Project Update: April 2020

Winter Season

Similar to the previous monitoring phase, the caves of Kaligandaki were surveyed again during the winter season from late January to mid-February 2020. We recorded the caves' micro-climatic properties and bat community assemblages. An Echometer Touch 2 Pro was used to record the ultrasound emitted by bats.

Caves microclimatic condition

In all study caves, CO_2 concentration didn't exceed 600 ppm which was surprising given what we have recorded the during autumn season - Gupteshore cave had more than 7000 ppm from morning to evening and Laleshore cave had more than 2500 ppm inside, while, Alpeshore, Parbati and Pauwa had fairly equal CO_2 level.

In the morning, the temperature difference between the entrance and inside the cave remained 3-5℃ in all sites. Temperature both inside the caves and at the entrances was fairly equal in daytime though slightly higher at the entrance. In the evening, the temperature at the entrance and inside the caves decreased.

In Gupteshore, Alpeshore and Laleshore cave, humidity was higher inside the caves than at the entrance (the difference was more than 20% in all caves) throughout the day while the humidity difference was below 5% in Parbati and Pauwa cave.

Bat species

Contrary to what was observed in the autumn season, the colony size in all caves was relatively low. Only one individual was recorded from Laleshore, Alpeshore and Parbati caves while no bats were recorded from Gupteshore cave during the visit. However, a few individuals (fewer than 20) of *Rhinolophus* and *Miniopterus* species were observed to emerge at Gupteshore, Alpeshore and Parbati. This finding provided evidence of species not preferring these caves as hibernation sites in Kaligandaki canyon. As usual, *Cynopterus sphinx* was recorded from Parbati cave and *Rousettus leschenaultii* from Alpeshore and Tara cave.

Additional activities

The school teaching programme was organised in a few schools to raise awareness about caves and bats conservation. Bat conservation posters, videos and research equipment (microclimatic sensor and acoustic device) were also demonstrated. A blog post on NeBRCU webpage was published mentioning how diverse Kaligandaki canyon is for bats and raising conservation issues. Further, the project's major findings were shared among forestry students of Tribhuvan University in Pokhara via an oral presentation.

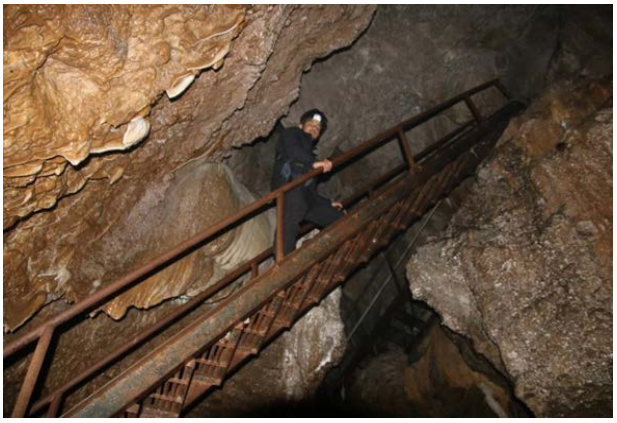
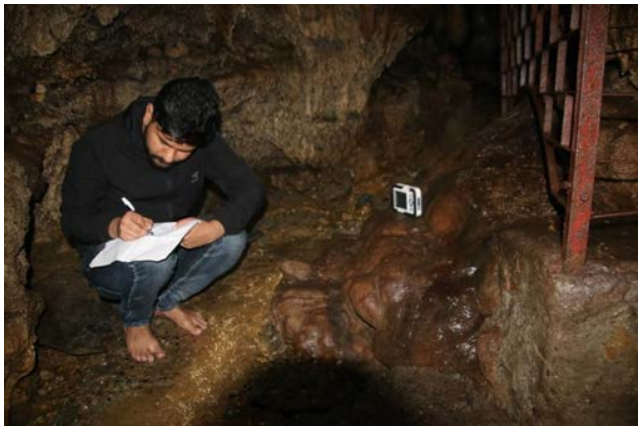
Future Plans

Only two seasonal monitoring sessions have been conducted so far and the project still has spring and summer monitoring to go. Most of the major conservation work needs to do within the remaining monitoring phase. However, due to coronavirus impact, Nepal has been under lockdown for a few weeks and infection cases are increasing day by day which will extend the lockdown period. The time for spring monitoring is

approaching, and in this situation, I'm regret to say the project activities will be postponed until the end of lockdown.


