

# Female chimps keep the bullies at bay

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Female chimpanzees may have found a fool-proof way to ensure they mate with only the highest ranking males, namely those with important social and physical characteristics that their offspring may inherit, according to a new study by Akiko Matsumoto-Oda from the Department of Welfare and Culture at Okinawa University in Japan.

Female chimpanzees do not synchronize their reproductive activities which reduces the opportunities for less-desirable males to coerce them into mating. The findings have just been published online in Springer's journal *Behavioral Ecology and Sociobiology*.

Most studies of primates to date have suggested that females synchronize their reproductive activities. However, it has been very difficult to demonstrate this analytically. Matsumoto-Oda and colleagues have developed a new index – the estrus synchrony index - to analyze whether female chimpanzees, in the Mahale Mountains National Park in Tanzania, synchronize the fertile period of their reproductive cycles.

The authors identified estrus in females by the size of their anogenital swellings, which is related to increased levels of follicular estrogen. The period of maximal swelling was regarded as the 'estrous period' because almost all copulations were observed in this phase. In the analysis of the data covering nine years of observations, the authors looked at whether or not females displayed a significant tendency to synchronize their estrous cycles.

Commenting on these findings, the authors suggest that "avoiding

synchronizing estrous cycles may be a female strategy to reduce male sexual coercion."

Indeed, male chimpanzees use coercive tactics such as physical aggression against females, forced copulation, harassment and intimidation to increase their reproductive success. The opportunity for males to coerce females is reduced when females avoid synchronizing their estrous cycles, because with fewer females in estrus at the same time, mating competition between males intensifies. As a result, there is an increased probability that high-ranking males, with desirable social and physical attributes, will mate with the fertile females. These sought-after characteristics could be inherited by their offspring.

Source: Springer

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