

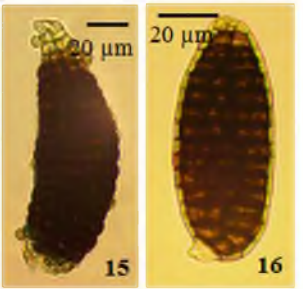
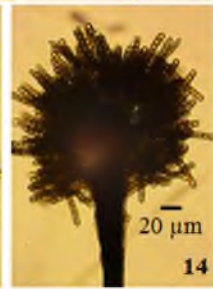
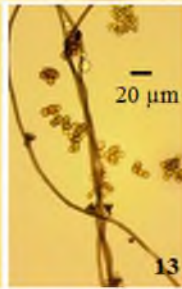
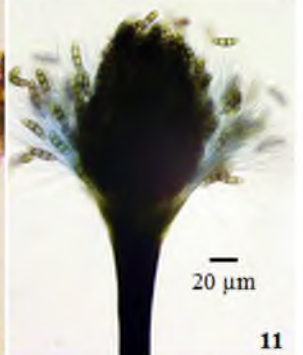
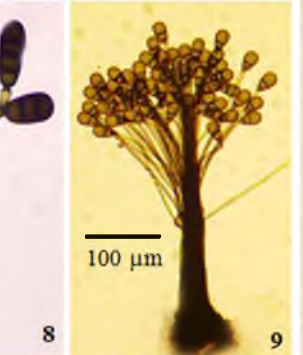
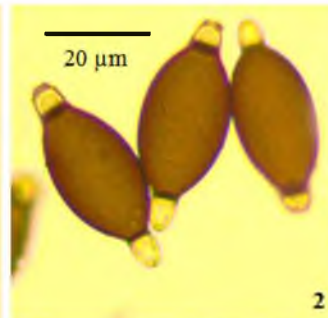
BSI NEWSLETTER

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Botanical Survey of India
CGO Complex, 3rd MSO Building, Block – F
5th Floor, DF Block, Sector – I, Salt Lake City
Kolkata – 700 064



HEAD QUARTERS, KOLKATA

For the projects, 'Studies on wild mushrooms of Sikkim', 'Studies on the macrofungi of AJC Bose Indian Botanic Garden', 'Wood rotting fungi of Rajmahal hills', 'Revision of the family Metzgeriaceae in India', and 'Liverworts and Hornworts Flora of Darjeeling District, West Bengal' scientists and scientific staff of the Cryptogamic section identified the collected specimens, prepared the camera lucida drawings and taken microphotographs and also made the descriptions.

In connection with the project, "Pharmacognosy of Indian Cycads", Dr A.B.D. Selvam, Scientist 'D' studied the micro-morphological features of the pollen grains of a *Cycas* sp. under Light Microscope (LM), which was collected from AJC Bose Indian Botanic Garden campus.

Dr. Gupta prepared the answer for the parliamentary query related to occurrence of algal bloom in the Arabian Sea and submitted to the Director, BSI for further necessary action at their end.

Dr. D. Singh, Scientist 'D' prepared the database of 29 general liverwort specimens at CAL herbarium.

Dr. Monalisa Dey, Scientist 'B' prepared and provided course material on Bryophytes for the participating students of the Green Skill Development Programme (GSDP), being held at Central National Herbarium.

Public service rendered

Dr. A.B.D. Selvam pharmacognostically studied and authenticated a mixture of plant samples containing roots and stems of *Withania somnifera* (L.) Dunal (Solanaceae), which was received from M/s Imami Ltd., Kolkata.

Dr. A.B.D. Selvam evaluated a Ph.D. thesis, "Synthesis and Characterization of Iron Nanoparticles and their application as Nano-fertilizers on different cultivars of Ginger (*Zingiber officinale* Rosc.)" submitted by Ms. L. Fany John Benita, received from University of Madras and report was sent on 14.07.2017.

Lectures delivered

Dr. R.K. Gupta, Scientist 'D' deliver a lecture on 'Basic concept of Algae' and also provided practical demonstration to the Green Skill Development trainee students.

Dr. A.B.D. Selvam delivered an in-house lecture to newly joined Junior Project Fellow (JPF) on "Pharmacognosy with reference to CITES and Negative listed Plants" held at Committee room of CNH, BSI, Howrah on 24.07.2017.

Publication

Selvam, A.B.D. 2017. Jackfruit Therapy. *World J. Pharmacy and Pharmaceut. Sci.* 6(7): 1233–1237.

CENTRAL NATIONAL HERBARIUM, HOWRAH

Dr. Vinay Ranjan, Scientist 'D' and Sri Anant Kumar, Bot. Asst. identified 21 field numbers collected from Neora Valley National Park, Darjeeling district, West Bengal.

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

Dr. Kumar Avinash Bharati, Scientist 'B' identified seven field numbers collected from Baraila lake Salim Ali Jubba Sahni Bird Sanctuary, Vaishali District, Bihar.

Public service rendered

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' sent literature to Dr. A.G. Pandurangan, Director, Jawaharlal Nehru Tropical Botanic Garden & Research Institute, Thiruvananthapuram; provided PDF of 6 pages from *Kew Bull.* 38(2): 215–220. 1983 to Dr. W. Dinesh Albertson, Research Scientist 'B', C.E.M.D.E., University of Delhi; 8 pages on *Terminalia* from Directory of Plants in the Botanic Gardens of India by Chakraverty et al. (2003) to Amol P. Salve, Research Student, Department of Botany, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Maharashtra; 22 pages on *Indigofera* from *Flora of Pakistan*, No. 100 to Dr. A.A. Ansari, Retired Scientist, BSI; 33 pages [*Taxon* 66(2): 445–477. 2017] on *Argyreia* (Convolvulaceae) and 9 pages on Convolvulaceae from Chromosome Atlas of flowering plants of the Indian subcontinent by Kumar and Subramaniam (1987) to Pramod Lawand, Shivaji University, Kolhapur; 12 pages from *Taxon* 58(3): 2009 and 84 pages from *Advances in Legume Systematics*, Vol. 7 on Evolution of the tribe Indigofereae to Dr. Vibha Chauhan, Post-Doctoral Fellow, BGIR, Noida.

