

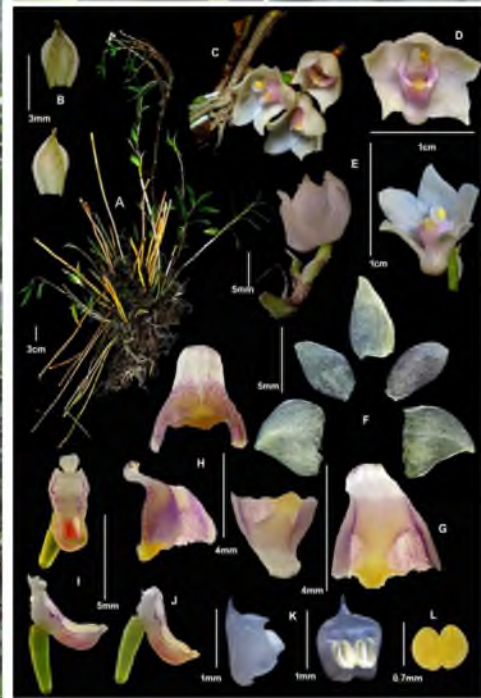
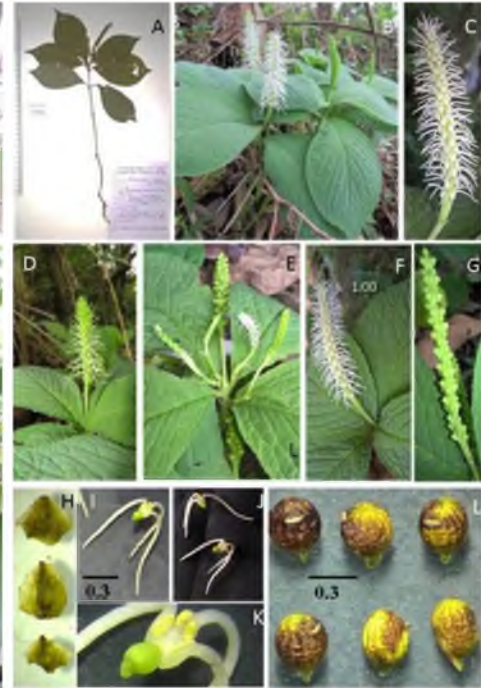
BSI NEWSLETTER

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HEAD QUARTERS, KOLKATA

Dr. A.B.D. Selvam, Scientist 'D' conducted a field tour to Kerala from 18th to 25th June 2017 and collected the species of *Cycas* (leaves, male and female cones) from wild and cultivated sources by utilising seven field numbers.

In connection with the ongoing projects, 'Studies on wild mushrooms of Sikkim', 'Studies on the macrofungi of AJC Bose Indian Botanic Garden', 'Revision of the family Metzgeriaceae in India', 'Liverworts and Hornworts Flora of Darjeeling District, West Bengal', and 'Wood rotting fungi of Rajmahal hills' the scientific officials studied the specimens, made identification, descriptions and illustrations as well as microphotographs. Distributional maps with the help of Arc-GIS were also prepared for the fungal species *Hymenochaete conchata*, *Byssomerulius corium* and *Helicogloea globosa* by Mr. M.E. Hembrom, Botanist.

Dr. R.K. Gupta, Scientist 'D' labeled and incorporated six green algae viz., *Pediastrum angulosum* (Ehrenb.) Menegh., *P. boryanum* (Turpin) Menegh., *P. duplex* F.I.F. Meyen, *Spirogyra hyalina* Cleve, *S. intorta* C.C. Jao, *S. jogensis* M.O.P. Iyengar.

Public service rendered

Sri Arvind Parihar, Bot. Asst. accessioned and incorporated five specimens (3 Holotypes and 2 Paratypes) received from Mr. Aniket Ghosh and Mr. Tahir Mehmood, Ph. D. Scholars of HNB Garhwal University, Srinagar, Uttarakhand. The detail of the specimens is as follows:

- 1) *Russula rajendrae* A. Ghosh & K. Das (Russulaceae) - Accession No. – CAL 1554 - (Holotype)
- 2) *Russula petersenii* A. Ghosh & K. Das (Russulaceae) - Accession No. – CAL 1555 - (Holotype)
- 3) *Amanita cornelii* Mehmood, K. Das, Iqbal, Hosen, Tullos & R.P. Bhatt (Amanaticaeae)- Accession No. – CAL 1556 - (Paratype)
- 4) *Amanita emodotrygon* Mehmood, Tullos, K. Das, Iqbal, Hosen, & R.P. Bhatt (Amanaticaeae)- Accession No. – CAL 1557- (Paratype)
- 5) *Amanita garhwalensis* Mehmood, K. Das, Iqbal, Hosen, & R.P. Bhatt (Amanaticaeae)- Accession No. – CAL 1558 - (Holotype)

Meeting/programme attended

Dr. Monalisa Dey, Scientist 'B' attended a meeting on "e-commerce portal development for BSI" and "Development of species management system of Indian flora" at BSI Headquarters on 15.06.2017.

Dr. Dey also participated as a resource person for the Green Skill Development Programme, held at Central National Herbarium and provided training on "Brief introduction about Bryophytes and their collection and preservation techniques" to the participating students on 28.06.2017.

Scientific officials of Headquarters, BSI participated in celebration of World Environment Day, on 05.06.2017 conducted at AJC Bose Indian Botanic Garden, Howrah.

They also participated in the Yoga Day celebration at Central National Herbarium, Botanical Survey of India, Howrah on 21.06.2017.

CENTRAL NATIONAL HERBARIUM, HOWRAH

Dr. Kumar Avinash Bharati, Scientist 'B' conducted one field tour to Baraila Lake Salim Ali Jubba Sahni Bird Sanctuary, Vaishali, Bihar from 4th to 10th June 2017 and collected specimens of 40 field numbers.

Herbarium identification

Dr. V.P. Prasad, Scientist 'D' identified four field numbers and corrected the identity of five old specimens housed at CAL.

Dr. Vinay Ranjan, Scientist 'D' and Sri Anant Kumar, Bot. Asst. identified 27 field numbers collected from Neora Valley National Park, Darjeeling district, West Bengal.

Dr. O.N. Maurya, Scientist 'C' identified three field numbers collected from Vikramshila Gangetic Dolphin Wildlife sanctuary, Bhagalpur, Bihar.

Sri P.P. Ghoshal, Botanist identified five field numbers collected from Betla National park, Latehar, Jharkhand.

Sri Anant Kumar corrected the identity of herbarium specimens as *Morinda angustifolia* and *Cyanthillium cinereum* housed at CAL.

