



BSI NEWSLETTER

The monthly electronic newsletter of Botanical Survey of India

Director's column

Scientists of BSI, in connection with the ongoing projects conducted field trips to various parts of India. Important field tours to the protected areas are: Agasthyamalai Biosphere Reserve in Kerala; Someshwara Wildlife Sanctuary, Kudremukh National Park and Bhadra Tiger Reserve in Karnataka; Baralia lake Salim Ali Jubba Sahni Bird Sanctuary in Bihar and Yangoupokpi Lokchao Wildlife Sanctuary in Manipur. Apart from these, they made collections in Mancherial and Asifabad districts of Telangana, and Sindhudurg district of Maharashtra.

The Eastern Regional Centre, BSI conducted a three-day workshop on 'Training on Basics of Plant Taxonomy and Nomenclature' at Shillong. In this workshop, total 39 candidates from various parts of Northeastern states participated. The Scientific officials of Central National Herbarium, BSI, Howrah acted as resource persons.

Three BSI scientists received the awards during the seminar on 'Glimpses of Research Work in Taxonomy and Ethnobotany and APT & SEB Medal Award Ceremony' held at CSIR-NBRI, Lucknow. Dr. V. Sampath Kumar awarded with "Prof. B.A. Razi Medal", Dr. R.K. Gupta received "Prof. B.N. Prasad Medal" while Dr. Pushpa Kumari received "Dr. V. Mudgal Medal".

Jai Hind!

Paramjit Singh

Director, Botanical Survey of India, Kolkata



HEAD QUARTERS, KOLKATA

Mr. M.E. Hembrom, Botanist conducted a field survey tour from 28th October to 11th November 2016 and surveyed about 700 sq. km areas (24°06'07.2"N– 24°25'49.8"N to 87°17'54.1"E – 87°28'45.5"E) of Kathikund and Raneshwar blocks of Dumka district (400 sq. km areas) and Sahibganj district (24048'57.9"– 25007'31.2"N to 87043'27.9"–87025'28.2" E) of Mandro, Borio and Taljhari block (300 sq. km areas) and collected about 80 Field numbers of wood rotting fungi.

In connection with the Research project, 'Taxonomic diversity and ecology of cyanobacteria and algae in the alpine regions of Eastern Himalaya', Dr. S.K. Das identified five species of diatoms.

In connection with the projects on 'Algal Flora of Jharkhand', 'Studies on wild mushrooms of Sikkim', 'Studies on the macrofungi of AJCBIBG', 'Wood rotting fungi of Rajmahal hills', 'Revision of the family Metzgeriaceae in India', and 'Liverworts and Hornworts Flora of Darjeeling District, West Bengal', identification, descriptions and illustrations are made by the Scientific officials.

Seminar/conference/lecture attended/delivered

Drs. Subir Bandyopadhyay, Scientist 'B' and Sangita Das Chowdhury, AJCBPDF acted as resource persons in the three-day workshop on 'Training on Basics of Plant Identification and Nomenclature' at ERC, BSI, Shillong from 7th to 9th November 2016.

Dr. R.K. Gupta, Scientist 'D' attended the seminar on 'Glimpses of Research work in Taxonomy and Ethnobotany and APT & SEB Medal Award Ceremony' at National Botanical Research Institute, Lucknow on 15.11.2016. Dr. R.K. Gupta received Prof. B.N. Prasad medal (2016) and citation in the field of Taxonomy of Algae and delivered a lecture on 'Algal habitats in India with special reference to thermal springs'.

Dr. A.B.D. Selvam delivered a lecture on "Cycas: an Indian overview" on 18.11.2016 at Central National Herbarium, which was attended by the scientific officials of BSI, Howrah.

Dr. A.B.D. Selvam attended the National Conference on "Conservation, Cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants" and delivered a lecture on "Indian Cycas L.: An Overview" at T.N.B. College, Bhagalpur, Bihar on 21.11.2016.

The scientific officials of Hqrs., BSI attended a talk on "KAS PLATEAU: A botanical paradise" by Dr. M. Sanjappa, former Director, BSI at Central National Herbarium conference room on 23.11.2016.

Public service rendered

Dr. A.B.D. Selvam pharmacognostically studied and authenticated the leaves and male cones of *Cycas revoluta* Thunb. (Cycadaceae), which was received from M/s Imami Limited, Kolkata.

Publications

Ghosh, A., Das, K., Adhikari, S. and Bhatt, R.P. 2016. A novel species of *Russula* (Russulaceae) from Indian Himalaya. *Mycosphere* 7(6): 778–785.

Singh, D. Two new records of family Lejeuneaceae (Marchantiophyta) from Sikkim, India. *Indian J. Forest.* 39 (3): 267–272.

Das, S.K. and Singh, D. 2016. New distributional record of two marine macro-algae from Larsemann hills, East Antarctica. *Phykos* 46 (2): 29–32.

Selvam, A.B.D. 2016. Indian *Cycas* L.: An overview. In: H.K. Chourasia and A.K. Roy (Eds.), *Conservation, Cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants*, pp. 307–314. Today & Tomorrow's Printers and Publishers, New Delhi.



Dr. R.K. Gupta receiving Prof. B.N. Prasad medal (2016) and citation in the field of Taxonomy of Algae

AJC BOSE INDIAN BOTANIC GARDEN, HOWRAH

Dr. Pratibha Gupta, Scientist 'E', surveyed King Lake, Prain Lake, Diwan Lake, Janardan Lake, Shadir Lake, Leram Lake etc., of AJC Bose Indian Botanic Garden along with Dr. A. Pramanick, Scientist 'E' & HoO on 08.11.2016 to know the basic physical conditions of the lakes for the study and possibility of implementation of Grander Technology.

Dr. Pratibha Gupta studied six numbers of Algal samples collected from Antartica under Leica DM 2500 Microscope and 152 numbers of photomicrographs of these samples were taken.

Garden Maintenance

Regular maintenance of the plant saplings collected during different tours are being carried out at nurseries. Special drive is taken for de-weeding with recently procured new garden equipment and cleaning of different divisions and vantage points in the garden. Preparation of bed for winter flower plantation is under progress.

14 encaged aerial roots of the Great Banyan tree were repaired during this period in respect of re-fixing and replacing of bamboo cages fitted to them according to their growth and necessity. New support has been provided to two heavy branches by bamboos. Four aerial roots were encaged in bamboo cages for training them as 'prop root'. About 90 prop roots have been applied with fungicide (Blitox with Lincid oil) to restrict fungal attack.

Public service rendered

Handed over a rescued Russell viper from AJCBIBG to the "Forest Department officials of Urban Forestry Division, Kadamtala, Howrah.

Dr. Pratibha Gupta reviewed the research paper for publication in *Palgo Journal of Medicine and Medical Sciences* (PJMM) on request of Paul O. Aghogho.

Dr. S.S. Hameed provided expertise advice to Lloyd Botanic Garden Darjeeling for its upliftment and future development programme as per the request received from West Bengal Forest Department.

Meeting attended

Col. Giles Crisp and Maj. Gurney and three Lady members from International Dendrological Society (IDS) and BGCI, UK had meeting with Dr. A. Pramanik and other scientific officials at AJCBIBG, Howrah.

Visitors/students

30 students from Department of Botany, Guwahati University, Assam visited garden on 02.11.2016.

15 M.Sc. students from Handique Girls college, Guwahati Assam visited garden on 07.11.2016.

Dr. A.K. Bhatnagar, University of Delhi & Principal Investigator, Botanical Gardens and Heritage Sites: Role in Plant Introduction and Conservation alongwith one person visited garden on 12.11.2016.

Ms. Ruchira Das and other 9 members from Think Art group visited the garden under the Silk River Project, Drawing connection between Royal Botanic Gardens, Kew and AJCBIBG visited garden on 20.11.2016.

Hon'ble M.P., Smt. Renuka Chowdhury, Chairperson, Committee on Science and Technology, Environment and Forest, along with 11 Hon'ble M.P. and other 18 people visited garden on 22.10.2016.

70 students from Gobindapur Ratneswar High School along with State Biodiversity Board officials visited garden on 23.10.2016.

Publication

Gupta, P. 2016. Changing Climate and its effect on Cyanobacteria. *Climate Change* 2(8): 589–600.

– Dr. A. Pramanik
Scientist 'E' & HoO

CENTRAL NATIONAL HERBARIUM, HOWRAH

Dr. Avinash Kumar Bharti, Scientist 'B' conducted one field tour to Baralia lake Salim Ali Jubba Sahni Bird Sanctuary, Bihar from 10th to 15th November 2016.

Dr. V. Sampath Kumar, Scientist 'D' consulted the herbarium of LWG (NBRI) from 15th to 19th November 2016 and the herbarium of CDRI on 17.11.2016.

