



# BSI NEWSLETTER

The monthly electronic newsletter of Botanical Survey of India

## Director's column

During this month, scientists of BSI published two new species, *Andrographis megamalayana* (Acanthaceae) from southern Western Ghats and *Themeda odishae* (Poaceae) from northern Eastern Ghats. Besides, scientists also published new reports, which include a lichen genus, *Lecanora* (lichenised Ascomycota) from Arunachal Pradesh, *Eleocharis ochrostachys* (Cyperaceae) from Andaman & Nicobar Islands and *Habenaria suaveolens* (Orchidaceae) from Goa. Apart from this, BSI scientists have rediscovered *Phyllanthus megacarpus* after a lapse of 130 years from Karnataka, which is also an addition to the state flora.

Field tours were conducted by the scientific officials of BSI in January 2016 in connection with various ongoing projects. Some of them are: Field tour to different parts of Kerala for the project, 'Indigenous Palms of India', tour to different districts of Rajasthan for the project, 'Lichens of Rajasthan and Kutch, Gujarat', tour to some ranges in Seshachalam Biosphere Reserve and Sacred Groves of Chittoor district for the projects, 'Flora of Seshachalam Biosphere Reserve' and 'Flora of Sacred Groves of Andhra Pradesh' respectively.

The 67th Republic day was celebrated in all the units and regional centres of BSI by hoisting the national flag.

The 7th Research Advisory Monitoring Committee (RAMC) meeting of BSI was organized at Western Regional Centre, BSI, Pune on 18th January 2016 under the chairmanship of Prof. A.K. Koul. In the meeting, discussions were held mainly to improve the research activities in BSI at par with the international standards and application of modern techniques. The newly established SEM facility at the centre was also inaugurated by the chairman of RAMC.

Happy browsing!

**Paramjit Singh**

Director, Botanical Survey of India, Kolkata





## HEAD QUARTERS, KOLKATA

In connection with 'Pharmacognostic studies on Medicinal Aconites of India', Dr. A.B.D. Selvam, Scientist 'D' completed 'Organoleptic studies' of the mother roots of 5 species of *Aconitum* viz., *A. ferox*, *A. chasmanthum*, *A. laeve*, *A. nagarum* and *A. rotundifolium*.

For the ongoing projects on 'Algal Flora of Jharkhand', 'Studies on wild mushrooms of Sikkim', 'Studies on the macrofungi of AJCBIBG', 'Revision of the family Metzgeriaceae in India', and 'Wood rotting fungi of Rajmahal hills' identifications and descriptions were made by the scientific officials.

Dr. M.N. Aziz, Scientist 'E' confirmed the identity of two mosses (*Octoblepharum albidum* and *Entodon concinnus*) collected from Amboli, Maharashtra by Director, BSI.

In connection with displaying of posters at renovated Botanical Gallery at ISIM, Kolkata, Dr. Kanad Das, Scientist 'D' prepared two posters, "Fungi" and "Morphological diversity of Macrofungi".

Sri Arvind Parihar, Presv. Asst. accessioned and incorporated 4 specimens (including three holotype specimens) viz., *Calocybella lohitha* (Acc. No. 1288) - Holotype, *Calocybella babruka* (Acc. No. 1289) - Holotype, *Calocybella swetha* (Acc. No. 1290) - Holotype, *Calocybella swetha* (Acc. No. 1291) received from Prof. P. Manimohan, Department of Botany, Calicut University, Kerala.

Dr. Devendra Singh, Scientist 'C' is presently on an expedition to Larsemann Hills, Antarctica for collecting bryophyte specimens.

### Databasing of specimens at Cryptogamic section

Dr. Monalisa Dey, Scientist 'B' prepared database of 87 liverwort specimens; Smt. Shobha Rudra, Botanist prepared database of 200 Lichen specimens and Sri Kaju Majumdar, Presv. Asst. prepared database of 410 Pteridophytes.

### Public service rendered

Dr. R.K. Gupta, Scientist 'D' attended Domjur Science Fair at Jhapordah Duke Institution, Howrah on 08.01.2016 and addressed on the subject South Pole - Antarctica to the students.

Dr. R.K. Gupta also identified an algal specimen received from Dept. of Pharmaceutical Sciences, Birla Institute of Technology, Mesra, Ranchi and issued an authentication certificate.

### Meetings attended

Dr. Paramjit Singh, Director, BSI attended the inaugural ceremony of the Lead Botanical Garden and Nilambari Conference Room in Shivaji University, Kolhapur on 15.01.2016. The Director also attended Research Advisory and Monitoring Committee (RAMC) meeting of BSI at Western Regional Centre, BSI, Pune on 18.01.2016 as member Secretary.

### Visitors

Dr. Vineet Kumar Rawat, Scientist 'C' APRC, Itanagar for herbarium consultation.

Two Research scholars from Mizoram University to identify moss specimens.

24 students and 3 teachers from Bajkul Milani Mahabidyalya, Bajkul, E. Midnapur, West Bengal.

30 students and 4 teachers from New Alipur college, Kolkata.

30 students and 2 teachers from Shyampur, Sidheshwar Mahabidyalya, Ajudhya, Howrah, West Bengal.



A view of iceberg in Larsemann hills Photo: Devendra Singh



A moss bed at Larsemann hills Photo: Devendra Singh

## AJC BOSE INDIAN BOTANIC GARDEN, HOWRAH

Dr. S.S. Hameed, Scientist 'D' conducted a tour to Kerala from 30th December 2015 to 6th January 2016 under the project, "Indigenous Palms of India" and collected saplings of 29 rare, endemic and economically important plant species for *ex-situ* conservation in the garden. The following Rare, Endemic and Threatened palm species (Arecaceae) were introduced in the garden:

*Arenga wightii*, *Bentinckia condappanna*, *Calamus hookerianus*, *C. nagbetta*, *C. shendurunii*, *C. travancoricus*, *C. vattayila*, *Pinanga dicksonii*, and *Phoenix pusilla*.

Besides, the following Endemic species of Western Ghats were also introduced as a part of *ex-situ* conservation:

*Calophyllum apetalum* (Clusiaceae), *Cinnamomum riparium* (Lauraceae), *Cynometra bourdillonii* (Fabaceae), *Dysoxylum binectariferum* (Meliaceae), *Elaeocarpus tuberculatus* (Elaeocarpaceae), *Garcinia imbertii* and *G. rubroechinata* (Clusiaceae).

Tagging of trees is under process under the project, "GIS based phyto-mapping of trees and shrubs of AJC Bose Indian Botanic Garden, Howrah".



***Bentinckia condappanna* population in Chemunchi area, South Western Ghat, Kerala**

Photo: S.S. Hameed



***Corypha umbraculifera* in flowering near Chakkambuzha Meenachal Taluke, Kerala**

Photo: S.S. Hameed

### Republic Day celebration

67th Republic Day was celebrated at the Curator Office Lawn of AJCBIBG on 26.01.2016. The ceremony was attended by Dr. Vinita Damodaran, Professor, Sussex University, England as a Chief Guest.



