Solving the Cheetah-Farmer Conflict in Namibia

Rural central Namibia is one of the most important strongholds of the declining global cheetah population. Here, the rarest large African cat lives on privately owned farmland. A traditional conflict poses a threat to them as they occasionally prey on cattle calves. New insights into the cheetah's spatial behaviour provide a viable solution to this human-wildlife conflict: "communication hubs" form hotspots of cheetah activity, leading to substantially less activity in the vast areas between the cores of the territories.

Territory Holders
Core areas as 50% KDE of four cheetahs (red)
Home range as 95% KDE of one cheetah (grey)

Floating Individuals
GPS tracks of three cheetahs
1 June 2020 – 7 January 2021

P153-7417

P HUB

P151-5552

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Scientists from the Cheetah Research Project, led by the Leibniz Institute for Zoo and Wildlife Research (IZW), discovered two interesting details of the cheetah's spatial behaviour by collecting long-term movmenent data:

(1) Cheetah males display two spatial tactics: floating individuals roam over vast areas whereas territory holders defend small core areas (Melzheimer et al. 2018 Ecosphere).

(2) These core areas of male cheetah territories serve as "communication hubs" (Melzheimer et al. 2020 PNAS).

Implementing this knowledge and moving their breeding herds with young calves out of the hotspots, farmers were able to reduce livestock losses by more than 80 percent.

The map illustrates the movement behaviour of three floaters that regularly visit these communication hubs. All of them frequently move into the "P Hub" during the period from 16 to 31 December 2020 (highlighted tracks).

0 10 20 30 KM

Graphic: Cédric Scherer
Icons: Stephanie Gendera
Data: Melzheimer et al. 2020 PNAS

www.cheetah-research.org

21.6°S
21.7°S
21.8°S
21.9°S
22.0°S
22.1°S
22.2°S

17.3°E 17.4°E 17.5°E 17.6°E 17.7°E 17.8°E 17.9°E 18.0°E 18.1°E