



Trapped in a well, this leopard walked more than 120 km to reach the forests of Sanjay Gandhi National Park in Mumbai

PROJECT WAGHOBHA

Leopards in my backyard

India is the only country where high densities of people and livestock share space with carnivores

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Recent research on leopard behaviour shows capturing the problem animals and releasing them elsewhere only shifts the locale of the people-animal conflict. At first glance Akole taluka in Ahmednagar district seems like any other taluka in western Maharashtra's sugarcane belt. It has densely populated and chaotic settlements, virtually no forest cover and a landscape that is dominated by a mosaic of agricultural fields.

It seems unlikely, even unexpected, yet in Akole people, their dogs and cattle live cheek-by-jowl with large numbers of leopards, one of the biggest wild carnivores. Akole seems like a place for a serious human-wildlife conflict but this is where the taluka throws up another surprise.

Most discussions on the human-wildlife conflict are about carnivores straying because of loss of their natural habitat—most often considered to be forests. The discussions emphasise the need to separate humans and wildlife populations to prevent aggravation of the conflict. An ongoing research project led by Vidya Athreya of Project Waghoba (www.projectwaghoba.in) in Akole's farmlands challenges these widely held beliefs.

A two-month camera-trapping exercise last year by Athreya photographed 14 different leopards in about 200 sq km. This included five adult males, five adult females and four cubs, indicating a population that was breeding actively. Further analysis revealed a leopard density of 12 adults in 100 sq km living among human densities of nearly 200 people per sq km—a human domi-

nated area that significantly has no forest cover.

Clearly, the leopards of Akole have not strayed into these farmlands. They, in fact, have been living here for generations and significantly there have been no reports of attacks on people in nearly a decade. People are undoubtedly worried about safety, yet there were no strident calls for killing the leopards or for removing them from the area.

Many questions arise. Why are there so many leopards in Akole? What led to a massive conflict in nearby Junnar a few years ago while there has been none in Akole? What is the assurance there won't be a problem in Akole too? While the search for the pieces of the jigsaw is on, some answers are available.

The leopard is one of the most versatile and adaptable creatures and has been known, historically, to live on the fringes of human habitations. Akole could be an example. An important dimension, however, is the change in land use across this belt in the past three decades. Improved irrigation facilities have significantly increased the spread of sugarcane and this in turn has benefited the leopard by providing good breeding and hiding ground. With no competition and easy prey available in the form of stray dogs, cattle, pigs and chicken among others, it is not surprising that the leopard established itself across large parts of Akole taluka.

The people-animal conflict is more complex and protracted. Its intensity was best highlighted when it peaked in neighbouring Junnar in 2003. Leopards killed nearly 50 people in two years and over a 100 leopards were captured for permanent incarceration in that period. Investigation, by another team led by Athreya cast doubt on the then policy of capturing leopards in a problem area and releasing them elsewhere and said it was at the root of the conflict.

This is best illustrated by developments reported in late 2003 from the Yawal Wildlife Sanctuary spread over 170-odd sq km in Jalgaon district of Maharashtra. These forests have a rich diversity of wildlife that includes large carnivores like leopards. Though the forests of Yawal have been dotted with human settlements for a long time, there had been no instances of conflict with leopards.

This suddenly changed when six



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A forest department hoarding warns against leopards

leopard attacks were reported for the first time in the last two months of 2003 in villages that had not seen any attacks till then. The attacks stopped only when trap cages were put there and two leopards caught. These were the same animals that had only a few months earlier terrorised people in the agriculture-dominated landscape of Junnar.

Labelled straying animals, the leopards were trapped and as per the management policy moved 400 km to the forests of Yawal, where they were released back into the wild.

The identity of the leopards, the explanation of their presence and the answer to the question of the attacks lay in a small electronic tag that was inserted at the base of the tail of these animals. They had been electronically tagged before release as part of a pioneering



research project by the Maharashtra Forest Department and assisted by Athreya and veterinarian Aniruddh Belsare. The tag, the size of a grain, can be read like a bar-code and it was hoped that tagging would help track the problem animals.

Athreya and Belsare could now



The road the leopard took



show that translocation of the problem leopards was no solution; it lay at the root of the problem. The translocation of the animal from the area of conflict had in fact caused the conflict to move to new areas. The animals had carried the conflict with them.

One of the problem animals was captured 90 km from its site of release in the direction of Junnar, the town from where it had been brought. Big carnivores have acute homing tendency that draws them back to their original territory. Recent evidence of this has come from Athreya's latest research work involving satellite tracking of leopards in western Maharashtra. The research team catalogued a 120-km expedition of an adult male leopard from the hinterland to the Sanjay Gandhi National Park.

The leopard that was trapped in a well in Alephata along the Pune-Nashik highway was rescued, fitted with a satel-



Researcher Vidya Athreya (above right) and her team radio-collar a leopard before release; (left) sugarcane fields are good hiding ground for carnivores

lite collar and released in the nearby forests of Malshej Ghat. The animal completed its remarkable journey in about 23 days—passing through agricultural land, densely populated areas, across roads, rail tracks, close to Kasara station, and swimming across the Vasai Creek. There is no evidence, but it can be conjectured that the animal was originally from forests in Mumbai and could be one of the many that have often been captured here and released elsewhere.

These stories throw up important questions about the biology and behaviour of large carnivores and the very controversial and emotional subject of human-wildlife conflict. "It is important to note," said Athreya, "that India is the only country in the world where high densities of people (more than 300 per sq km) and the highest livestock density in the world share their spaces

Translocation, which was considered a simple answer to the leopard attacks, in fact lay at the root of the problem

with carnivores. Except the cheetah we have still retained all (58 species, 14 of them heavier than 10 kg which can be potentially dangerous to humans). Total elimination was never part of our culture. This is an ethic that can make conservation work easy, but the conservation community has to start working with these people." Another important dimension, she added, is that conservation in India is viewed entirely through the lens of protected areas. "We have no clue that so much wildlife exists outside these areas and management decisions are generally inappropriate for areas that are often not even forests."

There is now the realisation, for instance, that translocation, which for long was considered a simple and straightforward answer, in fact lay at the root of the problem it sought to solve. The information and insights provided by Akole once again underline the importance of good science and rigorous research because the answers we find are only as good as the questions we ask. We might not know all the causes that could push the Akole situation into a conflict, but we can now say with confidence that we know a critical few. ■

Pankaj Sekhsaria edits the Protected Area Update, a bi-monthly newsletter on wildlife and protected areas