

# Annual Scientific Meet 2017

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Scientist 'D'  
CNH, BSI

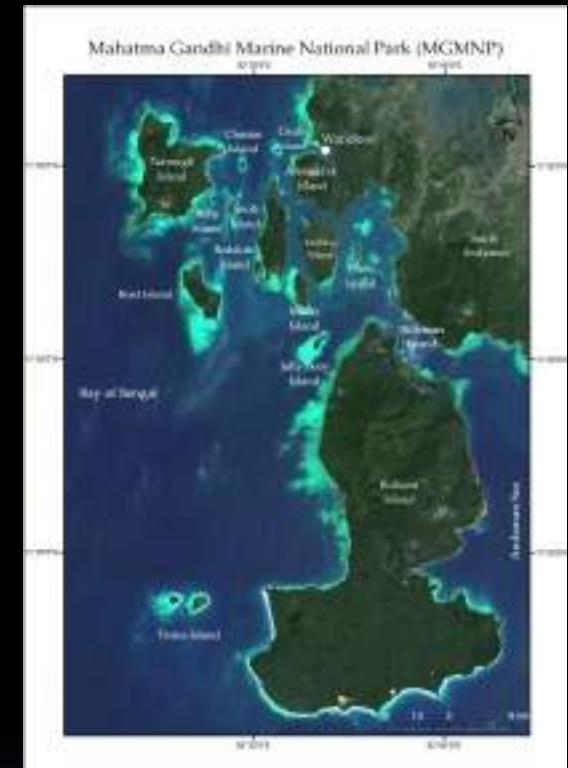
Junior Research Fellow: (2001 – 2004)

PAN Project

Botanical Survey of India, A&NRC, Port Blair

**Ph.D. – Angiosperm diversity of  
Mahatma Gandhi Marine National Park,  
South Andaman  
University of Madras**

**2008**



## Studies on the Plant Resources of the Jarawas – an Indigenous tribe of Andaman Islands

Member of multi disciplinary study team,  
organized by the Directorate of Tribal Welfare and  
by Andaman Adim Janjati Vikas Samiti (AAJVS) of  
Andaman and Nicobar Administration from  
10.12.2001 to 09.01.2002.

The study was carried out in R.K. Nallah area of  
the Jarawa Tribal Reserve. A total of 120 field  
numbers comprising 480 plant specimens were  
collected the uses were documented.



- Explored Barren Island Flora. A total of 33 field numbers comprising 100 specimens of vascular plants were collected and enumerated.
- Field exploration tours to Kalpong Hydro-electric project site in September 2001. A total of 300 endemic and wild edible plant saplings were introduced in the Kalpong Botanic Garden.
- Explored the limestone caves of the Baratang Island in 2003. A total of 152 taxa of plants belonging to 142 genera and 63 families were collected.
- Member of expert group in plant identification for the EIA studies of Dhanikari Dam Catchment area (area of submergence) in August, 2003.
- Member of expert group in plant identification during the Tree census studies by the Forest Department in Middle Andaman Islands in 2004.



Barren Island- cinder cone



Barren Island – solidified magma



# Ecorestoration of Adyar Estuary

## – Garbage dump to Garden

Coordinated Survey, Collection and Plantation of ca 2,00,000 plant saplings



- Copy editor in SPS (Scientific Publishing Services) – 6 months.
- Visiting faculty for M. Arch (landscape Architecture) (Subject: Planting & Horticultural practices) in Anna University, Guindy, Chennai – for 1 semester (2010).
- Re-entry to Botanical Survey of India as Scientist 'C' on 27<sup>th</sup> April, 2011.

