

## **Project Update: April 2015**

The first field visit was carried out in June-July 2014 followed by second visit in September 2014 and third visit in March 2015 with each visit lasting for about 15 days. Questionnaire survey, resource mapping and documentation of ethnobotanical information were carried out during first and second visit with the help of field coordinator and local field assistants while third field visit included vulnerability assessment, identification of threatened species and awareness campaigns. We followed ethical guidelines adopted by the International Society of Ethnobiology (ISE) and carried out interviews and field observations based on standard ethnobotanical methods (see Alexiades, 1996; Cotton, 1996; Martin, 1995). The purpose of our visit was clearly outlined prior to our study and permission was taken from the local people ahead of our work. Interviews were conducted to collect information on use of plants, priority species, parts used, mode of preparation and administration. In addition information on occurrence localities, cultivation status, trade status, harvesting methods was also collected. The obtained information was recorded on the questionnaire sheet as preliminary data. Cross check interviews were performed to increase the accuracy of the information. In order to evaluate commercial demand, trade data of medicinal plants were collected from concerned districts offices.

With the method developed by Cunningham (1996) and by using 8 predictors of vulnerability (see Tripathi & Schmitt, 2001; Ghimire & Aumeeruddy-Thomas, 2005; Shrestha & Shrestha, 2012), threat assessment was carried out to evaluate the most vulnerable species. The study identified *Paris polyphylla*, *Neopicrorhiza scrophulariiflora*, *Aconitum spicatum* and *Swertia chirayita* as the most vulnerable species. These species have high local demand and were the most preferred species among all in the community. The greatest threats to these species were chiefly due to unsustainable harvesting and ad-hoc collection practices. Since whole plant has to be uprooted for collection, harvesting them prior to flowering and fruiting season leaves no chance for regeneration. Furthermore, during our study we found that illegal collection has fostered well in the area. Since, it does not lie within the jurisdiction of Department of National Parks and Wildlife Conservation; resources from this area are rampantly collected. There are no check points to monitor these activities and hence the valuable resources are decreasing. To our question about conservation program in the village, one participant mockingly replied "We conserve one deer every day." Saying this he was ironically stating that on an average one wildlife is killed everyday illegally from the forest. During our interaction, most of the villagers admitted this fact and urged for a need to conserve their dwindling resources. According to them, illegal collection is the prime cause of resource depletion followed by unwise collection. With the help of field assistants and local school teachers we coordinated with Rhododendron Conservation Committee, a grassroot level organization and organized an informal awareness program on sustainable harvesting techniques. Our conservation program also included a half day seminar and interaction program at local high school where we discussed about need for conservation with the students. We also sought permission from a

school in *Guphapokhari* to assist in establishing a medicinal plants information centre in their premise. Ecological studies which included quadrat sampling and study of soil characteristics were conducted for top 5 threatened species selected on the basis of their vulnerability score. The soil samples have been collected for lab analysis and at present we are preparing a manuscript based on ethnomedicinal data collected during our study for publication in peer-reviewed scientific journal.

### Some Photos from the Field



*Neopicrorhiza scrophulariiflora*



*Swertia multicaulis*



*Betula utilis*



*Rubus acuminatus*



*Lycopodium japonicum*



*Cassiope fastigiata*



*Fritillaria cirrhosa*



*Meconopsis paniculata*



*Rheum acuminatum*



*Nardostachys grandiflora*



*Swertia chirayita*



Interviewing local people



Local woman drying collected medicinal plants



Settlement in Guphapokhari



Conservation education to high-school students



Briefing harvesting method to local people



Saplings of *Taxus wallichiana*