Public Service rendered

CNH officials identified four plant specimens: two specimens by Dr. Gopal Krishna, one by Sri Vijay Mastakar and one by Sri Shyam Biswa, Bot. Asst. which have come from Department of Pharmaceutical Technology, Jadavpur University Kolkata; Gurunanak Institute of Dental Sciences & Research, Kolkata and Department of Pharmaceutical Technology, NSHM Knowsedge Campus, Tollygunge, Kolkata.

Dr. P.V. Prasanna, Scientist 'F' & HoO functioned as external examiner at Calcutta University for conducting 4th Semester Practical exams.

Dr. V.P. Prasad evaluated a Ph. D. thesis received from Kannur University, Kerala.

Dr. V. Sampath Kumar, Scientist 'D' provided PDF of New Taxa of Capparaceae, *Bull. Bot. Surv. India* 28: 185–192. 1986 sent to Prof. Vatsavaya S. Raju, Plant Systematics Laboratory, Department of Botany, Kakatiya University, Warangal, Telangana.

Dr. Subir Bandyopadhyay, Scientist 'B' provided PDF from *Bull. Bot. Surv. India* 18(1–4): 144–148. 1976 to Dr. Jaideep Mazumdar, Krishna Chandra College, Hetampur, Birbhum, West Bengal pages on *Symplocos* from *Revised Flora of Ceylon*, Vol. 3 to Dr. M. Sanjappa, former Director, BSI, Kolkata and information regarding five authors of plant names [N.S. Atri, Siba Prasad Adhikary, Sudipta Kumar Das, Sukumar Bhakta and Nitin Keshari] for incorporation in the Author Query database of IPNI.

Dr. Bandyopadhyay also reviewed the MS of a paper received from Editor, *Nelumbo*.

Dr. Avisek Bhattacharjee, Scientist-'B' provided image of a Wallichian specimen (Numer. List no. 8775) to Dr. Indira Chowdhury, Director, Centre for Public History, Srishti Institute of Art, Design and Technology, Yelahanka, Bangalore with some related information and sent images of types of *Cycas pschannae* R.C. Srivast. & L.J. Singh to Dr. Michael Calonje, Cycad Biologist, Montgomery Botanical Center, Miami; 27 images of type specimens of *Millettia* Wight & Arn. to Dr. James A. Compton, University of Reading, Berkshire, England and sent 24 specimens of *Plagiochila* (Dumort.) Dumort. on loan to CSIR-NBRI.

Dr. Bhattacharjee also reviewed one manuscript each for the journals *Rheedeia* and *Phytotaxa*.

Meetings/Seminar/conference attended

Dr. Vinay Ranjan, Scientist 'D' attended a meeting in Nabanna in connection with WB Forest Department (Wildlife wing), Kolkata on 13.06.2017.

Dr. K. Karthigeyan, Scientist 'D' attended a meeting with the Forest Department Officials regarding floristic studies in Sunderban Biosphere Reserve on 16.06.2017.

Dr. V.P. Prasad attended the Regional Workshop on “Conservation and Management of Wetland (Eastern States)” organized under aegis of the National River Conservation Directorate of the Ministry of Environment, Forests & Climate Change, Govt. of India, at ZSI HQ, Kolkata on 23.06.2017.

Visitors

Sri Ashish Kr. Chowdhury from Tripura University for Herbarium consultation from 9th to 16th June 2017.

Mrs. Madhumita Biswas from MoEF & CC, New Delhi visited Type Herbarium II on 09.06.2017.

Sri Akramul Haque on 16.06.2017 to consult types of *Dioscorea* at CAL.

Sri Jayanta Kumar Dutta along with two students from Delhi Public School visited Central National Herbarium on 27.06.2017.

Sri Debashish Chanda from National Informatics Centre, Kolkata visited Type Herbarium II on 29.06.2017.

Publications

Moaakum, Dey, S., Adamowski, W. and Gogoi, R. 2017. *Impatiens nagorum* sp. nov. (Balsaminaceae) a new species from Nagaland, Northeast India. *Phytotaxa* 308(2): 275–282.

Bandyopadhyay, S., and Ghoshal, P.P. 2017. Type specimens of names in *Bauhinia* and *Phanera* (Fabaceae: Caesalpinioideae) at Central National Herbarium, Howrah (CAL). *Bangladesh J. Pl. Taxon.* 24(1): 1–8.

Sunil, C.N., Naveen Kumar, V.V., Rajeev, T.S., Ratheesh Narayanan, M.K. and Prasad, V.P.. *Kleinia subrahmanianii* (Asteraceae: Senecioneae), a new species from southern Western Ghats, Kerala, India. *Telopea* 20: 119–123.

Prasad, V.P. and Simpson, D.A. 2017. Notes on the taxonomy and lectotypification of *Cyperus macer* (Cyperaceae). *Kew Bull.* 72: 33. doi: 10.1007/s12225-017-9702-9 (published online).

Yeasmin, Lucina, Ali, Md. Nasim, Sinha Ray, Syandan and Kumari, P. 2017. Distribution, Identification and Genetic Diversity among Bamboo Species: A Phenomic Approach. *Adv. Plants & Agr. Res.* 7(2): 00251.

– Dr. P.V. Prasanna
Scientist ‘F’ & HoO

INDUSTRIAL SECTION INDIAN MUSEUM, KOLKATA

As a part of preparing a database of herbarium specimens at BSIS, 137 numbers of Dicot herbarium specimens were listed and documented.

Botanical paintings

The botanical paintings by Roxburgh are being interpreted with updated nomenclature. Under this project, from the family Ebenaceae 12 species are enlisted.

Updating of nomenclature of digitized herbarium specimens at BSIS

About 400 numbers of Digitized Herbarium specimens were updated with valid botanical names, basionyms/synonyms.

Public service rendered

Under the Narcotic Drugs & Psychotropic Substances (NDPS) Act, two samples received from West Bengal Police were identified.

Visitors/students

Dr. Amita Prasad, IAS, Addl. Secretary, MoEF & CC, New Delhi visited in connection with ‘Restoration of BSI building in Indian Museum campus at Kolkata’ on 23.06.2017. The visit was followed by a meeting in presence of Director BSI & ZSI and other BSI officials.

Students from Motijhil Girls’ High School, Dum Dum visited Botanical Gallery and New Botanical Gallery in connection with exhibition on ‘J.D. Hooker: Botanical trailblazer and the botanical heritage of India’ on 24.06.2017 and attended a lecture on “Crop Wild Relatives of India” delivered by Smt. Sudeshna Datta as



Photo: ISIM

Dr. Amita Prasad, IAS, Addl. Secretary, MoEF & CC, New Delhi at Botanical Gallery, ISIM, BSI, Kolkata



Meeting on Restoration of BSI building in Indian Museum campus at Kolkata on 23.06.2017 at ISIM, BSI, Kolkata



Photo: ISIM

Smt. Sudeshna Datta delivering a lecture on Crop Wild Relatives of India to students at ISIM, BSI, Kolkata



Sri B.C. Dey explaining school students regarding various exhibits at Botanical Gallery, ISIM, BSI, Kolkata

ongoing collaborative awareness programme of BSI with CWEH, University of Sussex, U.K. Dr. M. Bhaumik, Smt. Sudeshna Datta and Sri B.C. Dey guided the students about botanical gallery exhibits and J.D. Hooker's exhibition during their visit.