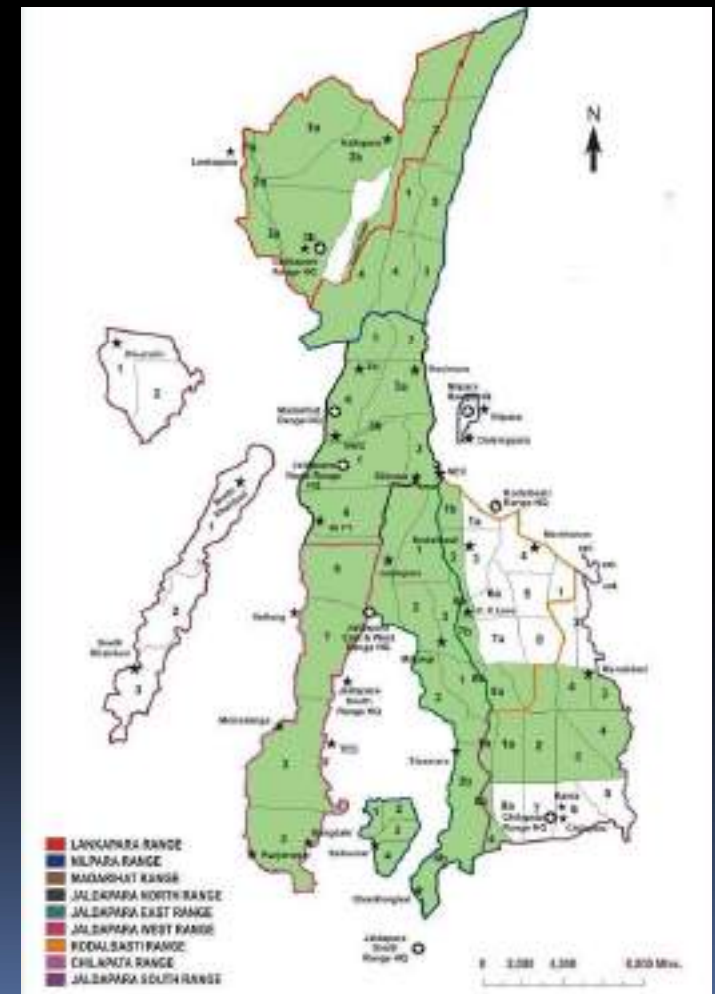
## Annual Action Plan Project

### Floristic Diversity of Jaldapara National Park, West Bengal

Carried out Annual Action Plan Project survey on the “Floristic Diversity of Jaldapara National Park, West Bengal, India” from 2012 - 2015

- Six field survey tours were conducted during the period 2012–2015.
- A total of 1055 field numbers comprising 4220 specimens were collected.
- A total of 2110 herbarium specimens were prepared with labels.

Report prepared. To be submitted to BSI, HQ.