Dr. Kumar also consulted the herbaria of BSD (NRC) and DD (FRI) from 21st to 29th November 2016. During this tour apart from Labiate specimens, the Barringtoniaceae/Lecythidaceae specimens in DD were also consulted by Dr. Kumar in connection with the 'Flora of India'. Total ca 500 specimens were consulted and determinative slips were made by Dr. Kumar wherever discrepancies were noticed.

Dr. O.N. Maurya, Scientist 'C' consulted herbaria of Bhagalpur University, Ranchi University and Ranchi College from 20th to 28th November 2016 for families of Portulacaceae, Tamaricaceae, Lentibulariaceae, Gesneriaceae, Scrophulariaceae, Cuscutaceae, Orobanchaceae and Pedaliaceae.

Herbarium specimen identification

Dr Vinay Ranjan, Scientist 'D' identified specimens of two field numbers collected from Aurangabad and Nawada districts of Bihar.

Dr. Maurya identified specimens of nine field numbers collected from Vikramshila Gangetic Dolphin Wildlife sanctuary, Bhagalpur, Bihar.

Sri P.P. Ghoshal, Botanist identified six species collected from Betla National Park, Latehar, Jharkhand.

Dr. Gopal Krishna and Sri Anant Kumar, Bot. Asstt. identified four field numbers collected from Neora Valley National Park, Darjeeling district, West Bengal.

Sri V.K. Mastakar, Bot. Asst. identified 10 species belonging to different genera of Leguminosae in Hall 2.

Herbarium specimens digitized

Scanned 40 specimens, data entered for 93 Type specimens and 30 general herbarium specimens in Excel sheet by Sri Anand Kumar, Bot. Asst. Data verified and validated for 10 type specimens by Sri P.P. Ghosal.

Scanning Electron Microscopy

A total of 87 plant specimens have been scanned using SEM by Ms. S. Shalini (15 *Argyria* spp.- Pollen, Leaf, and Seed), Dr. Rajib Gogoi (6 *Impatiens* spp. Seed and Pollen), Ms. Piu Das (27 *Pteris* spp.- Spore and Leaf), Dr. Devendra Singh (10 *Bryum* spp., *Metzeria* spp., *Pellia* spp., *Dounia* spp.- Spore, Thallus and Leaf); Ms. Chandani Gupta (two *Rubus hexagynus*-Seed) ; Sri Saurabh Sachan (13 Lauraceae Pollen); Dr. Kanad Das (6 *Russula* & *Crotinanus* spp.- Spore); Ms. Pamela Saha (8 Moss spp.- Spore and Thallus).

Public service rendered

CNH officials identified 28 plant specimens: 4 species by Dr. R. Gogoi; 3 species by Dr. Subir Bandhopadhyay; 3 species by Sri Mastakar and 18 species by Sri Shyam Biswa, which have come from The Deputy Excise Collector and Asstt. Commissioner of Excise, Raniganj Range, West Bengal; CSIR- Indian Institute of Chemical Biology, Jadavpur, Kolkata; Department of Pharmaceutical Sciences and Technology, BIT, Mesra, Ranchi, Jharkhand; Dr. B. C. Roy College of Pharmacy and Allied Health Sciences, Bidhannagar, Durgapur; Bengal School of Technology, Hooghly; Jawahar Navodaya Vidyalaya, Howrah; Department of Pharmacology and Toxicology, West Bengal University of Animal and Fishery Sciences, Mohanpur.

Dr. K. Karthigeyan, Scientist 'D' reviewed an article received from *Journal of Threatened Taxa*.

Dr. Karthigeyan also provided images of eight scanned herbarium specimen images of *Hemiorchis* spp. to Dr. Mark Newman, Royal Botanic Garden, Edinburgh, Scotland and information on the availability of *Didymocarpus membranacea*, Acc. no. 36686 to Ms. Janeesha Haseem, University of Calicut, Kerala.

Dr. S. Bandyopadhyay, Scientist 'B' provided protologue of *Derris thothathrii* to Dr. Manoj Lekhak, Shivaji University, Kolhapur, Maharashtra; 3 pages from *Notes Roy. Bot. Gard. Edinburgh* 21: 1954 and 26: 1965 to Dr. K. Narayanan Nair, CSIR-National Botanical Research Institute, Lucknow; of 4 pages from *Bull. Bot. Surv. India* 20(1-4): 136-139 to Dr. S. Datta, Asstt. Professor in Botany, Serampore College; 2 pages from *Flora of Hassan District* (1976) to Dr. K.N. Gandhi; 40 pages from *Nelumbo* 53: 93-132 to Dr. Asis Kumar Nandi, Associate Professor of Botany, Vidyasagar University, Midnapore and 5 pages from *Ind. J. Trad. Knowledge* 1(1): 17-21] to Dr. Abhijit Bandyopadhyay, Burdwan University.

Dr. Bandyopadhyay also provided the image of the holotype of *Derris thothathrii* to Dr. K.N. Gandhi.

Dr. Bandyopadhyay reviewed the two manuscripts received from the Publication Officer, Journal of the Bombay Natural History Society and Publication-in-Charge, *Nelumbo*.

Dr. Bandyopadhyay acted as a judge of the poster display competition in the UGC sponsored National Conference on 'Conservation, Cultivation, Diseases and Therapeutic importance of Medicinal and Aromatic plants' organized by Department of Botany, TNB College, Bhagalpur and PG Department. Home Science, Food and Nutrition, TMBU, Bhagalpur.

Dr. Avishek Bhattacharjee, Scientist 'B' sent images of 20 specimens and 3 literature of *Trapa* to Nancy Rybicki, US Geological Survey, Reston.

Meetings/Seminar/conference/workshop attended/lecture delivered

Vigilance Awareness week organized in Central National Herbarium from 4th to 10th November 2016.

Drs. V. Sampath Kumar, A. Bhattacharjee and G. Krishna attended three-day workshop on 'Training on Basics of Plant Identification and Nomenclature' at ERC, BSI, Shillong from 7th to 9th November 2016 as resource persons and imparted training to the students and college teachers from NE India.

Dr. V. Sampath Kumar delivered four lectures, 'History of code of Botanical Nomenclature', 'Author Citation' and 'Categories and Hierarchy' and 'How to describe a new taxon' and also conducted a plant identification practical class along with Drs. S. Bandyopadhyay, A. Bhattacharjee, G. Krishna and Sangita Dey. On 9th November evaluated the Questionnaires on plant nomenclature answered by the participants on plant nomenclature during the training course at ERC, BSI, Shillong.

Dr. S. Bandyopadhyay also delivered three lectures, 'How to read the roman numerals?' 'Symbols and abbreviations' and 'Typification of Plant Names' at ERC, BSI, Shillong during the training course.

Dr. A. Bhattacharjee delivered 3 lectures/presentations and took 1 practical classes in the training course, 'Different kind of names', 'Valid and effective publication' and 'Flora, Revision & Monograph' and practical class: 'How to prepare a photo-plate' at ERC, BSI, Shillong.

Dr. G. Krishna delivered 2 lectures, 'How to prepare artificial keys?' and 'Important websites for students' at ERC, BSI, Shillong.

Sri S. Biswa and Sri V. Mastakar attended Three-day XXVI Annual Conference of Indian Association for Angiosperm Taxonomy and International Seminar on 'Conservation and Sustainable Utilization of Biodiversity' from 7th to 9th November 2016, organized by Department of Botany, Shivaji University, Kolhapur, Maharashtra.

Dr. P.V. Prasanna, Scientist 'F' & HoO participated in the meeting pertaining to CoP-13 & MoP-2 of Nagoya Protocol at MoEF & CC, Delhi on 08.11.2016.

Dr. Gogoi delivered a lecture on "Biodiversity of North East India" at Pub-Kamrup College, Baihata Chariali, Assam on 10.11.2016.



Dr. V. Sampath Kumar receiving Angiosperm Plant Taxonomy award of "Prof. B.A. Razi Medal"



Dr. Pushpa Kumari receiving Angiosperm Plant Taxonomy award of "Dr. V. Mudgal Medal"

Drs. V. Sampath Kumar and Pushpa Kumari attended one day National Seminar on "Glimpses of Research Work in Taxonomy and Ethnobotany and APT & SEB Medal Award Ceremony" at CSIR-NBRI, Lucknow on 15.11.2016. Dr. Kumar acted as one of the judges for poster evaluation in Taxonomy category.

In this ceremony, Dr. Sampath Kumar received Angiosperm Plant Taxonomy award (APT) of “Prof. B.A. Razi Medal” and delivered a lecture on ‘Nutlet Morphology of Labiates and its significance’, whilst Dr. Pushpa Kumari received APT award of Dr. V. Mudgal Medal and delivered a lecture on ‘ Bamboos in India: Generic diversity and identification.