Programme/training attended

Dr. Paramjit Singh, Director, BSI inaugurated the special programme of nature study event in AJCBIBG, Howrah to celebrate 'World Environment Day' in collaboration with Indian Museum, Kolkata on 05.06.2017; 80 under-privileged children participated from three different NGOs based in Kolkata and Howrah, viz., Calcutta Rescue, Hope Foundation and Women's Interlink Foundation and Dr. A.K. Sahoo, Sri B.C. Dey and Sri. S.K. Sharma guided them during their visit. Dr. A.K. Sahoo participated in 'International Yoga Day' celebration held at Indian Museum, Kolkata on 21.06.2017. He also participated in the Official Language Implementation Committee meeting of BSI-ISIM held on 28.06.2017 with committee members to review on the progress made during previous quarter and plan of action for the forthcoming quarter.



Photo: ISIM

Director, BSI, along with children from different NGOs make a pledge to protect the environment

**– Dr. Manas Bhaumik
Scientist 'D' & HoO**

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

In connection with digitization of herbarium specimens at PBL, about 270 specimens nos. of family Lauraceae, Monimiaceae and Myristicaceae was scanned.

In EXEL format, 50 herbarium specimens of the families Thymetiaceae were fed in the computer in a prescribed format.

Swachh Bharat Abhiyan 'Swachhta Pakhwada' (cleanliness drive fortnight)

Organized Thematic Cleanliness Drives as a part of Swachh Bharat Abhiyan fortnight from 1st June to 15th June 2017. As part of nationwide sanitation and cleanliness campaign on Swachh Bharat Abhiyan to achieve the goal of clean India, a massive drive of cleaning the surrounding area of main office ANRC, BSI, Port Blair as well as residential colony was undertaken by the Scientists and the staff.

World Environment Day

Organized a tree sapling planting programme on the occasion of World Environment Day at Dhanikhari Experimental Garden cum Arboretum (DEGA) on 05.06.2017.



Photo: C.P. Vivek



Cleanliness drives conducted at Port Blair as a part of Swachh Bharat Abhiyan fortnight

Tree sapling planting programme on the occasion of World Environment Day at DEGA on 05.06.2017

Meeting/training/programme/workshop attended/organised

Dr. Sanjay Mishra, Scientist 'B', participated in Training of Trainers (ToT) on common Yoga Protocol as framed by Ministry of AYUSH from 5th to 10th June 2017 at auditorium of Government Girls Senior Secondary School, Marina Park, Port Blair.

Dr. Mishra attended meeting convened under the chairmanship of the Chief Secretary, Andaman and Nicobar Administration to discuss the promotion, cultivation and marketing of medicinal plants on commercial scale in Andaman and Nicobar Islands.

Dr. T.A.M. Jagadeesh Ram, Scientist 'D' attended the meeting of the State Level Steering Committee (SLSC) for Great Nicobar Biosphere Reserve on 16.06.2017 at Secretariat, Andaman and Nicobar Administration Port Blair.

Organized World yoga day and Organized quarterly meeting of Departmental Rajbhasha implementation committee on 21.06.2017.

Dr. Singh organized two-day Hindi workshop at main office on 22.06.2017 and 23.06.2017.

International Day of Yoga

Celebrated the International Day of Yoga on 21.06.2017. The theme of the year was "Yoga for harmony and health". The resource person, Dr. Sanjay Mishra displayed the practices in accordance with common Yoga protocol for International Day of Yoga. All the officers and staff of BSI participated in the practice. The information brochures and CD's were distributed to the participants.



Photo: G.A. Ekka

Performing of common *Asanas* during International Day of Yoga at ANRC, BSI, Port Blair by the officials

Hindi workshop

Two days Hindi workshop was organized at main office, as well as Dhanikhari Experimental Garden cum Arboretum (DEGA), Nayashahar on 22.06.2017 and 23.06.2017.



Photo: G.A. Ekka

Two-day Hindi workshop held at Andaman & Nicobar Regional Centre, BSI, Port Blair

Visitors/students

Dr. Navendu Page, Post Doctoral Fellow, Central Institute of Medicinal and Aromatic Plants (CIMAP), Bangalore, visited herbarium and library on 05.06.2017.

Dr. Hari Venkatesh M.D. (Ayur), Head, Research & Development, Sri Sri Ayurveda Trust Bangalore visited herbarium and library on 13.06.2017.

Ms. P. Vani, 3rd Year Genetic Engineering student, Bharat University, Chennai, consulted library and herbarium from 19th to 22nd June 2017.

Seven students of Girls Senior Secondary School, Port Mount visited Garden on 20-06-2017.

Ms. Anamika Mistry, M. Pharmacy (Pharmacology), Karupanadhi College of Pharmacy, Bangalore consulted Library and herbarium on 27.06.2017 .



Students of GSDP Foundation Course visiting Dhanikhari Experimental Garden cum Arboretum, ANRC, Port Blair

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

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

Dr. V.K. Rawat, Scientist 'D' processed and Identified the collected specimens and finalizing manuscript in connection with the project, "Taxonomic study of family Polypodiaceae of North East India".

Dr. Manish K. Kandwal, Scientist 'D' finalizing the manuscript for the project "Grass flora of Arunachal Pradesh".

Dr. Krishna Chowlu, Scientist 'B' identified and description prepared along with coloured photo plates for three species of Orchids and entered collection data in thirty herbarium sheets in connection with 'Red listing of orchids of Arunachal Pradesh as per IUCN criteria'.

Sri B.B.T. Tham, Botanist has recorded phenological data for 13 species in connection with "Recording of phenology of flowering/fruited of species in garden".

Dr. Souravjyoti Borah, Botanist, prepared taxonomic key for 28 species, photo plates prepared for 34 species in connection with 'Flora of Lohit District and Flora of Kamlang WLS, Arunachal Pradesh'.

Dr. Manish K. Kandwal, Scientist 'D' identified 09 field numbers in connection with Grass flora of Arunachal Pradesh.

Dr. Umesh Kumar L. Tiwari, Scientist 'B' identified 15 field numbers in connection with Flora of East Kameng district, Arunachal Pradesh.

Sri Brajesh Meena, Presv. Asst. documented 1128 numbers of existing herbarium sheets in register and in EXCEL format 1295 sheets.



