# MARA PREDATOR CONSERVATION PROGRAMME

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KENYA WILDLIFE TRUST

## CHEETAH REPORT | 2025




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# Active Livestock Management Can Improve Coexistence with Cheetahs in Kenya's Maasai Mara

## Background

Existing livestock management strategies in the Maasai Mara's wildlife conservancies and neighboring community lands help foster human–cheetah coexistence by addressing the adverse effects of overgrazing, which can degrade habitat and reduce wild prey populations. While these strategies are essential for maintaining viable cheetah habitat, they do not prevent direct cheetah–livestock interactions. Aside from evidence documenting that cheetahs prey on shoats *(sheep and goats)* and calves more frequently than on adult cattle, we still lack data on how cheetahs behave during these interactions.

Cheetahs may perceive all livestock as potential prey and seek them out or investigate their presence in anticipation to hunt *(Photo 1)*, or they may be indifferent to livestock and only hunt them opportunistically when interactions occur. Alternatively, cheetahs may perceive livestock, or their associated herders, as potentially threatening and be displaced by interactions *(Photo 2)*.



*Photo 1: Subadult cheetah hunting a calf in the Maasai Mara. © Unknown*



*Photo 2: Two cheetahs being displaced by cattle in one of the Maasai Mara's wildlife conservancies. © Unknown Tour Guide.*

Such displacement could negatively affect cheetahs by altering habitat use, disrupting hunting patterns, and increasing exposure to larger carnivores or people who may threaten cheetahs. Furthermore, cheetahs from different demographic groups *(e.g., males, females, solitary individuals with cubs)* or with various individual traits *(e.g., learned behaviors, injured vs. healthy)* may respond differently during interactions with different livestock types *(e.g., cattle or goats)*.

By examining how individual cheetahs behave during interactions with cattle and shoats, we can identify the drivers of livestock predation and determine which livestock types negatively affect particular cheetahs. These insights are critical, as they will enable managers to adjust livestock management strategies so they are less likely to attract or displace cheetahs and to proactively avoid interactions with cheetahs most prone to livestock predation or vulnerable to displacement.

Between June 8th and December 20th, 2021, we observed the behavioral response of individual cheetahs to audio playbacks simulating the presence of cattle or shoats. After each playback, we recorded whether the cheetah moved and, if so, the direction of its movement relative to the speaker.

Movement 'Toward the Speaker' indicated attraction, whereas movement 'Away from the Speaker' indicated displacement (*Figure 1*)

