

Chimps found using spears

by Bend Weekly News Sources

Chimps in Senegal are regularly making and using spears to hunt other, small primates, without human help, according to research led by an anthropologist. It's the first study to report regular tool use by non-humans while hunting other vertebrates, according to the U.S. National Geographic Society, which helped fund the work.

A bushbaby (Ootomurgarutti) was a reported victim of a spear-wielding chimp. (Image courtesy U.S. Nat'l Human Genome Inst.)

Anthropologist Jill Pruetz of Iowa State University in Ames, Iowa, and Patricia Berntson, a graduate student at the University of Cambridge, U.K., documented 22 cases of chimps making spears to use in hunting down smaller primates in cavities of hollow branches or tree trunks. Chimps made the spears of live branches that they trimmed, then sharpened with their teeth, Pruetz and Berntson said. They found the activities at Fongoli, Senegal, in 2005 and 2006. A paper on the findings is to appear in the March 6 issue of the research journal *Current Biology*. The paper was online in the journal starting today. "We came upon the discovery quite unexpectedly," said Pruetz. "There were hints that this behavior might occur, but it was one time at a different site. Then I talked to [Bertolani] and he told me that he saw a female hunt with tools. When he looked through original data... we realized he had other evidence and observations of them probably doing the same thing. While in Senegal for the spring semester, I saw about 13 different hunting bouts. So it really is habitual." Chimps repeatedly jabbed tools into hollow trunks or branches and smelled and/or licked them upon extraction, the researchers said. Two of the 22 cases were judged as merely playfulness in the case of an infant male or exploration. In all other cases, the scientists said the chimps poked with such force that prey could have been injured. They described just one case in which a chimp extracted a bushbaby, a smaller primate, using a spear.

Although hunting is predominantly an adult male activity with chimps, only one adult male of 11 males in the chimp community was seen in the tool-assisted hunting, the investigators said. The rest were adolescents or younger chimps of both sexes. "In the chimp literature, there is a lot of discussion about hunting by adult males, because basically, they're the only ones that do it, and they don't use tools," said Pruetz. "Females are rarely involved. And so this was just kind of as a finding on a number of different levels. It's not only chimps hunting with tools, but females and the ones who hunted the most with them were adolescents." It's also classically in primates that when there is a new innovation, particularly in terms of tool use, the younger generations pick it up very quickly. The last ones to pick up are adults, mainly the males, she said. "This is because imitations learn from the ones they are most affiliated with, their mothers." The findings support the theory that females might have played a role in the evolution of tool technology among early humans, Pruetz said. Those technologies would have included both hunting and gathering-related activities. "The combination of hunting and tool use at Fongoli, behaviors long considered

hallmarks of our own species, makes the population especially intriguing, wrote the scientists in the Current Biology paper. "The observation that individuals hunt with tools include females and immature chimpanzees suggests that we should re-think traditional explanations for the evolution of such behavior in our own lineage. Learning more about the unique behaviors of chimpanzees in such an environment, before they disappear, can provide important clues about the challenges facing our earliest ancestors."

Courtesy National Geographic Society and World Science staff

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