Programme attended/conducted

World environment day was jointly celebrated by BSI and ZSI Itanagar at BSI campus by organizing various programmes including plantation and drawing competition among students participated from various schools of Itanagar.

World Yoga day jointly organized by BSI and ZSI Itanagar at ZSI campus, Itanagar on 21.06.2017

Dr. V.K. Rawat attended Wildlife Board Meeting at PCCF Office, Itanagar.

Classes and practical were conducted for "Foundation Course-Biodiversity Conservation" under National Green Skill Development Programme (GSDP).

Publication

Chowlu, K. and Rab, K.S. 2017. *Oberonia jhae*: A new species of orchid from Arunachal Pradesh, India. *Bangladesh Assoc. Pl. Taxon.* 24(1): 49–52

– Dr. V.K. Rawat
Scientist 'D' & HoO

ARID ZONE REGIONAL CENTRE, JODHPUR

Dr. M.K. Singhadiya, Botanist & Sri Ravi Prasad, Bot. Asst. conducted a Botanical exploration tour to Sariska Tiger Reserve from 1st to 18th June 2017 and collected 119 field numbers, besides these also collected two live plants of *Pandanus odorifer* for *ex-situ* conservation.

15 Field numbers collected during different field visits were identified during this month by the scientific officials of this regional centre.



Photo: AZRC

Capparis sepiaria (CAPPARACEAE) in flowering Sariska Tiger Reserve, Alwar Dist., Rajasthan



Grewia tiliifolia (TILIACEAE) in flowering Sariska Tiger Reserve, Alwar Dist., Rajasthan



Photo: AZRC

Interaction with local inhabitants of Sariska Tiger Reserve, Alwar Dist., Rajasthan during field tour



Drawing competition organised on World Environment Day celebration at AZRC, BSI, Jodhpur

World Environment Day 2017

Celebrated World Environment Day on 05.06.2017. Sri R.S. Shekhawat, CCF, Jodhpur division, Rajasthan was present as Chief Guest in this programme.

Hindi workshop

Organised Hindi workshop on 29.06.2017. A lecture "Rajbhasa Hindi Vartaman Paripekchya Me" was delivered by Dr. N.K. Bohra, Scientist 'B', AFRI, Jodhpur on 29.06.2017. All officers, staff members of BSI and ZSI, Jodhpur attended the workshop.

International Yoga Day-2017

All officers and staff members of AZRC, students of 'Green Skill Development Programme' participated and performed yoga during yoga session in this office on 21.06.2017 and also organized lecture on "Yoga" by Dr. D.D. Ojha, former Scientist, Central Ground Water Board, Jodhpur.



Photo: AZRC

Performing *Asanas* on International Yoga Day by officials on 21.06.2017 at AZRC, BSI, Jodhpur

Visitors/Students

Dr. Devendra Kumar, AllMS, Jodhpur, Sri Jitendra Kumar and N.A. Kastunura, ZSI, visited herbarium for information on Herbarium plants on 05.06.2017, to whom lecture were given.



Foresters of Rajasthan Forest Dept., Jodhpur visited office garden (left) and Museum (right) on 16.06.2017

88 Foresters, Rajasthan Forest Dept, Jodhpur division visited Museum, Garden, Library, & Herbarium of BSI, AZRC, Jodhpur on 16t.06.2017.

– Dr. S.L. Meena
Scientist 'D' I/C

CENTRAL REGIONAL CENTRE, ALLAHABAD

A total of 46 specimens were identified in to 74 species for the projects, 'Floristic Diversity of Bhoj Wetland, M.P.' and 'Floristic diversity of Kishanpur Wildlife Sanctuary, Lakhimpur Kheri, UP.'

Completed taxonomic description of 25 species under 'Flora of Chhattisgarh' Vol. II.

In connection with the project, 'Trees of Allahabad city and its Environs' details of 10 species were gathered.

Editing of family Asteraceae including several nomenclatural changes and change in key to genera and species completed under project 'Editing of Flora of Uttar Pradesh, Vol. II'.

For project, 'Identification of old unidentified specimens of BSA' 30 specimens were identified.

Under project 'Ex situ conservation of Endemic, threatened and economic plant species in the associated garden of CRC and documentation of phenological data on flowering and fruiting every month', six saplings were planted which include *Adansonia digitata*, *Radermachera xylocarpa* and *Pterocarpus marsupium*.

Identification service rendered

Sri Vineet Kumar Singh and Dr. Nitisha Srivastava, Bot. Assts. authenticated 36 and 10 herbarium specimens received from National Centre for Natural Resources, Pt. Ravishankar Shukla University, Raipur, Chhattisgarh in to 18 and 5 species respectively.

Green Skill India Development Programme

The Pilot Project on Green Skill Development programme, classes started from 12.6.2017. Drs. A.N. Shukla, Neelam K. Gautam, Ashutosh K. Verma, Nitisha Srivastava, Vineet K. Singh, A.P. Tiwari, Pushpi Singh and Pooja Gupta delivered lectures on their allotted modules.



**Celebration of World Environment Day
at CRC, BSI, Allahabad**



**Plantation drive on World Environment Day
at CRC, BSI, Allahabad**

World Environment Day

World Environment Day was celebrated on 05.06.2017. Drawing competition was organised and students from class 6–12 of National Bal Bhawan, Allahabad participated in the programme. Their work was evaluated by Drs. Arti Garg, Neelam K. Gautam, Pushpi Singh, N-PDF and Pooja Gupta, AJCB-PDF and based on their evaluation 8 prizes were distributed to the winners. Participation Certificates to all the 23 students were distributed. Documentary films on Kalpavriksha, Laddakh Cold Desert and Environment were shown to the students. Saplings of six important species were planted in the garden in presence of Chief guest Dr. R.K. Rai, Retd. IFS.

International Yoga Day

International Yoga Diwas was celebrated on 21.06.2017 in the Regional Centre in a befitting manner.

Public service rendered

Dr. Arti Garg, Scientist 'D', reviewed manuscript for ENVIS Newsletter.

Drs. G.P. Sinha and A.N. Shukla brought 7 seedlings of EET species for plantation from Dr. R.N. Rai, Retd. IFS officer and in exchange provided fresh seeds of *Saraca asoca*.

Dr. Neelam Gautam, Scientist 'B' executed processing to buy Digital Signature Certificate from (n) CODE Solutions.

Dr. Neelam Gautam conducted B.Sc.-II & III year practical examination as external examiner on 19.06.2017 at K.M.M., Pratapgarh.

Dr. Ashutosh Kumar Verma submitted 'Project Completion Report' of SERB-Young Scientist project, "Molecular and biochemical investigations in antidiabetic plant *Gymnema sylvestre* R. Br. to SERB and Director, BSI, Kolkata.

