

Big cats are adapting fast, can live in harmony: new study

By Dinesh C Sharma

New Delhi, February 20: Even as we keep hearing about cases of human-animal conflicts involving big cats like leopards, a new study in wildlife areas in the Western Ghats has thrown up a surprising finding – big cats and other carnivores are living in harmony with each other.



Tigers, leopards, and dholes (Asian wild dog) - three species which are otherwise supposed to be in direct competition with one other - are actually living with little conflict. The study was done in habitats of these animals in the Western Ghats in Karnataka by a group of researchers led by the Wildlife Conservation Society (WCS).

“Tigers, leopards, and dholes are doing a delicate dance in protected areas, and all are managing to survive,” says Ullas Karanth of WCS Asia who led the study. “We are surprised to see how each species has remarkably different adaptations to prey on different prey sizes, use different habitat types and be active at different times.” Given small and isolated nature of prey in these reserves, such adaptation is helpful for efforts to save all three species.

Researchers used a technique called ‘camera trap’ to sample populations of tigers, leopards and dholes, and to map their behaviours. The technique involves using remotely-operated cameras fitted with motion sensors to capture images of animals in the wild. Researchers recorded over 2500 images of the three predators in action.

Normally big cats and wild dogs live in different locations to avoid each other. They go after prey at different times and avoid direct confrontation. But in wildlife reserves they are co-existing despite competing for the same type of prey such as sambar deer, chital, and pigs. It was found that in reserves with enough number of prey, dholes which are active during the day did not come in much contact with tigers and leopards who move around during nights. However, their active times overlapped in Bhadra Wildlife Reserve where prey was scarcer yet dholes still managed to avoid tigers and leopards. Similarly in Nagarahole reserve which is full of all the three species and their prey, leopards actively avoided tigers.

The study says that these carnivores have developed smart adaptations to coexist, even while they exploit the same prey base. However, this adaptation mechanism will vary

depending on density of prey and other features of habitats. The research could give conservationists and wildlife managers new insights to plan for managing populations of species like tigers as well as for overall biodiversity.

The study authors include Ullas Karanth, Arjun Srivathsa, Divya Vasudev, Mahi Puri, Ravishankar Parameshwaran and Samba Kumar from WCS, National Centre for Biological Sciences and University of Florida. The study results have appeared in scientific journal *Proceedings of Royal Society of London B: Biological Sciences*, and the work was supported by the Department of Biotechnology and the Department of Science and Technology, among others.

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