Left: Habitat surrounding Laleshore cave. Right: Habitat surrounding Parbati cave.

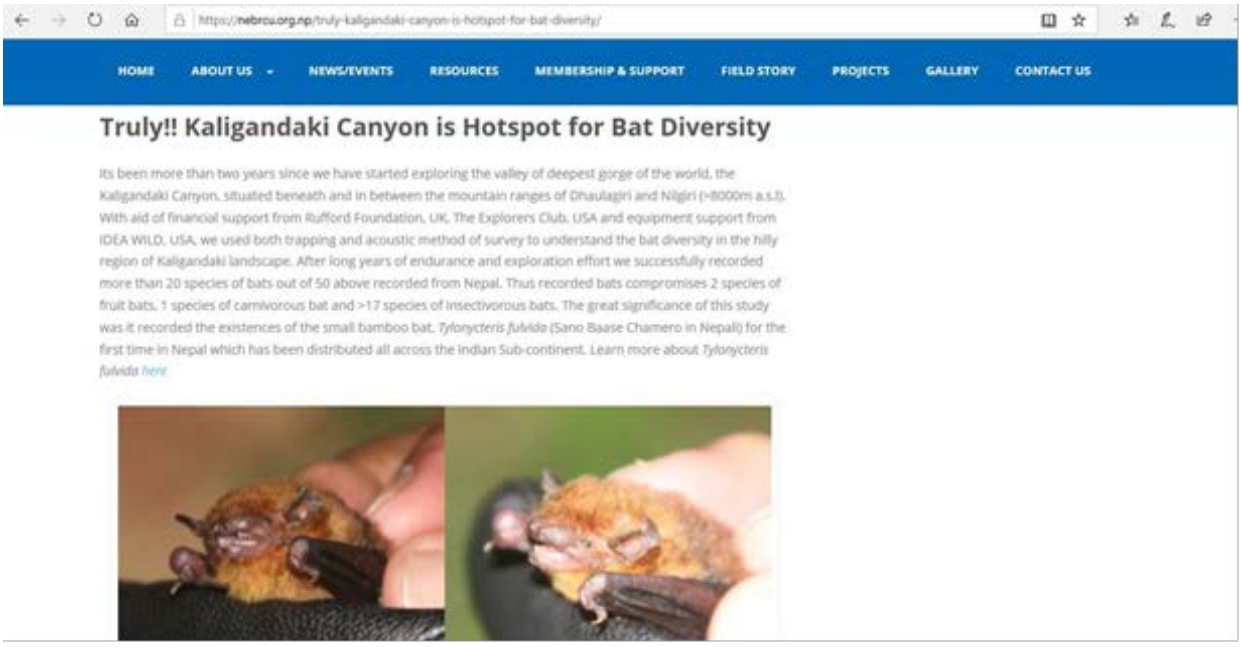

Left: Inside Laleshore cave. Right: Inside Alpeshore cave.

Left: Inside Alpeshore cave. Right: Measuring microclimatic condition in Gupteshore cave.

Left: Fire ignition trace in Parbati cave. Right: Plants growing inside Gupteshore cave.

Left: Researcher demonstrating acoustic device to school students. Right: Researcher demonstrating conservation poster to school students.



Blog post posted in NeBRCU website

Researcher presenting projects findings to forestry students in Institute of Forestry, Pokhara.