Drs. V. Ranjan, S. Bandhyopadhyay, O.N. Maurya and G. Krishna attended conference on the topic “Conservation, Cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic plants” at T.N.B. College Bhagalpur from 21st to 23rd November 2016.

Dr. S. Bandyopadhyay delivered a lecture on “Suggestive approach to involve students in using medicinal plants” as resource person in National Conference on Conservation, cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants organized by T.N.B. College, Bhagalpur on 21.11.2016.

Dr. V. Ranjan delivered a lecture on “Ethno-Medico-Botanical Survey of Parasnath Wildlife Sanctuary, Giridih, Jharkhand” as resource person in National Conference on Conservation, cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants organized by T.N.B. College, Bhagalpur on 22.11.2016.

Dr. O.N. Maurya delivered a lecture on “Role of Micromorphological studies in relation to Taxonomy” as resource person in National Conference on Conservation, cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants organized by T.N.B. College, Bhagalpur on 23.11.2016.

Dr. G. Krishna also delivered a lecture on “Ethno-medicinal Plants of Aurangabad districts, Bihar and its conservation” as resource person in National Conference on Conservation, cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants organized by T.N.B. College, Bhagalpur on 23.11.2016.

Sri S. Biswa delivered an oral presentation on “Flowering plants of Koderma Wildlife Sanctuary, Jharkhand, with special emphasize on interesting plants and ethnic knowledge” at the IAAT conference 2016 held at Department of Botany, Shivaji University, Kolhapur, Maharashtra.

Sri V. Masatakar delivered an oral presentation on “Legumes of Palkot Wildlife Sanctuary, Jharkhand” at the IAAT conference 2016 held at Department of Botany, Shivaji University, Kolhapur, Maharashtra.

Sri Manoj Hembrom, participated in one-day workshop on “Mushroom bioprospecting and its role in women empowerment and social upliftment in tribal area” at Waghai Agricultural University, Dang, Gujarat on 30.11.2016 organised in collaboration with State Forest Department and Gujarat State Biodiversity Mission.

Visitors/students

38 students with Prof. B. Tashi, Department of Botany, Guwahati University on 02.11.2016.

4 Students from L.M.B. School, Kolkata on 03.11.2016.

8 students of M.Sc. Botany with Prof. Bandana Nabis Das, Department of Botany, Hardique Girls College, Guwahati on 07.11.2016.

Sri Mahesh Kumar Sharma, Sr. Accountant, PAO(BSI/ZSI) along with three of his associates on 09.11.2016.

20 Students from Bagnan College on 10.11.2016.

Prof. A.K. Bhatnagar, former Prof. & Head, Department of Botany, Delhi University on 13.11.2016.

Mr. Carol Cuney, ex Chairman, Mr. Alies Crisp, Chairman, International Dendrology Society on 21.11.2016.

52 students of B. Tech. (Biotech.) with Dr. Harshata Pal, Amity University, Rajarhat, Kolkata on 21.11.2016.

35 Students from Mrinalini data Mahavidhyapith on 29.11.2016.

24 Students from Mount Everest College, Manipur on 29.11.2016.

Sri Ayan Sarkar, Ms. Puja Hait, Ms. Anindita Samanta, B. Sc. 1st year (Botany) from Prabhu Jagat Bandhu College, Howrah on 30.11.2016.



Prof. A.K. Bhatnagar at Type Herbarium, CNH, Howrah

Publications

Karthigeyan, K., Das Das, M. and Wijedasa, L. 2016. *Memecylon cerasiforme* (Melastomataceae): a poorly known species rediscovered, redescribed and newly recorded for India. *Gard. Bull. Singapore* 68(2): 319–326.

Karthigeyan, K. and Jayanthi, J. 2016. *Ficus concinna* (Miq.) Miq. (Moraceae) - a new record to West Bengal from Jaldapara National Park. *Indian J. Forestry* 39 (3): 287–289.

Bandyopadhyay, S., Krishna, G. and Venu, P. 2016. Names of new taxa published and types deposited—A case study. *Ann. Pl. Sci.* 5(10): 1451–1457.

Bandyopadhyay, S., Bhattacharjee, A. and Krishna, G. 2016. Lectotypification of plant names. *Curr. Sci.* 111 (9): 1437.

Bandyopadhyay, S. 2016. Suggestive approach to involve students in using medicinal plants. In: Chourasia, H.K. and A.K. Roy (Eds.), *Conservation, Cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants*, pp. 219–224. Today and Tomorrow's Printers, New Delhi.

Krishna, G., Kumar, A., Kumar A., Biswa, S. and P. Lakshminarasimhan (2016). Diversity of ethnomedicinal plants and their conservation in Aurangabad district, Bihar. In: Chourasia, H.K. and A.K. Roy (Eds.), *Conservation, Cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants*, pp. 15–16. Today and Tomorrow's Printers and Publishers, New Delhi.

Ranjan, V. 2016. Ethno-Medico-Botanical Survey of Parasnath Wildlife Sanctuary, Giridih, Jharkhand In: Chourasia, H.K. & A.K. Roy (Eds.), *Conservation, Cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants*, pp. 289–305. Today and Tomorrow's Printers and Publishers, New Delhi.

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

CENTRAL BOTANICAL LABORATORY, HOWRAH

Dr. Harish Singh, Scientist 'D' & HoO prepared a detail draft ethnobotanical report on 380 plants collected from Nuapada district as per Proforma; Dr. K.A. Sujana, Scientist 'D', identified 4 plant species collected from Malkangiri district, Odisha; Sri A.C. Halder and Sri Baske, Botanists identified 2 plant species collected from Baudh district, Odisha. Dr. Sujana and Sri R. Saravanan, Bot. Asst. collected secondary data on 8 endemic trees and entered data of 34 trees endemic to Andaman Nicobar Islands. Dr. Monika Mishra, Bot. Asst. counted chromosome number of *Asystesia gangetica* (2n= 52).

Conference/seminar attended

R. Saravanan attended IAAT conference and International seminar on Conservation and Sustainable Utilization of Biodiversity, from 7th to 9th November 2016 at Shivaji University, Kolhapur and delivered a lecture on 'Application of Ethnobotany Knowledge in Healing Ailments by the Tribals of Kuldiha Wildlife Sanctuary Belt'.

Ms. Sagari Chaudhury, Senior Project Fellow attended IAAT conference 2016 at Shivaji University, Kolhapur from 7th to 9th November 2016 and delivered a lecture on 'Documentation and quantitative study of Ethnomedicinal plants used by the *Lodhas* (a primitive tribal group) of West Bengal, India' and got T.R. Sahu award for Best paper on "Medicinal plants Systematics" category.

Dr. H. Singh made a presentation on 'Comparative study on Ethnomedicinal uses practiced by the ethnic groups of Sundargarh, Mayurbhanj, Angul, Balangir and Deogarh districts, Odisha, India' for a National Seminar on 'Conservation, Cultivation, diseases and therapeutic importance of medicinal and aromatic plants' held at TNB College, Bhagalpur from 21st to 23rd November 2016.

Vigilance awareness week

Dr. Harish Singh administered pledge to officials of CBL on 02.11.2016 during vigilance awareness week observation.



Dr. Harish Singh administering pledge in during vigilance awareness week at CBL, Howrah



Sri A.C. Halder explaining ethnobotanical exhibits to the students from Assam in CBL, Howrah

Visitors/Students

36 students and one Teacher from Department of Botany, Guwahati University, Assam visited ethnobotanical museum, CBL Howrah.

Publications

Sujana, K.A., Pandey, A.D. and Saravanan, R. 2016. Ethnomedicinal plants of Dhenkanal district, Odisha, India. In: H.K. Chourasia and A.K. Roy (Eds.), *Conservation, Cultivation, diseases and therapeutic importance of medicinal and aromatic plant*, pp. 239–269. Today & Tomorrows printers and publishers, New Delhi.

Singh, H. 2016. Comparative study on Ethnomedicinal uses practiced by the ethnic groups of Sundargarh, Mayurbhanj, Angul, Balangir and Deogarh districts, Odisha, India. In: H.K. Chourasia and A.K. Roy (Eds.), *Conservation, Cultivation, Diseases and Therapeutic Importance of Medicinal and Aromatic Plants*, PP. 43–84. Today & Tomorrows printers and publishers, New Delhi.

– Dr. Harish Singh
Scientist 'D' & HoO

INDUSTRIAL SECTION INDIAN MUSEUM, KOLKATA

The botanical paintings by Roxburgh are being interpreted with updated nomenclature. Under this project 15 valid taxa of Zingiberaceae and 6 members of Convolvulaceae were interpreted.

Database of Herbarium Specimens

As a part of preparing a database of herbarium specimens at BSIS, 110 numbers of Dicot herbarium specimens were listed and documented.

