



A mature cheetah with a juvenile in a thicket

Cheetah's Last Great Refuge

The Tsavo National Park has emerged as the largest stronghold of the species now considered Endangered in Kenya

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ALL PHOTOS COURTESY **FELIDAE CONSERVATION FUND**

In the heart of Kenya, where vast savannas meet rugged terrain, the biodiversity-rich Tsavo ecosystem stands as one of East Africa’s last great refuges for the cheetah (*Acinonyx jubatus*). Known for their breathtaking speed and elusive nature, cheetahs here face mounting challenges in a landscape increasingly shaped by human activity.

Tsavo National Park, located in southeastern Kenya east of Mount Kilimanjaro, is the largest of Kenya’s national parks and one of the world’s largest conservation areas. Established in 1948, it was later divided into two administrative units: Tsavo East and Tsavo West. Drained by the Tsavo and Galana rivers, and the Tiva River to the north, the park features acacia scrub, scattered woodlands, savannah grassland and semi arid plains dotted with acacia and baobab trees. Dormant vegetation bursts into luxuriant bloom after light rains.

While Tsavo East is relatively flat, Tsavo West boasts of volcanic landscapes with numerous springs and seasonal manmade waterholes. The park is home to diverse wildlife, including elephants, lions, rhinoceroses, buffalo, hippopotamuses, hartebeests, various antelope species, and hundreds of bird species. However, poaching and habitat loss remain persistent challenges. The Nairobi-Mombasa highway and railway divide Tsavo East and Tsavo West, fragmenting this expansive ecosystem.

Tsavo East and Tsavo West anchor the unique ecosystem that spans over 42,000 km². These two sites are home to a range of tribes, cultures and land use types. Yet, between these parks lies an expanse of unprotected land dominated by livestock ranches. This vital area serves as a critical corridor for cheetah movement, enabling genetic exchange and dispersal necessary for the species’ long-term survival. Unfortunately, rising human development, including roads, railways, and commercial ventures, threaten to fragment this essential habitat.

Once spread across vast stretches from Africa to southwestern Asia, cheetahs have vanished from 91% of their historic range. Only about 6,517 individuals remain worldwide. The International Union for Conservation of Nature (IUCN) classifies the cheetah as ‘Vulnerable’ on



Camera traps are used by TCP to monitor wellbeing and movement of the cheetahs

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its Red List of Threatened Species. In Kenya however, cheetahs are listed as ‘Endangered’ under the country’s Wildlife Conservation and Management Act, making the Tsavo region — one of their largest remaining strongholds — crucial for the species’ future. Tsavo’s cheetahs also have the potential to connect with Tanzania’s cheetah populations, forming a transboundary conservation corridor that could enhance genetic diversity and population resilience.

Cheetahs are apex predators crucial to maintaining the balance of Africa’s ecosystems. By regulating populations of small herbivores, they help prevent overgrazing and preserve the health of the landscape. Unlike other big cats, cheetahs require vast territories, establishing expansive home ranges and existing at low population densities. This makes them especially vulnerable to habitat fragmentation. Genetic exchange between populations is vital for their survival, but as

landscapes become fragmented, isolated cheetah populations face increased risks of inbreeding, reduced reproductive success, and heightened susceptibility to disease—factors that could accelerate their path to extinction. Moreover, since most cheetahs reside outside of protected areas, they serve as an important indicator species for the health and connectivity of broader ecosystems.

While Tsavo National Park is famous for its ‘Man-Eaters’—two lions that preyed on railway workers in 1898—it is also home to one of East Africa’s largest and most resilient cheetah populations. Spanning over 16,000 square miles, this semi-arid ecosystem remains a cheetah stronghold, with potential for cross-border connectivity to Tanzania. Despite its vastness, Tsavo’s landscape faces growing human pressures, including infrastructure development, livestock grazing, and land conversion, which threaten its continuity.