Award received

Dr. Garg received CEE 5th Science and Technology Award – 17, for Special Achievement certificate of Merit.

Publications

Garg, A. 2017. Ambikeshwar sacred site in Upper Ganga—A repository of primeval flora and cultural wealth. *J. Non-timber Forest Prod.* 24(1): 43–46.

Garg, A. 2017. P.K.K. Nair (1930–2017), (Personal News - An Obituary). *Current Sci.* 112(12): 2492.

Singh, V. and Garg, A. 2017. Pharmacognosy—A blended science. *Van Sangyan* 4(4): 17-18.

– Dr. G.P. Sinha
Scientist 'E' & HoO

EASTERN REGIONAL CENTRE, SHILLONG

During the period Two Local field tours were conducted: Mawsynram Forest areas on 11.06.2017 and Ryngkangkhlhla, Ri-bhoi, Meghalaya on 16.06.2017 by Dr. Murugesan, Scientist 'B' and L.R. Meitei, Bot. Asst. for collection of live plants for experimental garden, Barapani. During this period, identified 123 species collected from Amchang Wildlife sanctuary, Kamrup, Assam by Dr. A.A.Mao, Scientist 'F' & Nandita Sarma, Sr. Presv. Asst., Flora of Eastern Nagaland by Dr. N. Odyuo, Scientist 'D' & Dr. R. Daimary, Bot. Asst.; Flora of Nagaland, Dr. A.A.Mao, Dr. N. Odyuo, Dr. D.K. Roy, Bot. Asst., for Flora of West & south-West Khasi hills district, Meghalaya with reference to the sacred groves by Dr. Chaya Deori, Scientist 'D' and Sri S.R.



***Chloranthus nervosus* var. *khasiana* A.V. Prabhugaonkar, M. Murugesan and A.A. Mao (Chloranthaceae)**

***Dendrobium tuensangense* N. Odyuo & C. Deori (Orchidaceae)**

Talukdar, Bot. Asst. Dr. S.K. Singh made taxonomic description completed of one species namely *Riccia huebeneriana*; studied the protologue of all synonyms of *Riccia billardieri*, *R. bulbifera*, *R. bengalensis*, *R. pimodii*, *R. himalayensis*, *Riccia poihaiana* and verified from the existing collections available.

Observed and recorded phenological data of flowering and fruiting of 73 plant species viz., *Aerides multiflora*, *Aesculus assamica*, *Ageratum conyzoides*, *Allamanda cathartica*, *Alpinea malaccensis*, *Amomum pterocarpum*, *Artocarpus heterophyllus*, *Artocarpus lakoocha*, *Arundina graminifolia* var. *gramnifolia*, *Baccaurea ramiflora*, *Bougainvillea glabra*, *Brachycorythis galeandra*, *Caryota urens*, *Catunaregam spinosa*, *Cerasus cerasoides*, *Citrus medica*, *Coelogyne prolifera*, *Coelogyne punctulata*, *Conchidium muscicola*, *Crepidium khasianum*, *Crepidium calophyllum*, *Cunninghamia lanceolata*, *Curcuma angustifolia*, *Curcuma caesia*, *Cymbidium aloifolium*, *Dillenia indica*, *Dendrobium fugax*, *Dendrobium moschatum*, *Dendrobium stuposum*, *Dendrobium transparens*, *Dracaena angustifolia*, *Epiphyllum oxypetalum*, *Epipogium roseum*, *Eria ferruginea*, *Eurya acuminate*, *Exbucklandia populnea*, *Globba racemosa*, *Gloriosia superba*, *Gmelina arborea*, *Gnetum gnemon*, *Habenaria acuifera*, *Hedychium ellipticum*, *Itea macrophylla*, *Jacaranda mimosifolia*, *Lagerstroemia indica*, *Lagerstroemia speciosa*, *Ligustrum robustum*, *Liparis deflexa*, *Liparis*

Ligustrum robustum, *Liparis deflexa*, *Liparis plantaginea*, *Magnolia champaca*, *Magnolia hodgsonii*, *Melastoma malabathricum*, *Mesua ferrea*, *Micromelum integerrimum*, *Micropera rostrata*, *Nephelaphyllum cordifolia*, *Nepenthes khasiana*, *Ocotea lancifolia*, *Papilionanthe teres*, *Phaius tancarvilleae*, *Phalaenopsis manii*, *Pholidota articulata*, *Pholidota imbricata*, *Rauvolfia serpentina*, *Renanthera imschootiana*, *Roscoea purpurea*, *Schima wallichii*, *Schefflera wallichiana*, *Smitinandia micrantha*, *Syzygium jambos*, *Tabernaemontana divaricata*, *Thunia alba* and *Vanilla borneensis* by Dr. M. Murugesan and Sri L.R. Meitei.

Approximately 800 seedlings of *Cymbidium tigrinum* are transferred from lab to land.

Data analyze, interpretation, literature survey for *Armadorum senapatianum*, *Cymbidium tigrinum*. Subcultured *Armadorum senapatianum*, *Nepenthes*, callus of *Cymbidium tigrinum* under the project Micro-propagation of RET Plants of Northeast India by Dr. A.A. Mao & L. Ibemhal Chanu, Bot. Asst.

Under Micropropagation, Phytochemical Screening of Medicinal Plants and Molecular Characterization of Selected Species by Dr. Deepu Vijayan, Scientist 'B', transferred *in vitro* raised plants of *Pyrenaria khasiana* to green house for acclimatization (50 Nos).

Fungi studied during period *Fusicnidiumindica* sp. nov.; An interesting isolate collected from CNH, Howrah; *Acrodontium* sp. Obtained DNA sequence data from RFDF, RGCG, Thiruvananthapuram of three interesting fungal cultures namely of *Dendrosporium lobatum* Plakidas & Edgerton ex J.L. Crane, *Semipseudocercosporaperistrophes-acuminata* (J.M. Yen) J.M. Yen and an unidentified fungal cultures from *Nepenthes khasiana* identified as *Acrodontium* sp. by Dr. Ashish Venkatesh Prabhugaonkar, Scientist 'B'.

Identification service rendered

Identified about five samples of specimens received from various institutions.

Programme organised/lecture delivered/attended

World Environment Day was celebrated by plantation programme in the region on 05.06.2017 and was attended by all the officers and staff of BSI.

3rd International Yoga Day was celebrated on 21.06.2017. Officials from Sports Authority of India, Shillong demonstrated and delivered a speech on the benefits of Yoga.

An interactive session on ArcGIS software was conducted by Ashish V. Prabhugaonkar and Dr. M. Murugesan, attended by all the officers, scientific staffs and research scholars.

A lecture was delivered by Prof. A.P. Das from University of North Bengal University on 'The Father of Taxonomy, Carl Linnaeus and his contribution on 16.06.2017 and was attended by all the officers scientific staff and research scholars of BSI, Shillong.



