

Adolescent male chimps in large community strive to be alphas

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Hogan Sherrow observes chimpanzees at Kibale National Park. Photo courtesy of Sherrow.

(Phys.org)—An Ohio University anthropologist reports the first observation of dominance relationships among adolescent male chimpanzees, which he attributes to the composition of their community.

Hogan Sherrow spent eight years studying the Ngogo community of [chimpanzees](#) in Kibale National Park in western Uganda. Ngogo is the biggest chimpanzee community on record, with more than 150 members and about twice as many males as found in other chimp communities

across Africa.

Unlike their adult male counterparts, which have a well-documented [dominance hierarchy](#), adolescent males have not been known to establish dominance relationships. During four field seasons between 2000 and 2004, however, Sherrow found that some adolescent males pant grunted to other adolescent males on a consistent basis. Research by Jane Goodall established that pant grunts are made by subordinate individuals to dominant ones, Sherrow explained.

"It calms hostilities. It means, 'I know that you're stronger than me, so don't beat me up.' It's like they're sending up the white flag," said Sherrow, an assistant professor of anthropology who published his recent findings in the journal *Folia Primatologica*.

After ranking the 17 adolescent males in order of dominance, Sherrow concluded that the biggest and oldest animals were at the top of the hierarchy. There were only two exceptions, males that appeared to act in a subordinate manner due to physical injuries.

Sherrow suggests that he observed dominance relationships in the adolescent males of this chimpanzee community due to its size and heightened competition for females. Each male in Ngogo must contend with 35 to 40 others, whereas most communities contain 10 to 15 competitors for mating. Adolescent male [chimps](#) also may vie for access to high-ranking [adult males](#) as a competitive strategy.

Adult male chimpanzees have clear and defined dominance relationships that depend on size, strength and the ability to form alliances in the community. The most dominant males have priority access to resources and potential mates and usually father more offspring.

"We should not be surprised that adolescent males can form these

dominance relationships. Adults males form them, and adolescent males need to learn them at some point," Sherrow said.

Studies of other immature males in primate, mammal and even human communities with intense competition for resources also have found adolescent dominance hierarchies, he added.

Because the Ngogo community is unusually large, Sherrow noted that scientists should seek to observe this behavior in another neighboring community of this size to determine if a similar hierarchy can be documented. The Ngogo study site, located in the Ugandan rain forest, was established in 1995 and has been observed daily by researchers.

The recent study not only offers a new view of chimpanzee behavior, but could shed light on human power and dominance as well, Sherrow suggested.

"Because chimpanzees, along with bonobos, are our closest living relatives, understanding things like how and why they form dominance relationships helps us understand the drive for status and prestige in humans," he said.

Provided by Ohio University

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