

Study Finds People, Livestock And Carnivores Share Same Space

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In the southern Rift Valley of Kenya, the Maasai people, their livestock and a range of carnivores, including striped hyenas, spotted hyenas, lions and bat-eared foxes, are coexisting fairly happily according to a team of coupled human and natural systems researchers.

“I wouldn’t call the results surprising,” said [Meredith Evans Wagner](#), a visiting scholar from the University of Florida in the Center for Systems Integration and Sustainability (CSIS) at Michigan State University and part of the research team. “Other research has shown that people and carnivores can coexist, but there is a large body of thought that believes carnivores need their own protected space to survive.”

The paper “[Occupancy patterns and niche partitioning within a diverse carnivore community exposed to anthropogenic pressures](#)” was recently published in *Biological Conservation*. Other authors are Paul Schuette and Scott Creel, of Montana State University, and Aaron Wagner, postdoctoral researcher in the BEACON Center for the Study of Evolution in Action at Michigan State.

The paper’s findings echo results of a [study](#) published in *PNAS* in September 2012 by Jianguo “Jack” Liu and Neil Carter of CSIS: namely that tigers and people are sharing the same space in Chitwan National Park in Nepal, albeit at different times.

Wagner and her colleagues spent just over two years documenting the carnivores of the southern Rift Valley, using motion-detecting camera traps to capture images of the creatures and people using four different areas of land: a conservation area with no human settlements, a grazing area that also had no human settlements, a permanent settlement area, and a buffer zone between the grazing and conservation areas that included seasonal human settlements.

While most of the results were expected – the majority of carnivore photos were taken after dark, most of the larger predators, such as lions and spotted hyenas, tended to be found in the conservation area that didn’t include any human settlements – there were some intriguing results.

“We found that while there were more striped hyenas in the conservation area, there were also striped hyenas in the buffer zone, close to the human settlement area,” Wagner explained. “The hyenas weren’t avoiding that area; they were using the settlement area as a resource in addition to hunting.”

When the Maasai slaughtered an animal for food, they throw the scraps out their back doors, which are at the edge of the buffer zone, where the striped hyenas were happy to eat them.

“Carnivores aren’t a problem for this group of Maasai,” Wagner said. “They’ve made a conscious decision to not hunt carnivores. If one of their livestock is killed by a carnivore, people don’t go out and kill a

carnivore in retaliation. It's a little bit unusual in that way. But in our study, we found that carnivores killing livestock didn't happen a lot."

"Wildlife is clearly driven away from the permanent settlement areas," said Aaron Wagner. "But the seasonal human migration out of the buffer zone keeps that area viable for wildlife. Numbers drop when the cattle and people move in, but the striped hyenas seem to have habits that allow them to compensate. They do scavenge around bomas [Maasai settlements] when the pickings are good, but they hunt, too. Even with the people around, there are enough prey left, or enough trickling in from the conservation area, that they have plenty to hunt. More often than not, when following a striped hyena that's foraging (or playing at a den) at 3 a.m., there's no indication that people are so close."

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