Dr. Avisek Bhattacharjee, Scientist 'B' sent images of eight type specimens of *Piper* to Ms. Rani Asmarayani, University of Missouri St. Louis - Missouri Botanical Garden, USA; 28 images of 26 type specimens of *Flemingia* to Dr. Do Van Truong, Vietnam National Museum of Nature, Hanoi, Vietnam and 10 images of *Calanthe alpina* to Dr. Jeewan Singh Jalal, Scientist D, WRC, BSI, Pune.

Meetings/Seminar/conference attended

Dr. P.V. Prasanna, Scientist 'F' & HoO attended 27th State level steering Committee meeting of Sundarban Biosphere reserve management at Forest Dept., West Bengal on 19.07.2017.

Dr. Pushpa Kumari, Scientist 'D' attended the XIXth International Botanical Congress held from 23rd to 29th July 2017 at Shenzhen, China and delivered one oral presentation on "Ecology, Endemism and Generic Circumscription in woody Bamboos in India" and one poster on "Conservation and Reintroduction of *Bentinckia nicobarica* (Kurz) Becc. in Nicobar Islands – A case study" during the congress.

Visitors

Sri Ashok Kumar Biswal, IFS, Senior Deputy Director, Forest Survey of India on 04.07.2017.

Sri Akram Ul Haq on 18.07.2017, 25.07.2017 and 28.07.2017.

Sri Surendra Kumar, Director, MoEF&CC and Sri Parmod Kumar, Section Officer, MoEF&CC on 14.07.2017.

Ms. Anasuya Basu, Senior Assistant Editor from The Telegraph and Dr. Truptirekha Kar, Research Fellow in Simlipal Tiger Reserve, Odisha on 31.07.2017.

Publications

Bandyopadhyay, S. and Bhattacharjee, A. 2017. Responding to requests. *Curr. Sci.* 113(2): 197.

Basumatary, S.K., Tripathi, S. and Gogoi, R. 2017. Modern Pollen Rain in South Garo Hills, Meghalaya. *Compendium of Botanical Research in Eastern India*, pp. 99–108.

Gogoi, R., Tham, B.B.T., Lidén, M. and Borah, S. 2017. *Impatiens pseudolaevigata* sp. nov. (Balsaminaceae): a new species from Western Arunachal Pradesh, India. *Phytotaxa* 313(2): 227–230.

Gogoi, R., Borah, S. and Hakkinen, M. 2017. Diversity of Wild Bananas (*Musa* L.–Musaceae) in the state of Assam, India. *Compendium of Botanical Research in Eastern India*, pp. 80–98.

Jeyaprakash, K. Karthigeyan, K. and Rathinavel, S. 2017. *Archidendron chevalieri* (Kosterm.) I.C. Nielsen (Leguminosae: Mimosoideae) – a new record for India from Arunachal Pradesh. *Int. J. Curr. Res. Biosci. Plant Biol.* 4(7): 97–101.

Jeyaprakash, K., Karthigeyan, K. and Rathinavel, S. 2017. *Jasminum pentaneurum* Hand.-Mazz. (Oleaceae): an addition to Indian Flora from Arunachal Pradesh, North East India. *Int. J. Curr. Res. Biosci. Plant Biol.* 4(7): 129–133.

Shalini, S., Lakshminarasimhan, P. and Arisdason, W. 2017. Lectotypification of four names in *Argyria* (Convolvulaceae). *Telopea* 20: 171–177

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

INDUSTRIAL SECTION INDIAN MUSEUM, KOLKATA

As a part of preparing a database of herbarium specimens at BSIS, 145 numbers of Dicot herbarium specimens were listed and documented.

Botanical Paintings

The botanical paintings by Roxburgh are being interpreted with updated nomenclature. Three names are analysed and description of 3 taxa viz. *Diospyros racemosa*, *Diospyros ramiflora* and *Diospyros lanceifolia* prepared from the family Ebenaceae and 62 names of Poaceae members in *Icones Roxburghianae* were listed.

Updating of nomenclature of digitized Herbarium Specimens at BSIS

About 370 numbers of Digitized Herbarium specimens were updated with valid botanical names, basionyms/synonyms.

Public service rendered

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

Visitors/students

This office celebrated the *Vanmahotsav* on 06.07.2017. On this occasion, 44 numbers of students from Kishore Bharati Boys High school, Dum Dum visited Botanical Gallery and discussion held on plant



Students from Kishore Bharati Boys High School, Dum Dum watching the documentary

Newly recruited BSI-JRFs from CNH Howrah visiting Botanical Gallery, ISIM, Kolkata

conservation and the role of public participation followed by interaction with students by Dr M. Bhaumik and Dr. A.K. Sahoo with assistance from other technical staff.

A documentary on Cold Desert has been shown to the students. Newly recruited Junior Research Fellows, BSI from CNH, Howrah visited Botanical Gallery & Exhibition on “Joseph Dalton Hooker: Botanical Trailblazer and the Botanical Heritage of India” on July 18, 2017.



Trainees of Green Skill Development Programme (GSDP) of BSI-ZSI (2017 batch) visited Botanical Gallery & Hooker exhibition on 20.07.2017. Different aspects of importance of plants explained. A short film on Field Collections of Plant Specimens and Herbarium Techniques has been shown to the trainees. Dr Kangkan Pagag, Smt. Sudeshna Datta, Sri B.C. Dey and Sri S.K. Sharma attended and guided the group of school students from Kishore Bharati Boys High School, Dum Dum during their visit of Botanical Gallery and J.D. Hooker exhibition as a part of “Vanmahatsav” celebration and also guided BSI-ZSI trainees of Green Skill Development Programme (GSDP).