Rohdea extorsandra N. Odyuo, D.K. Roy and Leonid V. Averyanov. (Asparagaceae)



World Environment Day celebration by plantation programme at ERC, BSI, Shillong



Participation of officials in International Yoga Day celebration at ERC, BSI, Shillong



Dr. Madhumita Biswas, Director, MoEF & CC visiting Botanic Garden, BSI, Barapani

Visitors/students

Three Professors, eight research scholars and three other visitors from various Institutions, Colleges and Universities visited the Centre.

Publications

Odyuo, N., Deori, C. and Daimary, R. 2017. *Dendrobium tuensangense*, a new species of Orchidaceae from Nagaland, Northeast India. *Phytotaxa* 311(2): 185–189.

Odyuo, N., Roy, D.K. and Leonid V. Averyanov. 2017. *Rohdea extrorsandra* (Asparagaceae), a new species from north-eastern India. *Phytotaxa* 309(3): 283–287.

Prabhugaonkar, A.V., Murugesan, M. and Mao, A.A. 2017. *Chloranthus nervosus* var. *khasiana* (Chloranthaceae) - a new variety from Meghalaya and a new record of species to Indian flora. *Pleione* 11(1): 149–153.

Prabhugaonkar, A.V., Murugesan, M. and Mao, A.A. 2017. Rediscovery of *Wightia speciosissima* (D. Don) Merr. (Paulowniaceae), a rare native potential ornamental tree from Khasi hills, Meghalaya (India). *Pleione* 11(1): 40–43.

– Dr. A.A. Mao
Scientist 'F' & HoO

NORTHERN REGIONAL CENTRE, DEHRADUN

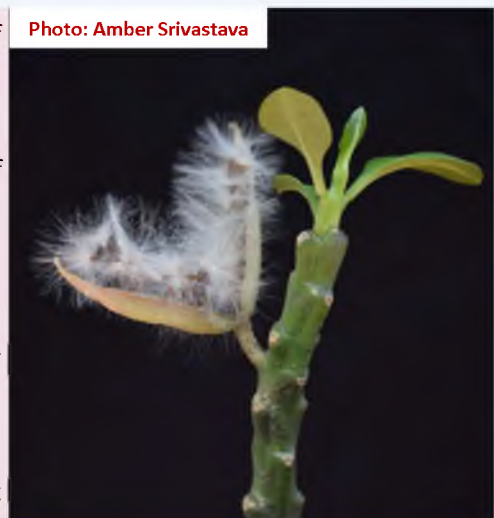
Identified total 56 species and made descriptions for 34 species of plants under the projects, Flora of Himachal Pradesh Vol. I; Flora of Binsar Wildlife Sanctuary; Flora of Sechu-Tuan Nala Wildlife Sanctuary; Trees of Dehradun city and its vicinity; Revision of genus *Adiantum* in India; Documentation and database of Alien Invasive species of Himachal Pradesh.

Meetings attended

Dr. P.K. Pusalkar, Scientist 'D' attended 'Uttarakhand Biodiversity Board Meeting' as BSI representative and expert on Threatened Plant Assessment Committee of the board on 07.06.2017.

Dr. Kumar Ambrish, Scientist 'D' & HoO and Dr. B.S. Kholia Scientist 'D' attended Town level official language implementation committee meeting on 28.06.2017 at Survey of India, Dehradun.

Photo: Amber Srivastava



Frerea indica Dalzell fruiting under ex-situ conservation at NRC, BSI, Dehradun



Dr. Kumar Ambrish and Dr. B.S. Kholia at Town level official language implementation committee meeting



Exhibition of Botanical Survey of India at Forest Research Institute, Dehra Dun

World Environment Day

The Centre has celebrated Environment Day on 05.06.2017.

The centre also organized exhibition of Botanical Survey of India at Forest Research Institute (FRI) on the occasion of World Environment Day, 05.06.2017/FRI foundation day.



Green Skill Development Programme students visiting museum of Archaeological Survey of India, Dehradun



Officers and staff participating in Hindi Workshop at NRC, BSI, Dehradun

Hindi Workshop

The centre has organized Hindi workshop on 29.06.2017 with participation from all officers and employees.

Visitors/students

52 visitors from Doon University, Dehradun and Bareilly College, Bareilly have visited the museum, Library and the garden of the centre.

Publication

Kumar, P., Singhal, V.K. and Srivastava, S.K. 2017. Secondary associations in 'Himalayan Pink' (*Dianthus angulatus* Royle ex Benth., Caryophyllaceae) from cold deserts of Lahaul-Spiti. *Genetika* 49(1): 87–94.

Kumar A. and Srivastava, S.K. 2017. *Aster laka* C.B. Clarke: A new record for Uttarakhand. *Indian For.* 143(5): 505–506.

Dr. Kumar Ambrish
Scientist 'D' & HoO

SOUTHERN REGIONAL CENTRE, COIMBATORE

Dr. C. Murugan, Scientist 'D' & HoO and Dr. S. Arumugam, Bot. Asst. conducted one field tour to MWLS and vouched 217 field numbers. identified 15 field numbers from previous collections in connection with Floristic Assessment of Meghamalai WLS, Tamil Nadu. Dr. K.A.A. Kabeer, Scientist 'D' and Sri A. Ravi Kiran, Bot. Asst. identified 38 field numbers for Kodaikanal WLS, Tamil Nadu. Dr. J.H. Franklin Benjamin, Scientist 'C' and Sri Rakesh G Vadhyar, Bot. Asst. identified 31 field numbers from Kanniyakumari WLS, Tamil Nadu. For flora of Tamil Nadu: Cyperaceae, Dr. C. Murugan, Dr. J.V. Sudhakar and Dr. S. Arumugam identified 12 field numbers from previous collection. For flora of Kerala, Dr. M.Y. Kamble, Scientist 'D' and Dr. T. Saravanan, Bot. Asst. are finalising manuscript for the families from Bromeliaceae to Burbaniaceae (excluding Dioscoreaceae & Amaryllidiaceae). Whereas, Sri R.K. Singh, Botanist and Dr. S. Pradeesh, Bot. Asst. completed nomenclature for 58 species and database for 9 genera of the family Commelinaceae.

Ex-situ conservation

Dr. S. Kaliamoorthy, Scientist 'D', and his team (Dr. M.Y. Kamble, Dr. T.S. Saravanan, Sri B.S. Elango, Bot. Asst.) multiplied 550 samples belonging to 27 taxa, developed 20 cuttings and recorded the phenological data of 18 species of orchids 9 species of other angiosperms.

Digitisation of Herbarium specimens

During this month, a total of five R. Wight collections were segregated from general herbarium and incorporated into the R. Wight herbarium. Data base of 575 herbarium sheets of family Ebenaceae was completed.

