

World's only bonobo sanctuary aids orphaned apes in developing social skills

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Two bonobos in friendly social contact. Credit: Stephanie Kordon/Lola ya Bonobo Sanctuary

Apes orphaned by the illegal trade in bushmeat and pets can overcome trauma and develop social abilities like those of their mother-reared



peers.

A study led by Durham University, UK, looked at the effects of rehabilitation by the world's only bonobo sanctuary on the social and <u>emotional development</u> of orphaned bonobo apes across a 10-year period. The findings are <u>published</u> in the journal *Royal Society Open Science*.

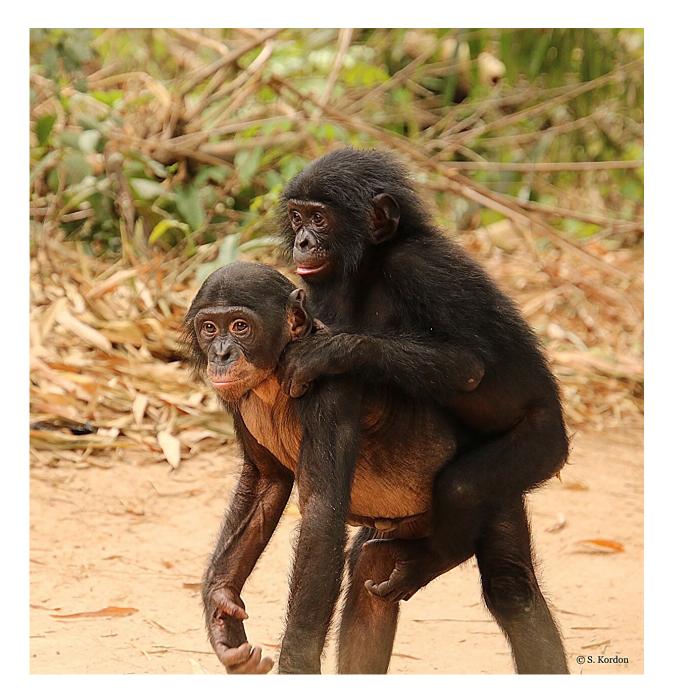
Bonobos are our closest living relatives, along with chimpanzees, and are only found in the Democratic Republic of Congo. The early life trauma of maternal loss and the deprivation from being captured by humans can have long lasting negative effects on bonobos' social abilities.

Researchers wanted to see what impact rehabilitation in the Congolese sanctuary of Lola ya Bonobo had on the social and emotional skills of orphaned bonobos, compared to those who were raised by their mothers, at different points in time across the animals' lifespans.

In particular, the researchers investigated how the bonobos' empathy, <u>social skills</u> and aggression behaviors developed across their lifespan, as well as between the sexes.

Although the orphaned bonobos studied showed reduced social skills, they still demonstrated a degree of the species-typical social behaviors seen in the mother-reared apes.





A young bonobo carries another on her back- offering comfort and reassurance. Credit: Stephanie Kordon/Lola ya Bonobo Sanctuary.

The researchers say this underscores the orphans' ability to overcome challenges as well as the important role that rehabilitation centers like



this can play in their recovery before the apes are released back into the wild.

Lead author Stephanie Kordon, a Ph.D. researcher in the Department of Psychology, Durham University, said, "Bonobos are one of our closest ape cousins, but they are in danger of extinction due to logging and the <u>illegal trade</u> in bushmeat and pets.

"The Lola ya Bonobo sanctuary does vital work in protecting this vulnerable species. While the orphans' social development is not equivalent to that of their mother-reared counterparts, they overlap in the development and behaviors they display.

"By better understanding the healthy social development of bonobos, we aim to help the important rehabilitation and conservation efforts of this unique species."





Social play behavior between an orphaned and a mother-reared juvenile bonobo. Credit: Stephanie Kordon/Lola ya Bonobo Sanctuary.

In total, researchers observed 83 bonobos at different points in their lives across 10 years at Lola ya Bonobo.

