

Annual Scientific Meet 2017

**Geeta Chaudhury
Botanist
ISIM**

MY JOURNEY TO BSI

- ❑ Worked as Research Fellow from 1987-1991 under Flora of India project on family Amaranthaceae.
- ❑ Ph.D. thesis title: *Revision of Family Amaranthaceae of India* registered under University of Calcutta in 1988.
- ❑ Joined BSI as Junior Scientific Assistant in 1991 at CBL.
 - Assisted senior scientists in project- *Determination of reproductive capacity of wetland species of West Bengal.*
- ❑ Botanical Assistant in 1997 at Shillong Regional Circle & back to CBL in 2001.

Amaranthaceae of india

Genus	Species
<i>Deeringia</i>	1 (<i>amaranthoides</i>)
<i>Celosia</i>	3 (<i>argentea, pulchella, polygonoides</i>)
<i>Bosea</i>	1 (<i>amherstiana</i>)
<i>Indobanalia</i>	1 (<i>thyrsiflora</i>)
<i>Allmania</i>	1 (<i>nodiflora</i>)
<i>Digera</i>	1 (<i>muricata</i>)
<i>Amaranthus</i>	13 (<i>caturus, caudatus, dubius, graecizans, hybridus, lividus, palmeri, polygonoides, retroflexus, spinosus, tenuifolius, tricolor, viridis</i>)
<i>Cyathula</i>	3 (<i>capitata, prostata, tomentosa</i>)
<i>Pupalia</i>	1 (<i>lappacea, 3 vars.</i>)
<i>Psilotrichum</i>	5 (<i>elliotii, ferrugineum, nudum, scleranthum, sericeum</i>)
<i>Nothosaerva</i>	1 (<i>brachiata</i>)
<i>Aerva</i>	3 (<i>javanica, lanata, sanguinolenta</i>)
<i>Trichuriella</i>	1 (<i>monsoniae</i>)
<i>Stilbanthus</i>	1 (<i>scandens</i>)
<i>Achyranthes</i>	3 (<i>aspera, bidentata, coynei</i>)
<i>Centrostachys</i>	1 (<i>aquatica</i>)
<i>Alternanthera</i>	7 (<i>betzichiana, caracasana, paronychoides, philoxeroides, pungens, sessilis, tenella</i>)
<i>Gomphrena</i>	2 (<i>celosioides, globosa</i>)
<i>Iresine</i>	1 (<i>herbstii</i>)

❑ Revision of Amaranthaceae in India

- 50 species under 19 genera has been studied
- ***Amaranthus retroflexus*** a new report from India
- ***Amaranthus polygonoides*** a new report from Andhra Pradesh
- ***Cyathula capitata* & *C. tomentosa*** are new reports from West Bengal
- ***Achyranthes coynei*, *Aerva wightii*, *Amaranthus caturus*, *Centrostachys aquatica* & *Psilotrichum nudum* -5 RET species**

ANNUAL ACTION PLAN PROJECTS

❑ Determination of reproductive capacity of wetland species of West Bengal (2001-02):

Species studied:

- (1) *Leucus cephalotes* Spreng - 20%
- (2) *Cyperus irea* L. - 15%
- (3) *Allmania nodiflora* (L.) R.Br. - 5%
- (4) *Gomphrena celosioides* Mart.- 45%

❑ Determination of reproductive capacity of medicinal plants (2001-02):

Species studied:

- (1) *Strychnos nux-vomica* L. - 45%
- (2) *Rumex dentata* L. - 50%
- (3) *Psoralia foralyfolium* L. - 50%

□ Flora of West Bengal (2002-04):

No. of family studied: Seven (9 genera & 24 spp.)

1. **Agavaceae :** *Agave* (1 sp.)
2. **Bromeliaceae:** *Ananus* (1 sp.)
3. **Cannaceae:** *Canna* (1 sp.)
4. **Haemodoraceae:** *Sansevieria* (2 spp.)
5. **Hypoxidaceae:** *Curculigo* (1 sp.), *Hypoxis* (1 sp.),
Molineria (3 spp.)
6. **Musaceae:** *Musa* (3 spp.)
7. **Smilacaceae:** *Smilax* (11 spp.)

□ Flora of West Bengal (2004-05):

No. of family studied: One (2 genera & 3 spp.)

Marantaceae: *Phrynium* (2 spp.)

Maranta (1 sp.)

