

THE ROLE OF SEASONAL FALLBACK FOODS IN THE DIETS OF CHIMPANZEES AND GORILLAS IN BWINDI IMPENETRABLE NATIONAL PARK

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Seasonal cycles of food availability are believed to shape the behavioral ecologies of forest animals. Natural selection may act most strongly only during periods of resource shortages. The behavioral ecology of great apes in sympatry may reveal aspects of the influences of seasonal foods on their behavior, and therefore on their evolved co-existence. The Bwindi Impenetrable Great Ape Project investigated the behavioral ecology of chimpanzees (*Pan troglodytes schweinfurthii*) and mountain gorillas (*Gorilla beringei beringei*) in Bwindi Impenetrable National Park, Uganda. We found that the two species had similar diets. Bwindi gorilla diet was overall more folivorous than chimpanzee diet, but was markedly more frugivorous from that of gorillas in the nearby Virunga Volcanoes. During four months of the year Bwindi gorilla diet included more food species than that of the chimpanzees did. During the periods when fruit availability was least, chimpanzees continued to forage for fruits while gorillas consumed fibrous foods that were considered fallback foods. Three factors in particular - seasonal consumption of fibrous foods by gorillas, interspecific differences in preferred fruit species, and meat consumption by chimpanzees - contributed to dietary divergence between the two species. Gorillas ate *Myrianthus holstii* at much higher rates than Bwindi chimpanzees did, while chimpanzees included more figs in their annual diet than gorillas did. We observed five encounters between Bwindi chimpanzees and gorillas. We hypothesize that interference competition for food exists between chimpanzees and gorillas, although whether such occasional contests are ecologically important to either species is unknown. Funded was provided by the National Geographic Society, the Wenner Gren Foundation for Anthropological Research, the Fulbright Foundation and the University of Southern California.

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