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A GROUP OF TOOL-USING CHIMPANZEES WITHIN KIBALE NATIONAL PARK. CR

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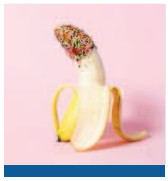

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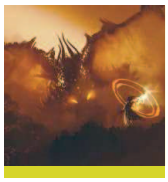

Six Ancient Legends That Are Based On Real Events

Here's The Real Reason Your Friend's

and leaf-based tools for millennia, from around the time of the rule of the pharaohs in Egypt's Old Kingdom.

By Robin Andrews

19/07/2016, 17:52

Now, a new study published in the journal eLife reveals how well adapted to tool use chimpanzees really are. As it turns out, chimpanzees who are keener to explore the world are more frequent tool users, suggesting that chimpanzees who travel really do broaden their horizons.

Observing chimpanzees in the wild, and comparing their tendencies to lounge around or wander the realm of the Budongo Forest in Uganda, the team of researchers noticed that more chimpanzees use tools to engage in foraging when they become aware that high-energy foods are being rapidly depleted in their local area. However, those that travel as a matter of habit acquire new foraging techniques far quicker.

"So basically, when you have had a really bad time for a while in terms of finding your food, and that you get the additional travel on top of it, this makes you the most likely to use a tool," lead author Thibaud Gruber, a zoological cognitive researcher from the University of Geneva, told IFLScience.

"Interestingly, there is a convergence with recent theories of modern human-like bipedalism, which is believed to have evolved in part because it is less costly energetically speaking than chimpanzee quadrupedalism," Gruber noted. "In the end, both bipedalism and tool use could have co-evolved as strategies with the same goal: reducing energetic expenditures."

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chimpanzees from Budongo Forest because they were seen to not use as many tools as their primate counterparts across Africa. They set up a series of tests in the wilderness that they termed "honey-trap experiments", wherein a hole was drilled in a natural log, left on a path used by chimps, and filled with honey.

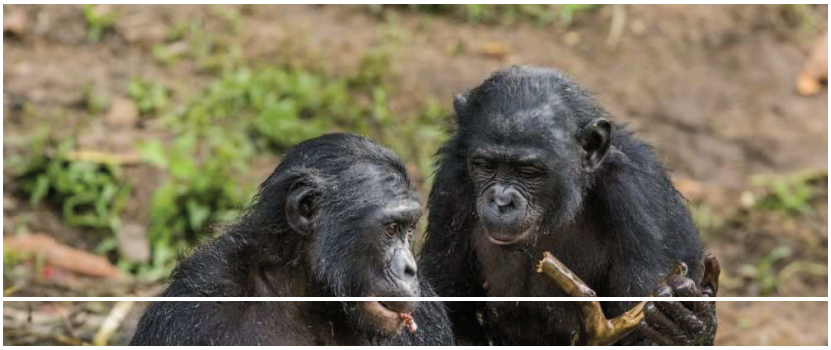
"The idea of the honey-trap experiment was to provide something that the chimps would really want to work for (honey) but make it inaccessible without the use of a tool to see what kind of tool they would manufacture to reach it," Gruber explained.

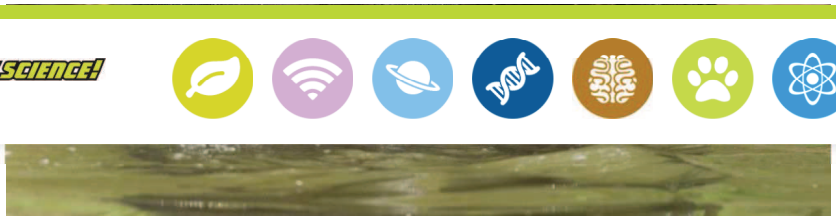
The team noticed that, over time, some of these chimps manufactured "leaf sponges", folded patterns of leaves that could be forced into the gap to absorb the honey. However, many were perpetually unable to design an effective honey-gathering tool.

After seven years of observations, the team realized that the chimps only became interested in designing honey-gathering tools if there was a lack of ripe fruit nearby. Instead of spending energy traveling far away to find fresh fruit, they conserved it by attempting to make tools to reach the high-energy honey.

More importantly, however, those that attempted to use tools had tended to have traveled a long distance prior to coming across their habitat's lack of ripe fruit. This means that they are acutely aware of how much energy they have expended hiking around, and that using a tool to get the honey would use far less energy than another trek designed to seek out new resources.

Thus, they likely developed tool use in order to ensure their continued survival when times were tough. "This is probably a reasoning we can expand to other primates," Gruber concluded "Our ancestors in particular."





Tool use is now widespread across primates. Sergey Uryadnikov/Shutterstock

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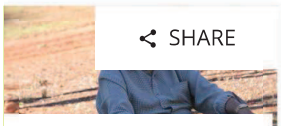

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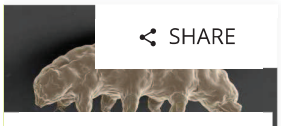

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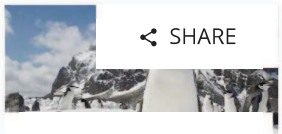

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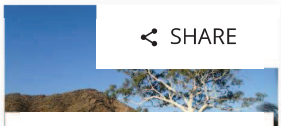

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