Dr A.K. Sahoo facilitated for the consultation of J.F. Watson’s Textile designs (vols. VII & VIII) by the representative (Sri Simon Mark) of M/S ‘Sutra’, the NGO on a view of forthcoming collaborative exhibition on “Textiles and Natural Dyes of Bengal” on 20.07.2017.

– Dr. Manas Bhaumik
Scientist ‘D’ & HoO

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

For digitization of herbarium specimens of PBL, 557 numbers of specimens of the family Euphorbiaceae and Urticaceae were scanned.

About 750 herbarium specimens of the families Balanophoraceae, Elaeagnaceae, Euphorbiaceae, Loranthaceae, Santalaceae, Thymelaceae and Urticaceae were fed in the computer in EXCEL format.

Green Skill Development Programme (Foundation Course)

Dr. Sanjay Mishra, Scientist ‘B’, delivered lecture on “Introduction to common local flora with their local and scientific names” on 03.07.2017; on “Introduction to the concept of Rare, Endangered and Threatened flora & causes of threats” on 06.07.2017; on “Basics of Tissue culture techniques” on 11.07.2017 and on “Introduction to basic classification of plants” on 19.06.2017 to the trainees of Green Skill Development Programme, Foundation Course by MoEF & CC at BSI, ANRC, Port Blair.

Sri Gautam Anuj Ekka, Presv. Asst., demonstrated practical on Herbarium Methodology on 04.07.2017; on “Introduction to economic botany, medicinal plants and traditional knowledge” on 26.06.2017 and on “Collection and preservation techniques of voucher specimens-herbarium techniques” on 30.06.2017 to the GSDP trainees at BSI, ANRC, Port Blair.



Review of progress of GSDP by Dr. Paramjit Singh, Director, BSI at Port Blair on 29.07.2017

Dr. C.P. Vivek, Bot. Asst., delivered lecture on “Morphology of Angiosperms-vegetative and floral parts” on 27.06.2017 and on “Introduction to popular species concepts” on 29.06.2017 to the trainees.

Review meeting of Green Skill Development Programme

Dr. Paramjit Singh, Director, BSI, Kolkata reviewed the progress of GSDP, Port Blair at ANRC, BSI, Port Blair on 29.07.2017.

Celebration of 68th Van Mahotsav-2017

As a part of month long celebration of 68th *Vanmahotsav*, a tree planting programme was organized by the Botanical Survey of India, Andaman and Nicobar Regional Centre, Port Blair at Govt. Middle School, Guptapara to create awareness among the students and general public of these islands about the importance of trees and life.

Meeting/programme attended/organised

Dr. Lal Ji Singh, Scientist ‘D’ & HoO participated Ceremonial Tree Planting function of 68th *Vanmahotsav*-2017 at Govt. Sr. Sec. School, Rangachang, South Andaman organised by Department of Environment and Forests, Andaman and Nicobar Administration on 03.07.2017.

Dr. Singh organized a tree planting programme as a part of month long celebration of 68th *Vanmahotsav* -2017 at Govt. Middle School, Guptapara, South Andaman on 10.07. 2017.

Dr. Singh participated research advisory committee meeting at Office of the Principal Chief Conservator of Forests, Research & Working Plan, Haddo, Port Blair on 13.07.2017.

Dr. Singh attended Half Yearly meeting of Town Official Language Implementation Committee (TOLIC) at CIARI, Port Blair on 28.07.2017.

Dr. Singh organized review meeting of progress of GSDP at BSI, ANRC, Port Blair Chaired by Dr. Paramjit Singh, Director, BSI, Kolkata on 29.07.2017.



Dr. Lal Ji Singh attending Half Yearly meeting of Town Official Language Implementation Committee (TOLIC) at CIARI, Port Blair



Photo: G.A. Ekka

Dr. Lal Ji Singh addressing gathering on the occasion of celebration of 68th *Vanmahotsav* organized by ANRC, BSI



Photo: G.A. Ekka

Mass tree planting by students of Government Middle School, Guptapara, S. Andaman (left); Sri D.M. Shukla, Addl. PCCF, Department of Environment and Forests, A & N Administration planting sapling of *Bentinckia nicobarica* (middle); Dr. Paramjit Singh, Director, BSI planting sapling of *Schizostachyum kurzii* (right)

Dr. Singh participated closing ceremony of 68th Van Mahotsav-2017 organized by Department of Environment and Forests, Andaman and Nicobar Administration at Tagore Government College of Education, Port Blair on 31.07.2017.

Besides, BSI organized tree planting programme in various parts of the Islands and also distributed free seedlings for Islanders. Dr. Paramjit Singh, Director, BSI, MoEF & CC and Sri D.M. Shukla, Addl. PCCF, Department of Environment and Forests, Andaman and Nicobar Administration visited BSI garden at Nayashahar on 29.07.2017. Dr. Singh planted an endemic bamboo of Andaman and Nicobar Islands, *Schizostachyum kurzii* and an endemic palm, *Bentinckia nicobarica* was planted by Sri Shukla in the garden. They also visited different sections of the garden and had discussion with scientists on survey and documentation of plant species, new discoveries, *ex-situ* conservation activities of BSI, ANRC.

Visitors

13 trainees of Green Skill Development Programme foundation course visited herbarium and garden on 04.07.2017 and 07.07.2017 respectively.

Sri Joju P. Alappatt, Director, FTI, Wimberligunj visited Herbarium for consultation on 04.07.2017.

Sri D.M. Shukla, Addl. PCCF, Department of Environment and Forests, Andaman and Nicobar Administration visited garden on 29.07.2017 along with Dr. Paramjit Singh, Director, BSI.