**Address by the Director, BSI during the Republic Day celebration at AJCBIBG, Howrah**

Photo: B.K. Singh



**Dr. V. Damodaran addressing during the Republic Day celebration at AJCBIBG, Howrah**

Photo: B.K. Singh

### Rajbasha meeting

Quarterly meeting of Rajbasha held on 28.01.2016 in the Chamber of Head of Office, AJC Bose Indian Botanic Garden.



### Functions attended

Dr. A. Pramanik, Scientist 'E' & HoO attended the function of Book release of "Biodiversity of Rajbhavan, Kolkata, West Bengal" at Raj Bhavan on 30.12.2015 and a documentary film release function on Old History of Howrah & present development – A Linking bridge showing some clippings of AJCBIBG on 17.01.2016.

Dr. Basant Kumar Singh, Sr. Presv. Asst. attended the closing ceremony of Nature Camp at Jasodamayee School, Howrah on 24.01.2016.

### Visitors

Justices Jb. Mohd. Yukub Mir and Mohd. Muzafer Akhtar, Jammu & Kashmir High Court, Sri Pabitra Kar, Deputy Speaker, Tripura Legislative Assembly, Agartala and other dignitaries visited botanic garden during the month of January 2016. More than 500 students from various schools and college visited AJCBIBG, which include 80 students from All India Children & Juvenile Organization, Howrah.

– Dr. A. Pramanik  
Scientist 'E' & HoO



Photo: B.K. Singh

Participants of Nature Camp organized by All India Children and Juvenile Organization, Howrah



Photo: B.K. Singh

Visitors gathering during the New Year celebration near the Great Banyan Tree

## CENTRAL NATIONAL HERBARIUM, HOWRAH

In connection with Flora of Bihar, vol. II and Flora of Jharkhand, vol. II, Dr. Avishek Bhattacharjee, Scientist 'B' resolved the identity crisis of *Bupleurum falcatum* var. *biharensis* by consulting its type and protologue of the taxon and its allied taxa. Dr. Bhattacharjee also Identified 3 specimens of *Calanthe tricarinata* from the unidentified specimens at CAL.

### Scanning Electron Microscopy

49 plant samples have been scanned during January 2016 for scientists/research scholars of BSI working on different group of plants:

Dr. Kanad Das – spores of *Rusula* spp., *Entoloma* spp., *Crepidotus* spp.; Dr. K. Avinash Bharti – seeds of *Meconopsis* spp.; Mrs. Piu Das – spores of *Pteris* spp.; Ms. Pamela Saha – spores of *Funaria* spp., *Enthostrodum* spp., *Hydrogonium* spp., *Anomobryum* spp. and *Bryum* spp.; Ms. S. Shalini – leaves, pollens and seeds of *Argyrea pilosa*, *A. hirsuta*; Ms. Liza Mallik – anthers and pollens of *Crotalaria* spp.; Ms. Dyutiparna Chakraborty – spores of mushrooms.

### Digitisation of herbarium specimens

35 type specimens have been barcoded and scanned. Apart from this, field data have been entered for 75 species of *Colocasia*, *Eria*, *Impatiens*, *Lasianthus*, *Musa* and *Rhododendron* spp. in excel sheet.

### Public Service rendered

Dr. Subir Bandyopadhyay, Scientist 'B' provided PDF of different literature to Dr. Sujit Kumar Das Das, ex-Scientist, WRC, BSI, Pune; Prof. T. Pullaiah, Sir Krishnadevaraya University, Anantapur, Andhra Pradesh and Dr. Manoj Lekhak, Shivaji University, Kolhapur, Maharashtra.

Dr. Bandyopadhyay and Sri Shyam Biswa, Sr. Presv. Asst. traced 26 collections of *Berberis* by George Forrest from China from the general herbarium and documented the relevant data along with Saurabh Sachan, Sr. Presv. Asst. for onward transmission to Dr. Julian Harber.

Dr. A. Bhattacharjee sent images of *Phoenix pusilla* to Dr. Sam P. Mathew, Scientist E1, Jawaharlal Nehru Tropical Botanic Garden and Research Institute, Kerala. Dr. Bhattacharjee guided 2 M.Sc. (Part II) students, Ms. Shabnam Khatoon and Ms. Sumita Begum of Environmental Science of Jogamaya Devi College P.G. Study Centre under Directorate of Distance Education, Vidyasagar University, Midnapore for their M.Sc. project works on 'Plant diversity and conservation in India with special reference to flowering plants' and 'Convention on Biological Diversity and its importance'.

Dr. Bhattacharjee reviewed a manuscript for the journal *Rheedea*.

Sri Biswa identified a plant sample for Ms. A. Anand, BIT, Mesra, Ranchi, Jharkhand.

Sri Anant Kumar, Sr. Presv. Asst. sorted 22 collections of *Senecio* and *Cremanthodium* of Asteraceae for Dr. Long Wang, China from the general herbarium (CAL).

### Meeting attended

Dr. V. Sampath Kumar, Scientist 'D', Dr. Vinay Ranjan, Scientist 'D' and Dr. A. Bhattacharjee attended a meeting on 29.01.2016 at ZSI, Kolkata in connection with the visit of Sri Prakash Javadekar, Hon'ble Minister of State (Independent Charge), Environment, Forest and Climate Change and other members of Consultative Committee of Members of Parliament to Kolkata and Sunderban.

### Visitors

Ms. Marine Bellego, Institut national des langues et civilisations orientales, Paris visited monocot type section on 12.01.2016.

45 students (B.Sc.) of Surendranath College, Kolkata on 11.01.2016; 12 students (B.Sc.) of Gurucharan College, Silchar on 11.01.2016; 30 students M.Sc. (Botany) of Vidarbha Institute of Science, Amravati, Maharashtra on 15.01.2016; 25 students B.Sc. (Honours) of Sree Chaitanya College, Habra on 19.01.2016 and 21 students (B.Sc.) of Serampore College, Serampore on 19.01.2016.

### Publications

Bandyopadhyay, S. and Bhattacharjee, A. 2015. (101) Proposal to add a new Recommendation to Rec. 9B. *Taxon* 64(6): 1338.

Biswa S., Lakshminarasimhan, P. and Lokho, A. 2016 (2015). Phytodiversity of Koderma Wildlife Sanctuary, Jharkhand – An overview. *Phytotaxonomy* 15: 22–27

Jana, B. and Sampath Kumar, V. 2015. Lectotypification of five names in *Carex* L. (Cyperaceae). *Taiwania* 60 (4): 213–215.

Sampath Kumar, V. and Chakraborty, T. 2016. *Teucrium tomentosum* B. Heyne ex Benth. (Lamiaceae), an unnoticed later homonym for almost two centuries. *Phytotaxa* 243 (2): 197–198.

