ARPHA Conference Abstracts 9: e203825
doi: 10.3897/aca.9.e203825

OPEN ACCESS

Conference Abstract

Cascading Ecological Impacts of the Invasive Brown Treesnake

Haldre Rogers ‡

‡ Virginia Tech, Blacksburg, United States of America

Corresponding author: Haldre Rogers (haldre@vt.edu)

Received: 12 Jun 2026 | Published: 12 Jun 2026

Citation: Rogers H (2026) Cascading Ecological Impacts of the Invasive Brown Treesnake. ARPHA Conference Abstracts 9: e203825. https://doi.org/10.3897/aca.9.e203825

Abstract

The invasion of the brown treesnake (*Boiga irregularis*) on Guam led to the loss of nearly all native forest birds and decline in several native lizards, triggering ecosystem-wide changes that extend far beyond direct predation. Using comparative data from across the Mariana Islands, I will show how the disappearance of pollinators, frugivores, and vertebrate insectivores alters pollination interactions, disrupts seed dispersal, and reshapes forest gap dynamics and successional trajectories. The collapse of vertebrate insectivory has also contributed to dramatic increases in spider abundance and major shifts in arthropod communities. Together, these cascading effects constrain plant recruitment, limit the regeneration of historically common native species, and modify the spatial patterning and pace of forest recovery. I will also highlight how mapping the island's ecological interaction networks can identify leverage points for more effective snake control and for enhancing ecological function, including strategies to expand the influence of the sole remaining native avian seed disperser. These insights provide a framework for integrating ecological understanding with management approaches for invasive snakes and other top predators.

Presenting author

Haldre Rogers

© Rogers H. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Presented at

Neobiota 2026, the 14th International Conference on Biological Invasions

Hosting institution

Virginia Tech

Conflicts of interest

The authors have declared that no competing interests exist.