Updating of Nomenclature of digitized Herbarium Specimens at BSIS

140 numbers of Digitized Herbarium specimens were updated with valid botanical names, basionyms/synonyms.

Visitors

Prof. Romita Ray in the Dept. of Art and Music Histories at Syracuse University, USA visited botanical gallery on 11.11.2016 and Mr. Ben Musgrave, Writer & Dramatist from London, UK visited botanical gallery on 21.11.2016.



Mr. Ben Musgrave, Writer Dramatist from London, UK at Botanical Gallery in ISIM, Kolkata

Vigilance awareness week

Observed Vigilance Awareness Week on 02.11.2016 and pledge was administered to the officials of ISIM.

Miscellaneous

Officials from Industrial Section, Indian Museum participated in the programme Vision Vibrant Uttar Pradesh 2016 organized by Centre for Agriculture and Rural Development (CARD), New Delhi at Indian Institute of Sugarcane Research (IIRS), Lucknow from 26.11.2016 to 28.11.2016 and displayed BSI Exhibits in a stall for the visitors and guests.



BSI participation in Vision Vibrant Uttar Pradesh-2016 Exhibition at Lucknow, Uttar Pradesh

Publication

Datta, S., Paul, T.K. and Sinha, B.K. 2016. Lectotypification of three *Aeschynanthus* species (Gesneriaceae) in India. J. Jpn. Bot. 91: 233–238.

– Dr. Manas Bhaumik
Scientist 'D' & HoO

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

One Herbarium Consultation tour undertaken by Dr. Lal Ji Singh, Scientist 'D' to Central National Herbarium, Howrah (CAL) from 7th to 11th November 2016 and 174 Specimens identified.

Herbarium identification

Dr. T.A.M. Jagadeesh Ram, Scientist 'D' identified 76 specimens of Monoblastiaceae into 7 species.

Dr. C.P. Vivek, Bot. Asst. identified 16 herbarium specimens belong to 2 species of *Alternanthera* of Amaranthaceae.

Digitization of herbarium specimens

Herbarium specimen details computerized: 1797 herbarium specimens of families Averrhoaceae, Balsaminaceae, Bombacaceae, Burseraceae, Celastraceae, Dichapetalaceae, Eleocarpaceae, Icacinaceae, Linaceae, Malpighiaceae, Malvaceae, Meliaceae, Ochnaceae, Olacaceae, Opiliaceae, Oxalidaceae, Rutaceae, Simaroubaceae, Sterculiaceae and Tiliaceae were fed in the computer in the prescribed format.

Observance of Constitution Day

As a part of the observation of constitution Day, Dr. Lal Ji Singh read out the preamble of the Indian Constitution to all the officers and staff of Botanical Survey of India, Andaman and Nicobar Regional Centre at office.



Photo: G.A. Ekka

Dr. Lal Ji Singh administering constitution Day Pledge to the officers and staff of ANRC, Port Blair

Public service rendered

Dr. Sanjay Mishra, Scientist 'B' delivered a lecture on the topic "Floristic Diversity and Endemism in Andaman and Nicobar Islands and its Conservation" at Forest Training Institute, Wimberlygunj, South Andaman on 08.11.2016.

Dr. Lal Ji Singh, evaluated a Ph.D. Thesis for Dr. Ram Manohar Lohia Awadh University, Faizabad, U. P.

Hindi workshop

Two days Hindi workshop was organized at main office, as well as Dhannikhari Experimental Garden cum Arboretum (DEGCA), Nayashahar on 29th and 30th November 2016.

Meeting/conference/programme/function attended

Dr. T.A.M. Jagadeesh Ram attended the meeting for Finalization of Research Activities for the Department of Environment & Forests, Andaman and Nicobar Islands at Vansathan, Haddo, Port Blair on 08.11.2016.



Photo: G.A. Ekka

Hindi workshop held at ANRC, Port Blair

Dr. Jagadeesh, Dr. Mishra, Dr. C.P. Vivek and Sri Gautam A. Ekka attended the National Seminar on 'Ethno-Medicinal Practices in Andaman and Nicobar Islands: Scope, Limitation and Prospective', Organized by Regional Research Centre of Ayurveda, Port Blair at Anthropological Survey of India Auditorium on 11th and 12th November 2016. In this seminar Sri Gautam Anuj Ekka, Pres. Asst., made an oral presentation on 'Conservation of Medicinal Plants Diversity in Dhannikhari Experimental garden cum Arboretum (DEGCA), Botanical Survey of India, Andaman and Nicobar Regional Centre, Port Blair' on 11.11.2016.

Dr. Singh, attended National Seminar on Scientific and Technical Terminology in Biodiversity and delivered a lecture on Plant diversity of Andaman and Nicobar Islands organised by Commission for Scientific and Technical Terminology, Ministry of Human Resource Development, Govt. of India at Port Blair on 15.11.2016 and 16.11.2016.

Dr. Singh, Dr. Jagadeesh and Dr. Sanjay Mishra attended Silver Jubilee Workshop on Ecology and Conservation of Andaman and Nicobar Biodiversity organised by Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore, Tamil Nadu at Port Blair on 24.11.2016 and 25.11.2016.

Dr. Singh, attended meeting with the Hon'ble Lt. Governor, Andaman and Nicobar Islands, ITF, Ground at Port Blair on 29.11.2016.

Visitors/students

Dr. Pratush Das, Fisheries Survey of India, Port Blair visited garden on 09.11.2016.

Prof. A. K. Srivastava, Prof. Emeritus, C.C.S. University, Meerut visited Museum, Library and Herbarium on 16.11.2016.

Dr. V. P. Prasad, Scientist 'D', CNH and Dr. K.A. Sujana, Scientist 'D', CBL visited Herbarium at ANRC, Port Blair.



Photo: G.A. Ekka

Dr. V. P. Prasad, Scientist 'D', CNH, BSI and Dr. K.A. Sujana, Scientist 'D', CBL, BSI at ANRC, BSI, Port Blair





Photo: G.A. Ekka

Dr. P.P. Dhyani, Director, G.B. Pant National Institute of Himalayan Environment & Sustainable Development (GBPNIHESD) at Herbarium of ANRC, Port Blair (left) and Garden, Dhanikhari (right)

Dr. P.P. Dhyani, Director, G.B. Pant National Institute of Himalayan Environment & Sustainable Development (GBPNIHESD) Kosi-Katarmal, Almora, Uttarakhand visited Museum, Library, Herbarium and Garden on 22.11.2016.

Dr. P. Pramod, Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore visited office on 23.11.2016.

Publication

Joseph, S., Jagadeesh Ram, T.A.M., Sinha, G.P. and Ramachandran, V.S. 2016. A new record and key to the genus *Alyxoria* (lichenized Ascomycota) in India. *Fedd. Rep.* 127: 30–33.

– Dr. Lal Ji Singh
Scientist 'D' & HoO

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

Dr. Krishna Chowlu, Scientist 'B', conducted a field tour to Kurungkumay, Arunachal Pradesh from 3rd to 13th November 2016. Dr. Umesh Kumar L. Tiwari, Scientist 'B' conducted a herbarium consultation tour to ASSAM, Shillong from 2nd to 13th November 2016. Dr. Tiwari studied 932 sheets covering 71 families represent the flora of Kameng district of Arunachal Pradesh.

Herbarium specimen identification

Dr. P. Satyanarayana, Scientist 'D' & HoO and Sri B.B.T. Tham, Botanist made descriptions for 38 species in connection with 'Flora of Pakhui Tiger Reserve and Wild Life Sanctuary'.

Dr. Vineet Kumar Rawat, Scientist 'D' made descriptions for 12 species in connection with 'Taxonomic study of the family Polypodiaceae of North East India' and also collected 7 live plants for garden.

Dr. Manish K. Kandwal, Scientist 'D' identified specimens of 15 field numbers for Grass flora of Arunachal Pradesh.

Dr. Krishna Chowlu made entry of Herbarium sheets for 3 species in connection with 'Flora of East Kameng District, Arunachal Pradesh.'

Visitors

In connection with the scientific audit, officials from Scientific Department, Kolkata visited the regional centre from 18th November to 1st December 2016.



Dicranopteris linearis (Gleicheniaceae)

– Dr. Vineet Kumar Rawat
Scientist 'D' & HoO

ARID ZONE REGIONAL CENTRE, JODHPUR

Herbarium specimen identification

Specimens of 144 field numbers identified during the month of November 2016, which includes 10 field numbers of Ethnobotany of Dang Dist., Gujarat by Sri Vinod Maina and Sri Ravi Prasad, 27 field numbers of Flora of Shoolpaneshwar WLS, Narmada Dist., Gujarat by Dr. S.L. Meena and Dr. Harikrishana Peddi, 28 species of Flora of Navsari Dist., Gujarat by Dr. Ramesh Kumar and Sri Vinod Maina, 64 field numbers of Flora of Todgarh-Raoli WLS, Rajasthan by Dr. C.S. Purohit, 15 field numbers of Flora of Sariksa Tiger Reserve, Alwar Dist., Rajasthan by Dr. M.K. Singhadiya and Sri Ravi Prasad.

