

Chimps dance in the face of fire

19 January 2010, by Lin Edwards



(PhysOrg.com) -- Unusual behaviors have been observed in wild chimpanzees in West Africa in the face of grass fires. The chimps did not panic or flee, and some made ritualistic displays that suggest they understand fire and do not fear it, and they may even be able to control it. Since chimpanzees are the nearest relatives to humans, the observations may shed some light on how our early ancestors harnessed fire.

The chimpanzees faced with a wildfire appeared to monitor the [fire](#), and showed no fear. The alpha male even performed a kind of ritualistic display toward the fire front. Anthropologist Dr Jill Pruett from Iowa State University made the observations at her Fongoli research site in southeastern Senegal, where hot and fast-moving wildfires are common in the savannah region towards the end of the long dry season.

Dr Pruett saw the behavior, including "fire dancing" on two occasions in 2006, and said she was surprised at how well the chimps could predict the behavior of the fires, which was better than her own ability. She said in once case there was fire on three sides, and yet the chimps remained calm, even though the flames and smoke were clearly visible. Pruett said she thought their calmness could represent a key stage in controlling fire since it is necessary to overcome the fear before control

becomes a possibility.

The leader of the group, the alpha male, emitted a barking sound unlike the usual warning calls, and then danced in a similar way to the rain dances noted by primatologist Jane Goodall, in which the chimps swayed in slow motion as thunderstorms approached. Male chimps elsewhere have been seen displaying in this way, in a slow-motion dance to show their dominance. The fire dance was a similar exaggerated dance, but directed towards the approaching blaze, and beginning when the fire sounds were quite deafening.

Dr Pruett is convinced the chimps conceptualize fire, and it is known that captive apes can control fire. She said that if chimpanzees can understand fire, the ape-like, small-brained ancestors of humans who lived in similar habitats around five million years ago could have done the same. This means the control of fire could have occurred at a very early stage in human evolution, and long before the earliest archaeological evidence so far found of burnt remnants associated with human ancestors, which date to less than one million years ago. Dr Pruett said the main question is why they would try to control it; what is the impetus?

Dr Pruett is able to get close to the chimpanzees because, although they are wary of humans, they apparently do not view people as predators because people in Senegal do not eat them and consider them close relatives. The Fongoli [chimpanzees](#), living in a habitat that is mostly grassland, are different to forest-dwelling chimps in many ways, including their habits of using caves, soaking in pools of water, and hunting with tools.

The findings are to be published in the *American Journal of Physical Anthropology*.

More information: Reaction to fire by savanna chimpanzees (*Pan troglodytes verus*) at Fongoli, Senegal: Conceptualization of fire behavior and the case for a chimpanzee model, *American Journal of Physical Anthropology*, [DOI:10.1002/ajpa.21245](https://doi.org/10.1002/ajpa.21245)

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