **Remains:** Bones and teeth from about 90 mastodons have been found in Ohio.

Source: Ohio Historical Society

THE COLUMBUS DISPATCH