Plant conservation

Recorded phenological data for 43 plants species of desert botanic garden, AZRC, Jodhpur.



Asparagus racemosus (Asparagaceae)



Cordia sebestena (Boraginaceae)



Plumbago zeylanica (Plumbaginaceae)

Photo: P. Harikrishana



Barleria cristata (Acanthaceae)

Public Service rendered

Identified 3 plant specimens for students in connection with their research work.

Visitors

Dr. O. P. Sharma, Lecture, Department of Botany, Govt. College, Bundi, Rajasthan, visited the regional centre, viz., herbarium, museum, botanic garden and mounting section on 18.11.2016.

Dr. Vijay Malik, Lecturer, Dept. of Botany, M.S. College, Saharanpur (U.P.) visited in this regional centre, viz., herbarium, museum, botanic garden and mounting section on 18.11.2016.

Sri Subash Rajpurohit, Research Associate, University of Pennsylvania, Philadelphia, PA, USA visited herbarium on 18.11.2016.

Hindi workshop

Hindi workshop was organized on “Rajbhasha Hindi ka prashasan avum vigyan me upayogita” in this regional centre on 24.11.2016. Dr. D.D. Ojha, Scientist ‘G’, Central Ground Water Board, Jodhpur was invited as a chief guest.



Hindi workshop organized in AZRC, Jodhpur

Publications

Singhadiya, M.K., Pandey, I., Maina, V.

and Pandey, R.P. 2016. *Moringa oleifera* Lam. - Sanjana - A Miracle food plant with multipurpose uses in Rajasthan-India. *J. Non Timber Forest Products* 23(3): 159–167.

Purohit, C.S., Kumar, R and Maina, V. 2016. *Rajasthan ki mahatvapurn avushadi van sampada. Vanaspathi vani*. 5: 39–44.

Maina, V and Kumar, R. 2016. *Jarawa-ek purvawalokan. Vanaspathi vani*. 5: 59–63.

– Sri Vinod Maina
Scientist ‘D’ & HoO

CENTRAL REGIONAL CENTRE, ALLAHABAD

A total of 42 species under 80 specimens were identified in connection with the project ‘Flora of Chhattisgarh’- Vol. I.

Taxonomic description of 10 species completed under ongoing projects ‘Flora of Parvati Aranga Wildlife Sanctuary and adjacent Tikri forest area, Gonda, UP’, 10 species under ‘Flora of Chhattisgarh Vol. I’, 5 species under ‘Flora of Chandraprabha Wildlife Sanctuary, Chandauli, UP.’ and 23 species under ‘Flora of Chhattisgarh’ Vol. II. In addition, 85 earlier collected specimens housed at BSA were also identified.

Public service rendered

Sri V.K. Singh, Bot. Asst. authenticated one plant specimen as *Ziziphus jujuba* (Rhamnaceae) received from Sri Bhaskar Kumar, M.Pharm. (Pharmacognosy), School of Pharmaceutical Science, I.F.T.M University, Moradabad (U.P.).

Dr. Nitisha Srivastava, Bot. Asst. authenticated plant specimens of *Tinospora cordifolia* (Menispermaceae) and *Solanum virginianum* (Solanaceae).

Dr. A.N. Shukla, Scientist ‘B’ Provided information about the *Datura stramonium* (Solanaceae) to Dr. P. Lakshminarsimhan, Scientist ‘E’, Botanical Survey of India.

Dr. A.N. Shukla, Scientist ‘B’ attended and replied the query of HQ regarding the EIA studies of Singrauli Coal Mine area.

Dr. Arti Garg, Scientist ‘D’ reviewed a manuscript entitled for the Journal - ‘Advances in Medicinal Plant Research’.

Visitors/students

Dr. A.N. Shukla, Sri V.K. Singh, Dr. Nitisha Srivastava and Sri Arjun Prasad Tiwari, Presv. Asst. assisted Educational visit of 38 undergraduate and postgraduate students of S.S. Khanna P.G. College, Allahabad on 03.11.2016.



Photo: A.N. Shukla

Dr. G.P. Sinha delivering a lecture to the students of S.S. Khanna Girls College, Allahabad

Programme participated

Dr. G.P. Sinha, Scientist 'E' & HoO, Dr. A.N. Shukla, Dr. Ashutosh Verma, Scientist 'B', Dr. A.P. Tiwari and Sri Bholanath, Sr. Lib. & Inf. Asstt. participated in the programme Vision Vibrant Uttar Pradesh 2016 organized by Centre for Agriculture and Rural Development (CARD), New Delhi at Indian Institute of Sugarcane Research (IISR), Lucknow from 26th to 28th November 2016 and displayed BSI Exhibits in a stall for the visitors and guests.



BSI stall at Vision Vibrant UP-2016 At IIRSS, Lucknow



Visit of dignitaries at BSI stall during, Vision Vibrant UP-2016 at IISR, Lucknow

Audit

Internal Audit by Pay and Accounts Office, Kolkata for the period from April 2012 to March 2016 was conducted at CRC from 12th to 20th November 2016.

– Dr. G.P. Sinha
Scientist 'E' & HoO

DECCAN REGIONAL CENTRE, HYDERABAD

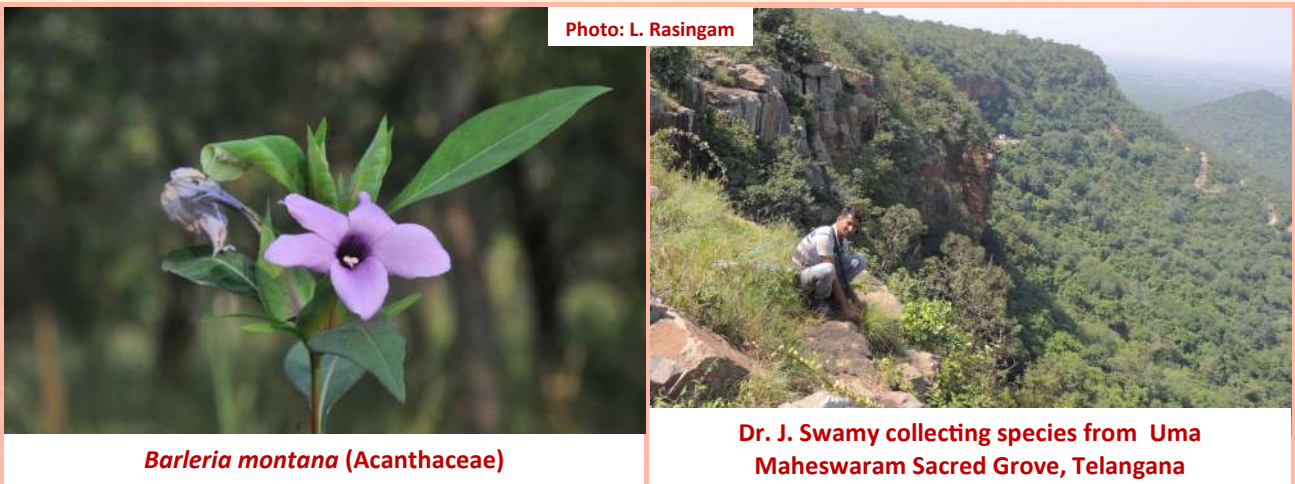
Dr. K. Prasad, RA, has undertaken a field tour to Agasthyamalai Biosphere Reserve and Muthikulam, Elival hills, Kerala from 2nd to 15th November 2016 and collected 22 field numbers. Dr. J. Swamy Bot. Asst., undertaken a field tour to Sacred groves of Mancherial and Asifabad districts of Telangana from 16th to 21st November 2016. Sri. K. Chandramohan, SPF, undertaken one Herbarium consultation tour to Central National Herbarium (CNH), Howrah from 1st to 8th November 2016.

Sri S. Nagaraju, Bot. Asst., identified 43 field numbers in connection with the Seshachalam Biosphere Reserve; Dr. J. Swamy, identified 26 field numbers in connection with the Sacred Groves of Andhra Pradesh; Dr. G. Swarnalatha, Bot. Asst., studied 24 lichen specimens obtained on loan from herbarium of Central Regional Centre (BSA), Allahabad; Sri. K. Chandramohan, identified 17 field numbers for Flora of Satkosia Wildlife Sanctuary, Odisha and Dr. K. Prasad, identified 3 specimens from South India.