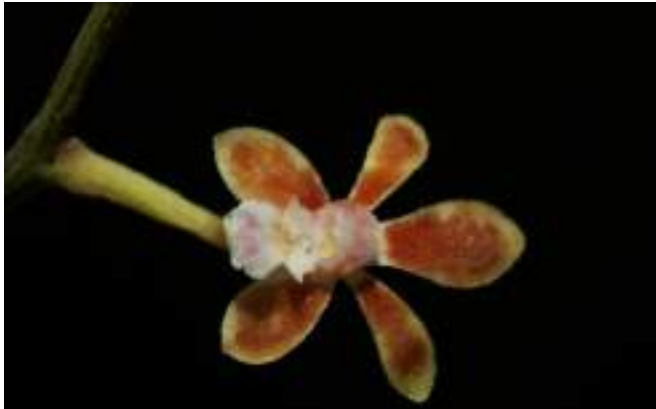




## Jaldapara National Park, West Bengal







Cleisostoma racemiferum



Hoya lanceolata



Firmiana colorata



Rhynchotechum ellipticum



Phlogacanthus thyriformis



Impatiens tripetala



Drosera burmanni



Stixis suaveolens



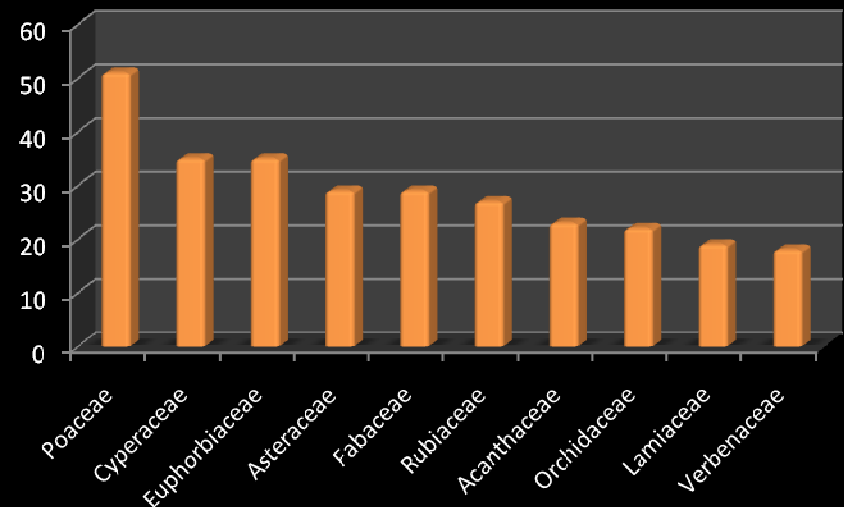
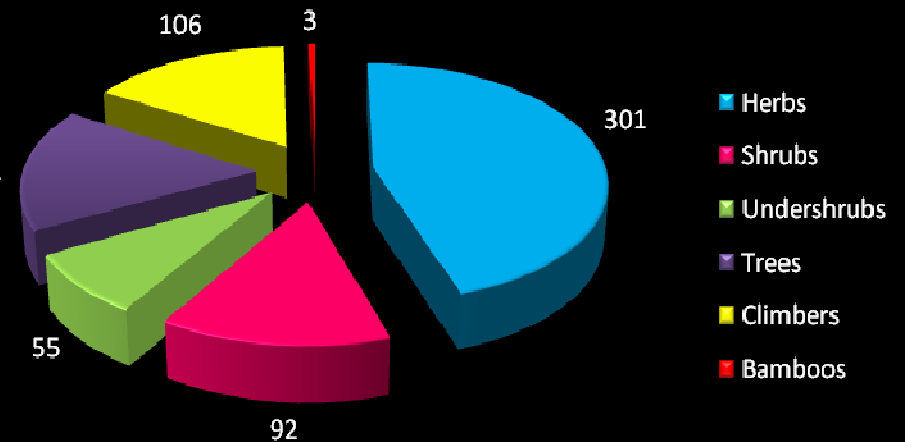
Aerides multiflorum

## Outcomes of the Study

Documentation of 668 taxa of angiosperms belonging to 445 genera and 120 families. Dicots dominate the flora with 510 taxa (76%) belonging to 336 genera under 98 families and monocots are represented by 158 taxa (24%) belonging to 109 genera under 22 families.

The study resulted in the documentation of 51 species of grasses which is the primary fodder source of the herbivores including the endangered one horned Rhino (*Rhinoceros unicornis*).

The study also resulted in the collection of two new additions to the flora of India viz., *Ixora longibracteata* Bremek. (Rubiaceae) and *Memecylon cerasiforme* Kurz (Melastomataceae). Three species forms new additions to the flora of West Bengal.



## New additions to the flora of India



*Memecylon cerasiforme* (Melastomataceae)



*Ixora longibracteata* (Rubiaceae)