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

ARID ZONE REGIONAL CENTRE, JODHPUR

Over 50 Field numbers were identified during the period under report .

Identification service rendered

Identified 15 field numbers for Flora of Sariksa Tiger Reserve, Alwar Dist., Rajasthan by Dr. M.K. Singhadiya and Sri Ravi Prasad.

Van Mahotsav 2017

Celebrated *Vanmahotsav* on 07.07.2017. Dr. N.K. Basu, Director, Arid Forest Research Institute was invited as Chief Guest, who shared his knowledge & experience about forestry, conservation of plants and water resources. Special Guest, Sri Dinesh Joshi, Founder of Bal-Basera organization, who work for HIV positive children, emphasize on importance of plants for health. Other special guests are Dr. Sanjeev Kumar, HoO, ZSI, Jodhpur and Dr. Govind Singh Panwar, Retd. Hindi Professor. Shri Vinod Maina, Scientist 'D' & HoO, AZRC, BSI chaired the Function. On this occasion, 63 children of Bal-Basera organization, students of Green skill development programme and officers and Staff members of AZRC, BSI participated in plantation programme which was held in office garden. 125 plant saplings introduced during Vanmahotsav celebration.

Photo: Ravi Prasad



Solanum trilobatum (SOLANACEAE) flowering at AZRC

Photo: Narendra



Gathering at the celebration of *Vanmahotsav* 2017



Photo: Ravi Prasad

Planting of sapling during *Vanmahotsav* 2017

Public service rendered

Identified one plant specimen of *Citrus medica* L. for Vikram Choudhary, B. Pharma, Part-II student of Shri Nathjee Institute of Pharmacy, Udaipur.

Visitors

On the occasion of *Vanmahotsav* 63 Children's from *Bal-Basera* organization (work for HIV positive children), Jodhpur visited museum and garden on 07. 07. 2017.

Publication

Prasad, R. and Maina, V. 2017. Jalvayu Parivartan aur Bharatiya Krishi. *Paryavaran*. 68: 41-43.

– Sri Vinod Maina
Scientist 'D' & HoO

CENTRAL REGIONAL CENTRE, ALLAHABAD

For the project, 'Floristic diversity of Kishanpur Wildlife Sanctuary, Lakhimpur Kheri, U.P.', Dr. Neelam Gautam, Scientist 'B' and party conducted a field exploration tour from 4th to 10th July 2017, collected 195 field numbers along with GPS data.

For the project, 'Floristic Diversity of Bhoj Wetland, M.P.' Dr. Arti Garg and party initiated a 10 days field collection tour to Bhopal from 24.07.2017.



View of Kishanpur Wildlife Sanctuary, U.P.

Photo: CRC



Leea alata in Kishanpur Wildlife Sanctuary, U.P.

Herbarium specimen identification

A total of 62 specimens were identified in to 31 species for the projects, 'Floristic Diversity of Bhoj Wetland, M.P.' and 'Floristic diversity of Kishanpur Wildlife Sanctuary, Lakhimpur Kheri, UP.'

A total of 98 specimens were identified in connection with the project, 'Identification of old unidentified specimens of BSA'.

Taxonomic description of 20 species were Completed for the project, 'Trees of Allahabad city and its Environs'.

Editing of three families viz. Araliaceae, Alangiaceae and Rubiaceae were completed for the project 'Editing of Flora of Uttar Pradesh, Vol. II'.

Floral buds of four species belonging to Indian subtribe *Cassiinae* were collected for cytological investigations of the project 'Cytotaxonomical studies of selected taxa of Indian subtribe *Cassiinae*'.

Dr. Pushpi Singh, DST-SERB N-PDF' identified six lichen loan specimens from LWU- LWG and ASSAM herbaria for the project, 'Taxonomic and phylogenetic reassessment and revision of the genus *Phaeographis* and allied genera in the family Graphidaceae (lichenized fungi: Ascomycota) of India'.

Taxonomic descriptions of 26 species were completed for 'Flora of Chhattisgarh' Vol. II.

Identification service rendered

Sri Vineet Kumar Singh, authenticated 2 specimens received from Mrs. Shweta Kulshrestha, Research Scholar, Department of Chemistry, SHUATS, Allahabad viz., *Pinus roxburghii* and *Prosopis cineraria*.

Dr. Nitisha Srivastava, authenticated following 20 specimens into 10 species received from National Center for Natural Resources, Pt. Ravishankar Shukla University, Raipur, Chattisgarh viz., *Cestrum nocturnum*, *Tabernaemontana divaricata*, *Rotala rotundifolia*, *Phyla nodiflora*, *Chenopodium album*, *Pongamia pinnata*, *Syzygium cumini*, *Chromolaena odorata*, *Jasminum arborescens*.

Public service rendered

Dr. Arti Garg, reviewed a manuscript for National Academy of Science Letters.

Dr. Neelam Gautam conducted practical examination of M.Sc. – Final as External Examiner at S.V.M. Science and Technology Postgraduate College, Pratapgarh on 02.07.2017.

Meeting attended

Dr. G.P. Sinha, Scientist 'E' & HoO attended 15th Madhya Pradesh State Wildlife Board Meeting chaired by Honourable Chief Minister, Madhya Pradesh at Bhopal on 10.07.2017.

Vanmahotsava, 2017

Vanmahotsava was celebrated at CRC, Allahabad from 1st July to 7th July, 2017. All officers, staff and research scholars actively participated in the celebration with great zeal.



