

Neighboring chimp communities have their own nut-cracking styles

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This image shows a wild chimp as he uses a hammer to crack nuts. Credit: Luncz et al. *Current Biology*

People don't always do as their neighbors do, and the same is true of neighboring chimpanzees. That's according to a report published online on May 10 in *Current Biology* featuring observations of wild chimps as they used hammers to crack nuts.

"In humans, cultural differences are an essential part of what distinguishes neighboring groups that live in very similar environments," said Lydia Luncz of the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. "For the first time, a very similar situation has been found in wild [chimpanzees](#) living in the Taï National

Park, Côte d'Ivoire, demonstrating that they share with us the ability for fine-scale cultural differentiation."

The chimpanzees under study show preferences for different nut-cracking tools, including stone and wooden hammers of various sizes. Those differences are maintained even as individual [chimps](#) will sometimes move from one community to the other within a single forest in Côte d'Ivoire.

"We have documented differences in hammer choice within a single forest block, with members of three different adjacent chimpanzee communities that are in regular contact with one another and are thus not genetically differentiated," Luncz said.

One chimpanzee group prefers nutcrackers made of stone. That preference stuck over the course of the season, even as Coula [nuts](#) grew softer and the other two chimpanzee groups started opting for wooden tools, which are adequate for the job and easier to come by in the forest. The three chimpanzee communities also differ in their preferences for hammer size, the researchers reported.

Although previous studies have described [cultural differences](#) among chimpanzees, those have primarily come from comparisons between populations separated by large geographic distances, the researchers said. That's made it more difficult to rule out the possibility that the chimpanzees were genetically distinct or that they were simply responding to ecological differences.

The researchers aren't yet sure whether one approach to nut cracking is really better than another, but they plan to continue studying the Côte d'Ivoire chimpanzees to find out. They are also keen to learn how female chimpanzees adopt the habits of their new communities after a move.

Ultimately, the new findings might help to explain the roots of human culture as well.

"In many ways, chimpanzees are very similar to us humans," said study author Christophe Boesch. "By studying the similarities to our closest living relatives in their natural habitat in Africa, we have the unique opportunity to learn more about the evolutionary roots of culture, which is for us humans one of the key elements of our identity."

More information: Luncz et al.: "Evidence for cultural differences between neighboring chimpanzee communities."

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