

How our ancestors were like gorillas

November 29 2007

Research published in this week's *Science* journal shows that some of our closest extinct relatives had more in common with gorillas than previously thought. Dr Charles Lockwood, UCL Department of Anthropology and lead author of the study, said: "When we examined fossils from 1.5 to 2 million years ago we found that in one of our close relatives the males continued to grow well into adulthood, just as they do in gorillas. This resulted in a much bigger size difference between males and females than we see today.

"It's common knowledge that boys mature later than girls, but in humans the difference is actually much less marked than in some other primates. Male gorillas continue to grow long after their wisdom teeth have come through, and they don't reach what is referred to as dominant "silverback" status until many years after the females have already started to have offspring. Our research makes us think that, in this fossil species, one older male was probably dominant in a troop of females. This situation was risky for the males and they suffered high rates of predation as a result of both their social structure and pattern of growth."

The research used 35 fossilised specimens of *Paranthropus robustus*, an extinct relative of *Homo sapiens* which existed almost two million years ago. The fossils came from the palaeontological sites of Swartkrans, Drimolen and Kromdraai, all of which are in South Africa's Cradle of Humankind World Heritage Site near Johannesburg.

The research was inspired by earlier discoveries at Drimolen by Dr Andre Keyser, one of the co-authors of the study. Dr Colin Menter,

from the University of Johannesburg and co-director of current fieldwork at Drimolen, explains: “Discoveries at this site showed us that sex differences in *Paranthropus robustus* were greater than we had previously thought. While there are some specimens from Drimolen that are just as large and robust as those from other sites like Swartkrans, there is a complete female skull that is distinctly smaller than the other, well-preserved specimens of the species.”

Jacopo Moggi-Cecchi, based at the University of Florence and an expert on fossil teeth, participated in the study and says: "It takes large samples of fossils to ask questions about variation and growth, and it's really a tribute to fieldworkers such as Robert Broom and Bob Brain [who worked at Swartkrans] that this research could even take place. It's also an example of why we need to continue to look for fossils after we think we know what a species is – more specimens allow us to answer more interesting questions. Even isolated teeth can give us new insights into what variation means.”

Dr Lockwood adds: “The pattern of growth also gives a better understanding of who is male and who is female in this sample of skulls and it turns out that there are far more males in the fossil sample. Because fossils from the most prolific site, Swartkrans, are thought to have been deposited by predators such as leopards and hyenas, it appears that males were getting killed more often than females.

"Basically, males had a high-risk, high-return lifestyle in this species. They most likely left their birth groups at about the time they reached maturity, and it was a long time before they were mature enough to attract females and establish a new group. Some of them were killed by predators before they got the chance."

Source: University College London

Citation: How our ancestors were like gorillas (2007, November 29) retrieved 25 April 2024 from <https://phys.org/news/2007-11-ancestors-gorillas.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.