Public services rendered

During this month 19 plant species were **Photo: SRC** identified and also 142 pages of literatures were supplied to various research scholars and students.



Plantation programme at SRC, BSI, Coimbatore during World Environment Day celebration



Participation of officials during International Yoga Day celebration at SRC, BSI, Coimbatore

Meetings/programmes attended/conducted

BSI, Coimbatore observed world Environment day on 05.06.2017 with school children. In this connection various competitions were conducted and distributed prizes all the winners.

3rd International Yoga day was observed in befitting manner on 21.06.2017. All the officer and staff are actively participated yoga practices.

Ms. Madhumita Biswas Scientist 'F', MoEF & CC conducted O & M inspection on 16.06.2017.

Visitors/students

11 scientific personnel/officials/scholars visited the museum, herbarium and library whereas 2433 persons under 263 parties visited the NOEG, Yercaud.

Publications

Prasad, K., Venu, P. and Kaliamoorthy, S. 2017.

Ceropegia omissa H. Huber (Apocynaceae: Asclepiadoideae) on the verge of extinction. *Current Sci.* 112 (11): 2189–2191.

Arumugam, S., M. Anantha Lakshmi and Mehala Devi, R. 2017. A Note on the distribution of *Syzygium neesianum* Arn. (Myrtaceae) from India. *Ind. J. Forest.* 40(1): 97–98.

Prabhu, S. and Murugan, C. 2017. A new species of *Memecylon* L. (Melastomataceae) from the Western Ghats, India. *Ind. J. Forest.* 40(1): 69–71.



Dr. Madhumita Biswas, Director, MoEF & CC
visiting MH herbarium during OM Inspection

– Dr. C. Murugan
Scientist 'D' & HoO

WESTERN REGIONAL CENTRE, PUNE

Dr. J. Jayanthi, Scientist 'D' identified 100 field numbers for the project, "Floristic diversity of Biligiri Rangaswamy Temple Wildlife Sanctuary, Karnataka".

Dr. Jeewan Singh Jalal, Scientist 'D' prepared drainage shape file of study area Goa, Digitize the protected area boundary shape file of Goa state, Shuttle Radar Topography Mission (SRTM) data at 1 arc second (~30 meter) DEM tiles downloaded through Earth Explorer and created a mosaic in Arc Gis 10.2 with help of ArcGIS 10.5 for the project, "An assessment of Orchid diversity of Central Western Ghats: Goa".

Dr. Priyanka Ingle, Scientist 'B', identified 14 field numbers for the project, "Floristic diversity of Wan Wildlife Sanctuary, Maharashtra".

Sri S. C. Patil, Bot. Asst. identified 12 field numbers for the project, "Flora of Pushpagiri Wildlife Sanctuary, Karnataka".

Dr. A. Benniamin, Scientist 'D' identified three field numbers for the project, "Ferns of Karnataka".

Sri D. Jesubalan, Bot. Asst. identified 2 field numbers for the project, "Pteridophytic flora of Pushpagiri Wildlife Sanctuary, Karnataka with 10% periphery".

Sri D. Tripathi, SPF identified two field numbers for the project, "Pteridophyte flora of Kudremukh National Park, Karnataka with 10% periphery".

Dr. S. Bhakta, Bot. Asst. identified 13 species of algal samples for the project, "Biodiversity assessment of microalgae from thermal springs of Maharashtra".

Dr. Rashmi Dubey, Scientist 'D' processed 5 litter samples by particle plating method; processed six fungal samples from wooden logs and taken microscopic photographs of 5 samples for the project, "Taxonomic Studies of Micro fungi of Sanjay Gandhi National Park along with its 10% peripheral area".

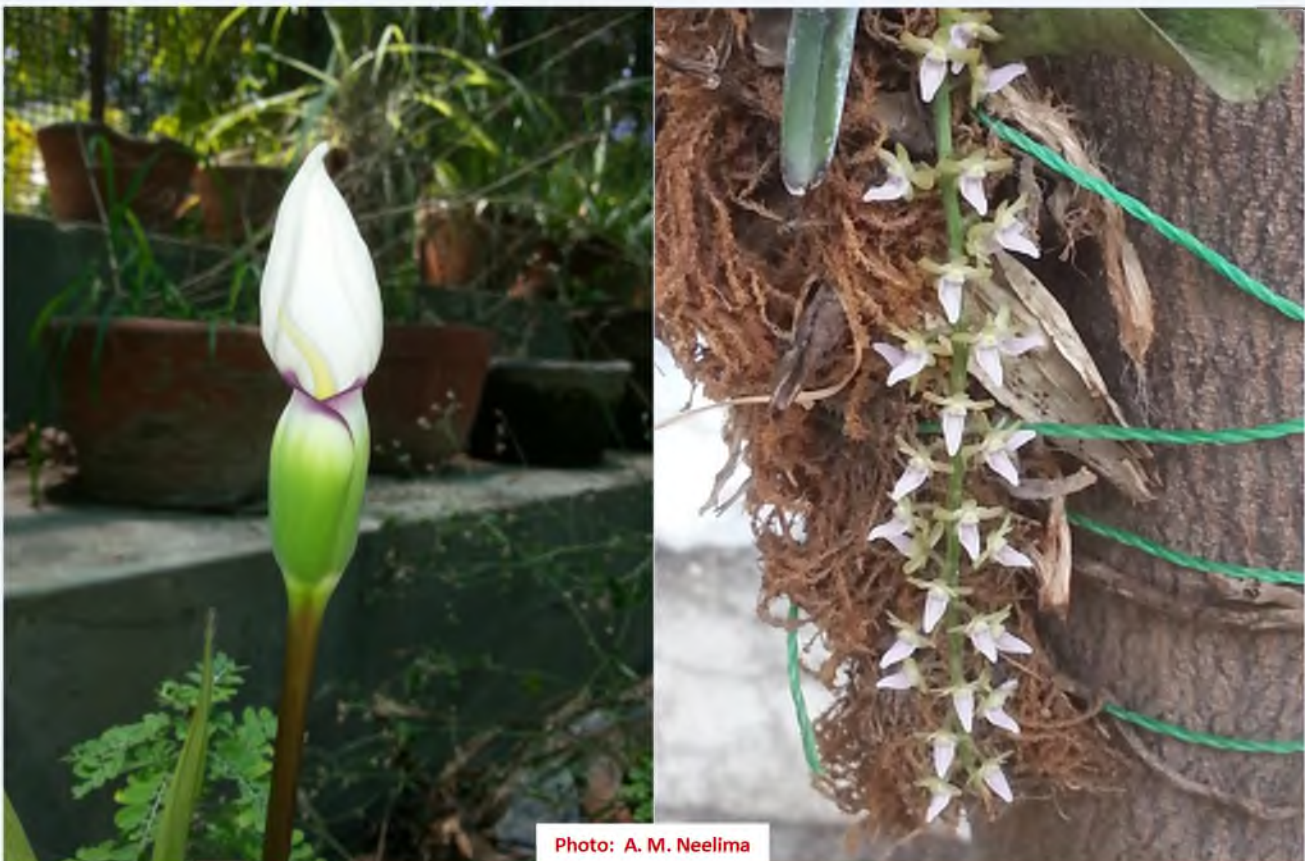


Photo: A. M. Neelima

Flowering of *Arisaema murrayi* (ARACEAE) [left] and *Diplozentrum congestum* (ORCHIDACEAE) [right] at WRC, BSI

Smt. Shreya Sengupta, Senior Project Fellow examined 184 slides of micro fungi for the project, “Microfungi of Biligiri Rangaswamy Temple wildlife Sanctuary, Karnataka”.