– Dr. P.V. Prasanna  
Scientist 'F' & HoO



Visit of Sri Anil Sant, Joint Secretary, MoEF&CC to CNH on 31st January 2016 Photo: D.L. Shirodkar



## CENTRAL BOTANICAL LABORATORY, HOWRAH

Ms. Sagari Chaudhury, SPA conducted a field tour to Bankura Dist., West Bengal from 22nd to 26th January, 2016 and collected 30 specimens including four for neutraceutical analysis. Dr. Harish Singh, Scientist 'D' & HoO, Dr. Dhole Pankaj Arvind, Bot. Asst. and Sri R. Saravanan, Bot. Asst. identified 32 plant specimens collected from Nuapada district of Odisha; Dr. K.A. Sujana, Scientist 'C' identified 38 species collected from Malkangiri district of Odisha and Sri A. C. Halder and Sri P. K. Baske, Botanists identified 30 plants collected from Nayagargh district of Odisha. Ms. Sagari Chaudhury, SPA identified five plant specimens collected from Bankura district, West Bengal. Dr. K.A. Sujana, Sri R. Saravanan and Ms. Monika Mishra, Bot. Asst. made description for 365 plants collected from Kuldiha Wildlife Sanctuary, Balasore district, Odisha and documented 120 plants field data. Dr. A.K. Verma, Scientist 'B' and Ms. Monika Mishra completed cytological studies on *Crotalaria spectabilis* ( $2n=16$ ) growing in AJCBIBG, Howrah and documented data from 150 Herbarium sheets of cytological voucher specimens on MS Excel sheets. Dr. Verma and Ms. Liza Mallick, Project Assistant analysed transcriptome data and chemical fingerprints and prepared binary data for HPLC profiles of *Gymnema sylvestris*.

### Public service rendered

Dr. Harish Singh reviewed a manuscript for the journal *Ethnobotany* and sent the comments to the editor.

### Visitors/ students

Information service was rendered on Ethnobotany to the 221 students and 24 teachers visited from Burdwan Raj College, Burdwan, West Bengal; Bajkul Milani Mahavidyalaya, Bajkul, Purba Medinipur, West Bengal; G.B. Pant Agriculture University, Pantnagar, Uttarakhand; Govt. Vidarbha Science College, Amravati, Maharashtra; VidyaSagar College, Kolkata; Serampore College, Serampore, Hooghly Dist., West Bengal; Lady Brabourne College, Kolkata; Dr. D.S. Rawat, Assistant Professor, Pantnagar Agricultural University, Uttarakhand; Dr. R.K. Roy, Sr. Principal Scientist, CSIR-NBRI, Lucknow, Uttar Pradesh and Prof. H.K. Chaurasia, Associate Professor, TNB Bhagalpur, Bihar.

### Publications

Singh, H. 2016. Promising Ethnobotanical Plants and Prospects of Plant based Cottage industries in Tribal areas of Odisha, India. In: A.K. Jain (Ed.), *Indian Ethnobotany: Emerging trends (Dr. S.K. Jain Felicitation volume)*, pp.33–50. Scientific Publishers, Jodhpur.

John, J., Sujana, K.A., Ragi, P.R. and Anil Kumar, N. 2015. Screening of antidiarrheal properties and phytochemicals of four rare plants used in traditional medicine. *J. Bio. Sci. Opin.* 3(6): 266–270.

– Dr. Harish Singh  
Scientist 'D' & HoO



Smt. Monika Mishra explaining about ethnobotanical exhibits to students at CBL, Howrah

Photo: R. Saravanan



Sri P.K. Baske delivering talk about Ethnobotany to students at CBL, Howrah

Photo: R. Saravanan

## INDUSTRIAL SECTION INDIAN MUSEUM, KOLKATA

The botanical paintings by Roxburgh are being interpreted: two species of *Eugenia* (Myrtaceae), three species of *Ficus* and *Artocarpus* (Moraceae) and six species *Cucurbita* (Cucurbitaceae) were interpreted with updated nomenclature and description.

### Database of Herbarium Specimens

As a part of preparing a database of specimens at BSIS, 50 specimens of Monocot and 67 specimens of dicot were listed and nomenclature updated.

### Public service rendered

Under the Narcotic Drugs and Psychotropic Substances Act, identified 7 samples received from different police stations of West Bengal.

### Publications

Pagag, K., Singh, S.K. and Roy, D.K. 2015. Notes on blooming of a rare orchid *Flickingeria macraei*. *Keanean J. Sci.* 4: 35–38.

Sahoo, A.K. 2016. Botanical Survey of India: The Epicenter of Ethnobotanical studies of Dr. S.K. Jain. In: A.K. Jain (Ed.) *Indian Ethnobotany: emerging trends*, pp. 315–322. Scientific Publishers, Jodhpur

– Dr. Manas Bhaumik  
Scientist 'D' & HoO

## ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

Dr. Sanjay Mishra, Scientist 'B', Dr. C.P. Vivek, Bot. Asst. and Sri Gautam Anuj Ekka, Presv. Asst., Grade - I conducted field exploration to Kyd, Pitman and James Islands in South Andaman from 20th to 24th January 2016 and vouched 155 field numbers along with the GPS data. Plants/seedlings of 20 species were introduced in the Dhanikhari Experimental Garden cum Arboretum, Nayashahar.

### Herbarium identification

Dr. T.A.M. Jagadeesh Ram, Scientist 'D' identified 76 specimens of Graphidaceae into 9 species.

Dr. Sanjay Mishra, Scientist 'B' identified four specimens of the family Cyperaceae at PBL as *Cyperus diffusus* (F. No. 14817, 2 specimens) and *Fimbristylis miliacea* (F. No. 9046, 2 specimens).

### Digitization of Herbarium Specimens

Dr. C.P. Vivek, Bot. Asst. incorporated and computerized the details of 34 herbarium specimens of the family Convolvulaceae in Excel sheet in connection with the digitization of herbarium specimens at PBL.

### Public service rendered

Dr. Sanjay Mishra delivered a lecture on the plant diversity of Andaman and Nicobar Islands to 70 students and 3 teaching Staff of RGT Public Vidyalaya, Port Blair on 13.01.2016 during their visit to Dhanikhari Experimental Garden cum Arboretum, Nayashahar as a part of their educational trip.

Total 88 Graphidoid lichens were sent on loan to CRC, Allahabad for revisionary studies.

**National Voters Day:** National Voters Day was observed by taking pledge by the officers and staff of ANRC at main office Port Blair on 25.01.2016.

**Republic Day celebration:** 67th Republic Day was celebrated by hoisting National flag at the ANRC office, Port Blair on 26.01.2016.

### Meetings /programmes attended

Dr. Mishra, attended General council meeting of Andaman Science Association (ASA) at ICAR-CIARI, Port Blair on 7.01.2016.

Dr. Lalji Singh, Scientist 'D' & HoO participated Research Advisory Committee (RAC) meeting at Office of the Chief Conservator of Forests, Research & Working Plan, Van Sadan Haddo, Port Blair on 08.01.2016 and also in inaugural function of the INSPIRE Program at Pondicherry University Campus, Port Blair on 08.01.2016.