□ Flora of West Bengal (2007-09):

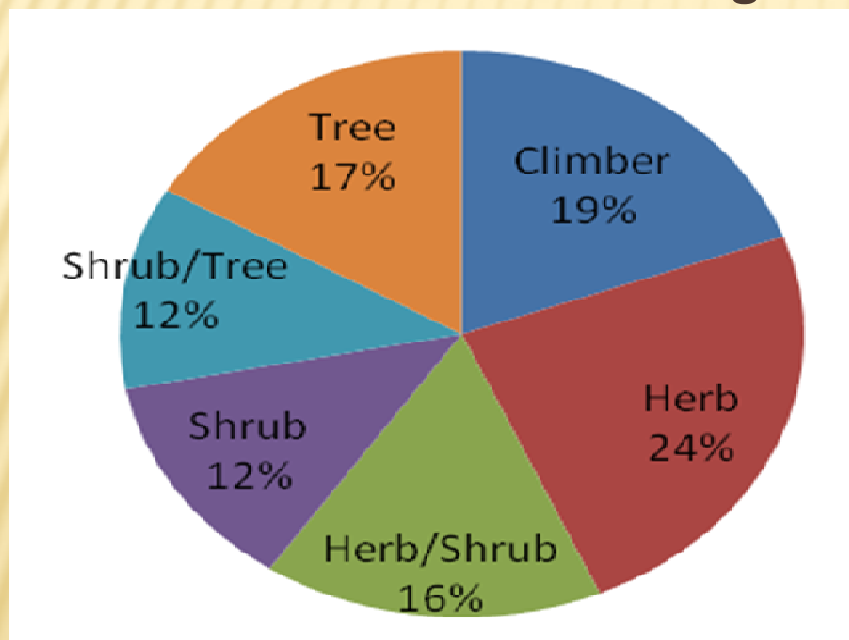
Family studied - Urticaceae (16 genera & 53 spp.)

Sl. no.	Name of genus	Name of species
1	<i>Boehmeria</i>	2 (<i>macrophylla, polystachya</i>)
2	<i>Chamabania</i>	1 (<i>cuspidata</i>)
3	<i>Debregeasia</i>	2 (<i>longifolia, wallichiana</i>)
4	<i>Dendrocnide</i>	1 (<i>sinuata</i>)
5	<i>Elatostema</i>	16 (<i>cornutum, cuneatum, dissectum, ficoides, hookerianum, integrifolium, integrifolium, lineolatum, momandrum, nastrum, parvum, pusillum, rupestre, sessile, sikkimense, subincisum</i>)
6	<i>Girardinia</i>	1 (<i>diversifolia</i>)
7	<i>Laportea</i>	2 (<i>ulbifera, interrupta</i>)
8	<i>Lecanthus</i>	1 (<i>peduncularis</i>)
9	<i>Maoutia</i>	1 (<i>puya</i>)
10	<i>Oreocnide</i>	1 (<i>frutescens</i>)
11	<i>Pilea</i>	14 (<i>anisophylla, approximata, bracteosa, cordifolia, glaberrima, hookeriana, microphylla, oxydon, peploides, scripta, symmeria, ternifolia, umbrosa, wightii</i>)
12	<i>Poikilospermum</i>	2 (<i>lanceolatum, naucleiflorum</i>)
13	<i>Pouzolzia</i>	4 (<i>hirta, pentandra, sanguinea (2 vars.), zeylanica</i>)
14	<i>Procris</i>	1 (<i>crenata</i>)
15	<i>Sarcochlamys</i>	1 (<i>pulcherrima</i>)
16	<i>Urtica</i>	3 (<i>ardens, mairei, parviflora</i>)

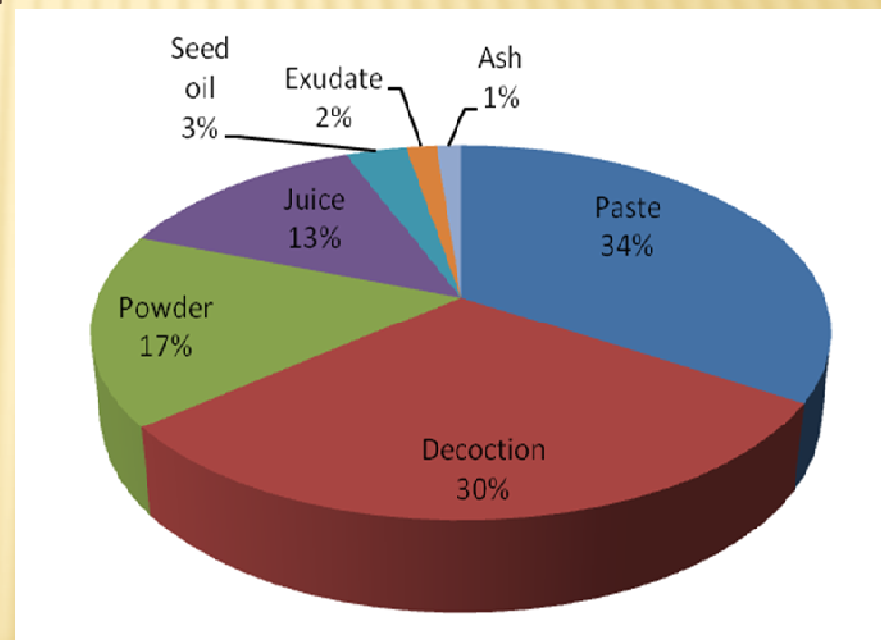
□ Ethnomedicinal uses of Leguminosae in India recorded in herbarium and published literature (2011-13)

