

## **Proposal for MSc thesis 2014/2015**

**Topic:** Factors affecting rodent richness and abundance in the Himalayan foothills.

**Framework:** This thesis is integrated under a wider project focusing on the persistence and movement of small cats in the Himalayan foothills landscape. The project is a collaborative work between Salim Ali Centre for Ornithology and Natural History (SACON), National Centre for Biological Sciences (NCBS) and University of Uppsala (UU).

**Background:** Northeast India is a hotspot of rodent diversity, however rodents have been scarcely studied in the region. The landscape at Himalayan foothills comprise a transition from evergreen forest to a mosaic of vegetation mainly composed of shrubland and grassland along the Brahmaputra River. Extensive areas of croplands are also present. The predictors of rodent diversity and abundance along this gradient are not known. Such information is vital for better environmental management of rodents and their predators.

**Proposed work:** It is proposed to conduct live trapping for rodents in four protected areas (PAs) of the states of Arunachal Pradesh and Assam. The PAs are representative of the landscape existent in the Himalayan foothills. Trapping should start in October and will be conducted across the 4 main habitat types present within each PA. For each habitat type, 6 lines of 25 live traps will be deployed. Traps will be active for 3 consecutive nights. This sampling design corresponds to approximately 36 days of fieldwork for each PA, considering the number of traps available in the project.

At each trap line, habitat characteristics such as canopy height, percent canopy cover, percentage of ground covered by fallen leaves, logs and twigs, will be noted. Further, the number (and if possible identity) of fruiting trees and plants will be noted.

Statistical analyses can include analysis of correlograms and application of modelling algorithms (e.g. GLMs).

The student is encouraged to incorporate additional ideas to the existing project.

**Previous experience:** Students with previous experience of rodent trapping and some background in modelling will be favored. Knowledge on software R is a plus.

**Guides:** The work will be supervised by Shomita Mukherjee (SACON), Krishnapriya Tamma (NCBS) and Andre Silva (UU).

**Contacts:** Interested students can apply by sending their CVs to Krishnapriya Tamma [priya.tamma@gmail.com](mailto:priya.tamma@gmail.com) and Andre Silva [pintodasilva.a@gmail.com](mailto:pintodasilva.a@gmail.com) by the 30<sup>th</sup> of June 2014.