Dr. Singh acted as a Chair Person and Judge, State Level Flower Show-2016 organised by Directorate of Agriculture, Andaman and Nicobar Administration, Port Blair on 13.01.2016.

Dr. Singh participated in Opening Ceremony as well as Valedictory Function and Presentation Ceremony of





**Dr. Lal Ji Singh greeting Sri Prakash Javedekar, Honourable Union Minister of Environment, Forest and Climate Change, New Delhi**  
Photo: Gautam Ekka

# The Andaman EXPRESS

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## Minister reviews BSI activities in isles



**PORT BLAIR:** The Regional Centre here, a Experimental Garden cum Union Minister of State subordinate organization Arboretum and in these (Independent Charge) for under MoEF& CC. He held discussion on endemic Environment, Forest & discussed various matters related to the documentation and conservation of the floral diversity of these Islands. Dr. Prakash Javedekar held a meeting with Dr.Lal Ji Singh, the Scientist and Head, Botanical Survey of India, Andaman and Nicobar species at the BSI Botanic regional center.

State Level Exhibition—Gyanodaya: 2015–16 at Govt. Girls Senior Secondary School, Port Blair on 13.01.2016 and 15.01.2016 respectively.

Dr. Singh received Honourable Union Minister of Environment, Forest and Climate Change, (MoEF & CC), Sri Prakash Javedekar at Port Blair Airport on 16.01.2016.

Dr. Singh accompanied Honourable Union Minister of MoEF & CC, Sri Prakash Javedekar during his visit to Ross Island and attended meeting with him at Raj Niwas, Port Blair on 17.01.2016.

Dr. Singh attended reception of 67th Republic Day Flag Hoisting celebration at Raj Niwas, Port Blair on 26.01.2016

Dr. Singh, attended 67th Republic Day Flag Hoisting celebration at Netaji Subas Chandra Bose Stadium, Port Blair on 26.01.16.

Dr. Singh, Scientist 'D' & HoO attended BEATING RETREAT Ceremony at Netaji Subas Chandra Bose Stadium, Port Blair on 29.01.2016

### Visitors/students

Sri S.C. Sharma, Sr. Account officer and Shri Sukhbeer, Account officer, Minister of Environment, Forest & Climate Change, New Delhi visited garden on 09.01.2016.

13 teaching Staff along with 70 students, RGT Public Vidyalaya, Port Blair visited garden on 13.01.2016.

Dr. Kalpana Shukla, Scientist (Microbiologist), US Research Institute, USA visited ANRC, Port Blair on 15.01.2016.

Dr. Kailash Chandra, Director-in-charge, Zoological Survey of India, Kolkata along with two Scientists and 4 staff members of ZSI, ANRC, Port Blair visited Dhanikhari Experimental Garden cum Arboretum (DEGA) on 18.01.2016.

Dr. M.N. Srivastava, Scientist, CDRI, Lucknow visited ANRC, Port Blair on 19.01.2016.

Dr. A. Anuraj, Scientist, CIARI visited library for consultation and herbarium on 27.01.2016 .

**– Dr. Lalji Singh**  
Scientist 'D' & HoO



**Sri S.C. Sharma, SAO and Shri Sukhbeer, AO, MoEF&CC, New Delhi at DEGA**  
Photo: C.P. Vivek



**Teaching Staff along with students, RGT Public Vidyalaya during their visit to DEGA**  
Photo: C.P. Vivek





Dr. Kailash Chandra, Director-in-charge, Zoological Survey of India, Kolkata at Dhanikhari Experimental Garden

Photo: Gautam Ekka



Dr. Lal Ji Singh delivers speech on National Voters Day in which officers and staff of ANRC took pledge at ANRC office, Port Blair

Photo: Gautam Ekka

## ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

Dr. Vineet Kumar Rawat, Scientist 'C' conducted Herbarium Consultation tour to CRC, Allahabad; CNH, Howrah and ERC, Shillong from 22nd December 2015 to 15th January 2016. During this tour, Dr. Rawat also made collections of Pteridophyte specimens in connection with ongoing project, 'Taxonomic study of Family Polypodiaceae of North East India'.

Dr. Souravjyoti Borah, Botanist carried out one herbarium consultation tour to ERC, Shillong from 17th January to 5th February 2016 in connection with 'Flora of Lohit District and Kamlang Wildlife Sanctuary'.

### Identification

Dr. P. Satyanarayana, Scientist 'D' & HoO and Sri B.B.T. Tham, Botanist made descriptions for 25 species for Flora of Pakhui Tiger Reserve and Wild Life sanctuary, East Kameng District.

Dr. V.K. Rawat identified five field numbers for the Taxonomic study of family Polypodiaceae of North East India.

Dr. Manish K. Kandwal Scientist 'C' identified and prepared descriptions for 13 species in connection with the study of Grass flora of Arunachal Pradesh.



*Aglaomorpha coronans* Photo: V.K. Rawat



*Drymoglossum heterophyllum*

Photo: V.K. Rawat



Dr. Umesh Kumar L. Tiwari, Scientist 'B' identified and prepared descriptions for 13 species in connection with Flora of East Kameng District, Arunachal Pradesh.

Dr. Krishna Chowlu, Scientist 'B' identified 23 species and entered data sheet for 6 specimens in connection with the study of Orchids of Arunachal Pradesh (Red Listing).

### Botanic Garden Inspection

Dr. Umesh Kumar inspected Botanic Garden at Chessa, SFRI, a project Funded by MoEF & CC, New Delhi on 22.01.2016.

– Dr. P. Satyanarayana  
Scientist 'D' & HoO

## ARID ZONE REGIONAL CENTRE, JODHPUR

In connection with the project, Ethnobotany of Dang District, Gujarat Sri Vinod Maina, Scientist 'D' & HoO and Sri Ravi Prasad, Bot. Asst. identified specimens of 8 field numbers. For Flora of Shoolpaneshwar WLS, Narmada District, Gujarat Dr. S.L. Meena, Scientist 'D' and Dr. Harikrishana Peddi, Bot. Asst. identified specimens of 70 field numbers. For Flora of Navsari District, Gujarat Dr. Ramesh Kumar, Scientist 'C' identified specimens 32 field numbers.

### Public service rendered

Identified total 179 plant specimens brought by Dr. Rohit M. Patel, Scientist, Terrestrial Ecology Division, Gujarat Institute of Desert Ecology, Gujarat.

### Visitors

Dr. Rohit M. Patel, Dr. Jayesh Bhatt and Sri Bhagirath of Gujarat Institute of Desert Ecology, Bhuj Gujarat consulted herbarium on 31<sup>st</sup> December 2015.

Col. Vir. Singh, Staff Officer, Army Education Core, Cantt. Jodhpur visited herbarium, Library and Garden on 13.01.2016 to collect information about medicinal and ornamental plants.

