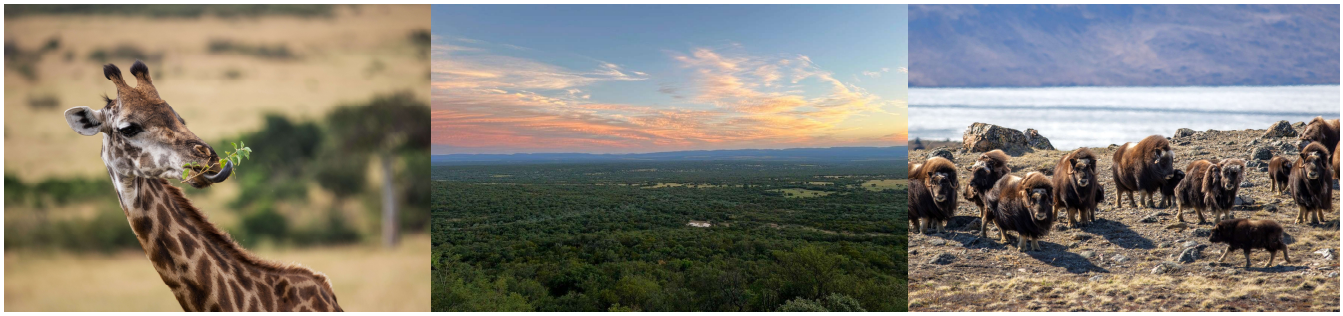

Public lecture |02/12/2026

Dr **Jonas Trepel** (Harvard University, Cambridge/USA)



Ecological Dynamics in a Novel Biosphere: **Large Herbivores as Drivers of Vegetation Structure and Plant Diversity**

Large herbivores are increasingly recognized as key drivers of ecosystem form and function, yet we still have a surprisingly poor understanding of how their effects play out across spatial scales. I discuss how large herbivores shape vegetation dynamics, from cross-continental patterns to fine-scale mechanisms.

We begin at the global scale, where satellite-based observations show that terrestrial vegetation greenness has increased markedly over the past two decades. We then turn to southern African savannas to explore how elephants influence woody vegetation dynamics at both local and landscape scales. At finer spatial scales, I draw on field surveys and long-term exclosure experiments to illustrate the effects of intact herbivore communities on plant species richness and functional redundancy.

Finally, I present findings from a meta-analysis on how restoring large herbivores (i.e., trophic rewilding) affects vegetation structure and biodiversity. I conclude with a synthesis of the role of large herbivores as ecosystem engineers and their importance for conservation and restoration in a rapidly changing world.

Where: Lecture Hall MN35 (Großer Hörsaal), Untere Karspüle 2, Göttingen

When: Wednesday, 2 December 2026, 6 p.m. (18:00 h)

Organized by the Department of Conservation Biology, University of Göttingen

UNIVERSITÄT GÖTTINGEN