Photo: L. Rasingam



Dalbergia lanceolaria subsp. *paniculata*
(Fabaceae)–a sacred tree trunk



***Barleria montana* (Acanthaceae)**

Dr. J. Swamy collecting species from Uma Maheswaram Sacred Grove, Telangana

Dr. L. Rasingam, documented 10 species in connection with the Flora of Nagarjunasagar – Srisailem Wildlife Sanctuary and Mrs. P.S. Annamma, SPF made descriptions for 10 species in connection with the Flora of Kawal Tiger Reserve.

Digitization of herbarium specimens

In connection with digitization of herbarium specimens at BSID, 450 herbarium specimens belongs to 70 genera of Acanthaceae, Lamiaceae, Bignoniaceae, Malvaceae, Oxalidaceae, Compositae, Combretaceae, Lythraceae, Leguminosae, Poaceae, Solanaceae, Convolvulaceae, Boraginaceae, Gentianaceae, Apocynaceae, Oleaceae, Sapotaceae, Verbenaceae, Pedaliaceae, Orobanchaceae, Linderniaceae, Plantaginaceae, Phrymaceae, Cyperaceae, Putranjivaceae, Euphorbiaceae and Phyllanthaceae were scanned and data entry of label information completed. About 50 scanned images were converted from TIFF to JPEG format.

Public service rendered

Dr. J. Swamy identified three plant species, viz., *Phyllodium longipes*, *Commelina benghalensis* and *Holarrhena pubescens* to Acharya Nagarjuna University, Guntur, Koringa College of Pharmacy, East Godavari of Andhra Pradesh and Teegala Ram Reddy College of Pharmacy, Hyderabad respectively and explained about Botanical Survey of India, Herbarium and Museum to graduate and post graduate students of Govt. Degree and PG College, Siddipet, Medak district, Telangana on 08.11.2016.

Meetings/programmes attended

Dr. L. Rasingam attended taxonomy workshop at Koti Womens College, Osmania University on 02.11.2016. Dr. Rasingam also attended the Andhra Pradesh State Biodiversity Board meeting at Aranya Bhavan, Hyderabad on 11.11.2016. Dr. Rasingam completed the Garden inspection work on 16th & 17th November 2016 at Yogi Vemana University, Kadapa and the report has been prepared and submitted to the directorate.

Dr. J. Swamy attended workshop on “Training of Trainers for Taxonomic Identification and Systematic Studies” as a resource person to Adikavi Nannayya University, Rajamahendravaram, East Godavari, Andhra Pradesh from 3rd to 5th November 2016 and delivered two lectures on “**Role of Botanical Survey of India in Advancement of Taxonomic Research and Conservation in India**” and “**Herbarium techniques**” and also demonstrated Herbarium techniques.

Publications

Swamy, J. 2016. Notes on the distribution of *Cylindropuntia fulgida* var. *mamillata* (Cactaceae-Opuntioideae) in India. *Indian J. Forestry* 39(3): 273–275.

Chandramohan, K., Prasanna, P.V., Swamy, J. and Rahman, T. 2016. Two new distributional records for Odisha State. *Indian J. Forestry* 39(3): 295–297.

– Dr. L. Rasingam
Scientist 'C' & HoO

EASTERN REGIONAL CENTRE, SHILLONG

Sri L. R. Meitei, Bot. Asst. conducted one tour during the period from 29th October to 8th November 2016 to Yangoupokpi Lokchao Wildlife Sanctuary, Lai Lok, Khujai Lok, Govajang, Laiching, forests near Moreh, Maantum Village, Sahei Village, Sijang Village and Lokchao forest areas in Chandel district of the state of Manipur for the project - Yangoupokpi Lokchao Wildlife Sanctuary, Chandel District, Manipur, 163 live plant species are collected viz., *Acampe ochracea*, *Adiantum capillus*, *A. edgeworthii*, *A. phillippense*, *Aerides multiflora*, *A. odorata*, *Aerides* sp., *Aleuritopteris bicolor*, *Amomum subulatum*, *Ardisia* sp., *Artabotrys hexapetalus*, *Asplenium ensiforme*, *Bambusa* spp., *Begonia* spp., *Blechnum* sp., *Boesenbergia* spp., *Bulbophyllum careyanum*, *B. gamblei*, *B. odoratissimum*, *Bulbophyllum* spp., *Calamus* sp., *Caryota* sp., *Calanthe biloba*, *Calanthe* spp., *Celosia argentea*, *Caryota* sp.,

Cephalantheropsis obcordata, *Cleisomeria pilosulum*, *Cleisostoma* sp., *Clerodendrum serratum*, *Coelogyne flaccida*, *Coelogyne* spp., *C. viscosa*, *Colocasia* sp., *Coniogramme* sp., *Costus speciosus*, *Curculigo orchioides*, *Curcuma* spp. *Cycas pectinata*, *Cymbidium* spp., *Dendrobium acinaciforme*, *D. aphyllum*, *D. anceps*, *D. chrysotoxum*, *D. delacourii*, *D. densiflorum*, *D. falconeri*, *D. formosum*, *D. infundibulum*, *D. jenkinsii*, *D. lituiflorum*, *D. longicornu*, *D. moschatum*, *D. nobile*, *D. ochreatum*, *D. pulchellum*, *D. transparens*, *D. wardianum*, *Dillenia* sp., *Dioscorea* spp., *Diplazium* sp., *Drynaria coronans*, *D. propinqua*, *Dryopteris* sp., *Elaphoglossum marginatum*, *Eria amica*, *E. biflora*, *E. lasiopetala*, *E. pannea*, *E. tomentosa*, *Eria* spp., *Fern* spp., *Gastrochilus calceolaris*, *Gastrochilus* sp., *Geodorum* sp., *Globba* spp., *Goodyera* sp., *Gnetum gnemon*, *Habenaria* spp., *Hedychium ellipticum*, *Hedychium* spp., *Goodyera* sp., *Liparis* sp., *Luisia* sp., *Lycopodiella cernua*, *Lygodium flexuosum*, *Micropera* sp., *Musa* spp., *Neogyna* sp., *Oberonia* spp., *Onychium* sp., *Orchid* spp, *Panisea uniflora*, *Papilionanthe teres*, *Physalis minima*, *Polystichum luctuosum*, *Pteris* sp., *P. subquinata*, *Pteris vittata*, *Lepisorus* sp., *Leptochilus hemionitideus*, *Liparis* spp., *Luisia* sp., *Oberonia* spp., *Panisea* sp., *Papilionanthe* sp., *Phalaenopsis* sp., *Pholidota articulata*, *Pholidota* spp., *Platyterium wallichii*, *Pteroceres* sp., *Pyrrosia costata*, *Renanthera imschootiana*, *Rhyncostylis retusa*, *Saccolabiopsis pusilla*, *Sterculia* sp., *Tainia* sp., *Tectaria polymorpha*, *Thunia alba*, *Thunia* sp., *Vanda coerulea*, *Vanda* sp., *Zeuxine* sp. and *Zingiber* spp.

Dr. R. Daimary identified eight species for the Flora of Eastern Nagaland, viz., *Betula alnoides*, *Ficus abelii*, *F. clavata*, *F. neriifolia*, *F. fistulosa*, *F. heterophylla*, *F. heteropleura*, *F. obscura*.

Dr. S.K. Singh, Scientist 'D' went on tour to Kamakhya hill, Guwahati, Assam on 05.11.2016 for collection of *Riccia*. Seven samples were collected for the project of Taxonomic Revision of genus *Riccia* (Marchantiophyta) in India.

Dr. Ashish Venkatesh Prabhugaonkar, Scientist 'B' undertook tour on 07.11.2016 to Cherapunjee and nearby forest areas, East Khasi Hills district, Meghalaya. Identified the following species: *Pithomyces flavus*, *Piricauda cochinchinensis*, *Pseudogliophragma indica*, *Sporoshcisma mirabile*, *Gliocladium sagarensis*, *Dendrosporium lobatum*. 21 cultures are currently been grown and observed. Accession nos. were received for fungal strains deposited at Microbial type culture collection'- *Pseudotorula goensis* (MTCC 12620) and *Speiropsis pedatospora* (MTCC 12621). Results of sequencing for ITS and LSU region two fungi namely *Pseudocercosporidium subramaniani* and an unidentified fungus similar to *Berkleasium* were received from RFDF, RGCG, Thiruvananthapuram, same are being analysed further.

Dr. S.K. Singh described six species of the project of Bryoflora (Hepaticae & Anthocerotae) of Mizoram.

Reading for *Cymbidium tigrinum* in control, 10 % banana, 10 % coconut, 2 % charcoal in MS. Approx 400 seedlings. Lab to land transferred of *C. tigrinum* (about 400 plants) in greenhouse. Data analyze, interpretation, literature survey for *Armadorum senapatianum*, *C. tigrinum*. Statistical analysis of *A. senapatianum*, *C. tigrinum*. Subcultured seedlings of callus of *Rhododendron coxianum*, *A. senapatianum* (app. 50 nos.), *C. tigrinum* (app. 1000 nos.) for the project of Micro-propagation of RET Plants of Northeast India by Dr. A.A. Mao, and L. Ibemhal Chanu, Bot. Asst.

