## Parks as Agents of Social and Environmental Change in Eastern and Southern Africa

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This interdisciplinary multi-institutional project, supported by NSF funding, examines the social and environmental impacts of a sample of parks in four countries – Uganda, Tanzania, Botswana, and Namibia. The parks and landscapes around them span an ecologic gradient from mid-altitude forests to semiarid savannas and a demographic gradient from very densely populated agricultural landscapes to relatively sparsely populated pastoral or low intensity agricultural areas.

My own research has focused mainly on Kibale National Park (KNP) in western Uganda, and the now densely populated landscape around it (with densities averaging about 300 or more per km2). I've done fieldwork there since 2004, together with UF professors Michael Binford and Jane Southworth, graduate students Joel Hartter (now faculty at University of New Hampshire), Amy Panikowski, Karen Kirner, and Katherine Mullan, and several Ugandan and other collaborators.

KNP was a forest reserve for much of the 20th century before becoming a national park, and the area around it has been transformed over that time from a sparsely populated to a densely settled agricultural landscape. We have for several years investigated the history of settlement and the factors that attracted migration to different portions of the area. In summer 2011, we looked in greater detail at the historic movements and interactions among several groups around the park. We found complex and shifting interactions among Batoro, Bakonjo, Bakiga, and others have and played major roles in history of the region. Tensions among some groups opened opportunities for settlement by others at various periods. Mining enterprises to the south of the park also helped bring migrants into the region, as have large tea plantations, which have gone through several cycles of decline and rehabilitation. Many migrant workers subsequently settled near (or sometimes in) the forest reserve. Periods of political instability strongly af-



fected settlement around and within KNP (as well as in other protected areas in Uganda). We are in the process of documenting the ways in which the human and animal ecology of the surrounding landscape has been massively transformed by the influx of agricultural and other migrants, and the shifting political ecology in which the park has been involved in the broader context of social, political, and demographic change in this region and at a national level.

Among our other recent findings are that, despite the park's "fortress conservation" characteristics, and the animal hazards that many farmers face, most people in our sample within five km of KNP say they benefit from the park, and only a small proportion (<1/3) cite the park's negative impacts. The benefits most often noted are forms of ecosystem services (improved climate, etc.) rather than direct economic benefits (employment, income). Crop raiding by park animals is a large problem in some locations, but resource restrictions and expulsion are not widely cited by our respondents. Contrary to expectations, the patterns of responses do not vary significantly by wealth, gender or ethnicity, but they do vary strongly by distance from the park, with negative assessments concentrated within one km from the boundary. We suggest that these responses are largely due to the fact that the large majority of current residents migrated to the area after the park (or forest reserve) was established, and that the area around the park has been so thoroughly domesticated. These conditions and outcomes are likely also to be true for other mid-altitude tropical forests in East Africa and elsewhere (Hartter & Goldman, 2010).

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