Division of Conservation Biology

The Concept of conservation is achieved through in-situ studies and seed banking in support of the horticulture collections of the garden. Species which are endemic to peninsular India with socio-economic values are selected to be more cared along with highlighting the importance of plant diversity and values of co-existence.

Major Research Areas

- Population and gene flow studies and conservation status assessment of endemic and threatened species
- Plant-pollinator interaction studies
- Seed banking
- Reproductive biology of threatened species
- Documentation of plant based information to support plant conservation
- Polynematous studies

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Major achievements

- Population structure and gene flow system of endemic and threatened tree species of the Western Ghats such as Garoaxina imbertii, Cassinie keoseaiii, Cunciex exotica and Palmaeemulapilac were studied and their conservation measures proposed.
- Studied reproductive biology of 25 bizzlies and 15 other rare species under threatened category.
- Seed Bank holds 1132 active collections belonging to 281 genera and 411 species of 99 families including seeds of 34 rare and endangered species and 41 endemics. Seeds of 38 species of 28 genera kept as base collections. Reference collections are also maintaining 4000 accessions of 2700 native and 1300 exotic specimens.
- Seed biology and standardization of germination protocols of 24 threatened species were completed.
- Maintains a polen herbarium which carries 3652 polen slides of 410 species belonging to 532 genera under 128 angiosperm families.

- Restoration studies of Coccinia floribunda (Goetgh.) Coile, Rauwolfa hastata S. R. Smith & Chithra, Rauwolfa micrantha Hook f., Rauwolfa serpentina L. Benth. ex Kuntz, Rauwolfa tetraphylla L., Rauwolfa verticillata S.J. Sibth. & B.Ham. are under way.
- Published a volume on 'Flowering Plants of Kerala' (2006) which revealed that there are 6634 species of flowering plants in 1418 genera under 188 families occur in Kerala.
- Published a two volume work under the title 'Flowering Plants of the Western Ghats, India' (2014) which records 7,402 species of flowering plants in 1,480 genera under 210 families that occur in the Western Ghats.

Major facilities

- Seed banking facilities
- Polen herbarium
- Epi-fluorescent microscope with camera attachment
- Microscopes with photographic attachment
- Night vision binoculars
- Ethnobotanical
- Reflectometer
- Centrifuge
- Cameras

Publications

- Books: 6
- Journal/Papers: 118
- Databases: 1

Research papers published recently