

BIODIVERSITY OF *DENDROBIUM* (ORCHIDACEAE) IN NORTH EASTERN INDIA: STUDIES ON THEIR CONSERVATION FOR SUSTAINABLE USE

Yogendra Kumar

Botany Department, North Eastern Hill University, Shillong 793022

Biological diversity or Biodiversity is the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part, this includes diversity within species, between species and of ecosystems.

Orchids are among the top in the market due to its beautiful flowers. The northeast India has a rich orchid biodiversity where the genus *Dendrobium* forms one of the important groups of commercially valuable and with scientific importance. *Dendrobium* species have medicinal uses also. For the improvement collection of germplasm of *Dendrobium*, study of phenology, palynology and seed morphometrics are essential. These aspects can leads to a sustainable development of orchid based cut flower/potted plant industry. An important feature of the project would be also to sustain environment friendly rural development and additional source of income to poor farmer and women in particular

Objective as stated in the project proposal

1. Exploration of the species in the region
2. Collection of germplasm for detailed scientific study
3. Phenological and palynological study for selection and plant improvement
4. Multiplication of the species

Highlights of the findings achieved in the project

During the tenure of the project some important findings have been made which are outlined below:

- Survey and collection of about 47 species of *Dendrobium*
- Germplasm collection which are maintained in NEHU campus
- Details morphological observation and characterization of the species
- Observation of different phenophases and their importance
- Characterization of pollen and study of pollination

Suggestion

In order to transfer the results of this project the expert at the time of recommending this project, suggested that another phase is required for field trial and transfer of packages for large-scale replication. Therefore, second phase of this project may be considered with one RA/SRF and one field attendant with poly-house for acclimatization and hardening of seedlings.