

FISSION-FUSION DYNAMICS IN CHIMPANZEES (*Pan troglodytes verus*) AT BOSSOU, REPUBLIC OF GUINEA: ECOLOGICAL CONSTRAINTS IN AN ANTHROPOGENIC ENVIRONMENT.

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Despite human-impacted wildlife habitats becoming more widespread, studies that examine how non-human primates adapt their grouping and activity patterns between agricultural and forest ecotones are hitherto lacking. For animals with highly developed fission-fusion dynamics, general behavioural ecology theory predicts that when wild foods are scarce, animals should split into smaller parties (or sub-groups) to reduce ranging costs, such as time spent moving. Focal and scan data were collected from direct observations of one chimpanzee community (*Pan troglodytes verus*) inhabiting a forest-farm mosaic at Bossou, Republic of Guinea, over an 18-month period. Contrary to predictions, wild fruit availability did not appear to influence mean daily party size. Instead, cultivated resources seem to provide chimpanzees at Bossou with an alternative to splitting into smaller parties. During crop-feeding bouts, chimpanzees were more likely to form larger parties when feeding on supplied foods than on abandoned or guarded crops: supplied foods were unlimited, resulting in low within-party feeding competition. However, when local people were present during raids on guarded crops, chimpanzees raided in larger parties, especially when guard level was high, possibly to increase the protective capabilities of the party. As predicted, individuals did not move more when wild fruits were scarce, but they did adapt their activity budgets to integrate crops into their broader ecological strategy. With species being increasingly forced into anthropogenically altered habitats, access to energy-rich crops must be incorporated into models that are traditionally used to explain fission-fusion dynamics and other socio-ecological adaptations to more natural environments.

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