– Sri Vinod Maina  
Scientist 'D' & HoO



Col. Vir Singh, Staff Officer, Army Education Core at Mounting section, AZRC, Jodhpur

Photo: AZRC



*Tecomella undulata* in flowering

Photo: AZRC



## CENTRAL REGIONAL CENTRE, ALLAHABAD

A field tour was undertaken to Jaipur, Sikar, Jhunjhunun, Nagaur, Jodhpur, Barmer, Jaisalmer, Bikaner and their surroundings in Rajasthan by Sri Rasananda Kar, Bot. Asst. from 28th December 2015 to 15th January 2016 and collected 75 field numbers of lichens for the ongoing project, "Lichens of Rajasthan and Kutch, Gujarat".

Two-week field tour to Chhattisgarh was initiated by Drs. A.N. Shukla, Scientist 'B' and A.P. Tiwari, Presv. Asst. on 22.01.2016 for the ongoing project, "Flora of Chhattisgarh".

### Identification

28 field numbers were identified to 28 species for the projects, "Flora of Chandra Prabha Wildlife Sanctuary, Chandauli, U.P." and "Floristic diversity of Parvati Aranga Wildlife Sanctuary and adjoining Tikri forest area, Gonda, U.P."

Under Flora of India Projects, "Taxonomic studies on lichenised non-Thelotremoid Indian Graphidaceae" and "Lichens of Terai regions of Uttar Pradesh" a total of 28 specimens were identified in to 18 species. In addition, 51 earlier collected specimens housed at BSA were also identified.

### Scanning Electron Microscopy

Comparative SEM analysis of pollens of *Solanum nigrum* and *S. purpureilineatum* (Solanaceae) were made by Sri Vineet Singh, Bot. Asst.

### Public service rendered

Identified 45 specimens brought by Priyanka Singh, Research Scholar, Jiwaji University, Gwalior, Madhya Pradesh.

### Republic Day Celebration

Republic Day was celebrated at CRC, Allahabad as usual gaiety by hoisting flag by Head of the Office in the office premises.

### Official Language Inspection

Sri S. Choubey, Hindi Cell, MoEF & CC, New Delhi made Inspection of work done in Official Language, Hindi at CRC office on 19.01.2016. A two page report was submitted during the inspection.

### Seminar/ Lecture attended

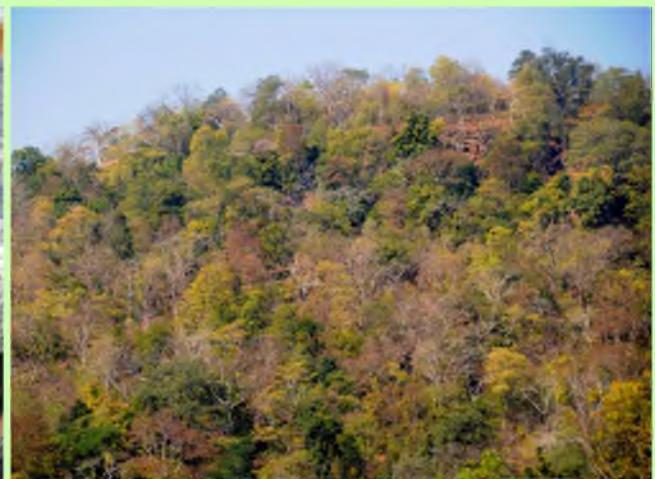
Dr. G.P. Sinha, Scientist 'E' & HoO attended a UGC sponsored National Seminar on "Biodiversity Conservation and Sustainable Development" at Brahmanand College, Kanpur on 20.01.2016 and delivered an invited lecture, 'Lichen diversity in India with special reference to Eastern Himalaya'.

Dr. Arti Garg, Scientist 'D' and Dr. Neelam K. Gautam Scientist 'B' attended 13th Prof. J.P. Srivastava Memorial lecture, 'Potential Bryophytes useful to mankind', delivered by Dr. Virendra Nath, Retd. Scientist, NBRI, Lucknow at C.M.P. Degree College, Allahabad on 22.01.2016.



Lichen vegetation on rocks at Harshgarh, Sikar, Rajasthan

Photo: Rasananda Kar



Mixed Dry Deciduous forest at Raigarh, Chhattishgarh

Photo: A.N. Shukla

### Publications

Singh, P., Singh, K.P. and Bhatt, A.B. 2015. Lichen genus *Lecanora* Ach. (lichenized Ascomycota) from Arunachal Pradesh, India. *Geophytology* 45(2): 127–138.

Singh, V. and Srivastava, S.K. 2015. Note on occurrence and copious growth of *Helminthostachys zeylanica* (L.) Hook. (Ophioglossaceae) in Tikri forest, Gonda, Uttar Pradesh. *Phytotaxonomy*. 15: 204–205.

Tiwari, A.P. and Shukla, A.N. 2015. Some additions to the flora of Chhattisgarh state, India. *Phytotaxonomy* 15: 129–132.

Tiwari, A.P., Khanna, K.K. and Dubey, P.C. 2015. Angiospermic diversity of Gandhi Sagar Wildlife Sanctuary, Madhya Pradesh, India. *Geophytology* 45(2): 139–152.

Srivastava, N. and Kumar, G. 2016. Fly ash induced chromotoxicity in green manure crop *Sesbania* pea. *Plant Cell Biotech. Mol. Biol.* 17(1&2): 1–6.

– Dr. G.P. Sinha  
Scientist 'E' & HoO

### DECCAN REGIONAL CENTRE, HYDERABAD

Sri S. Nagaraju, Bot. Asst. conducted one field tour to Chamala and Balapally ranges of Seshachalam Biosphere Reserve from 5th to 12th January 2016 and collected specimens of 186 field numbers. Dr. J. Swamy, Bot. Asst. conducted one field tour to Sacred Groves of Chittoor district from 5th to 12th January 2016 and collected specimens by utilising 154 field numbers.

Dr. J. Swamy, Bot. Asst. Identified 320 species from Chittoor district in connection with 'Flora of Sacred Groves of Andhra Pradesh'.

Documented 41 species for the ongoing projects, Flora of Nagarjunasagar – Srisailam Wildlife Sanctuary (15 species by Dr. L. Rasingam, Scientist 'C'), Flora of Satkosia Tiger Reserve (10 species by Sri K. Chandra Mohan, SPF) and Flora of Kawal Tiger Reserve (16 species by Ms. P.S. Annamma, SPF).

### Digitization of herbarium specimens

In connection with digitization of herbarium specimens at BSID, 600 herbarium specimens of Polygalaceae, Caryophyllaceae, Portulacaceae, Tamaricaceae, Elatinaceae, Dipterocarpaceae, Clusiaceae and Malvaceae were scanned and the field data entered.

### Public service rendered

Dr. J. Swamy, Dr. L. Rasingam and Sri K. Chandra Mohan identified 5 species for Pharmacy College students and for a Scientist, Taxonomy Division, Vijayawada.



A view of Papavinasanam Sacred Grove, Chittoor district, Andhra Pradesh

Photo: J. Swamy



*Terminalia pallida* from Papavinasanam Sacred Grove, Chittoor district, Andhra Pradesh

Photo: J. Swamy



### Workshop attended

Dr. K. Prasad, RA, attended two-day workshop on ‘Trends in Plant Taxonomy’ at Yogi Vemana University, Kadapa, Andhra Pradesh from 21st to 22nd January 2016.

