

Project Update: January 2017

Warming is a global concern, and OTCs are an easy and widely used way to simulate 2-4° C temperature rise in-situ. We have had OTCs along an elevation gradient in the biodiverse, fragile alpine meadow ecosystem in Sikkim in the Eastern Himalayas, and have been monitoring species richness, productivity biomass, plant phenology and physiological changes in May, August and November for the last 3 years. However, long term monitoring is essential to get an in-depth understanding of how vegetation responds to warming, as has been demonstrated in other ecosystems, and that is the motivation of the present study.

We have just completed the 4th year of sampling. Lab analyses are underway. This year, we are also developing a database of palatable, unpalatable and medicinal plants of this region. Also we are comparing the effect of warming on palatable and non-palatable species from grazed and un-grazed plots. This will further help to see if warming is affecting any of these groups of plants more than others.

Some photographs from Field:



Fig1: Collection of plant and soil samples.



Fig2: Collection of plant biomass samples



Fig3: Buttercup flowering at 4500m elevation.



Fig4: Collection of overall cover data.



Fig5: OTC Installation at the start of growing season.



Fig6: iButton for collecting temperature Data.