

Oryx

The secret life of Madagascar's largest carnivore in a vanishing forest

By Eileen Wyza, 14th February 2020

Large carnivores are renowned for their beauty, power and for the amount of attention they receive from the international conservation community working tirelessly to protect them from extinction. Big cats, polar bears, wolves and even the giant panda often become flagship species for conservation thanks to their charismatic nature. In Madagascar, however, there are no large predators. Topping out at 12 kg, the country's so-called king of the forests is a cat-like carnivore known as the fosa.



Collared fosa. Collars were funded by Naples Zoo, FL. Photo: Eileen Wyza

Fosas may not be large, but they are extremely effective predators. With flexible ankle joints that permit agile arboreal ascent and descent, and a long tail that facilitates balance, fosas are as capable of hunting lemurs high in the trees as they are of ambushing small prey on the ground. In fact, they are one of the lemurs' only natural predators. Like many species in Madagascar, the fosa

thrives in a variety of forest types. Yet despite their versatility, the alarming rate of deforestation occurring across the country poses an enormous threat to the long-term survival of this fascinating and unique species.



Canyon caused by erosion in deforested area of Ankarafantsika National Park. Photo: Eileen Wyza

Fosas are threatened by loss of habitat as their native forests continue to vanish, and by persecution, as they are perceived by many as a threat to both people and livestock. With the country's exponential human population growth, fosas face the combined challenge of navigating fragmented forests and coping with the expansion of villages into remaining natural areas. This problem is complicated further by the extreme economic hurdles that many Malagasy people face. On the landscape of food insecurity, any perceived threat can offer genuine and understandable concern.



Setting up safe traps for fosa capture. Photo: Nancy Stevens

To understand the potential for such concern, we [monitored](#) the movements of fosas fitted with GPS collars within Ankarafantsika National Park. Located in northern Madagascar, the Park is one of the country's largest and most fragmented protected areas. Ankarafantsika has a number of growing villages within the Park boundaries, and forest fires as a result of slash-and-burn agriculture occur almost every year during the region's dry season. By tracking fosa movements and activity patterns, we aimed to gather information on how these animals navigate habitat loss and areas of human habitation. Interestingly, our research documented the fosa's extreme reliance on forest cover for resting, traveling and feeding. We also [found](#) that in addition to avoiding open areas, fosas also typically steer clear of human settlements, which is not what we would expect to see if they were going out of their way to eat chickens, as people believe. We will use our findings to raise awareness about fosa biology in fragile ecosystems, and to engage with local stakeholders in and around the Park on strategies to facilitate human-wildlife coexistence.

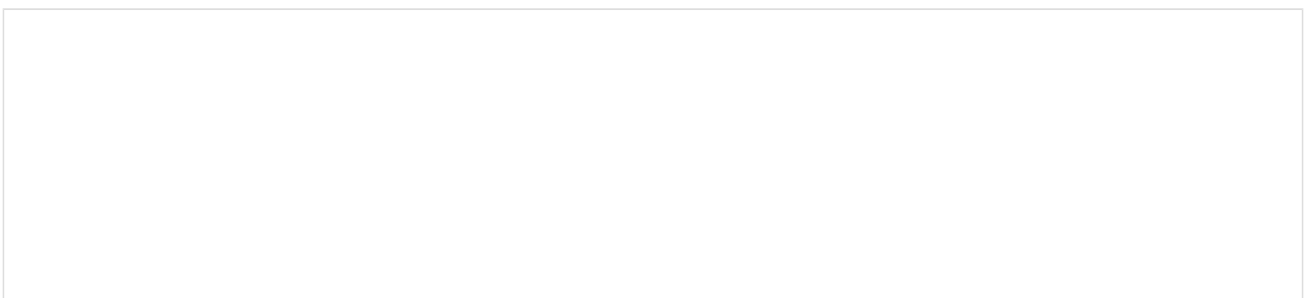


Lake Ravelobe in central Ankarafantsika National Park. Photo: Eileen Wyza

With continued human encroachment and deforestation, it is critical to understand how the last remaining populations of Madagascar's largest carnivore are making use of their space and time. Are they retreating into the dwindling inner forest? Are they adapting to reduced natural prey populations by eating chickens instead? Are they, like some other carnivores, becoming nocturnal, to avoid humans? The technology used to conduct this study did not exist when the forests first began to disappear, but now we have the chance to observe fosas closely in what remains of their natural habitats. The fosa is the largest carnivore on Madagascar, and there is still so much that we do not know and must learn if we are going to help this species have a fighting chance of survival.

Co-authors on the study include Nancy J. Stevens (Ohio University), Viorel Popescu (Ohio University), Luke Dollar (Catawba College) and our late colleague Pierrot Rahajanirina.

The article [Spatial dynamics and activity patterns of the fosa *Cryptoprocta ferox* in Ankarafantsika National Park, Madagascar: carnivores navigating a human-influenced landscape](#) is available in *Oryx—The International Journal of Conservation*.





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Eileen Wyza is a PhD student at Ohio University in Athens, USA. She is a wildlife ecologist whose research focuses on the behaviour of mammalian carnivores in the context of a highly human-influenced world, to inform both wildlife conservation and management as well as to minimize negative interactions between people and wildlife.