Photo: CRC

Plantation of *Khaya senegalensis* during Vanmahotsava by Green Skill Development Programme Trainees

Green Skill Development Programme (GSDP)

Under the programme Dr. A.N. Shukla, delivered 16 lectures on 'PBR'; Dr. Neelam Gautam, delivered 12 lectures on 'Economic Botany'; Dr. Ashutosh Kumar Verma delivered 14 lectures on 'Nature Guide Training'; Sri Vineet Kumar Singh delivered 17 lectures on Wetland Ecosystems; Dr. Nitisha Srivastava delivered 18 lectures on 'Major Environmental Issues'; Dr. Pushpi Singh, DST –SERB N-PDF delivered 18 lectures and Dr. Pooja Gupta, AJCB-PDF delivered 18 lectures to trainees. Dr. Arti Garg delivered a special lecture, 'Madhumakkhi Palan-ek laghu udyog' to trainees of GSDP.

Publication

Tiwari, A.P., Shukla, A.N. and Naik, M.L. 2017. *Rubus* L. (Rosaceae) a new generic record for Chhattisgarh. *Indian J. Forest.* 40(1): 101–102.

– Dr. G.P. Sinha
Scientist 'E' & HoO

EASTERN REGIONAL CENTRE, SHILLONG

During the period, Six one day local tours were conducted to Upper Shillong, on 02.07.2017, Shyiap, Ri-Bhoi on 10.07.2017 and 14.07.2017, Mawsynram, on 13.07.2017 and 26.07.2017, Lumsohpetbneng, Ri-bhoi on 15.07.2017 and collected 70 live plants for *ex-situ* conservation by Dr. Murugesan, Scientist 'B' and L.R. Meitei, Bot. Asst. During this period identified 73 species and described 22 species for Flora of Eastern Nagaland by Dr. N. Odyuo, Scientist 'D' and Dr. R. Daimary, Bot. Asst.; for Flora of Nagaland, Dr. A.A. Mao, Dr. N. Odyuo, Dr. D.K. Roy, Bot. Asst.; for Yangoupokpi Lokchao Wildlife Sanctuary by Dr. A.A. Mao and L.R. Meitei and 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. Talukdar, Bot. Asst. Taxonomic description completed of two species namely *Riccia billardier* & *Riccia beyrichiana* and studied the protologue of *Riccia cavernosa*, *Riccia robusta*, *Riccia rautanenii* and verified form the existing collections available at hand by Dr. S.K. Singh, Scientist 'D'. Approximately 600 seedlings of *Cymbidium tigrinum*, were transferred from lab to land by Dr. M. Murugesan and Sri L.R. Meitei.

Subcultured *Armadorum senapatianum*, *Nepenthes*, callus of *Cymbidium tigrinum* for the project, Micro-propagation of RET Plants of Northeast India by Dr. A.A. Mao and 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 (40 numbers).

Fungi studied during period, are *Aureobasidium pullulans*, *Acrodotium crateriforme*, *Bactrodesmium* sp. *Cordana vasiformis* Matsush., *Nomuraea rileyi*, *Harpoglyphium congestum*, *Gliocladium* sp., *Parodiella hedysari*, *Paraceratocladium* sp. and one day field visit to Mawsynram reserve forest on 26.07.2017 and collected *Pinnanga* sp., *Calamus* sp., *Wallichia* sp. by Dr. Ashish Venkatesh Prabhugaonkar, Scientist 'B'.

Public service rendered

Identified five plant specimens received from various institutions.

Programme organised

Celebrated *Vanmahotsav* on 07.07.2017 by planting 530 seedlings of various species at Don Bosco Higher secondary School, Smit, Shillong. The programme was attended by Dr. A.A. Mao, Dr. S.K. Singh, Dr. N. Odyuo, Dr. Chaya Deori, Dr. Deepu Vijayan, Dr. M. Mugrugesan, Dr. Ashish Venkatesh Prabhugaonkar and Dr. S.R. Talukdar.

Hindi workshop was conducted on 18.07.2017 and all the officials of ERC, BSI attended. Dr. S.K. Singh, delivered a talk on CBD.



Distribution of tree saplings among students during celebration of *Vanmahotasav* 2017

Tree plantation at ERC, BSI, Shillong during *Vanmahotasav* 2017

Visitors/students

Two Professor, three lecturers, three research scholars, nine students and seven other visitors from various Institutions, Colleges and Universities visited the Centre.

Publications

Deori, C., Talukdar, S.R., Mira, A.H. and Upadhaya, K. 2017. *Liparis sootenzanensis* Fukuy. (Orchidaceae): A new addition to the Orchid Flora of India. *MIOS Journal* 18(8): 9–12.

Mao, A.A., Roy, D.K. and Rushforth, K. 2017. A reassessment of the status of three taxa within the *Rhododendron formosum* complex (Ericaceae: subsect. *Maddenia*) from northeast India. *Edinburgh J. Botany* 1–15.

Odyuo, N. and Roy, D.K. 2017. *Hedychium chingmeianum* (Zingiberaceae), a new species from Nagaland, India. *Telopea* 20: 193–199.

Roy, D.K., Mao, A.A. and Averyanov, L.V. 2017. *Tupistra khasiana* (Asparagaceae), a new species from Meghalaya, India. *Taiwania* 62(3): 257–260 .

– Dr. A.A. Mao
Scientist 'F' & HoO

NORTHERN REGIONAL CENTRE, DEHRADUN

Identified total 25 species and made description for 37 species of Angiosperm in connection with the projects, Flora of Himachal Pradesh Vol. I, Floristic Diversity and Phytosociological study of Simbalbara National Park, Flora of Nandhour Wildlife Sanctuary, Flora of Sonanadi Wildlife Sanctuary, Revision of family Bignoniaceae, Cyatheaceae and genus *Lepisorus* (Sm.) Ching in India.

Digitization of Herbarium specimens

Scanned and digitized 50 specimens of the family Cappariaceae and of Pteridophytes.

Public Services rendered

Identified *Hypericum oblongifolium* for Dr. Archana Negi, Kumaun University, Nainital.

Meetings attended

Dr. Kumar Ambrish, Scientist 'D' & HoO attended meeting of Punjab State Board for Wildlife, Punjab, on 14.07.2017 at Punjab Bhavan, Chandigarh.