By Smt. G. Chaudhury & R. Saravanan

- ✓ 242 plants belong to 88 genera of Leguminosae were documented with their modes of administration.
- ✓ **Fabaceae** : 63 genera 161 species
- ✓ **Caesalpiaceae** : 15 genera 45 species
- ✓ **Mimosaceae** : 10 genera 36 species

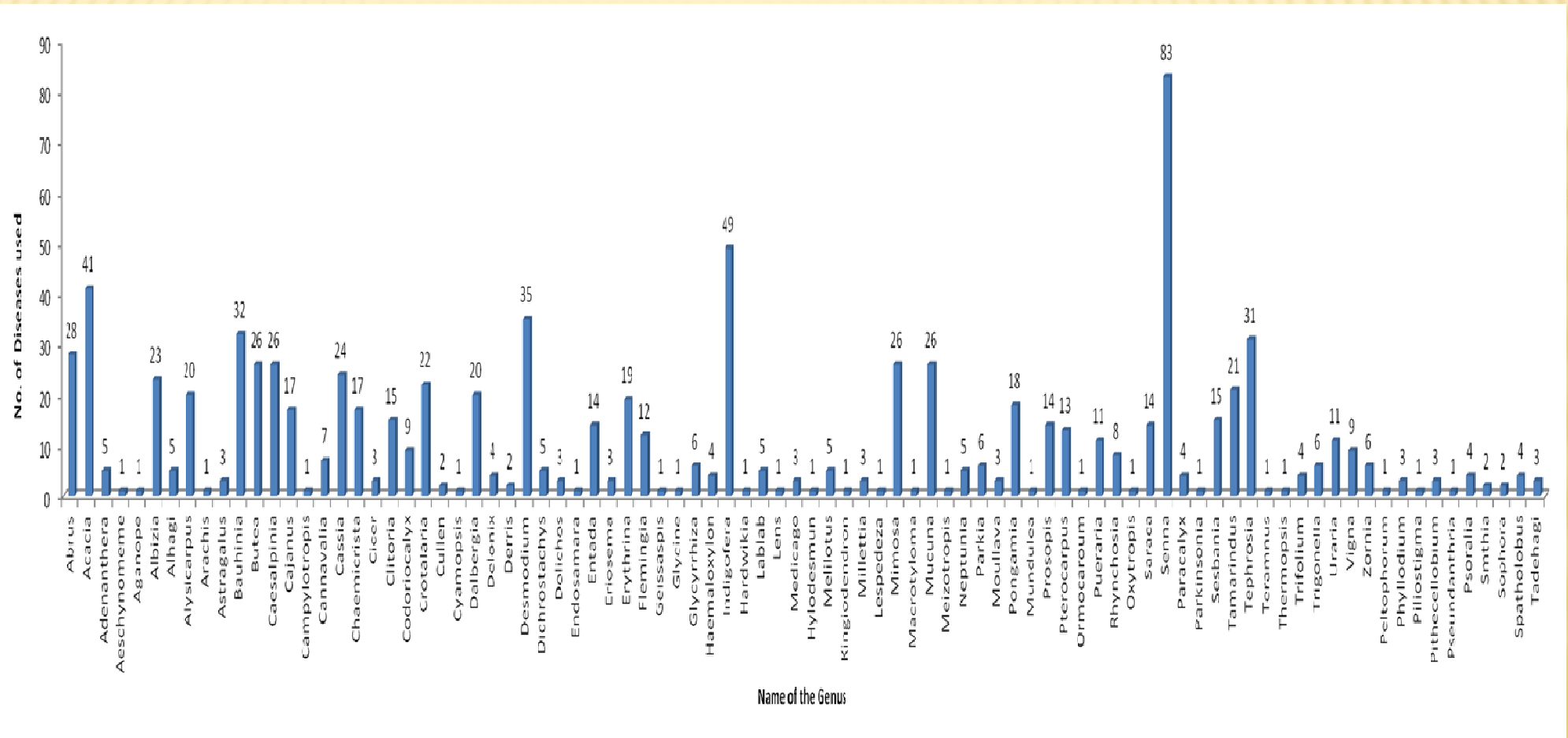


Habit diversity of ethnomedicinally important species of Leguminosae



Mode of Administration

Ethnomedicinal importance of the genera studied



Percentage of the plant parts used

<input type="checkbox"/> Leaf	51%
<input type="checkbox"/> Root	38%
<input type="checkbox"/> Seed	32.7%
<input type="checkbox"/> Entire plant	26.5%
<input type="checkbox"/> Bark	21.4%
<input type="checkbox"/> Fruit	14.3%
<input type="checkbox"/> Flower	12.6%
<input type="checkbox"/> Stem	9%
<input type="checkbox"/> Gum or resin	3.7%

Types of disease cured

67 types of diseases reported to be cured

- Skin diseases (27.74%)
- Stomach ulcer (26.52%)
- Diarrhoea/Dysentery (23.26%)
- Poisonous bites (19.18%)
- Fever (17.96 %)
- Rheumatism (17.54%)
- Piles (14.3%)
- Cough and cold (13.06%)
- Boils (12.24%)

□ Listing and Identification of Dicot herbarium specimens at BSIS (2013-2016)

By Smt. G. Chaudhury, Smt. S. Datta, Sri B.C. Dey, Sri S.K. Sharma

Data base preparation: A Catalogue of 101 families with 12,067 no. of Dicot herbarium plant specimens is prepared.

Three major families with no. of specimens catalogued:

- Leguminosae : 2,255 nos.**
- Malvaceae : 2,366 nos.**
- Rubiaceae : 518 nos.**

❑ Nomenclature update of digitized herbarium specimens at BSIS (2016-18):

By Dr. M. Bhaumik, Dr. A.K. Sahoo, Smt. G. Chaudhury, Smt. S. Datta, Sri B.C. Dey, Sri S.K. Sharma

Updated nomenclature of 510 nos. Digitized herbarium specimens up to January, 2017

❑ Collection of Oil, Oilseeds, Pulses & Medicinal plant products for enrichment of Botanical Gallery (2016-17)

