Project Update: April 2018

Hoolock gibbon (*Hoolock hoolock*) is a small, arboreal and territorial ape belonging to the family Hylobatidae. They are characterised by their long arms and hands, but they differ considerably in colouration: males are black-coloured with remarkable white brows, while females have grey-brown fur. They are distributed in South and Southeast Asia. They are known to occur in northeastern and southeastern forested areas in Bangladesh. Currently, hoolock gibbon is considered as Critically Endangered in the Red Book of Threatened Mammals of Bangladesh by the IUCN Bangladesh (2015) and Endangered globally (IUCN, 2008). However, the species is threatened throughout its geographic range by population decline primarily due to habitat destruction, human encroachment and fragmentation. In Bangladesh, the hoolock populations have declined to only around 300 individuals from an estimate of over 3,000 and thus have been regarded as being in a crisis situation. The present study considers how hoolock gibbons in Bangladesh are affected by inter-specific competition with other frugivorous vertebrates which will fill the gaps in our current knowledge so that sustainable conservation outcomes could be achieved. The project was aimed to determine the feeding behavior of hoolock gibbon, inter-specific competition with other frugivorous vertebrates and raising public awareness through conservation education programmes.

Diet and Feeding Behavior

For this study, we are selecting a group of gibbons and hence data on different feeding activities of the study group are collected by scan sampling method using 5-minute interval between scans. Time spent in various feeding activities for each age sex classes in the groups are denoted as percentage of the total number of scan records. The food sources of gibbon are recorded either from plant materials or animal matters.

Inter-specific Competition

Data on inter-specific competition between gibbon and other frugivorous vertebrates are collected through ad libitum sampling. If groups of gibbon and other frugivorous vertebrate species come within 30 m of each other, we are considered it as an inter-group encounter. We are recording foraging height, substrate used (only when the individual fed on fruits), plant species eaten (when the individual fed on fruits), fruit parts eaten and phenophase of the fruit during observation.

Phenological Sampling

Phenological data are collecting through quadrats to record the abundance of plant food resources and temporal variation in fruit availability for gibbons. Ten sample plots are lying in the study area. All plots have a fixed length and width of 50×50 m are placed randomly across all habitat types (e.g., trail, stream, grassland, lemon garden and tea garden). Number of plants, species, and their diversity are known by counting plants and identifying plant species. In these plots, all trees, lianas, vines, stranglers whose roots reached the ground and epiphytes that grown on other plants are identified and marked. We are tagging all the food trees having more than 30 cm DBH.

Outreach Activities

Interactive group discussion programs were arranged in two different study areas documenting wildlife inhabited in these forest, anthropogenic threats, and

conservation measures to raise awareness among the local people, forest staff and other stakeholders. The forest department staffs have now developed a sense of responsibility for the conservation of the gibbon.

We trained up some local young and being registered them as an eco-tour guides. Registered eco-tour guides are now identified by new ID card accredited by the Bangladesh Forest Department which all guides are required to have in their possession whilst guiding. ID cards are very important because various illegal/ unregistered tourist guides provide tourist with misleading information. They are also committed to assist the future enthusiastic researcher and treat the environment with respect.

Two large sized and one medium sized billboards carrying information on profile, threats and conservation needs of hoolock gibbon were mounted along the highway outside the Satchari Park area.

We attended Nepal RSG Conference 2018 and presented our current research initiatives to disseminate knowledge to the scientific community so that national and international organization become concerned with the project activities.

Left: Accommodating wildlife to locals and forest department staffs. Right: Providing ID card to eco-tour guides.

Left: Hoolock billboard mounted along the highway of Satchari National Park. Right: Measuring DBH of gibbon food trees.

Attending RSG Nepal Conference 2018