

BSI NEWSLETTER

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Kolkata – 700 064



HEAD QUARTERS, KOLKATA

For the ongoing projects on 'Studies on wild mushrooms of Sikkim', 'Studies on the macrofungi of AJC Bose Indian Botanic Garden, Howrah', 'Wood rotting fungi of Rajmahal hills' 'Revision of the family Metzgeriaceae in India', and 'Liverworts and Hornworts flora of Darjeeling District, West Bengal' identification, description, drawings and distribution maps were prepared by the scientific officials of Cryptogamic section.

In connection with the Project on "Pharmacognosy of Indian Cycads", Dr. A.B.D. Selvam, scientist 'D' studied the anatomical features of the leaf of a *Cycas* sp. under Light Microscope (LM), which was collected from AJC Bose Indian Botanic Garden campus, Howrah (field no. 4980).

Dr. Selvam pharmacognostically studied and authenticated 2 vegetable crude drug samples of stem-bark, *Azadirachta indica* A.Juss (Meliaceae) and *Saraca asoca* (Roxb.) Willd. (Caesalpiniaceae), which were received from Dr. Mradu Gupta, Institute of Post Graduate Ayurvedic Education and Research, Kolkata.

Dr. A.B.D. Selvam also pharmacognostically studied and authenticated a rhizome as *Nardostachys jatamansi* (D. Don) DC. (Valerianaceae), which was received from M/s Emami Ltd., Kolkata.

Dr. A.B.D. Selvam also pharmacognostically studied and authenticated 10 vegetable crude drug samples (detailed below), which were received from M/s Emami Ltd., Kolkata:

- ◆ *Piper longum* L. (Piperaceae) – Fruits
- ◆ *Curcuma longa* L. (Zingiberaceae) – Rhizome
- ◆ *Terminalia bellirica* (Gaertn.) Roxb. (Combretaceae) – Fruits
- ◆ *Terminalia chebula* Retz. (Combretaceae) – Fruits
- ◆ *Woodfordia fruticosa* (L.) Kurz. (Lythraceae) – Fruits
- ◆ *Withania somnifera* (L.) Dunal (Solanaceae) – Roots
- ◆ *Tribulus terrestris* L. (Zygophyllaceae) – Fruits
- ◆ *Glycyrrhiza glabra* L. (Leguminosae) – Roots/stems
- ◆ *Tinospora cordifolia* (Willd.) Miers. (Menispermaceae) – Stem
- ◆ *Trachyspermum ammi* (L.) Sprague (Apiaceae) - Seeds

Ph.D. awarded

Under the joint supervision of Dr. Kanad Das and Dr. S.K. Mukherjee, Dyutiparna Chakraborty, SPF, BSI is awarded with Ph. D. on 22.09.2017 from University of Kalyani, Nadia, West Bengal.

Visitors /students

Dr R.K. Gupta, Scientist 'D' attended 37 students from Bharathiar University, Coimbatore, Tamil Nadu; 22 students from Rangia College, Rangia, Assam; visitors from Royoporus Practical Training Institute (Botany), Burdwan, West Bengal on 18.09.2017, 19.09.2017 and 21.09.2017 respectively and explained about the collection, preservation and identification of the Algae. Similarly, Dr. Devendra Singh, Scientist 'D' explained about Bryophytes.

Lectures delivered/attended

The Scientific officials attended a talk on "Ecology of Biological invasions" by Prof. Inderjit of Delhi University, on 06.09.2017 at Central National Herbarium.

During the Ozone Day celebration at Central National Herbarium on 16.09.2017, Dr. Monalisa Dey, Scientist 'B' gave a presentation on 'Fundamentals of Ozone' to the visited school students. Dr. Monalisa also delivered a lecture on "An Introduction to Bryophytes" to the Junior Project Fellows of BSI at Central National Herbarium on 21.09.2017

Dr. Kanad Das delivered a talk on "Diversity and systematic of wild Indian mushrooms" in 4th one day seminar on Plant Science organized by P.G. Dept. of Botany, Hooghly Mohsin College, Chinsurah, West Bengal on 15.09.2017.

Publications

Chakraborty, D., Mukherjee, S.K. and Das, K. 2017. First Report of *Hygrophorus pudorinus* (A Wild Edible Mushroom) from India with Macro- and Micro-Morphology. *Nelumbo* 59(1): 95-99.

