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COMPARISON OF FOOD PATCH USE AND RANGING PATTERN BETWEEN BONOBOS AT WAMBA AND CHIMPANZEES IN THE KALINZU FOREST

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The unique fission-fusion ranging patterns of chimpanzees and bonobos are often explained by scramble competition over mature fruits that exist in a clumped distribution. However such hypothesis has not been well examined with data of ranging and feeding of wild populations. Scramble competition may occur in a food patch when depletion by animals reduces the available fruit in a patch to the level that feeding rate decreases. However, in chimpanzees in the Kalinzu Forest, Uganda, the feeding rate on main fruit food did not decrease during occupancy of the feeding tree. As expected, abundance of fruit in a tree positively affected number of animals feeding together and duration of stay in the tree. However, contrary to expectation, duration of stay positively correlated with number of animals feeding together. These data suggest that fission-fusion ranging pattern and tendency of females to range alone or in smaller parties cannot be explained by the scramble competition alone, and that we need to consider other social factors. Though data collection and analysis are still ongoing, scramble competition in a food patch seems to occur more clearly in bonobos at Wamba, D.R. Congo. Probably because a larger number of animals feed together, bonobos seem to deplete fruits and leave a tree more quickly. However, mean distance between food patches is much shorter than that for chimpanzees, which prevents slower-moving animals such as females carrying infant to incur excessive costs. This may partly explain why female bonobos can join the large mixed party more frequently than do female chimpanzees.

Keywords: bonobo, chimpanzee, food patch use, ranging pattern