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SCIENCE

# Prehistoric Massacre Hints at War Among Hunter-Gatherers

By **JAMES GORMAN** JAN. 20, 2016

The scene was a lagoon on the shore of Lake Turkana in Kenya. The time about 10,000 years ago. One group of hunter-gatherers attacked and slaughtered another, leaving the dead with crushed skulls, embedded arrow or spear points, and other devastating wounds.

The dead, said the scientists who reported the discovery Wednesday in the journal Nature, seem to have been scattered in no apparent order, and eventually covered and preserved by sediment from the lake. Of 12 relatively complete skeletons, 10 showed unmistakable signs of violent death, the scientists said. Partial remains of at least 15 other people were found at the site and are thought to have died in the same attack.

The bones at the lake, in northern Kenya, tell a tale of ferocity. One man was hit twice in the head by arrows or small spears and in the knee by a club. A woman, pregnant with a 6- to 9-month-old fetus, was killed by a blow to the head, the fetal skeleton preserved in her abdomen. The position of her hands and feet suggest that she may have been tied up before she was killed.

Violence has always been part of human behavior, but the origins of war are hotly debated. Some experts see it as deeply rooted in evolution, pointing to violent confrontations among groups of chimpanzees as clues to an ancestral predilection. Others emphasize the influence of complex and hierarchical human societies, and agricultural surpluses to be raided.

No one is suggesting that one discovery, at a place called Nataruk, will settle this argument, but it may be the first instance of a massacre in a foraging society. A discovery in Sudan from an earlier date found burials of victims of intergroup violence, but that society may have been more settled.

Marta Mirazon Lahr and Robert A. Foley, of Cambridge University and the Turkana Basin Institute in Nairobi, Kenya, and a team of other scientists, concluded in Nature that the find represented warfare among prehistoric hunter-gatherers.

Luke A. Glowacki, a postdoctoral researcher in human evolutionary biology at Harvard University not involved with the discovery, agreed. “There’s no other find like it,” he said.

With Richard Wrangham, a professor of biological anthropology at Harvard, Dr. Glowacki has traced the evolutionary roots of human warfare in chimpanzee behavior. And, he said, this find “shows warfare occurred before the invention of agriculture.”

Douglas P. Fry, a professor of anthropology at the University of Alabama, who was not involved in the research, agreed that the evidence looked like a massacre of one group by another but said that “based on skeletal evidence from one site in an area, it may be jumping the gun to call this ‘war.’”

Dr. Fry said in an email that nomadic foragers were unlikely to practice war, which tends to arise in more complex societies, and that these foragers may have already been in transition to a more settled life.

He said he would like to see “fortifications, villages built in defensible locations, specialized weapons of war, artistic or symbol depictions of war,” and more than one site before calling it warfare.

The first person to spot the bones, some of which were lying on the surface, Dr. Lahr said, was Pedro Ebeya, one of the fossil hunters who work with the Turkana Basin Institute.

Researchers have been exploring a large area there since 2009 that is rich in fossils, remnants of tools like harpoons, and some evidence of pottery. Mr. Ebeya was walking an area about 19 miles from the current shore of Lake Turkana that would have been the shore 10,000 years ago when the lake was bigger. When he returned from his walk, Dr. Lahr said, he told her, “I’ve got bones for you.”

At the site, she saw broken human bones on the surface mixed with gravel. “Then I saw the back of a skull,” which turned out to have major injuries. Further digging uncovered one violent death after another. The injuries showed no signs of having healed, which means that they had occurred at the time of death. And the position of the bodies showed no effort at burial.

The injuries, she said, showed that two different size clubs were used, as well as arrows. Deep cuts to foreheads, jaws and hands, she said, meant that a third type of weapon, with embedded stone blades, must have been used.

The stone remnants were obsidian, which is rare in that area, and, she said, they “suggest the attackers were coming from somewhere else.”

The authors of the Nature report say the attack could have been a raid for resources, or it could be an example of organized violence that was common among ancient hunter-gatherers, but rarely preserved.

This was a highly fertile time in the Lake Turkana area. Pottery found in

the region suggests that some groups of foragers at that time may have been storing food — resources worth stealing. Or the attackers may have been after captives. Bones from one young teenager were found at the site, and remains of adults and children under 6, but no remains of older children, who might have been taken by the attackers.

Dr. Lahr said the population of the area may have been expanding at the time, causing conflict as new bands formed and sought territory. There are conditions that lead to warfare, she said, “and those conditions I think applied in moments of the past to hunter-gatherers.”

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