

## Project Update: April 2017

### **Ex-situ conservation**

- Plantation of endemic and threatened species, during Botany Fest 2017 held at the Waghai Botanical Garden, Dangs district. Species conserved are: *Hardwickia binnata*, *Boswellia serrata*, *Dolichandrone falcata*, *Heterophragma quadriloculare*, *Erinocarpus nimmonnii*, *Bauhinia foveolata*.
- Also, published in a regional newspaper Divya Bhaskar, Sunday Edition (in the 'Bhaskar Vishesh' column), Surat on February 19, 2017.

### **In-situ conservation**

With the ongoing large-scale deforestation activities (agricultural encroachment, tourism, etc.), little is now left of our forest areas, but the sacred groves, still stand hither and thither, the last refuge for many species of trees, climbers, epiphytes and other flora. In Gujarat, this community based tradition has received considerable attention from a sociological as well as a biological perspective. Owing to the protection offered on religious grounds the sacred groves harbour many plant species of rare occurrence. During the present field explorations, there has been observed a concentration of endemic and threatened plant species in sacred groves.

1. A refugium has been identified on the hilly track from Gadad to Don, Dangs district, having a good concentration of endemics and other species of rare occurrence like *Adelocaryum coelestinum*, *Arisaema murrayi*, *Crotalaria filipes* var. *trichophora*, *Dendrobium barbatulum*, *Falconeria insignis*.
2. Ninai mata sacred grove popularly known as the Ninai waterfall in Narmada district: *Bauhinia vahlii*, *Begonia picta*, *Dendrobium microbulbon*, *Lagerstroemia microcarpa*, *Microchirita hamosa*.
3. Jauri-Jaura falls at Chavshala, Valsad district, conserving *Bauhinia foveolata*, *Bombax insigne*, *Dendrobium ovatum*, *Dyschoriste dalzellii*.
4. Bhathwari mata sacred grove at Ranavav, Porbandar district, conserving species like *Commiphora wightii*.
5. Vanvadi mata sacred grove situated in forest area of Virpur taluka, Kheda district.

Such refugia even though fragmented still maintain the minimum viable population of some species and are thus capable of maintaining part of the biodiversity. However, at some places, local communities no longer honour the traditional and cultural conservation practices of these forest patches, as economic hardship continues to bite, sacred groves could not be spared from such threats. Though, a certain plant species have been still conserved as spiritual ancestors:

- i *Butea monosperma*, an erect deciduous tree, characterized by its leaves which are pinnately 3-foliolate. But during field expedition we came across a natural mutant with unifoliolate leaves. It was observed that the tree does not produce any flowers or fruits; it just develops small bracts and bracteoles. It is considered to be sacred by the local people, popularly known as 'Ek-parni Khakhar', and hence been conserved there since last 90 years. People worship the tree as 'Ek-parni peer', and perform rituals under it by offering coconut, flags, flowers, incense sticks, etc. The tree is growing on

- ii *Butea monosperma* var. *lutea* at Targol, Jambughoda (22°20'20.72"N, 73°39'5.88"E) and at Pangam, Narmada (21°40'39.43"N, 73°30'33.54"E), where the tree produces pure yellow flowers every year, people have recognized this phenomenon to be a manifestation of nature and thus consecrated the tree to the local deity.
- iii *Entada rheedii* Spreng. a giant woody climber, locally known as Kayri cha vel at Vavar village (20°19'52.49"N, 73°22'44.91"E), Barpuda village (20°20'9.69"N, 73°23'8.42"E), Kaprada taluka, Valsad district. The liana has been conserved by the local people as it is a source of income. Its big elegant seeds are sold in the market which is locally used as an antidote against snake bites.
- iv *Commiphora stocksiana*, two individuals have been conserved in an agricultural field by Haji Ismail of Lakhapar village (23°42'19.09"N, 68°56'58.35"E), Lakhpat taluka, Kachchh district. During the cold season the plant yields a tasteless and odorless gum, popularly known as 'Mitha Guggul' that was sold at the rate of 150/kg at Mandvi market during April, 1981. The plant is restricted to India and Pakistan, and since past 2 years, it is no more found to occur in wilderness, in India.

Regional newspaper Divya Bhaskar, Sunday Edition (Bhaskar Vishesh), Surat on 19-2-17





Sacred groves as refugia for endemic plants



Distribution of certificates for plantation of endemic and threatened species to volunteers



Distribution of certificates for plantation of endemic and threatened species to volunteers



Planting of endemic and threatened species



Preparation of endemic & threatened plant saplings by the Project Investigator



Preparation of endemic & threatened plant saplings





# CERTIFICATE OF TREE PLANTATION

*We are glad to acknowledge  
with appreciation the contribution of*

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*for planting endemic and threatened  
plant species and catalyzing  
nature conservation, during the*

***BOTANY FEST 2017** held at  
**Waghai Botanical Garden, Dangs, Gujarat**  
jointly organized by*

***South Dang Forest Division, Ahwa-Dangs  
and the Department of Botany,  
The Maharaja Sayajirao University of Baroda.***

Date of plantation: 19/02/2017

Species planted: ***Hardwickia binata***

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