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"Exploring opportunities ... for managing natural resources and a better life for all"

## Cattle behaviour and herders' supportive strategies: A case study of mountain grazing in Kunene North, Namibia

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## Abstract

Cattle grazing preferences and patterns play a central role in shaping both animal and rangeland health, with significant implications for livestock production and human livelihoods. Grazing efficiency depends on the complex dynamics between people, animals, and their environment. This interplay is critical for pastoral communities where resources are available for a limited time after erratic rains. Especially during the dry season, small pockets of resources in the landscape can be a critical source of fodder. The ability to climb mountains is a trait that can make a critical difference, especially in the dry season when pasture is mostly only available uphill.

However, our understanding of the multifaceted human-animal-environment relationships that underpin grazing practices remains limited. Therefore, this study aims to fill this knowledge gap by investigating the factors that influence cattle behaviour associated with mountain grazing in Kunene North, Namibia.

Data were collected through narrative and semi-structured interviews with Himba pastoralists over a period of 9 months.

The results show that Himba pastoralists select for certain traits, but also teach their animals new behaviours. Mountain climbing is one of them, it is influenced by breed, body condition, and climbing experience. Herders also use strategies to help and teach new cattle to climb. For example, they create a trail by removing rocks that some have learned to fear because of previous hoof injuries or place cattle dung along the imaginary pathleading up the mountain for the animals to follow. Himba pastoralists know how to effectively use the intra-individual variability of their livestock for cattle to learn from their peers, but also how to actively influence their grazing patterns, by teaching them new behaviours.

The results show the importance of human-animal-environment relationships in the ability to use rangeland resources. The skills and experience of the herders and their cattle are transforming inaccessible grazing areas into important resources for the sustainability of the pastoral system in the mountainous areas of northern Kunene.

**Keywords:** Himba, human-animal-environment interactions

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