Dr. P.K. Pusalkar Scientist 'D', attended meeting of Uttarakhand Biodiversity Board at Dehradun on 20.07.2017 to finalise a list of threatened species for inclusion in sect. 38.

Van Mahotsav

Centre has celebrated Van Mahotsava from 1st to 7th July, 2017.



Dr. Veena Chandra, former Scientist, ICFRE planting the sapling during the programme of *Vanmahotsava* 2017



Dr. B.S. Kholia, Scientist, BSI planting a sapling during programme of *Vanmahotsava* 2017



Dr. G.S. Panwar delivering a lecture to Green Skill Development Programme trainees



Dr. P.K. Pusalkar delivering a talk to MSc. students from WII Dehradun

Visitors/students

32 students from Doon P.G. college and 40 students from WII, Dehradun visited the centre.

Publication

Kumar, P., Singhal, V.K. and Singh, H. 2017. Intraspecific floral morphotypes in six high altitude perennial herbaceous species from northwest Himalaya: their chromosome counts, meiotic behavior and pollen fertility. *The Nucleus* DOI 10.1007/s13237-017-0211-x.

Dr. Kumar Ambrish
Scientist 'D' & HoO

SOUTHERN REGIONAL CENTRE, COIMBATORE

Dr. J.H. Franklin Benjamin, Scientist 'C' and Sri Rakesh G. Vadhyar, Bot. Asst. conducted a plant exploration to Kanniyakumari WLS, Tamil Nadu from 22nd June to 2nd July 2017 and vouched 197 field numbers and also identified 47 field number from previous collections. Dr. C. Murugan, Scientist 'D' & HoO and Dr. S. Arumugam, Bot. Asst. undertook a plant exploration to Meghamalai WLS, Tamil Nadu from 19th to 27th July 2017 and vouched 129 field numbers. They also consulted herbarium at Kerala Forest Research Institute, Thrissur, Kerala on 06.07.2017.



Photo: SRC

A view of High altitude grassland at pachakumachi hills in Tamil Nadu



Scientific officials of SRC, BSI collecting plants at Pachakumachi hills



Photo: SRC

Tour party collecting the tree species at Manala



Callicarpa tomentosa

Herbarium Identification

Dr. K.A.A. Kabeer, Scientist 'D' and Sri A. Ravi Kiran, Bot. Asst. identified 68 field numbers for Kodaikanal WLS, Tamil Nadu. For flora of Tamil Nadu-Cyperaceae, Dr. C. Murugan, Dr. J.V. Sudhakar, Bot. Asst. and Dr. S. Arumugam identified 10 cyperaceae members.

Five R. Wight collection of Cyperaceae were segregated from general herbarium and incorporated into the R. Wight herbarium.

Ex-situ conservation

Dr. S. Kaliamoorthy, Scientist 'D', Dr. M.Y. Kamble, Scientist 'D' and his team multiplied 93 samples belonging to 22 taxa and developed 7 cuttings and recorded the phenological data of 30 plants belonging to 20 orchids and 10 other angiosperms at the National Orchidarium and Experimental Garden (NOEG), Yercaud, Tamil Nadu.



Photo: SRC

Impatiens grandis (BALSAMINACEAE)*Impatiens parasitica* (BALSAMINACEAE)

Photo: SRC

Impatiens verticillata (BALSAMINACEAE)*Ophiorrhiza rugosa* var. *prostrata* (RUBIACEAE)

Digitisation of Herbarium specimens

Five R. Wight collection of Cyperaceae were segregated from general herbarium and incorporated into the R. Wight herbarium.

Scanning Electron Microscopy (SEM)

Dr. K.A.A. Kabeer submitted the final manuscript on SEM study of Caryopsis in *Eragrostis*, *Sporobolus* and *Tripogon*. Dr. J.V. Sudhakar, with the help of Sri Saravanan, SEM Technician, completed the SEM study of seed morphology of all the allotted 15 taxa of *Ficus* L. and submitted the final manuscript. Dr. Sudhakar and Ms. Anantha Lakshmi, Sr. Pres. Asst. also scanned 56 SEM images from the nutlets of 18 species of cyperaceae.

Public service rendered

Dr. M. Palanisamy prepared report against Rajashaba Question regarding "Harmful Algal blooms in Arabian Sea, India" and sent to Head Quarters.

Dr. K.A.A. Kabeer reviewed a manuscript for *Nelumbo* journal

Meetings/programmes attended/conducted

Organised *Vanmahotsav* from 1st to 7th July 2017 at SRC, BSI, Coimbatore.

Dr. C. Murugan attended workshop on Sustainable Development Goal 14: 'Life Below Water' from 4th to 5th July.07.2017 to 05.07.2017 at the Central Marine Fisheries Research Institute, Kochi, Kerala.

For the Green Skill Development Program, various classes and practical demo were arranged to the participants of the program. Dr. R. Manikandan, Scientist 'D' is coordinating to conduct the training programme.



Dr. J.H. Franklin delivering a lecture to the Green Skill Development Programme trainees



Photo: SRC

Students and teacher planting sapling in SRC campus on the occasion of Vanmahotsav

Sri Rakesh G.V. attended State Level Steering Committee meeting of Agasthyamala Biosphere & Nilgiri Biosphere Reserve held at Forest Headquarters, Vazhuthacaud, Thiruvananthapuram on 06.07.2017.

Quarterly meeting of the Official Language Implementation Committee was held at SRC, BSI, Coimbatore on 28.06.2017 and discussed the various initiatives to promote Hindi among the officials and in official communication.

Dr. C. Murugan, Chairman of the Official Language Implementation Committee and Dr. M. Palanisamy, Hindi Adhikar attended the Half Yearly meeting of the TOLIC, held at BSNL Quarters P&T NSR Road Coimbatore on 18.07.2017

Visitors/students

13 scientific personnel/officials/scholars visited the museum, herbarium and library of this regional centre whereas 897 persons in 98 parties visited the NOEG, Yercaud.

