The Small Indian Mongoose (Herpestes auropunctatus): A Locally Protected Yet Internationally Persecuted Invasive Species

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A Threatened Species in India

Mongooses have a rich cultural history with the people of India. However, they are heavily poached for their fur, which is then sold for the manufacture of high-quality paintbrushes.

An Invasive Pest

One species, the small Indian mongoose, was introduced to Jamaica in 1872 for pest control. Within 15 years, it had spread to the rest of the Caribbean and many places throughout the world. Today it is known as one of the worst invasive species on the planet, having caused island extirpations and even extinctions of endemic species.

A Natural Experiment

Its introduction history demonstrates an excellent model to test evolutionary predictions. Comparisons of populations from the native range (i.e., a control group) to those in the introduced ranges (i.e., the experimental groups), allow us to observe evolution in situ in an organism otherwise unsuitable for laboratory testing.

Objectives

1. Obtain the first quantitative natural history data of the small Indian mongoose where it is protected in its native range of India
2. Use these data to create more effective management practices in areas across the globe where it is invasive
3. Test evolutionary hypotheses, specifically regarding the evolution of social behavior and the traits utilized in mating decisions

Methods

Data Collected

Morphological and genetic data were collected from 51 mongooses found in seven populations sampled from three cites of Northern India. Home ranges and habitat preferences were inferred from radio telemetry, i.e., the daily tracking of the movements of 15 mongooses for 30 or more days.

Outlook

The small Indian mongoose remains both protected and persecuted, but the data collected here will help raise awareness and improve management. Comparison of these data with those previously collected in Hawaii has already revealed exciting evolutionary patterns. Future data will deepen our understanding of both invasion biology and the evolution of intraspecies interactions.