By Smt. G. Chaudhury & Sri B.C. Dey

➤ **Berhampore, Murshidabad district, WB:** Following materials were collected during tour from **PORS (Pulse & Oilseeds Research Station)**

**OIL
SEEDS**
15 varieties

Name of crops	Name of variety
Toria	Agrani B-54, Panchali
Mustard	B-9 (Binoy), Subinoy, Jhumka NC-1, B-85 (Seeta), Bhagirathi RW-351, Sarama, Sanjukta Asech, Pitambari
Rape seed Mustard	Kalyan
Sesame	Tilottama, Roma, Sabitri
Linseed	Neela

PULSES

20 varieties

Name of crops	Name of variety
Gram	Bidisha, Anuradha, Mahamaya-1, Mahamaya-11,
Kalai	Sulata, Sarada, Goutam,
Mung	Sonali, Panna, Sukumar, Samrat, Bireswar
Lentil	Ranjan, Moitree, Asha, Suvendu, Subrata
Lathyrus	Nirmal, Ratan
Pea	B-22/Dhusar

Silk yarn

6 varieties

Name of crop	Name of variety
Yarn	Multi x Bi Yarn
	Bivoltine Yarn
Cocoon	Multi voltine Cocoon
	Multi x Bi Cocoon
	Bivoltine Cocoon

Vegetable oils

6 types

Oil type
Sesame, Sunflower, Ground nut, Ricebran, Soyabean, Mustard



Silk coccon & silk yarn collection at IISR&T, Central Silk Board, Berhampore, Murshidabad, W.B.



Gram cultivars at PORS, Berhampore, Murshidabad, W.B.



Mulberry plantation at IISR&T, Central Silk Board, Berhampore, Murshidabad, W.B.

□ Administrative work performed (as DDO, 2013 onwards)

- Attended training programme at Regional Training Centre, IGNAF, Ministry of Finance, Kolkata for implementation of PFMS (Public Financial Management System) for online payment on 2nd Mar 2016.
- Verification of service books of office staffs.

Summary of work done

- **No. projects handled individually : 4 nos.**
- **No. projects handled jointly : 6 nos.**
- **Publications:**
 - ✓ **Chapters in book : 2 nos.**
 - ✓ **Articles : 3 nos.**
 - ✓ **New report : 4 nos.**

Future Plan of Research

Collection of ethno-botanical/-medicinal materials from Birbhum district, West Bengal for enrichment of Botanical gallery, ISIM

Thank you