Publication

Singh, R.K. 2017. Nomenclatural novelties and lectotypifications in *Litsea* (Lauraceae). *Kew Bulletin* 72(2): 20(1–9).

– Dr. C. Murugan
Scientist 'D' & HoO

WESTERN REGIONAL CENTRE, PUNE

Dr. J. Jayanthi, Scientist 'D' identified 50 field numbers for the project, "Floristic diversity of Biligiri Rangaswamy Temple Wildlife Sanctuary, Karnataka".

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 nine field numbers for the project, "Flora of Pushpagiri Wildlife Sanctuary, Karnataka".

Sri D. Jesubalan, Bot. Asst. identified two 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 nine species of algal samples for the project, "Biodiversity assessment of microalgae from thermal springs of Maharashtra".

Dr. Rashmi Dubey, Scientist 'D' processed 11 litter samples by particle plating method; processed six fungal samples from wooden logs and taken microscopic photographs of five samples for the project, "Taxonomic Studies of Micro fungi of Sanjay Gandhi National Park along with its 10% peripheral area".

Smt. Shreya Sengupta, Senior Project Fellow examined 202 slides of micro fungi for the project, "Microfungi of Biligiri Rangaswamy Temple wildlife Sanctuary, Karnataka".

Public services rendered

During this month 13 plant specimens were identified and issued authentication certificates to students from B. Pharm, M. Pharm. colleges, Ph.D. and P.G. students from different institutions.

Meetings /seminars /programmes/attended

Dr. P. Lakshminarasimhan, Scientist 'E' & HoO, delivered a talk on "Herbarium Techniques" on 08.07.2017 at Department of Botany, Shivaji University, Kolhapur in National Workshop on Plant Taxonomy: Basics and Synthesis of Data [3-8th July, 2017] organised under "Center for Education, Learning and Research Training in Environment, Forest & Climate Change, Govt. of India, New Delhi"; was also Chief Guest of the Valedictory function

Dr. Lakshminarasimhan gave a Key note Address on 22.07.2017 [An introduction to the Convention on Biological Diversity for people working with botanical collections] during the International Conference on Environmental Science, Ecology, Biodiversity and Climate Change [22nd and 23rd July 2017] organised by Department of Botany and Microbiology, Waghire College of Arts, Commerce and Science, in association with Indo Global Chamber of Commerce, Industries and Agriculture at Waghire College, Saswad, Pune.

Dr. Lakshminarasimhan delivered a talk on "Biodiversity with reference to human and environment interaction" as Key Note Speaker during the Environment Conclave on 29.07.2017 at Symbiosis Centre for Management Studies, Pune.

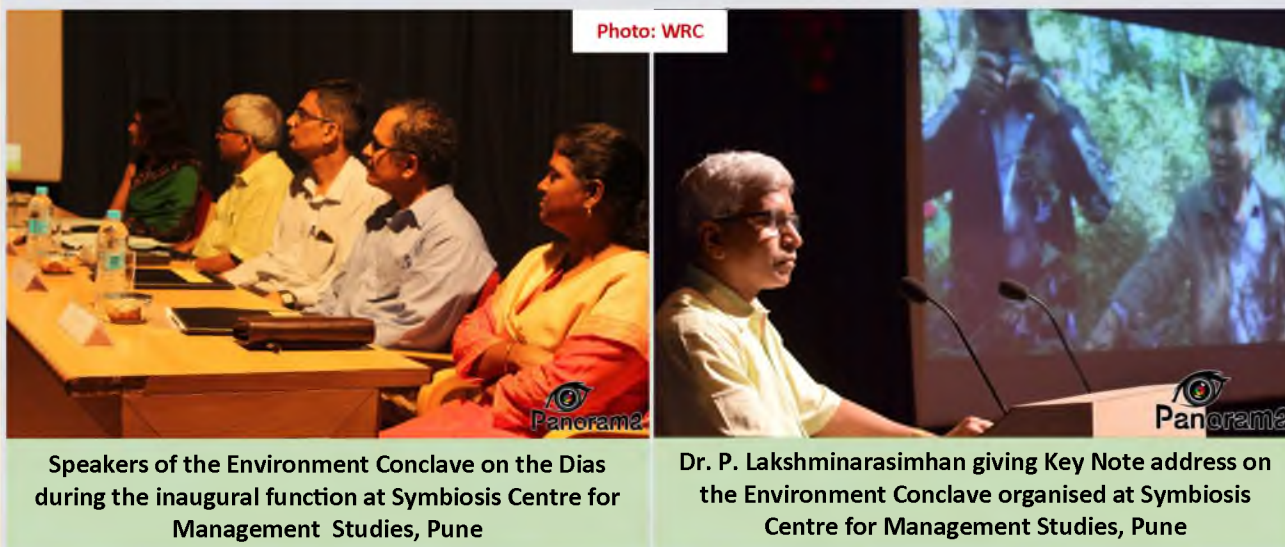


Photo: WRC

Speakers of the Environment Conclave on the Dias during the inaugural function at Symbiosis Centre for Management Studies, Pune

Dr. P. Lakshminarasimhan giving Key Note address on the Environment Conclave organised at Symbiosis Centre for Management Studies, Pune

Dr. J. Jayanthi delivered a talk on the theme "Biodiversity (Floral diversity) and Sustainable Utilization" as one of the resource person during the Environment Conclave programme organized by the Symbiosis College of Management studies, Pune on 29.07.2017.

Visitors/students

Ms. Durga Jadhav from the Naoroji Godrej Centre for Plant Research (NGCPR), Pune, visited WRC for consultation of Genus *Rhamnus* and *Kalanchoe*.

Dr. Rajasri Ray, Centre for Ecological Sciences, IISc., Bangalore, visited WRC for consultation of family Myrtaceae.

