Leopards in the backyard

March 8 2013

Credit: Norwegian Institute for Nature Research

A new camera-trapping study in India has revealed that leopards can occur at high densities in densely-populated and heavily-modified agricultural environments.

Despite the high density of leopards there are no reports of human fatalities in the study area.

The results from this study challenge the popular misperception that

large carnivores require wilderness areas to survive. On one hand this greatly expands the area of interface between humans and leopards which will require a proactive approach to dealing with potential conflicts on a large scale. However, on the other hand it opens up many new areas for conservation, greatly increasing the chances of maintaining the connectivity which is so important to maintain viable populations in the long term.

The conservation of large carnivores like wolves, bears, tigers and lions is always a challenging task in our modern and crowded world. Humans have modified and fragmented habitats and often experience a diversity of conflicts with large predatory neighbours.

There is currently a major debate going on among conservationists about how to best go about achieving large carnivore conservation. Alternatives range from a focus on fencing carnivores into protected areas to allowing them to reoccupy shared landscapes where they must coexist with human activities. At least part of this discussion depends on determining to what extent the species can tolerate living in human-dominated landscapes.

In order to investigate this a team of researchers from Norway (Norwegian Institute for Nature Research and Norwegian University for Life Sciences) and India (Wildlife Conservation Society - India) conducted a camera-trapping study around the town of Akole in western India.

The landscape is heavily dominated by people (350 people per km^2), virtually all habitat is converted to agriculture (mainly sugar cane), and there are no wild prey species bigger than hares in the landscape. There were no forests or protected areas close to the study area.

Despite this extent of human dominance of the landscape, the study revealed a very high density of both leopards and stripped hyenas (5

adults per 100 km^2). In addition to these large carnivores the studied revealed the presence of a range of smaller predators, including rusty spotted cats, small Indian civet, Indian fox, jungle cat, jackals and mongooses.

The leopards were photographed very close to houses at night, and even seen in the middle of the town. Despite this very high density of leopards, there were no reports of any people being seriously injured in living memory, although the leopards were living on a diet of domestic dogs and livestock which was a source of some conflict.

The results from this study challenge the popular misperception that large carnivores require wilderness areas to survive. On one hand greatly expands the area of interface between humans and leopards which will require a proactive approach to dealing with potential conflicts on a large scale. However, on the other hand it opens up many new areas for conservation, greatly increasing the chances of maintaining the connectivity which is so important to maintain viable populations in the long term.

More information: www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0057872

Provided by Norwegian Institute for Nature Research

Citation: Leopards in the backyard (2013, March 8) retrieved 10 April 2024 from https://phys.org/news/2013-03-leopards-backyard.html

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