Public services rendered

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

World Environment Day 2017

Organized World Environment Day at Western Regional Centre, Botanical Survey of India, Pune on 05.06.2017 with the theme of the year “Connecting people to Nature”. The programme was inaugurated by the Chief Guest, Dr. D.K. Tyagi, Additional PCCF, Social Forestry, Forest Department, Pune, Maharashtra by planting one sapling. Besides saplings were also planted by Dr. P. Lakshminarasimhan and the Internal Audit team from Pay & Account’s Office, Kolkata (BSI & ZSI) viz., Sri Mahesh Kumar Sharma, Sr. Accountant, Sri Pradeep Kumar, Asst. Accounts Officer and Sri Nand Lal Tiwari, Accountant. Children from different schools in and around Pune were also participated in the World Environment Day celebration. Altogether 34 students along with their parents participated in the World Environment Day programme at WRC, BSI, Pune. Dr. D.K. Tyagi and Dr. P. Lakshminarasimhan interacted with school children and explained about conserving the environment by changing their habits for example, using bicycles for short distances, public transport for daily commuting to offices, reducing food waste, saving energy at home and offices by switching of lights and AC’s when not in use and using water efficiently. After that, all students, scientists and staff of Botanical Survey of India, Western Regional Centre, Pune planted indigenous saplings in the office garden. Nearly 25 saplings were planted on the occasion of World Environmental day. As a prequel to the celebrations, the WRC, BSI conducted Sit and Draw Competition and also Quiz competition for the



Drawing competition for students held during World Environment Day celebration at Heritage Building, WRC, BSI, Pune

Plantation by Dr. D.K. Tyagi, Addl. PCCF, Pune during World Environment Day at WRC, BSI, Pune

school children according to their class/age. The competition was as per the theme of the World Environment Day i.e. "Connecting People to Nature". The children enthusiastically participated in the drawing competition by their creative drawings and posters. For Quiz competition two teams were made according to their class / age.

Meetings /programmes/attended/conducted

Dr. J. Jayanthi has attended the 3rd Meeting of Sub-Committee on Threatened Plant/Animal Species in the State under Maharashtra State Biodiversity Board on 12.06.2017 at Van Bhavan, Department of Forest, Pune.

A Pre Ph.D-Synopsis Presentation, "Floristic Studies on Koyna Wildlife Sanctuary with special emphasis on study of Endemic Plants" by Ms. Prajakta Pathare under the guidance of Dr. P.G. Diwakar (former Joint Director, BSI) was conducted on 20.06.2017 at WRC, BSI, Pune.

Organized International Day of yoga at WRC office, Pune on 21.06.2017.

Dr. J.S. Jalal attended three days training programme on User Mobilization & Roll out of Employees Information System (EIS) GPF/CDDO Module at INGAF, Mumbai during 21st to 23rd June 2017.

Visitors/students

Sri Kiran Abhyankar from Sharangdhar pharmaceuticals Pvt. Ltd., Pune, Ms. S.D. Randive from Walchand College of Arts & Science, Solapur, consulted the family Papilionaceae.

Sri Balaji Uchitkar, Research scholar, Dept. of Botany, Dr. B.A.M. University, Aurangabad visited on 19.06.2017 for herbarium consultation.

Sri Bhushan Shigwan, Research scholar, Agharkar Research Institute visited for consultation of herbarium specimens on 23.06.2017.

Ms. Edlabadkar, Bharat English School & Junior College, Pune visited herbarium.

Eight visitors from Pune, Mumbai and Aurangabad visited to WRC museum who has been guided and demonstrated about museum.

Publication

Patil, S.C., Lakshminarasimhan P. and Singh, P. 2017. (2529) Proposal to conserve the name *Podostemum* (Podostemaceae) with that spelling. *Taxon* 66(3): 760-761.

Dr. P. Lakshminarasimhan
Scientist 'E' & HoO



Crescentia alata Kunth (BIGNONIACEAE), commonly called as Mexican calabash. It is a small tree native to Southern Mexico and Costa Rica (Central America), commonly cultivated as an ornamental. The flowers are night blooming and pollinated by bats. The fruits are canon ball like and are having medicinal value.

Photo: D.L. Shirodhkar

अण्डमान निकोबार द्वीप समाचार

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पोर्ट ब्लेयर,

शुक्रवार, 16 जून 2017

web: www.an

वनस्पति सर्वेक्षण में स्वच्छता पखवाड़ा

पोर्ट ब्लेयर, 15 जून।

भारतीय वनस्पति सर्वेक्षण के पोर्ट ब्लेयर स्थित अंडमान निकोबार क्षेत्रीय केन्द्र द्वारा स्वच्छ भारत अभियान के तहत 1 से 15 जून, 2017 तक



स्वच्छता पखवाड़ा मनाया गया। स्वच्छ एवं हरित पर्यावरण को बढ़ावा दिए जाने के उद्देश्य से आयोजित पखवाड़े के दौरान पेड़ लगाए गए। हैड्रो स्थित कार्यालय परिसर, नया शहर स्थित बानस्पतिक उद्यान परिसर एवं शादीपुर स्थित आवासीय परिसर में सफाई अभियान चलाया गया। समापन समारोह में सभी अधिकारियों और कर्मचारियों ने स्वच्छ एवं हरित पर्यावरण के संरक्षण एवं विकास की शपथ ली।



Dr. Amita Prasad, IAS, Addl. Secretary, MoEF & CC, New Delhi, Dr. P. Singh, Director, BSI and Dr. Kailash Chandra, Director, ZSI along with other participants at Regional Workshop on "Conservation and Management of Wetland (Eastern Region)" organized under aegis of the National River Conservation Directorate of the Ministry of Environment, Forest & Climate Change, Govt. of India, at ZSI HQ, Kolkata on 23.06.2017

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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