### Visitors

Forest Section Officers of Telangana Forest Department (40 nos.) visited the centre on 22.01.2016. They learnt about the organization, herbarium, methodology of preservation and identification techniques as part of their training.

### Publications

Chorgha, A., Prasad, K., Prasanna, P.V. and Rao, Y.V. 2016. A new species of *Themeda* (Poaceae: Panicoideae) from the Eastern Ghats, India. *Phytotaxa* 245(2): 183–186.

Prasad, K. and Venu, P. 2016. A new generic status to section *Plectoglossa* (Orchidaceae-Habenaria). *Rheedea* 25(2): 86–93.

– Dr. P. Venu  
Scientist ‘G’ & HoO



Dr. J. Swamy, Bot. Asst. collecting Sacred Grove information at Talakona



Dr. J. Swamy explaining Herbarium techniques to Forest Section Officers of Telangana Forest Department

Photo: J. Swamy

## NORTHERN REGIONAL CENTRE, DEHRADUN

Identified total 73 species and made description for 60 species of Angiosperm in connection with the projects, Flora of Uttarakhand Vol. V, Floristic Diversity and Phytosociological study of Simbalbara National Park, Flora of Nandhour Wildlife Sanctuary, Flora of Sonanadi Wildlife Sanctuary, Revision of family Bignoniaceae, Cyatheaceae and genus *Lepisorus* (Sm.) Ching in India.

### Digitization of Herbarium specimens

Scanned and digitized 142 specimens of the family Capparidaceae and of Pteridophytes.



*Incarvillea emodi* – A threatened plant species from Western Himalaya

Photo: Amber Srivastava



*Markhamia lutea* flowered at Botanical garden in NRC, Dehradun

Photo: V.K. Madhukar



*Sophora mollis* flowered at Botanical garden in NRC, Dehradun

Photo: Manas R. Debta



*Vernonia amygdalina* flowered at Botanical garden in NRC, Dehradun

Photo: Manas R. Debta

### Scanning Electron Microscopy

SEM studies on pollens of *Macfadyena unguis-cati* and *Clytostoma binatum* (Bignoniaceae) were done in connection with the revision of the family Bignoniaceae in India.

### Public Service rendered

Identified 3 species viz., *Atriplex hortensis* for Sri Tsewang Rinchen, Research Scholar DRDO, Leh, Ladakh. Identified *Cyperus procerus* and *Cyperus rotundus* for Dr. Sristi Dhyani, Dept. of Dravyaguna, Rishikul Campus, Haridwar.

### Meetings/Programmes attended

Dr. S.K. Srivastava Scientist 'E' & HoO attended pre thesis seminar of Sri Prem Prakash, Research Scholar FRI (wood anatomy) Botany Division on "Wood structure studies of indigenous ligneous species of spurge family Euphorbiaceae" on 27.01.2016 as one of expert members of standing RAC of forest botany.

### Visitors/students

Three students from different Colleges visited the centre for consultation of herbarium as well as Library.

### Publications

Madhukar, V.K., Srivastava, S.K. and Dubey, N.K. 2015. Systematic account of the genus *Kigelia* D. Don (Bignoniaceae) in India. *Phytotaxonomy* 15: 15–21.

Manikandan, R. and Srivastava, S.K. 2015. Threatened medicinal plants protected in-situ in Govind Pashu Vihar Wildlife Sanctuary, Western Himalaya. *Phytotaxonomy* 15: 90–95.

Panwar, G.S., Srivastava, S.K. and Uniyal, P.L. 2015. *In vitro* propagation of *Eremostachys superba* Royle ex Benth. – an endangered, medicinal and ornamental herb of North-West Himalaya. *Medicinal Plants*. 7(4): 264–271.

– Dr. S.K. Srivastava  
Scientist 'E' & HoO



## SIKKIM HIMALAYAN REGIONAL CENTRE, GANGTOK

Dr. Dinesh Kumar Agrawala, Scientist 'C' & HoO identified one orchid specimen *Coelogyne corymbosa* [DKA 39227] and 30 other orchid specimens were finalized in respect of their identity, geo-coordinates and entry in the excel sheet.

Sri S.K. Rai, Presv. Asst. identified 23 species from 51 unidentified herbarium sheets.

Sri Subash Pradhan, Fieldman identified 7 species from 16 unidentified herbarium sheets.

### Digitisation of Herbarium specimens

300 herbarium specimens of Ranunculaceae were digitized during this month.

### Meetings/ workshop/programmes attended/ Conducted

Conducted one Hindi workshop on "*Vigyan mein Hindi ka Prayog*" on 21.01.2016 at SHRC, Gangtok. Sri Vinayak Soni, PGT, Kendriya Vidyalaya, Gangtok was the Chief Speaker on this occasion. Sri Soni emphasized the use of Hindi in scientific research and provided hand on training on few software related to typing in Hindi.

Dr. D.K. Agrawala attended as an interview board member for selection of project staff at Ayurveda Regional Research Institute, Tadong, Gangtok on 05.01.2016.

Dr. David Lalsama Biate, Scientist 'B' attended training programme on "Official Procedures, Purchase, Procurement management and Team Building" at ICAR-National Research Centre for Orchids, Pakyong, Sikkim on 08.01.2016.

Dr. Sankararao Mudadla attended as a member of DPC in Directorate of Census Operations, Sikkim at Gangtok on 22.01.2016.

### Visitors/students

24 students visited from Govt. Vidharbha Institute of Science and Humanities, Amravati, Maharashtra on 12.01.2016 as a part of their study tour.



"Hindi workshop on "*Vigyan mein Hindi ka Prayog*" at SHRC, Gangtok

Photo: Dewan Yadav

– Dr. D.K. Agarwala  
Scientist 'C' & HoO

## SOUTHERN REGIONAL CENTRE, COIMBATORE

Dr. M. Palanisamy, Scientist 'D' and Sri S.K. Yadav, Bot. Asst. identified 17 field numbers of seaweed specimens. Dr. K.A.A. Kabeer, Scientist 'D' and Sri A. Ravi Kiran, Bot. Asst. identified and labelled 27 field numbers of previous collections from Kodaikanal Wildlife Sanctuary, Tamil Nadu. Dr. J.H. Franklin Benjamin, Scientist 'B' and Sri R.G. Vadhayar, Bot. Asst. identified specimens of 82 field numbers collected from the Malabar Wildlife Sanctuary, Kozhikode, Kerala. Dr. G.V.S. Murthy, Scientist 'F' & HoO and Sri K. Yarrayya studied and made description for 20 species of *Fimbristylis* and 3 species of *Bulbostylis*. Dr. C. Murugan, Scientist 'D' determined 10 field numbers of *Memecylon* at MH.

