**Discovered: Oldest Writing in the New World**

The Cascajal block, found in Veracruz, Mexico, shows an example of ancient writing.

*Photograph by Michael D. Coe*

_Catherine Clarke Fox_

Anthropologists study people who are no longer living. Items those men, women, and children left behind when they died—everything from clothing to jewelry and tools—tell anthropologists a lot. And sometimes even their words survive.

Experts believe that a discovery in Mexico is the oldest example of writing ever found in the Americas. The people who created it probably lived 3,000 years ago, long before Christopher Columbus arrived in the New World.

Workers digging in a stone quarry happened to notice a stone block with marks carved onto its surface. They found the large piece of serpentine stone in Cascajal in Veracruz, Mexico, near the capital city of an ancient people called the Olmec.

“There are signs on the block that seem to show religious objects used by the Olmec,” says Dr. Stephen Houston, an anthropologist with Brown University in Rhode Island. “There is a pointy sign that looks very similar to something they used for blood-letting, and another that looks like a throne,” he explains.

Houston, an expert on the writing systems of ancient cultures, says the discovery is exciting because “it makes clear that the Olmec were literate, that they could read and write. It’s like hearing voices from the past,” he says.

But experts don’t know exactly what the writing says. If you have ever tried to figure out a message written in code, you have a pretty good idea of the hard work ahead. Finding other examples of Olmec writing could help crack the code.

Plenty of exciting finds await discovery, says Houston, maybe even by kids reading this article who decide to study past cultures when they grow up. “We could have whole sets of ancient writing which will basically make ancient people speak to us directly,” says Houston. “There are many puzzles to be solved, and this is just one of them.”

Text by Catherine Clarke Fox

Human ancestors threw spears

Ancient spear tips suggest early humanlike species were throwing sharp spears long before people did

BY STEPHEN ORNES
7:35AM, DECEMBER 12, 2013

长矛的边缘显示了损坏，表明它是一个用短距离投掷的投掷标枪的一部分。

The edge of this ancient obsidian stone point shows damage that suggests it was part of a spear thrown at animals from a short distance.

Long before guns and arrows, spears were the tool of choice for ancient hunters. Topped with sharp, pointed rocks, spears at first made it possible to kill animals by stabbing them close-up. Later, spears were sturdy enough to be thrown at animals from a distance.

Until recently, the earliest known throwing spears dated back 80,000 years. But a recent discovery in East Africa now extends that type of spear hunting to a far earlier time, one that precedes humans. It suggests that at least 279,000 years ago, an earlier, humanlike species must have been hunting big game, like hippos and antelope.

Scientists dug up spear tips from that far back in time at a site in Ethiopia called Gademotta. Back then, during the Stone Age, tools were usually made from found materials like stone, wood or bone. Any early spear-throwers at that time weren’t people but early ancestors of humans called hominids. Hominids are a family of primates that includes humans and their extinct ancestors (known only from fossils).

The ancient hominid’s spears most likely were long wooden poles topped with sharp, hand-chipped (sharpened) tips made from glassy volcanic rock, explains Yonatan Sahle. He is an archaeologist at the University of California, Berkeley, who has been studying the ancient spear tips made from this rock, known as obsidian. Given the tips’ age, his team concludes that prehuman species must have spear-hunted too. His team reported its findings Nov. 13 in the journal PLOS ONE.

The new finding challenges previously held ideas about the earliest throwers of stone-tipped spears, says John Shea. An archeologist at Stony Brook University in New York, he did not work on the new study. Previous studies had suggested ancient peoples started attaching stones to spears capable of stabbing animals close-up no earlier than 100,000 years ago.

The new find shows that more complex throwing spears were made at Gademotta long before then. They probably belonged to a species “out of which the human species evolved in eastern Africa,”
Shea told *Science News*. Which hominid left behind the points? No one knows. Scientists have unearthed no prehuman fossils at the site.

