**Fruit sharing in Bulindi chimpanzees, Uganda**

Kim van Dijk

Animal Behaviour and Cognition, Utrecht University, Utrecht, The Netherlands

**Abstract**

Chimpanzees (*Pan troglodytes*) are well studied regarding their food-sharing behaviour. Specifically, chimpanzees from multiple wild populations are known to hunt and share meat with unrelated conspecifics. Fruit-sharing is much less common, although chimpanzees in Bossou regularly share papaya. Chimpanzees in Bulindi have been found to eat and share jackfruit with unrelated conspecifics. Whereas sharing with kin may lead to fitness benefits for the sharing chimpanzees, sharing with non-kin seems a detrimental choice as it costs energy. In this study we aimed to understand why chimpanzees would share jackfruit with non-kin. First, chimpanzees may share for the benefit of receiving food back at a later point in time (‘Food-for-food’). Second, it might be better to share than face the consequences of severe begging or harassing behaviour (‘Sharing-under-pressure’). Third, food can be traded for sex, or the other way around (‘Food-for-sex’).

Unlike meat- or papaya-sharing in other chimpanzee populations, jackfruit-sharing was very common in Bulindi, with an average of 51 sharing events per month compared to 0.7-13 times per month for meat- and papaya-sharing. Although chimpanzees at Bulindi did not share reciprocally overall, the only two adult males in the community did share their food equally with each other, as expected. This is similar to a meat-sharing population at Ngogo in Kibale, Uganda, where adult males share reciprocally. All chimpanzees were more likely to share with individuals that solicitated for food by holding or reaching, but there was no severe begging and no major aggression during any of the events. The lack of severe begging and major aggression was different than meat-sharing but not papaya-sharing. Overall, the Bulindi chimpanzees show high levels of tolerance during jackfruit-sharing events. Males were more likely to share with females that were sexually receptive and that solicited for food, but, against expectation, it did not lead to more copulations with that particular female. Finally, as expected, mother-offspring sharing was one of the most common types of sharing, just like in other wild chimpanzee populations.

Overall, some aspects of food-sharing in the Bulindi chimpanzee community are seen elsewhere, while other aspects appear to be unique. However, the Bulindi chimpanzees and chimpanzees elsewhere regionally are under imminent threat from anthropogenic factors such as logging and habitat conversion for agriculture as they struggle for existence in the small forest patches that remain in their core habitat. If the chimpanzees at Bulindi (and those inhabiting similar human-dominated habitat regionally) go extinct, a part of a threatened species with behaviours not seen in any other chimpanzee population will be lost forever.