### Ex-situ conservation

Dr. S. Kaliamoorthy, Scientist 'D' introduced 90 plant samples of orchids, comprising 27 species, of which 6 species were collected by Dr. K.A.A. Kabeer and Sri A. Ravi Kiran from Kodaikanal WLS, Tamil Nadu. Dr. S. Sundaramoorthy, Scientist 'B' collected 21 plants from various places viz., Tirunelveli, Thanjavur, Madurai and Virudhunagar of Tamil Nadu and Mysore of Karnataka and introduced into the National Orchidarium and Experimental Garden (NO&EG), Yercaud.

In addition, Dr. Kaliamoorthy and his team multiplied 108 plant samples (29 samples of orchids and 79 samples of other plants), transplanted 14 plants and developed 48 seedlings and 98 cuttings. They also recorded the phenology of 23 species including 14 orchids and 9 other angiosperms. Dr. Kaliamoorthy collected and fixed the flower of orchid taxa *Tainia bicornis* in preservatives for SEM study.



Photo: G. Gnanasekaran

*Andrographis megamalayana* (Acanthaceae): a new species reported from Southern Western Ghats



Photo: S. Kaliamoorthy

*Cheirostylis flabellata* (Orchidaceae)



*Clematis gouriana* (Ranunculaceae)

Photo: A. Ravikiran



*Henckelia incana* (Gesneriaceae)

Photo: A. Ravikiran



*Polyalthia korinti* (Annonaceae)

Photo: A. Ravikiran



### Databasing and Digitization of herbarium specimens

Digital image of 6 species of *Lagenandra* and details of 105 herbarium sheets of Satyamangalam Forest were added in MH database. In addition, 10 isotype specimens (8 from S.N.M. College, Ernakulam and 2 from Calicut University, Kerala) were incorporated in type section.

### Scanning Electron Microscopy

Dr. G. Gnanasekaran, Bot. Asst. studied and taken 10 micrographs of seeds of the species of *Gymnostachyum* (Acanthaceae). Dr. Gnanasekaran also took 15 SEM micrographs of 4 species of *Sporobolus* (Poaceae) leaf surfaces for Sri S. Arumugam, Bot. Asst.

### Public service rendered

During this month, a total of 69 plants including 14 Seaweed samples were identified for research scholars and students from various institutions.

Dr. Palanisamy evaluated a Ph.D. thesis entitled, "Phycochemical Composition and Oncolytic effect of *Hypnea musciformis* (Wulfen) Lamouroux on 7,12-Dimethyl Benz(A) Anthracene (DMBA) Induced Experimental Model of Mammary Carcinogenesis" submitted by Sri M. Balamurugan to the Annamalai University.

Dr. J.V. Sudhakar accompanied Tamil Nadu Forest officials during a field tour to Analamais on 07.01.2016 for collection and Introduction of *Ficus* species in Ficitorium, at Sircarpathy (Pollachi), Coimbatore. Dr. Sudhakar also provided the List of *Ficus* species distributed in Tamil Nadu and Anamalai hills to DFO, Anamalai Tiger Reserve, Udumulaipet.

Dr. G. Gnanasekaran, Sri S.K. Yadav and Sri A. Ravi Kiran explained about BSI, Madras Herbarium and its arrangements and Herbarium Methodology to 25 PG students of SSR Degree College, Nizamabad (Telangana) on 11.01.2016 and 39 UG & PG students of UC College, Aluva and 12 PG students of St. Dominic's College, Kanjirapally, Kerala on 19.01.2016.

17 herbarium specimens of the genus *Pteris* were sent on loan for the study of Ms. Piu Das, CNH in connection with Flora of India Project.

Digital image of 6 species of *Lagenandra* were sent to WRC, Pune

### Training/conference/programme attended

Dr. M. Palanisamy and Dr. C. Murugan attended *Training programme on Disciplinary Procedure and Conduct Rules* on 4<sup>th</sup> and 5<sup>th</sup> January, 2016 at the Regional Training Institute, Institute of Government Accounts and Finance, Rajaji Bhawan, Chennai.

Dr. S. Kaliamoorthy attended *International Conference on Frontiers in Life Sciences (ICFLS-2016)*, organized by the Department of Botany, St. Joseph's College (Autonomous), Tiruchirappalli, Tamil Nadu on 7th and 8th January 2016 and delivered a lecture, "Ex situ conservation of orchids – Role of BSI, NOEG, Yercaud" and chaired a scientific session.

Dr. T.S. Saravanan, Bot. Asst. participated and made a poster presentation, "Study on asymbiotic seed germination in vitro in two endemic orchid species viz., *Coelogyne breviscapa* Lindl. and *Vanda spathulata* (L.) Spreng." in the *International Conference on Frontiers in Life Sciences (ICFLS-2016)*, organized by the Department of Botany, St. Joseph's College (Autonomous), Tiruchirappalli, Tamil Nadu, and won the first prize (Shield & Certificate) for the best poster presentation.

Dr. G.V.S. Murthy, Dr. M. Palanisamy and Dr. C. Murugan attended the Silver Jubilee celebration of Salim Ali Centre for Ornithology and Natural History (SACON), Anaikatty, Coimbatore on 28.01.2016, in which Sri Prakash Javadekar, Hon'ble Minister of State (I/C) for Environment, Forest and Climate Change, Government of India was the Chief Guest.

Scientists and scientific assistants of the centre attended Ph.D. public viva-voce entitled, "Selection, Genetic evaluation and Molecular characterization in *Ailanthus excelsa* Roxb." on 13.01.2016 at Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore.

### Visitors/students

A total of 125 students, research scholars, scientists, professors/officials visited the herbarium and library of this regional centre whereas 835 persons in 124 parties visited the National Orchidarium and Experimental Garden (NO&EG), Yercaud.

### Publication

Gnanasekaran, G., Karuppusamy, S. and Murthy, G.V.S. 2016. *Andrographis megamalayana* (Andrographinae: Acanthaceae), a new species from the southern Western Ghats, India. *Phytotaxa* 244: 89–95.

Gnanasekaran, G., Kottaimuthu, R. and Murthy, G.V.S. 2015. Taxonomy of *Andrographis rothii*: A stenoendemic species from the southern Western Ghats, Tamil Nadu, India with notes on lectotypification and identity of *A. lobelioides* var. *composita* (Acanthaceae). *Rheedea* 25(2): 109–115.

Ravikumar, K., Gnanasekaran, G. and Tiwari, U. 2015. Rediscovery and lectotypification of *Phyllanthus megacarpus* (Phyllanthaceae), an endemic species from the Western Ghats, India. *Rheedea* 25: 116–119.

Singh, R.K., Garg, A. and Singh, P. 2015. Typification of ten species of *Litsea* Lam. (Lauraceae) endemic to India. *Bangladesh J. Plant Taxon.* 22(2): 77–81.

Chandore A.N., Borude, D.B. and Kamble, M.Y. 2015. *Eleocharis ochrostachys* (Cyperaceae), a new record for Andaman & Nicobar Islands with a note on the identity of *E. swamyi*. *Rheedea* 25(2): 106–108.