Two research students visited WRC for herbarium consultation from Poona College, Camp, Pune.

Publication

Rai, I.D., Jalal, J.S., Singh, G. and Rawat, G.S. 2017. Note on the occurrence of cryptic and Endangered Mycoheterotrophic Orchid *Galeola falconeri* Hook.f. from Western Himalaya. *Indian Forester* 143 (7): 710–711.

Dr. P. Lakshminarasimhan
Scientist 'E' & HoO

**GLIMPSES OF VANMAHOTASAV 2017 CELEBRATION
AT AJC BOSE INDIAN BOTANIC GARDEN, HOWRAH**





Exacum tetragonum Roxb. (GENTIANACEAE) is a perennial herb with attractive flowers and medicinal properties, commonly known as 'Bicolor Persian violet'. It is distributed from India to Australia through Southeast and East Asia. The plant is cultivated in many gardens for its ornamental value.

Photo: D.L. Shirodhkar



Figure 1: *Tupistra khasiana* D.K. Roy, A.A. Mao & Aver.: A. Habit. B & C. Rhizomatous stem with inflorescence. D. Inflorescence. E. Bract. F. Bracteole. G. Flower, side view. H. Sagittal section of flower. I. Flattened perianth, adaxial surface with stamens. J. Flattened perianth, abaxial surface. K. Anther. L. Pistil. M. Ovary, side view. N. Ovary, transversal section.

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

अण्डमान निकोबार द्वीप समाचार

185 पोर्ट ब्लेयर, मंगलवार, 11 जुलाई 2017 www.bsi.org

वनस्पति सर्वेक्षण द्वारा वृक्षारोपण

पोर्ट ब्लेयर, 10 जुलाई।



68वें वन महात्सव मनाए जाने के सिलसिले में भारतीय वनस्पति शोष पृष्ठ 4 पर

वनस्पति सर्वेक्षण द्वारा —पृष्ठ 1 का शोष

सर्वेक्षण के पोर्ट ब्लेयर स्थित अण्डमान निकोबार केंद्र द्वारा गुवाहाटी के राजकीय प्राथमिक विद्यालय में आज वृक्षारोपण कार्यक्रम का आयोजन किया गया। वनस्पति सर्वेक्षण के क्षेत्रीय केंद्र के उप निदेशक व कार्यालय अध्यक्ष डॉ. लाल जी सिंह मुख्य अतिथि थे, जबकि गुवाहाटी की प्रधान श्रीमती अपल नरसम्हा तथा प्रधानाध्यापक श्री रामेश्वर के. घोष सम्माननीय अतिथि थे। अतिथियों ने वृक्षारोपण किया, जिसमें स्कूली बच्चों, शिक्षकों, वनस्पति सर्वेक्षण के अधिकारियों और कर्मचारियों, पंचायती राज संस्थान के सदस्यों तथा स्थानीय लोगों ने भी बड़-बड़कर हिस्सा लिया और संकटग्रस्त, स्थानिक एवं पिरल पौधे लगाए।

मुख्य अतिथि ने वनों के संरक्षण, जलवायु परिवर्तन तथा जीवन में इसके महत्व पर प्रकाश डाला। डॉ. सिंह ने वनों के संरक्षण एवं संवर्धन को प्रत्येक व्यक्ति की दैनिक जिम्मेदारी बताया।

गुवाहाटी की प्रधान तथा कार्यालय के वैज्ञानिक डॉ. संजय मिश्रा ने भी वनों के संरक्षण तथा संवर्धन पर चर्चा की। प्रधानाध्यापक ने उपस्थिति का स्वागत किया, जबकि शिक्षिका श्रीमती दीपाली वैष्णव ने धन्यवाद ज्ञापन किया।

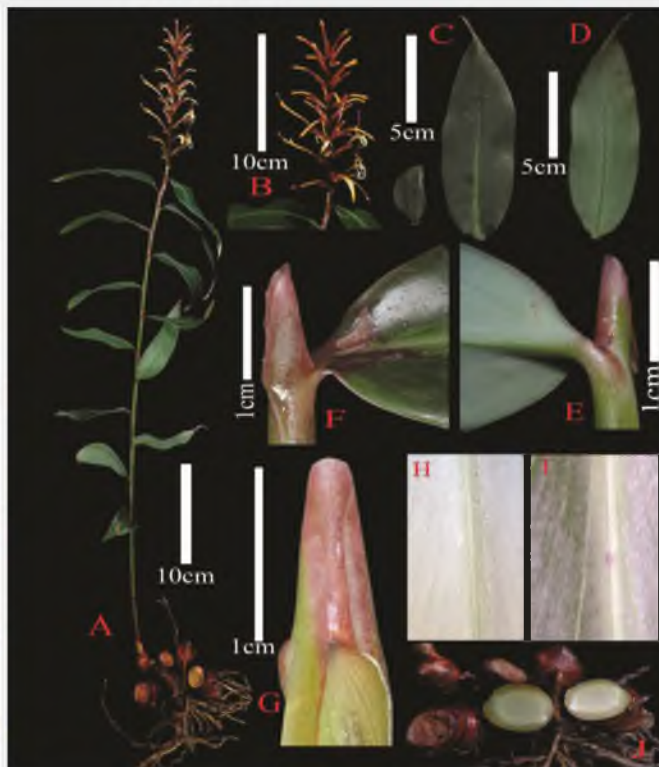


Plate 1. *Hedychium chingmeianum* N.Odyuo & D.K.Roy: A. Habit. B. Inflorescence with portions of leaves; C. Leaves (dorsal view); D. Leaf (ventral view); E. Ligule with portion of leaf (side view- ventral); F. Ligule with portion of leaf (side view- dorsal); G. Ligule (front view); H. Leaf blade surface (ventral); I. Leaf blade surface (dorsal); J. Rhizome.

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