Dr. Deepu Vijayan, Scientist 'B' subcultured in vitro raised *Pyrenaria khasiana* on WPM supplemented with different growth regulators. Cultured nodal segments of *P. khasiana* in WPM containing different concentrations of BA. Cultured seeds of *Pyrenaria* sp. on basal WPM for the project of Micropropagation, Phytochemical Screening of Medicinal Plants and Molecular Characterization of Selected Species of NE India.

Dr. M. Murugesan, Scientist 'B' conducted tour to Nagaland from 18th to 22nd November 2016 and collected the following plant species viz., *Acanthephippium* sp., *Aeschynanthus* sp., *Begonia* spp., *Bulbophyllum* spp., *Dendrobium acinaciforme*, *D. jenkinsii*, *Hedychium stenopetalum*, *Hedychium* spp., *Eria coronaria*, *Etingera* sp., *Exacum* sp., *Homalomena aromatica*, *Hoya* sp., *Impatiens latiflora*, *Phaius mishmensis*, *Piper* sp., *Tupistra* sp. and *Wallichia densiflora* and planted in Experimental Botanical garden, Umiam, Barapani and Shillong office garden.

Dr. Murugesan and Sri L.R. Meitei observed and recorded phenological data of flowering and fruiting of 38 plant species viz., *Acampe ochracea*, *Alnus nepalensis*, *Anoectochilus roxburghii*, *Bulbophyllum guttulatum*, *B. gymnopus*, *B. roseopictum*, *Camellia japonica*, *Coelogyne fuscescens*, *C. ovalis*, *C. punctulata* *C. schultesii*, *C. stricta*, *Cymbidium aloifolium*, *C. erythraeum*, *Dendrobium acinaciforme*, *Dracaena angustifolia*, *Epigenium amplum*, *Eria bambusifolia*, *E. biflora*, *Eurya acuminata*, *Exbucklandia populnea*, *Garcinia lanceolata*, *Liparis viridiflora*, *Nymphoides indica* *Oberonia acauli*, *Pelatantheria insectifera*, *Phaius mishmensis*, *Schima wallichii*, *Thunbergia coccinea*, *Vanda coerulea* and *Zeuxine affinis* for the project of *ex-situ* conservation of Endemic, Threatened and Economically important plants of the region and recording phenological data on flowering and fruiting of species growing in the Garden by Dr. M. Murugesan, and Sri L.R. Meitei.

Workshop organized/attended/lecture delivered

A three-day workshop on 'Training on Basics of Plant Identification and Nomenclature' was organized by this Regional Centre from 7th to 9th November 2016. 39 candidates from various states of NE India participated in this workshop.



Three-day Botanical nomenclature workshop organized by ERC, BSI, Shillong

Dr. A.A. Mao attended two-day workshop of DBT Overseas Associates at Sikkim organized by DST, Sikkim on 29th and 30th November 2016.

In a day workshop organised by Directorate of Mineral Resources Govt. of Meghalaya Shillong on 30th November, 2016 at ERC, BSI, Conference Room Dr. S.K. Singh delivered a lecture, “Invasive species and their control -with special reference to Meghalaya” Dr. Ashish Prabhugaonkar on “Poisonous Mushroom” and “Poisonous plants”.

Visitors/students

25 Professor, 226 students, 10 foreigners from various Institutions, Colleges and Universities visited the Centre.

Publication

Pratibha, J., Bhat, D.J. and Prabhugaonkar, A. 2016 Molecular phylogeny of *Speiropsis pedatospora*. *Mycosphere* 7(5), 679686Doi10.5943/Mycosphere/7/5/12.

– Dr. A.A. Mao
Scientist ‘F’ & HoO

NORTHERN REGIONAL CENTRE, DEHRADUN

Identified total 64 species and made descriptions for 56 species of plants under the projects on Flora of Uttarakhand Vol. V; Floristic Diversity and Phytosociological study of Simbalbara National Park; Flora of Nandhour Wildlife Sanctuary; Flora of Sonanadi Wildlife Sanctuary; Flora of Sechu-Tuan Nala Wildlife Sanctuary; Trees of Dehradun city and its vicinity; Revision of family Cyatheaceae and genus *Adiantum* in India.



Photo: Puneet Kumar

Hyoscyamus niger (Solanaceae) growing in Eco-sensitive zone of the Sechu Tuan Nalla WLS



Himalayan dwarf mistle-toe (*Arecuthobium minutissimum*) - a obligate parasitic plant

National Science Exhibition

Scientists and Scientific staff have participated in National Science Exhibition organized at Wadia Institute of Himalayan Geology, Dehradun on 28th-29th November, 2016.

Meetings/seminar/conference attended/lecture delivered

Dr. M.R. Debta, Dr. Puneet Kumar Scientist ‘B’ and Sri Harminder Singh, JRF attended National Conference on “Basic and Applied Researches in Plants and Microbes” held at Punjabi University, Patiala from 3rd to 5th November 2016.



Photo: Puneet Kumar

BSI Stall at National Science Exhibition organized at Wadia Institute of Himalayan Geology

Dr. S.K. Srivastava attended one day seminar on “*Glimpses of Research work in Ethno-botany and Taxonomy*” and Medal Award Ceremony of SEB and APT on 15.11.2016 at NBRI, Lucknow and delivered a lecture on “*Role of herbaria in Taxonomic Research*” in the seminar.

Public service rendered

Identified one specimens of *Ficus semicordata* for Dr. Anamika from Himalayan Ayurvedic College, Dehradun.

Visitors/students

Assisted and guided visitors about 50 students from Uttaranchal College of Science and Technology, Dehradun.

Dr. V. Sampath Kumar, Scientist ‘D’, CNH, BSI, Howrah consulted herbarium of BSD from 21st to 29th November 2016.

Publications

Joshi, P., Manikandan, R., Kumar, B. and Deroliya, P.K. 2016. Contribution to the pteridophytic flora of Govind Pashu Vihar Wild life Sanctuary, Uttarakhand. *Indian J. Forest.* 39(3): 277–284.

Madhukar, V.K. and Srivastava, S.K. 2016. Lectotypification in *Millingtonia* (Oroxyleae, Bignoniaceae). *Phytotaxa* 283 (2): 195–195. <http://dx.doi.org/10.11646/phytotaxa.283.2.9>

Pusalkar, P.K. and Srivastava, S.K. 2016. Breaking Point Endemism of *Ranunculus bikramii* Aswal & Mehrotra (Ranunculaceae) – New locality reports from Jammu & Kashmir, Himachal Pradesh and Uttarakhand. *Indian J. Forest.* 39(3): 263–265.

Debta, M.R., Srivastava, S.K. and Patel, M. 2016. Ethno-medicinal notes from Jawan. *Ethnobotany* 27: 99–101.

Dr. P.K. Pusalkar
Scientist ‘D’ & I/C



Photo: NBRI

Dr. S.K. Srivastava delivering talk during the Seminar on ‘Glimpses of Research Work in Ethnobotany and Taxonomy’

SIKKIM HIMALAYAN REGIONAL CENTRE, GANGTOK

Dr. Dinesh Kumar Agrawala, Scientist ‘C’ & HoO identified one Orchid species for the project, “Red listing of Orchids of Eastern Himalaya as per IUCN criteria” and 50 specimens were finalized in respect of their identity, label data, finding geo-coordinates and entering in the excel sheet.

Dr. David Lalsama Biate, Scientist ‘B’ identified two species for the project “Flora of Sikkim- Family Onagraceae”.

Sri Sundar Kumar Rai, Bot. Asst., identified 17 species from 20 unidentified specimens.

Sri Subash Pradhan, Field man, identified three species from three unidentified specimens.

Digitisation of Herbarium specimens

670 herbarium sheets belonging to Balsaminaceae and Rutaceae were scanned and meta data entered into Excel -worksheet.

Meeting/programme attended

Dr. D.K. Agrawala, attended 24th Annual Research Council Meeting of Indian Cardamom Research Institute, Spice Board, Gangtok on 16.11.2016 and co-chaired the Plenary Session.

Visitors/students

Four students from Sikkim University visited this centre for herbarium consultation on 02.11.2016.

Dr. M.U. Sharief, Scientist 'E' and Party from AJCBIBG, BSI, Howrah visited to SHRC from 22nd to 29th November 2016.

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

WESTERN REGIONAL CENTRE, PUNE

Dr. Alok Chorghhe conducted a tour to Sindhudurg district of Maharashtra under the project "Taxonomy, phytogeography and conservation of *Themeda* (Poaceae) and allied spathaceous genera of Tribe: Andropogoneae (Subtribe: Anthiistiriinae) in India" from 14th to 21st November 2016. During the tour 20 specimens were collected.