## Additions to the Flora of West Bengal

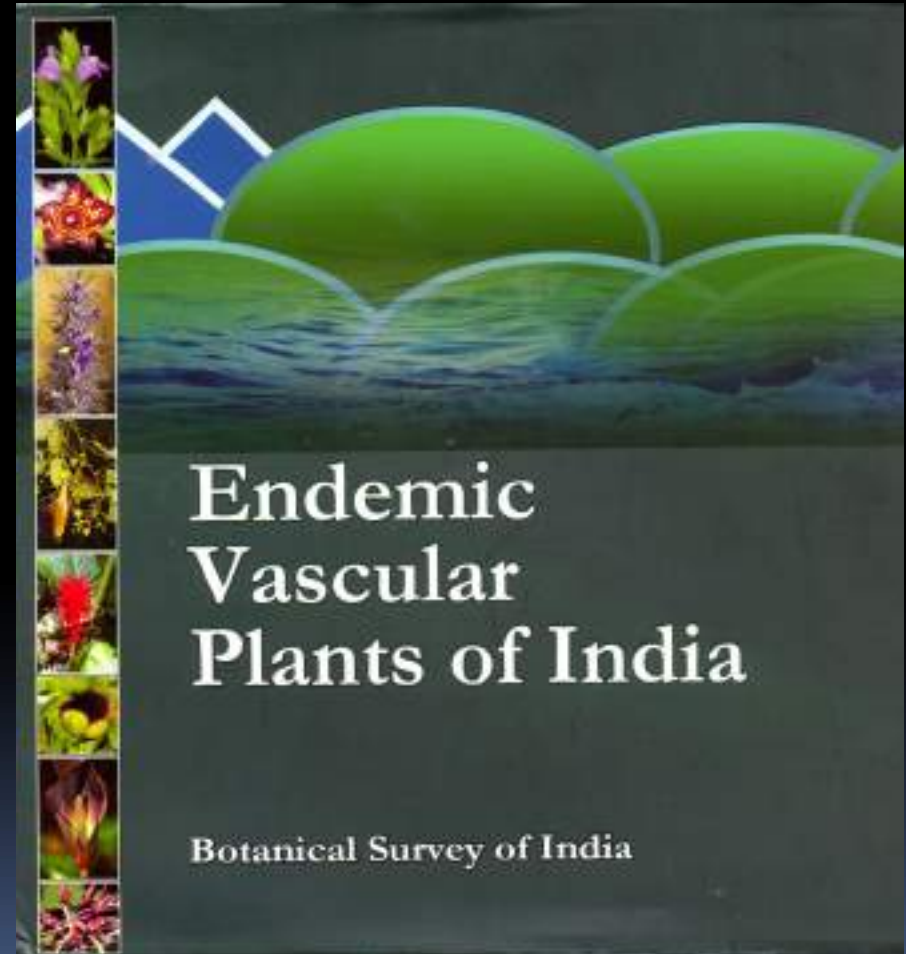


**Endemic Vascular Plants of India (2015)**  
(Project allotted by the Director BSI)

Enumerated a total of 4381 taxa of vascular plants belonging to 1007 genera and 176 families which includes 4303 angiosperms, 12 gymnosperms and 66 pteridophytes.

A total of 58 angiospermic genera exclusively endemic to India are identified. Distribution maps are provided for all the 58 endemic genera and their species.

ISBN: 81-8177-064-1



## Revisionary works

Revised the family Hamamelidaceae for the Flora of India

Revised the families Ebenaceae, Urticaceae and Fagaceae for the flora of West Bengal.

Revised the families Annonaceae, Brassicaceae, Rutaceae and tribes Psoraleae, Galegae, Viceae and Ciceracae for the Flora of Bihar.

Revised the families Annonaceae, Brassicaceae, Rutaceae and tribes Psoraleae, Galegae, Viceae and Ciceracae for the Flora of Jharkhand.

Revised and added information on the distribution of taxa in different states belonging to the families Casuarinaceae, Aponogetonaceae, Cactaceae and the genus Citrus for World checklist.

Revision of the family Acanthaceae for Flora of Bihar & Jharkhand is under progress.



*Castanopsis tribuloides*



*Castanopsis indica*



*Boehmeria macrophylla*



## Review / Editorial Assignments

- “Flora of Matheran, Raigad district, Maharashtra”
- “Abstracts and Bibliography of the flora of Andaman & Nicobar Islands”
- “ Family Apocynaceae – Flora of India
- “ Flora of Andaman & Nicobar Islands, Volume – 2”
- “ Family Acanthaceae (subtribe – Justicinae)”
- “Checklist of Flora of Meghalaya”.
- “ Reviewer for the journals : Taiwania, Rheedia, Nelumbo, JETB, JoTT, Zoosprint, Journal of Ecology and Environment.

## MoEF Project Proposals reviewed (five)

- “Digital Documentation of Trees and shrubs of Northern Punjab of India”.
- “Extension of herbal garden, Mettur, Tamil Nadu”.
- “Conservation of Aquatic Plants from Medicinal plants garden, Mettur, Tamil Nadu”.
- “Ex-situ conservation of threatened plants endemic to the region through botanic gardens and centres of conservation – submitted by Devchand college, Maharashtra”.
- “Recognition of Lead Garden under assistance for improvement of infrastructural facilities in Botanical Garden and centre of ex-situ conservation of indigenous, particularly Rare, Endangered and Threatened (RET) plants and plants endemic to the region – submitted by Pune University, Maharashtra”.

