

Project Update: October 2014

Activities proposed and their status:

1. Determining the impact of spotted deer on forest floor herpetofauna:

Proposed Method: A macro-level observational study (across 13 islands) and a micro-level exclusion experiment (eight exclosures on four islands).

Status:

i) Macro-level sampling was carried out in four new islands (total of 12 islands) for reptiles, spotted deer, understory vegetation cover and folivorous and litter arthropods. Only reptiles could be meaningfully sampled as the season of sampling (December to April - dry season) did not favour detection of amphibians. All the sampling was carried out in evergreen and moist deciduous forests. One island (South Sentinel) which does not have deer was originally proposed to be sampled. Upon further enquiry, it was found that the island's vegetation type is littoral and its biogeographic history varies from other considered islands. Hence, this island was dropped.

ii) The experimental plots excluding deer incurred much damage in a series of storms and winds which affected the Andaman Islands between November 2013 and January 2014. Further, the exclosure design seemed to fail in keeping the deer out after a certain period (9-12 months). These factors led to all the eight exclosures getting breached and browsed by the deer. Hence, no meaningful data could be gathered from this experiment. At this point, we are planning to redo the design and partner with another research project to carry out this work.

iii) In the absence of data from the experimental exclusion study, we are pursuing another line of evidence, which could add clarity to our understanding of the spotted deer's impact on the native reptiles. We are investigating the behavioural dependency of *Coryphophylax* spp, the most abundant genus among the reptiles of Andaman Islands. The two species of endemic lizards typically roost on seedlings and saplings, which as we know are hampered by deer browsing. This behavioural aspect could explain the results which we have arrived at.

2. Assessing the perception of people toward the introduced deer and its potential eradication:

Method: A semi structured questionnaire survey of people in villages in and around spotted deer inhabited areas.

Status: Questionnaire surveys have been completed in seven villages till now. Further, three to five villages are to be covered in the next couple of months.

3. Advocacy and Publishing:

Method: Peer-reviewed publications and a conference on the 'strategies for mitigating and preparedness for faunal invasions in Andaman and Nicobar Islands'.

Status: The scope of conference has been narrowed to achieve higher impact and the conference is now titled 'Introduced herbivores and their management in the Andaman Islands'. The conference is slated to be held in February 2015.

The major findings of our island sampling work detailed in Activity 1 have been communicated to a peer reviewed journal where it is currently under review. The major finding is that the spotted deer (*Axis axis*) depress island reptile densities by reducing the understory vegetation cover which the reptiles inhabit.

We are in the process of making a documentary based on the project, which is to be first screened at the planned conference.



Left: Bay Island Forest Lizard, *Coryphophylax subcristatus*, on a sapling. Right: Short-tailed Bay Island Lizard, *Coryphophylax brevicaudus*, on a sapling.