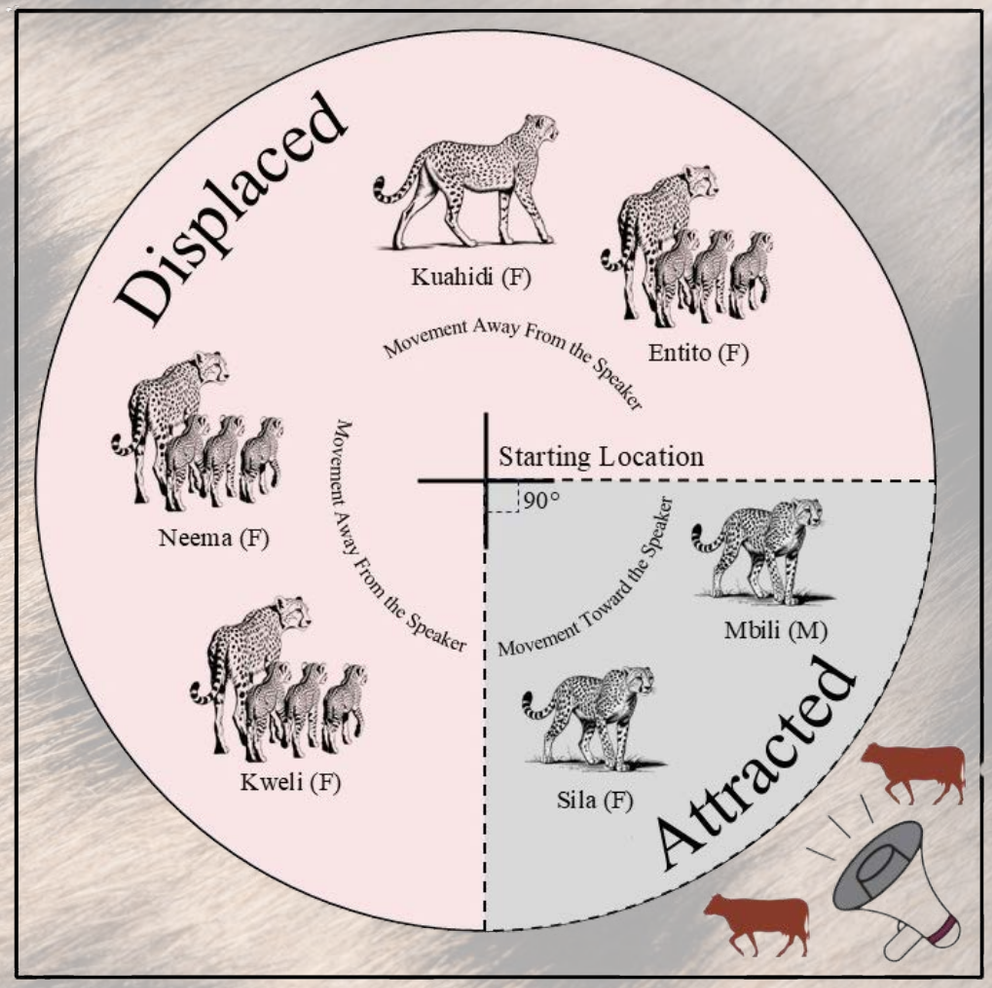



*Figure 1: 'Movement Away from the Speaker' indicates Displacement, while 'Movement Toward the Speaker' indicates Attraction. 'Towards the Speaker' was defined as when the subject moved within a 90° arc facing the speaker (gray area).*

*'Away From the Speaker' was defined as when the subject moved in any other direction (red area). Cheetah icons show which individuals were Displaced or Attracted in response to the cattle playback.*

## Key Findings

Most cheetahs moved in response to cattle, but the direction of movement varied, providing evidence for both displacement and attraction. Notably, ***cattle only displaced female cheetahs, most of whom were raising cubs***. This suggests that mothers with cubs may be particularly vulnerable to displacement by cattle.

In contrast, ***most cheetahs did not move in response to shoats***, suggesting they typically won't attract or displace cheetahs.

***No demographic group exhibited consistent attraction to either livestock type***, reinforcing previous reports that cheetahs prefer wild prey and that the majority of livestock predation likely occurs opportunistically or by individuals with prior experience hunting livestock.

Although limited sample sizes restricted some demographic analysis, we caution that vulnerable cheetahs, such as dispersing subadults or injured individuals, may be more susceptible to displacement or attraction and experience more severe consequences.



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## Recommendations

Based on these results, we recommend that two strategies be integrated into existing livestock management strategies:

1. ***Actively divert cattle and shoats from known cheetah locations to avoid direct interactions.***

    - ***Prioritize diverting cattle from females with cubs***. These females were especially prone to displacement by cattle. Displacement can increase stress, disrupt hunting patterns, alter habitat use, and expose mothers and cubs to larger carnivores, increasing risk of mortality.

    - ***Divert cattle and shoats from dispersing subadults, injured individuals, and cheetahs with a history of livestock predation.*** Inexperience, limited mobility, or learned livestock-hunting behaviors make these cheetahs more likely to hunt calves or shoats when interacting. Active diversion could reduce the immediate risk of livestock predation and human retaliation and minimize future livestock predation by preventing subadults from developing livestock-hunting behavior.

2. ***Consolidate the daily grazing footprint to reduce cheetah-livestock overlap and maximize livestock-free zones of open and semi-open habitat.*** Confining livestock to a smaller, clearly defined area each day lowers the chance of encountering cheetahs. If an interaction does occur, surrounding livestock-free zones give displaced cheetahs space to recover and prevent repeated interactions, which could prolong cheetah displacement and increase opportunities for livestock predation. We recommend two methods to achieve this:

    - ***Cluster grazing***: graze fewer, larger herds, or keep several small herds close together within designated grazing zones. Rotate these zones frequently to prevent overgrazing.

    - ***Designate and rotate entry/exit corridors***: Ensure livestock enter and exit conservancies through designated routes to preserve livestock-free refuge areas along conservancy edges. Rotate entry/exit routes frequently to prevent overgrazing.

Together, these measures would reduce the frequency of cheetah-livestock interactions, decrease the risk and severity of cheetah displacement, and minimize opportunities for livestock predation, ultimately reducing risk to cheetah cubs and helping to foster human-cheetah coexistence.

## Acknowledgements

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This report summarizes the findings from Chapter 1 of Brian Schuh's doctoral dissertation:

Schuh, B.K. (2024) An Experimental Evaluation of Cheetah *(Acinonyx jubatus)* Reactions to Sound Playbacks of Domestic Animals… The University of Wisconsin – Madison. https://faculty.nelson.wisc.edu/treves/pubs/Schuh_Dissertation.pdf



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