– Dr. G.V.S. Murthy  
Scientist 'F' & HoO



Explaining about plant specimen processing to Tamil Nadu Agricultural University students, Coimbatore

Photo: SRC



Dr J.V.S. Sudhakar during field trip to Anamalais with Tamil Nadu Forest Department officials

## WESTERN REGIONAL CENTRE, PUNE

During this month, about 10 angiosperm specimens collected from Biligiri Rangaswamy Temple (BRT) Wildlife Sanctuary, Karnataka were identified by Dr. J. Jayanthi, Scientist 'D'. About 95 field numbers of orchid species were assigned their geo-coordinates for Orchids of Goa by Dr. J.S. Jalal, Scientist 'C'. Four fern species were identified by Dr. A. Benniamin, Scientist 'D' in connection with Pteridophytes of Karnataka. Ms. S. Sengupta, SPF processed about 22 dry specimens for identification of microfungi collected from BRT Wildlife Sanctuary. Sri D. Tripathi, SPF identified four Pteridophyte specimens collected from Kudremukh National Park, Karnataka.

### Public service rendered

Dr. J.S. Jalal reviewed one research article for the journal *Internal Invention Journal of Agriculture and Soil Science* (IIJAS).

During this month, identified and authentication certificates were issued to 14 students from B. Pharm, and M. Pharm. colleges, and Ph.D. and P.G. students from different institutions.



### Meetings /programmes organised/attended

The 7th Research Advisory Monitoring Committee (RAMC) meeting of BSI was organised at this centre on 18.01.2016. The meeting was conducted under the chairmanship of Prof. A.K. Koul, Jammu University. The other members of the committee attended were Prof. D.J. Bhat, Goa University, Prof. S.C. Srivastava, Lucknow University, Dr. R.R. Rao, CIMAP, Dr. C.S. Nautiyal, Director, CSIR-NBRI, Dr. P. Latha, Director, TBGRI, and Dr. R. Dalwani, Advisor, MoEF & CC. The meeting was also attended by Dr. Paramjit Singh, Director, BSI along with Dr. B.K. Sinha, Scientist 'F', BSI, Hqrs. and Sri Sabyasachi Saha, Botanist, BSI, Hqrs. The RAMC Chairman, Prof. A.K. Koul also inaugurated newly made SEM room at WRC.

Dr. P. Lakshminarasimhan, Scientist 'E' & HoO attended the inauguration of the Lead Botanical Garden and Nilambari Auditorium at Botanic Garden, Shivaji University, Kolhapur, which was inaugurated by Hon'ble Sri Prakash Javadekar, Union Minister of State (I/C), Environment, Forest and Climate Change, Government of India, on 15.01.2016. Dr. A. Benniamin, Scientist 'D' and Dr. Rashmi Dubey, Scientist 'D' also attended the inaugural function.

Dr. P. Lakshminarasimhan attended two meetings at Council Hall, Pune on 04.01.2016 and 23.01.2016 regarding Plastic Waste Free Pune which was chaired by Sri Prakash Javadekar, Union Minister of State (I/C), Environment, Forest & Climate Change, Government of India. Dr. A. Benniamin, also attended a meeting at Council Hall, Pune on 04.01.2016; Dr. Benniamin also attended the meeting convened by Deputy Commissioner, PMC and District Forest Officer at Balgandarva Rang Mandir, Pune on 16.01.2016.

Dr. P. Lakshminarasimhan and Dr. A. Benniamin, received Hon'ble Union Minister Sri Prakash Javedekar at Pune airport on 2nd, 14th and 22nd January 2016.



Dr. P. Lakshminarasimhan welcomes RAMC members



RAMC members visiting botanic garden at WRC



RAMC members visiting museum at WRC



Inauguration of SEM room at WRC

Photo: S.C. Patil

### Visitors/students

42 students and five faculty members from Department of Pharmacognosy, Gaurishankar Institute of Pharmaceutical Education and Research, Limb, Satara, Maharashtra visited on 12.01.2016.

### Publications


Jalal, J.S., Jayanthi, J. and Lakshminarasimhan, P. 2015. *Habenaria suaveolens* Dalzell (Orchidaceae), a new distributional record for Goa state. *Phytotaxonomy* 15: 206–208.

Ingle, P. and Dhabe, A. 2015. Anatomical Investigation of *Terminalia chebula* Retz. *Phytotaxonomy* 15: 55–62.

– Dr. P. Lakshminarasimhan  
Scientist 'E' & HoO



**PLANT OF THE MONTH**



***Brownea coccinea* Jacq. (CAESALPINIACEAE)** Known as Mountain Rose or Rose of Venezuela is native to Guyana, Venezuela, Brazil and Trinidad and Tobago. Planted worldwide as ornamental avenue tree.

By Dr. B. K. Singh

**THE ECHO OF INDIA**

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PAGES: 8      PORT BLAIR THURSDAY, JANUARY 31, 2016

**2 new species of Ethno medicinal Mistletoes discovered**



**PORT BLAIR, JAN 28** - BSI scientists have discovered two new species of parasitic plants of mistletoes in the Andaman and Nicobar Islands.

The Andaman and Nicobar Islands constitute 572 islands in the country spread over 12 lakh sq km. Despite their size, they have a rich flora and fauna which is unique and diverse. The Botanical Survey of India has been working to establish a comprehensive documentation of this flora by taxonomists in the Andaman and Nicobar Islands.

However, the parasitic plants are rarely seen and hence the scientists have been actively working to identify and document them with particular emphasis on their genetic variation.

Some of the new species are *Microdroseris* and *Macrosiphonanthus* discovered in the forest of Anandpur in the South Andaman. The lead researcher Dr. Suresh Kumar Singh, Director, Botanical Survey of India, Ministry of Environment, Forest and Climate Change for scientific contributions in the field of Andaman Islands macroecology and parasitology, has been honored in the forest of Anandpur in the South Andaman. The species is named in honor of Dr. Suresh Kumar Singh, Director, Botanical Survey of India, Ministry of Environment, Forest and Climate Change for scientific contributions in the field of Andaman Islands macroecology and parasitology.

Through South and South Andaman, the lead researcher Dr. Suresh Kumar Singh, Director, Botanical Survey of India, Ministry of Environment, Forest and Climate Change for scientific contributions in the field of Andaman Islands macroecology and parasitology, has been honored in the forest of Anandpur in the South Andaman. The species is named in honor of Dr. Suresh Kumar Singh, Director, Botanical Survey of India, Ministry of Environment, Forest and Climate Change for scientific contributions in the field of Andaman Islands macroecology and parasitology.



Hon'ble Minister Sri Prakash Javadekar with BSI officials during inauguration of Lead Botanical Garden, Kolhapur. Giant water Lily (bloom in the foreground) was introduced from AJC Bose Indian Botanical Garden, Howrah.

Photo: Lead Botanical Garden, Kolhapur

*Thanks to all the scientists and staff of various regional centres and units of Botanical Survey of India for contributing to this newsletter*

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