The researchers saw that social skills increased in female bonobos and decreased in males with age, which is consistent with how bonobos interact in the wild, as bonobos are a female-led society. However, these skills were lower in orphans compared to those who were mother-reared.

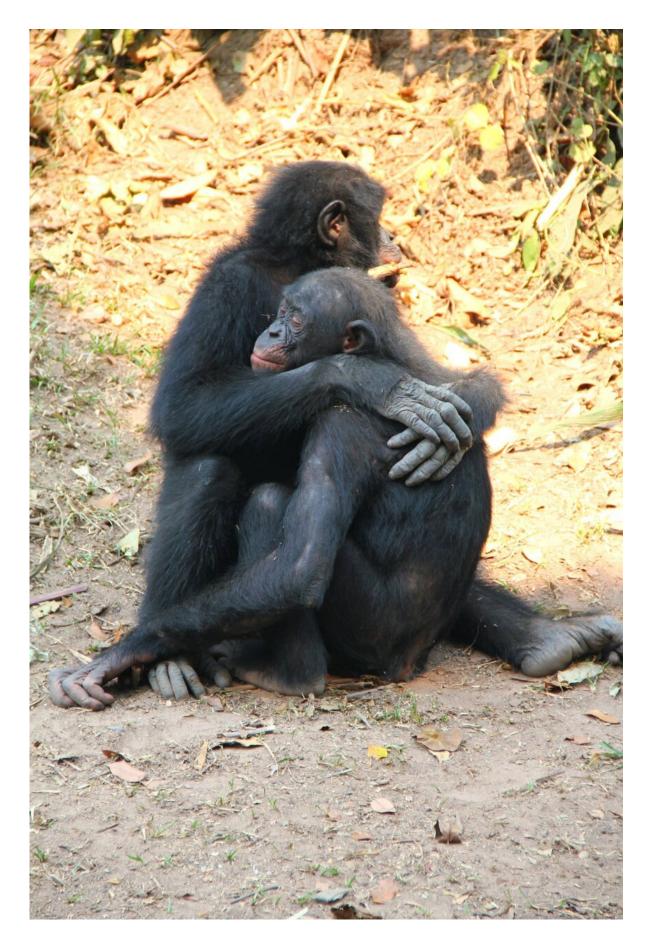
While orphaned bonobos were consistently less likely to show empathy—such as comforting another bonobo—this ability was not completely absent. This suggests that orphans continue to demonstrate



care towards other bonobos, even if it is at a lower end of the scale.

The fact that orphans' tendency to console others was still within the range of mother-reared bonobos—although at a lower level—also suggests they may have sufficient skills to cope within <u>social groups</u>. This is important as some of these apes go on to be reintroduced back into the wild, where social skills are critical for survival.







An orphan bonobo offers comforting contact, a sign of empathy, to a motherreared bonobo after a conflict. Credit: Zanna Clay/ Lola ya Bonobo Sanctuary.



A young bonobo offers comforting contact to another after a conflict. Credit: Zanna Clay/ Lola ya Bonobo Sanctuary.

Mother-reared and older females were more likely to be aggressive to other group members, while young and male bonobos were more likely to be the victims of aggression. However, how bonobos were reared did not predict their risk of being a victim of aggression.



Research senior-author Professor Zanna Clay, Department of Psychology, Durham University, said, "While we cannot say the orphaned bonobos are absolutely rehabilitated, our findings do show a good direction to their social function as we are seeing them demonstrate species-typical behaviors within low but normal ranges.

"Comparing orphans with mother-reared <u>bonobos</u> also gives us a fascinating insight into how early life experiences can influence the development of social and emotional skills in our closest cousins and the importance of sanctuaries in supporting that development."

The research also included researchers from Harvard University and Emory University.

More information: Factors shaping socio-emotional trajectories in sanctuary-living bonobos: a longitudinal approach, *Royal Society Open Science* (2024). DOI: 10.1098/rsos.240435. royalsocietypublishing.org/doi/10.1098/rsos.240435

Provided by Durham University

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