## Reports Prepared:

- Prepared material for a flier/Brochure on Central National Herbarium consolidating all the available information on the past history, area under Jurisdiction, previous botanical works, current botanical works, and major achievements of the circle etc.
- Prepared and submitted a write up on Endemic orchids of India for making poster for BSI.
- Prepared and submitted a write up on Endemic flowering plants of India with details on number of species endemic to Himalayan region, Peninsular India, Andaman & Nicobar Islands and the rest of India for BSI poster.
- Prepared and submitted a list of plants endemic to Rajasthan state as desired by H.o.O, Central National Herbarium.
- Prepared a Consolidated List of Threatened Plants of Punjab for inclusion under Section 38 of Biological Diversity Act, and submitted to H.o.O, CNH, for forwarding to the Director, BSI.

- Edited and provided inputs to the proposal for the Draft notification of threatened species of plants and animals under section 38 of the biological diversity act, 2002. (List Proposed by the Maharashtra State Biodiversity Board). A total of 33 threatened plants were proposed for inclusion in the list.
- Thoroughly revised and provided inputs on the list of 'Threatened plants of Jharkhand' for Jharkhand Biodiversity Board, for notification in Gazette by MOEFCC under section 38 of Biological Diversity Act, 2002.
- Revised and compiled a list of plants threatened in Sikkim.
- Critically evaluated and provided comments on the draft on Guidelines for Designated Repositories developed by the Core Expert Group (CEG) on Designated Repository.



## Sea Grasses of India

A comprehensive account on the taxonomy, updated nomenclature, keys, along with citations, basionyms if any and distribution of the seagrasses occurring in India was prepared. A total of 16 taxa of seagrasses which includes 15 species and one subspecies, belonging to 08 genera distributed in 03 families are enumerated. State wise distribution of all the sea grasses is also provided.



- Identified **25** images of Herbarium specimens of Helfer's collections received from Dr. Susanne Renner, Chair, Systematic Botany and Mycology, University of Munich, Director, Munich herbaria (M & MSB). Confirmed the identity of 14 herbarium specimens received from Dr. Renner and mounted for deposition.
- Prepared indexing of monocot genera, for 20 almirahs and labelled the genera. Preparation of excel sheet with index details of monocot genera is under progress.
- Provided over 56 photographs for publication in various floras and revisions published by BSI. (Flora of India Vol. 23, vol. 9, Vol, 20; Fl. Of West Bengal Vol. 2, Vol.3; Fascicles (*Bauhinia*) etc.)

### EX-SITU CONSERVATION:

Introduced a rare and endangered climbing shrub, *Hibiscus fragrans* Roxb. in the RET section of Indian Botanic Garden. The species is so far known to occur in north east India and Bangladesh and it is recorded for the first time in West Bengal from Jaldapara National Park. Planted in AJCBIBG by the Director, BSI.



Hibiscus fragrans Roxb.



## Administrative / Technical responsibilities

Performed duties as Regular DDO of CNH from May, 2013 to May, 2015.

Performed duties of DDO for 03 SERB-DST projects till December 2016.

In charge of Hall – 1 from April, 2011 to March, 2013

In charge of Hall – 5 & Monocots type section from April, 2015 to till date.

Member of Store verification committee.

Attended Kolkata high court to represent CNH in connection with the court case on a land located near Danesh Shaik Lane, Howrah.

Technical: Coordinated digitization and barcoding of 4348 monocot specimens and 30 volumes of Wallich's correspondence.

As in-charge of plant identification services from 2011 – 2013, issued authentication certificates for 338 specimens.

## Achievements

Number of books published	01 (01 in press)
Book chapters published	01
Number of Research papers published	43
Number of new taxa	09
New additions to the Flora of India	18 (01 genus)
New reports to states	19
New combinations/name changes	02
Lectotypifications	03



*Anoectochilus narasimhanii*



*Habenaria osmastonii*

*Thank you*

