

THE TANZANIA CHEETAH CONSERVATION PROGRAMME

Cheetah conservation has been a major focus for ZSL since 1991. With the support of the Tanzanian authorities, and more recently in collaboration with the Wildlife Conservation Society (WCS), we have been carrying out the longest-running in-depth study of a wild cheetah population. Building on our relationship with the Tanzania Wildlife Research Institute (TAWIRI) and Tanzania National Parks (TANAPA) we are now establishing a scheme for monitoring cheetah numbers across the country. Furthermore, as existing protected areas alone cannot ensure a long-term future for these beautiful cats, we are investigating means to enable cheetahs and humans to co-exist in the larger landscape.

Cheetah Census

Since 1974 the **Serengeti Cheetah Project** has been keeping track of individual cheetahs living on the plains in the southern part of the Serengeti National Park. This population numbers around 50 adult females and 20 adult males at any one time, and individuals can be easily identified by their distinctive spot patterns. Over the years this study has told us a great deal about wild cheetahs - their ecology, ranging patterns, social behaviour and hunting strategies.

Because the project is long-term, we now are able to monitor changes in birth and survival rates and relate these to environmental conditions, enabling us to make predictions about cheetah numbers in other parts of their range. It also allows us to test new cheetah census methods against a known population size.

For our census methods work we are prioritizing indirect techniques that do not depend on sightings, such as counting cheetah scats, as cheetahs are shy and are seldom seen across much of their range. In this work we collaborate closely with other researchers and managers within range states across Africa, who can implement the technique in an Africa-wide survey. Such a survey will enable us to obtain an accurate

The Tanzania Cheetah Conservation Programme recently helped host the first Cheetah Census Workshop in the Serengeti National Park in Tanzania. This workshop brought together delegates from all across Africa and elsewhere to establish a censusing protocol and develop a global cheetah monitoring plan.



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global estimate of cheetah numbers and distribution for the first time, providing us with information to plan conservation action.

Genetic management

With the loss of their habitat, cheetah populations are increasingly becoming fragmented and isolated. As populations become small, they become vulnerable to genetic problems such as inbreeding. In order to understand these processes in wild cheetahs, we have to understand their breeding system. In the Serengeti we know the mothers (and often grandmothers and great grandmothers) of most of the cheetahs in the population, but we know very little about their fathers. New techniques for extraction of DNA from faeces are now being used by ZSL's genetics labs to identify the fathers in the population. This enables us to estimate the likelihood of inbreeding

The Serengeti Cheetah Project can establish the fathers of cubs through their faeces. This information enables scientists to establish protocols for managing the genetic diversity of isolated cheetah populations.



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and losses in genetic diversity in isolated populations and hence plan the long-term genetic management of fragmented populations of cheetah.

The Tanzania Cheetah Watch

As well as the scientific work, we are using 'Cheetah Watch' leaflets to persuade tourists in Tanzania to send us their photos of cheetahs, which can be matched with spot pattern records and used to monitor cheetah population size across Tanzania.

Cheetahs are very vulnerable to the impact of insensitive tourism because of their natural wariness and because, unlike the other big cats, they are daytime hunters. The Serengeti Cheetah Project has documented two cheetah cub deaths that were a result of tourism. We are working with TANAPA to encourage tourists and their driver guides to behave more sensitively around cheetahs.

Beyond protected areas

Cheetahs live at low density and have large home ranges, which means that for long-term survival a cheetah population needs more space than can be provided by the protected area network. Cheetahs suffer from predation by lions and spotted hyaenas, and parks, by virtue of their protected status, provide a haven for these much larger predators. So protected areas are not the sanctuary for cheetahs that we might expect. In fact two-thirds of the world's cheetahs do well outside parks, living alongside traditional Maasai pastoralists and their livestock.

In order to understand the impact lions and spotted hyaenas have on cheetah populations playbacks of hyaenas at kills were played at loud volume to attract hyaenas and lions and provide estimates of their numbers.

However the open savannahs are fast being given over to agriculture and development, and in some areas cheetahs are killed because of conflict with people and livestock. We are addressing these problems through two steps. First, through our census project, we aim to establish priority areas for cheetah conservation in Tanzania. Second, we will go on to gather information about levels of conflict with cheetahs in these areas and appropriate livestock management to mitigate conflict. In this we will work with local communities and other relevant stakeholders to establish guidelines that will minimise conflict with cheetahs and enable people to continue to live alongside cheetahs.

Cheetah Watch posters displayed at park gates and lodges encourage "cheetah-friendly" viewing practices such as not approaching too close and limiting the number of vehicles around cheetahs.



Donors: Wildlife Conservation Society, Frankfurt Zoological Society, St. Louis Zoo Field Research for Conservation, The Royal Society, Darwin Initiative, The Howard G. Buffett Foundation.

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