Sahle and his coworkers studied 141 stone spear tips from Gademotta. Viewed under a microscope, 12 tips showed damage to their edges. Previous experiments have shown this type of damage comes from throwing stone-tipped spears into an animal that’s a short distance away. The scientists also found tiny marks near the base of the points, where they had been tied onto their wooden spear shafts.

The scientists estimated the age of the spear tips by where they were found. Seven were discovered beneath a layer of volcanic ash that is 279,000 years old. The rest were found buried in upper layers that were at least 105,000 years old.

**Power Words**

**archaeology**  The study of human history and prehistory through the excavation of sites and the analysis of artifacts and other physical remains.

**evolve**  To change gradually over generations, or a long period of time. In living organisms, the evolution usually involves random changes to genes that will then be passed along to an individual’s offspring. These can lead to new traits, such as altered coloration, new susceptibility to disease or protection from it, or different shaped features (such as legs, antennae, toes or internal organs).

**extinct**  No longer in existence, as in a species or larger group of organisms.

**hominid**  A primate belonging to the family of animals that includes humans and their fossil ancestors.

**obsidian**  A hard, dark, glasslike volcanic rock.

**primate**  The order of mammals that includes humans, apes, monkeys and related animals (such as tarsiers, the *Daubentonia* and other lemurs).

**Stone Age**  A prehistoric period, lasting millions of years and ending thousands of years ago, when weapons and tools were made of stone or of materials such as bone, wood or horn.

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Article of the week

- Read the article and talk-to-the-text.
- As you read mark words or sentences you find confusing.
- Fill out the close and critical reading WS.
- Write a final copy of the answers to the CCR WS on lined paper.

Ancient Cave Behavior

In a South African cave, scientists have found the oldest evidence of people acting like modern humans.

BY EMILY SOHN
12:00AM, OCTOBER 19, 2007

In this cave in South Africa, scientists have found the earliest example of people behaving in complex ways. The chunk of pigment (in the box) is one indication of modern human behavior. Ancient humans may have used it to color their bodies.

Mossel Bay Archaeology Project

People have been acting like people—in other words, they've been making tools, creating rituals, and sharing food—for a long time. That's the conclusion of a recent study from South Africa's southern coast.

There, in a cave perched above the sea, researchers from Arizona State University in Tempe have found evidence that humans were behaving in surprisingly complex ways as early as 164,000 years ago. Our species, Homo sapiens, emerged an estimated 200,000 years ago.
The cave held three important clues about the behavior of these Stone Age people.

First, the researchers found the remains of a variety of shellfish, including mussels, giant periwinkles, and limpets. The cave dwellers probably collected these creatures from rocky shores and tide pools and brought them to the cave to eat.

The researchers propose that the early Africans moved to the South African coast between 195,000 and 130,000 years ago. Around that time, the climate inland turned relatively cold and dry. As a result, there were fewer plants and animals to eat away from the coast.

When these ancient people moved to the coast, they probably experienced a major cultural shift, the researchers suspect. That's because observations of modern hunter-gatherer societies suggest that men are more likely to hunt for big animals when people live inland. On the coast, women play a more important role in providing food by gathering plants and shellfish.

As for the second clue, the researchers unearthed 57 pieces of reddish pigment. The researchers think that the cave dwellers used the pigment for coloring their bodies or for other rituals. Symbolic behavior is a distinctly human trait.

Finally, the search turned up more than 1,800 stone tools, including well-crafted blades. These double-edged blades came in a variety of sizes. The smallest were just less than a half-inch wide. Ancient people may have attached these blades to the end of a stick to make spears or other tools. Until now, the earliest evidence of similar blades dates back just 70,000 years.

The new discoveries support the theory that modern human behavior developed gradually, starting about 285,000 years ago, say some experts.

An alternative theory proposes that people developed modern behavior much more recently—perhaps around 45,000 years ago. It's also possible that complex behavior developed at different rates in different places.—Emily Sohn

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