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PRESS RELEASE

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Altruism in forest chimpanzees

Max Planck researchers report 18 cases of adoption of orphaned youngsters by group members in Taï forest chimpanzees. Half of the orphans were adopted by males.

In recent years, extended altruism towards unrelated group members has been proposed to be a unique characteristic of human societies. Support for this proposal came from experimental studies with captive chimpanzees. A team of researchers with the Department of Primatology at the Max Planck Institute for Evolutionary Anthropology (Leipzig/Germany) now reports 18 cases of adoption of orphaned youngsters by group members in Taï forest chimpanzees. Half of these orphans were adopted by males and remarkably only one of these proved to be the father. Such adoptions by adults can last for years and imply extensive care towards the orphans. These observations reveal that, under the appropriate socio-ecologic conditions, chimpanzees care for unrelated group members and that altruism is more extensive in wild populations than was suggested by captive studies (PLoS ONE, January 26, 2010).



Image 1: The adult male Freddy with his adopted male infant Victor: Freddy opens and shares Xylia seedpods with Victor (Copyright: Tobias Deschner, Max Planck Institute for Evolutionary Anthropology).

In recent years, extended altruism towards unrelated group members has been proposed to be a unique characteristic of human societies. Support for this proposal came from experimental studies with captive chimpanzees that showed that individuals were limited in the ways they shared or cooperated with others. This dichotomy between humans and chimpanzees was proposed to indicate an important difference between the two species, and one study concluded that “chimpanzees are indifferent to the welfare of unrelated group members”. In strong contrast with these captive studies, consistent observations of potentially altruistic behaviors in different populations of wild chimpanzees have been reported in such different domains as food sharing, regular use of coalitions, and cooperative hunting and border patrolling.

The proposed absence of altruistic food sharing in captive animals might be expected due to the well-fed state of all individuals under such conditions. In natural conditions, we might expect many situations in which an altruistic act would increase the survival of group members, like in the cases of adoption, and defense against predators or aggressive outsiders.



Image 2: The adult male Freddy carries on his back the adopted male infant Victor. "It was just an amazing sight to see such a big powerful male as Freddy bridging gaps in trees with his body to help the whimpering little Victor to reach the branches with fruits", said Boesch (Copyright: Tobias Deschner, Max Planck Institute for Evolutionary Anthropology).

To elucidate some of the specific conditions that elicit altruism towards unrelated group members in chimpanzee social groups, a team of researchers led by Christophe Boesch of the Max Planck Institute for Evolutionary Anthropology, reports 18 cases of adoption, a highly costly behavior, of orphaned youngsters by group members in Tai forest chimpanzees. “Some adoptions of orphans by unrelated adults lasted for years and imply extensive care towards the orphans. This includes being permanently associated with the orphan, waiting for it during travel, providing protection in conflicts and sharing food with the orphan”, says Christophe Boesch.

The high level of adoption observed in Tai chimpanzees compared to other well-studied East African populations might result from the fact that the Tai population coexists with a large population of leopards and the resulting high predation pressure exerted by these cats seems to have promoted strong within-group solidarity in the form of care for all injured individuals as well as joint coalition defense against the leopards. Once established, this care for the welfare of others seems to have been generalized to new social contexts, including adoption.

"These observations reveal that, under the appropriate socio-ecologic conditions, chimpanzees do care for the welfare of other unrelated group members and that altruism is more extensive in wild populations than was suggested by captive studies", concludes Christophe Boesch. "Only detailed observations of wild chimpanzees can give us a real understanding of what chimpanzees can do and how intelligent they are. Then and only then will we be able to answer the question of what makes us human."

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Original paper:

Boesch, C, C Bolé, N Eckhardt, H Boesch:
Altruism in Forest Chimpanzees: The Case of Adoption
PLoS ONE, January 26, 2010

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