Dr. A. Benniamin, Scientist 'D' undertook one field tour to Someshwara WLS, Kudremukh National Park and Bhadra Tiger Reserve, Karnataka from 20th November to 3rd December 2016.

Herbarium specimen identification

Dr. Priyanka Ingle, Scientist 'B', Sri Sameer C. Patil, Bot. Asst. identified 23 angiosperm species under the project "Floristic Diversity of Wan Wildlife Sanctuary" and "Flora of Pushpagiri Wildlife Sanctuary, Karnataka" respectively.

Dr. A. Benniamin identified three pteridophyte species under the project "Ferns of Karnataka".

Smt. Shreya Sengupta, SPF identified three microfungi under the project "Microfungi of BRT Wildlife Sanctuary, Karnataka".

Public service rendered

Dr. P. Lakshminarasimhan, Scientist 'E' & HoO provided information about the distribution data of *Datura stramonium* based on the specimens available from WRC, Pune, NRC, Dehradun and APRC, Itanagar (with assistance from S.K. Srivastava, P. Satyanarayana and Sameer Patil) to Christine Vaz, Herbarium Service, Centro de Investigación, Tecnología e Innovación. Edificio Celestino Mutis (CITIUS II), Universidad de Sevilla, Spain.

Dr. P. Lakshminarasimhan provided checklist of angiosperms of Maharashtra to Sri Shrikant Ingalthalikar, Pune.

Dr. A. Benniamin identified 10 pteridophyte specimens for Department of Botany, SPPU University, Pune. During this month six identification and authentication certificates were issued to students from B. Pharm, M. Pharm. colleges, Ph.D. and P.G. students from different institutions.

Meetings /seminars /programmes/attended

Dr. P. Lakshminarasimhan attended the XXVI Annual Conference of Indian Association for Angiosperm Taxonomy and International Seminar on "Conservation and Sustainable Utilization of Biodiversity organized by Department of Botany, Shivaji University, Kolhapur from 7th to 9th November, 2016. Dr. Lakshminarasimhan chaired one session of oral presentations on 07.11.16 and also gave a lecture on CITES and Plants on 08.11.2016.

Dr. Rashmi Dubey, Scientist 'D' attended a National Conference on Fungal Biotechnology" at Birla Institute of Scientific Research (BISR), Jaipur, Rajasthan during 16th to 18th November 2016 and delivered a lead lecture in the conference on topic "Biodiversity of Microfungi of Western Ghats of India".

Dr. P. Lakshminarasimhan attended the first Pune Heritage Festival Meeting for Partners and Associates at Indradhanushya Hall, Pune on 17.11.2016.

Dr. A. Benniamin attended an inaugural function of National Science forum at NCCBS, DBT, Pune on 18.11.2016.

Dr. P. Lakshminarasimhan participated in a Conference on “Western Ghats – Revisited” held at Van Bhavan, Pune on 30.11.2016 attended by forest officers working in the Western Ghats areas, NGOs and other distinguished officials. Also gave two presentations, viz., CITES and Plants and An introduction to the Convention on Biological Diversity for people working with botanical collections.

Constitution Day

Dr. P. Lakshminarasimhan administered the Constitution Day pledge on 25.11.2016 to officials of WRC, Pune.

Visitors/students

Experts from INTACH, Pune visited heritage building in BSI, WRC campus during this month.

Sri Mohammed Dilawar, President of Nature Forever Society, Nasik visited for WRC herbarium for consultation of *Ficus* specimens on 03.11.2016.

Dr. Emilia Mascarenhas from St. Xavier’s College, Goa visited WRC for herbarium consultation of *Ipomoea* specimens on 11.11.2016.

Ms. Eapsa Berry from University of Delhi, Delhi visited WRC for herbarium consultation of *Justicia* specimens on 23.11.2016.

Dr. Shrikant Ingalhalikar visited WRC for herbarium consultation.

Dr. Archana Rangari, Ismail Yusuf College, Mumbai visited WRC for herbarium consultation during this month.

Publication

Lakshminarasimhan, P. and Jayanthi. J. 2016. Botanic gardens in the conservation of threatened trees of India. *Vanashobha*: 2015-2016: 66–71.



Photo: WRC

Constitution Day observed at WRC, Pune on 25.11.2016



Photo: WRC

Dr. P. Lakshminarasimhan administering Constitution Day Pledge to the staff of WRC, Pune

Dr. P. Lakshminarasimhan
Scientist ‘E’ & HoO

PLANT OF THE MONTH



Abutilon ranadei Woodrow & Stapf (MALVACEAE) commonly known as Ghanti Mudra or Son - Ghanta is a Critically Endangered shrub with great potential as an ornamental; it is restricted to Maharashtra State in western India. It was first collected at Amba Ghat in the Kolhapur District of Maharashtra State by Namdeorao B. Ranade, sometime Keeper of the Herbarium at the College of Science, Pune. Kew botanist Otto Stapf and G.M. Woodrow described it as a new species in 1894 and named it in honour of Mr Ranade. This species was successfully introduced at AJC Bose Indian Botanic Garden, Howrah in February, 2012. The saplings were provided by the Shivaji University, Kolhapur, Maharashtra and introduced in Div. No. 1 & 6.

By Dr. B.K. Singh

अण्डमान निकोबार द्वीप समाचार

संख्या 327

पोर्ट ब्लेयर,

शुक्रवार, 02 दिसम्बर 2016

web: www.and.nic.in

वनस्पति सर्वेक्षण में हिन्दी कार्यशाला

पोर्ट ब्लेयर, 1 दिसम्बर।

यहां के भारतीय वनस्पति सर्वेक्षण के अंडमान निकोबार क्षेत्रीय

केन्द्र के मुख्य कार्यालय में 29 और 30 नवम्बर, 2016 को द्वितीय त्रैमासिक दो दिवसीय हिन्दी कार्यशाला आयोजित की



गई। उप निदेशक व वैज्ञानिक 'डी' तथा कार्यालयाध्यक्ष डॉ. लाल जी सिंह ने कार्यशाला का उद्घाटन करते हुए सभी अधिकारियों और कर्मचारियों से हिन्दी का ज्यादा से ज्यादा प्रयोग करने का आग्रह किया।

विभाग के हिन्दी अधिकारी व वैज्ञानिक 'बी' डॉ. संजय मिश्रा कार्यशाला में मुख्य वक्ता थे। उन्होंने राजभाषा में सरकारी पत्र लेखन के बारे में प्रतिभागियों को प्रशिक्षित किया। वैज्ञानिक 'डी' डॉ. जगदीश राम टाम ने उपस्थिति का स्वागत किया, जबकि पर्यवेक्षण सहायक ग्रेड-1 श्री गौतम अनुज एक्का ने धन्यवाद ज्ञापन किया।

HINDUSTAN TIMES, NEW DELHI
TUESDAY, NOVEMBER 22, 2016

Princess of Thailand takes a tour of botanic garden, sows 24 different varieties of seeds

HT Correspondent

■ htreporters@hindustantimes.com

NOIDA: Princess of Thailand Maha Chakri Sirindhorn on Monday sowed 24 different varieties of seeds at the Botanic Garden of Indian Republic (BGIR) in Sector 38 A on Monday morning.

The 163.79-acre garden, established by the Ministry of Environment, Forest and Climate Change, in Noida was the first stop in Princess Sirindhorn's six-day official visit to India.

Sirindhorn began her walk around the Garden at 9.45 am and was shown all attractions by the scientists.

The special attractions of the garden include the cactus house and a map of India made out of live plants.

The princess was also told about the involvement of BGIR in preserving components of biological diversity out of their natural habitats.

"The princess was very keen



■ Princess Maha Chakri Sirindhorn also planted a few saplings of cannonball tree which has medicinal and cultural value. HT PHOTO

to know about all kinds of plants in the country and the processes and measures adopted by us for its conservation. She also planted a few saplings of cannonball tree (Couroupita guianensis Aubl) which has medicinal,

mythological and cultural importance," said Dr Sheo Kumar, in-charge of BGIR, Noida.

The princess was also taken to the developed sections of the garden and was shown a host of

plants, which hold importance in India's history and mythology. These included Saphed and Lal Chandan, Kalpabricksha, Krishna Cup and Makhan Katori.

Princess also visited the different nurseries, landscaped areas and sections of the garden where medicinal and aquatic plants are grown.

"The princess observed plants which have played an important role in the evolution process. She also sowed seeds of 24 different species of plants, including those which are conserved in the seed bank at the garden. These plants are believed to be extinct in the wild," Kumar said.

He added that the princess showed interest in having a collaborative project with the BGIR in the future.

"She has also invited us to cooperate with her country in their forthcoming event of botanical conference at Bangkok," Kumar said.

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

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