

I. Rural Outreach and Athnobotanical Appraisal and in Mishmi Hills and Lohit Districts

The botanical and cross cultural ethnobotanical field and rural outreach tour was conducted in Lohit, Anjaw and Changlang Districts of Arunachal Pradesh from 12th June 2015 to 23rd June 2015 by the PI and his scholars. The main aim of the expedition was to conduct taxonomic collection and exploration of flowering plants of the Mishmi Hills and rapid ethnobotanical appraisal and documentation of diverse uses of medicinal plants traditionally used by the local communities Khamti, Idu Mishmi and Mizo Mishmi. Apart from rapid cross cultural ethnobotanical and general taxonomic study of some important flowering plants including medicinal plants found in the districts, we have also interacted with key local informants which includes knowledgeable priests, healers, and village head men. We have recorded their local biodiversity conservation knowledge and collected some important medicinal uses of the plants and animal species by the local communities. The significant medicinal species collected from the study area are *Begonia species*, *Paris polyphylla*, *Zanthoxylum rhetsa*, *Stephania glandulifera*, *Coptis teeta*, *Curcuma ceasia*, *Molinieria recurveta*, *Hedyotis scandens*, *Marantha arundinacea*, *Senna alata*, *Piper mullesua*, *Pogostemon bengalensis* which are mainly of subtropical and tropical species and are used by the Mishmi, Khamti, Nocte and Singhpo communities for curing debilities, stomach worm, snake bite, cut and wound, malaria, diarrhoea, cough and cool and skin inflammation. We have also conducted livelihood survey in selected localities of Anini including Alinye village where people are mostly dependent on *Phyllostachys pubescens* which is main backbone of the local economy. Mishmi cultivates good number of crop races which include large variety of *Cucurbita maxima* which has been recorded for the first time from Arunachal Pradesh. The major livelihood crop nurture by the Idu Mishmi are: *Oryza sativa*, *Coix lacryma jobi*, *Setaria italica*, *Chenopodium album*, *Solanum species*, millets, Zinger and other Cucurbitaceae members. It is concluded that the Idu Mishmi tribe of Arunachal Pradesh is rich in ethnobotanical knowledge and traditional cultural knowledge bases nurture through the institution of local priesthood whereas Khamti and Singhpo community are rich in formalized knowledge system and followers of Theraveda sect of Buddhism. More field investigation is required particularly in Anjaw Districts to documents diversity of both subtropical and temperate medicinal plants of the region.



Begonia species used by the Mishmi as anti-inflammatory agent



Cucurbita maxima variety -rare gene pool nurtured by the Mishmi



Solanum aethiopicum – popular medicinal and edible of Nocte and Khamti tribes



Coptis teeta -traditional multi-curative herbs of Mishmi tribe