Role of Ranchlands in Cheetah Conservation

Tsavo East and Tsavo West areas are separated by one million acres of privately owned ranches that serve as vital wildlife corridors. These ranchlands have

traditionally allowed cheetahs to move freely, ensuring gene flow and population dispersal.

However, the infrastructure expansion —roads, railways, commercial development, and electric fencing— now threaten this connectivity. For cheetahs, especially females with larger home ranges, the inability to traverse these barriers could spell disaster.

Despite their ecological importance, no comprehensive studies have assessed whether these ranches function as effective corridors or as ecological “sinks” with higher mortality risks. Past research has relied on interviews and spoor surveys, but robust, data-driven insights are needed to determine how cheetahs navigate these landscapes and how human activity impacts their survival.

Since its launch in 2011, the Tsavo

Cheetah Project (TCP) has been working to fill this critical knowledge gap in cheetah conservation. In collaboration with the Kenya Wildlife Service (KWS) and the Wildlife Research and Training Institute of Kenya (WRTI), among other groups, TCP monitors cheetah populations across the Tsavo region using camera traps, and movement tracking. By gathering data on cheetah density, demographics, and movement patterns, the project maps key connectivity pathways while identifying human-caused barriers that threaten species’ survival.

The urgency of this work was underscored when a mother cheetah and her three cubs became trapped inside a fenced livestock ranch under commercial development. Despite an existing agreement with the landowner, the situation only came to light through

Cheetah populations face increased risks of inbreeding, reduced reproductive success, and heightened susceptibility to disease



Photo: Ingrid Vekeman

A cheetah out on a hunt in the dry areas of the forest



Infrastructure expansion - especially electric fencing - threatens connectivity between Tsavo East and Tsavo West. For cheetahs, the inability to traverse these barriers could spell disaster

local rangers. The TCP team quickly deployed camouflaged infrared cameras to monitor the family non-invasively. Through persistent collaboration with ranch management, the cheetahs were eventually guided to safety. However, such incidents are becoming alarmingly frequent as development expands.

One of the most pressing threats here is the proliferation of electric fencing, designed to mitigate human-elephant conflict but posing deadly barriers to cheetahs and other wide-ranging species. Fencing put up by private ranchers often causes injuries and even deaths to animals like the cheetahs.

A critical focus of TCP is estimating cheetah density through identification of known individuals seen in camera trap images. It is also assessing habitat suitability for cheetahs in this landscape identifying key corridors and conservation areas. This information shall help them predict cheetah movement patterns and connectivity impacts, providing actionable insights for corridor protection.

By combining scientific research, community partnerships, and advocacy, the Tsavo Cheetah Project is helping ensure that cheetahs continue to move freely across one of East Africa’s last great wildernesses.

Conservation in Tsavo is not just about data collection — it’s about people. Partnerships with livestock ranches and conservancies across the 16,000 square-mile Tsavo Conservation Area have significantly reduced human-cheetah conflict. Education programmes and conflict mitigation efforts have helped transform attitudes towards cheetahs, reducing retaliatory killings following livestock depredation. Livestock owners are learning about practical ways to protect their herds without endangering wildlife and the ranches, and the many benefits of transforming into a wildlife conservancy.

The TCP team’s work is vital in protecting corridors like the Kasigau Corridor, linking Tsavo East and West. Besides, cheetahs, other carnivores such as the African wild dog, leopards and their prey species also

benefit from such activities.

The TCP has also played a key role in revitalising conservancy volunteer programmes in the wake of the COVID-19 pandemic. One significant outcome has been the promotion of more wildlife-friendly tourism across all project locations, supported by our network of partners, patrons, and social media outreach. This increased visibility has led to new partnership agreements between TCP and neighbouring conservancies while also encouraging more livestock ranches to register as official wildlife conservancies.

In Tsavo, there is hope that in wild spaces the cheetahs will sprint freely, sustaining the spirit of the savanna for generations. 🐾

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