

A study of tick Infestation on Wild Snakes of Northern Western Ghats of India

Ruta Bandivadekar, Pranav Pandit

The aim of the present study is to record the prevalence of infestation of *Amblyomma gervaisi* (Previously *Aponomma*) on different species of wild snakes found in Western Maharashtra and Karnataka, India.

Methodology

The study was conducted in the northern Western Ghats area during November 2008 to March 2010 covering different seasons. Random sampling of snakes was done in different habitats. Differences in the prevalence of Indian Rat Snake *Ptyas mucosa* (Linnaeus, 1758) and Spectacled Cobra *Naja naja* (Linnaeus, 1758) infestation, prevalence in males and females of Indian Rat Snake, prevalence of infestations in different habitats with the overall prevalence observed were compared using Fisher's exact test. Lengths of infested and non infested snakes were compared using Mann-Whitney U test.

Results

- 167 snakes of thirty species belonging to 22 genera and 5 families (Uropeltidae, Boidae, Colubridae, Elapidae and Viperidae) were examined
- All the ticks found were identified as *Amblyomma gervaisi*
- Out of 475 *Amblyomma gervaisi* ticks, 40.69% were males, 16.86% were females, 34.01% nymphs and 8.43% larvae.
- Only two species Spectacled Cobra *Naja naja* (Prevalence 30.00% n=20) and Indian Rat Snake *Ptyas mucosa* (Prevalence 29.16% , n=48) were found to be infested.

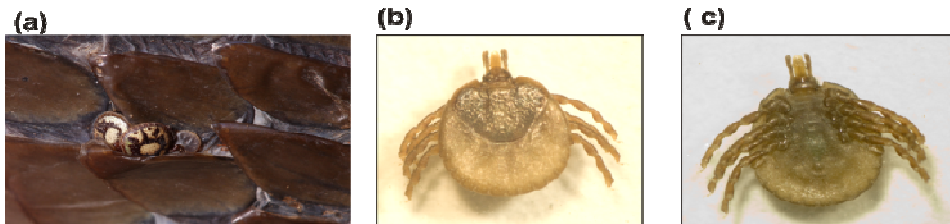


Figure 1: a) Ticks lodged in snake scales b) Dorsal view of tick *A. gervaisi* c) Ventral view of *A. gervaisi*

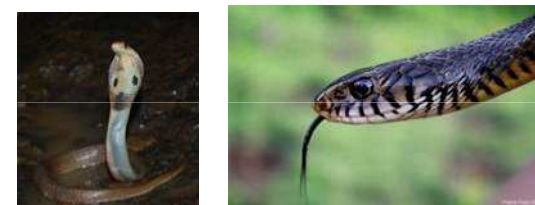


Figure 2: Spectacled Cobra and Indian Rat Snake © Pritesh Patel

- Lengths of infested snakes were found to longer than non-infested

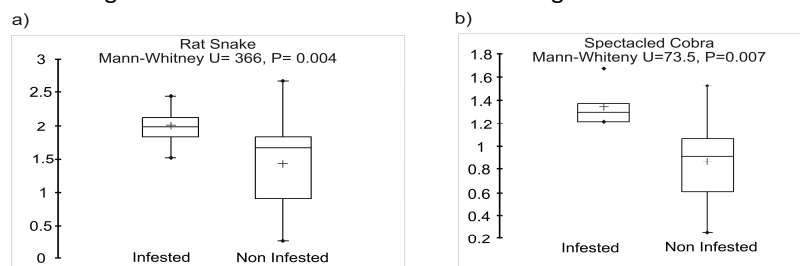


Figure 3: Box plot showing lengths of infested and non-infested snakes

Habitat	Prevalence of <i>A. gervaisi</i> (%)
Scrubland	27.5
Semi-evergreen Forest	27.27
Dry Deciduous Forest	11.11
Human settlement	9.26
Evergreen Forest	0.0

Table 1: Prevalence of infestation in different habitats observed

Discussion

- The study was intended to generate a baseline data of tick infestation on snakes found in northern Western Ghats of India. This may be the first time that such kind of extensive surveillance has been carried out in India.
- It is not still clear whether other species of snakes are refractory or susceptible, and there might be ecological or evolutionary reasons for this host specificity.