Selvam, A.B.D. 2017. "Redefining stelar theory and defining three new stelar types and a new stelar subtype". *World J. Pharm. and Pharmaceut. Sci.* 6 (9): 1262–1269.

CENTRAL NATIONAL HERBARIUM, HOWRAH

Dr. Rajib Gogoi, Scientist 'D' and Sri Anand Kumar, Bot. Asst. made a field tour from 23rd August to 8th September 2017 to Sikkim and collected 23 species of *Impatiens*.

Herbarium specimen identification

Dr. Vinay Ranjan, Scientist 'D' and Sri Anant Kumar, Bot. Asst. identified 10 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.

Public Service rendered

Dr. Sampath Kumar reviewed a manuscript on *Anisochilus propecephalus* (Lamiaceae) for the Journal *Phytotaxa*.

Dr. K. Karthigeyan, Scientist 'D' reviewed an article received from *Bangladesh Journal of Plant Taxonomy*.

Dr. Subir Bandyopadhyay, Scientist 'B' provided scanned PDF from *J. Bombay Nat. Hist. Soc.* 109(3): 2013 to Pramod Lawand, Shivaji University, Kolhapur; from Fraser-Jenkins, C.R. (2015) and from *Indian J. Forest.* 38 (3) to Dr. Jaideep Mazumdar, Krishna Chandra College, Hetampur, Birbhum, West Bengal and from *Kew Bull.* 64(2): 2009 to Dr. M. Sanjappa, former Director, BSI, Bengaluru.

Dr. Bandyopadhyay also attended a query on conserving of a generic name in Asteraceae with a conserved type from Ms. Shruti Kasana, Research Scholar, Plant Systematics Laboratory, Department of Botany, University of Delhi and provided information regarding 3 authors of plant names [Drs. Jai Prakash Keshri, Basant Kumar Singh, Lal Ji Singh] for incorporation in the Author Query database of IPNI.

Dr. Avishek Bhattacharjee, Scientist 'B' sent type image of *Gentiana listeri* Burkill to Md. Danish Husain, CSRI-NBRI, Lucknow and reviewed a manuscript for *J. Econ. Taxon. Bot.*

Dr. V.P. Prasad, Scientist 'D' identified of 12 Cyperaceae specimens from Baraila lake Salim Ali Jubba Sahni Bird Sanctuary, Vaishali District, Bihar and three specimens of *C. articulatus* for Centre for Rural Development and Technology, Indian Institute of Technology, Delhi.

Dr. V. Sampath Kumar, Scientist 'D' identified six plant specimens received from Department of Botany, University of Calcutta, Kolkata, West Bengal.

Sri V.K. Mastakar, Bot. Asst. identified five plant specimens belonging to family Leguminosae viz., *Rhynchosia capitata* and *Indigofera trita* collected by Dr. S.K. Soni, Asst. Prof., Botany Department, Dayalbagh Institute, Agra (U.P.) and *Mimosa pudica*, *Senna alata* and *Senna occidentalis* for Dr. Phatik Tamili, Asst. Prof., P.G. Deptt. of Botany, Darrange College (Guwahati University) Assam.

Meetings/Seminar attended

Dr. V. Ranjan attended a seminar on 'Agro-Biodiversity' on 5th and 6th September, 2017 at IBRAD, Kolkata.

Drs. Pushpa Kumari, Scientist 'D' and Avinash Bharti, Scientist 'B' attended the meeting with NIC, New Delhi regarding the BSI web-portal and conversion of type specimen data from 14th to 19th September 2017.

Visitors/students

Dr. Khushaal Yadav, Asst. Secretary, MoEF & CC on 07.09.2017.

37 students and five teachers from Bharathiar University, Coimbatore on 08.09.2017.

Sri Shivaraman Pandey and Sri Ashish Kumar, Research Scholars, CSIR-NBRI, Lucknow from 11th to 18th September 2017.

32 students, five teachers and two guardians from Jhargram Asok Vidyapith (H.S), West Bengal on 15.09.2017.

22 students from Rangia College, Rangia, Kamrup, Assam on 19.09.2017.

Glimpses of Celebration of "Ozone day 2017" at Central National Herbarium on 16th September 2017



Lecture arranged/delivered /training organized/programme celebrated

Central National Herbarium arranged an invited lecture by Prof. Inderjit, Delhi University on “Ecology of Biological invasions” on 06.09.2017.

Central National Herbarium organised ArcGIS training course provided by ESRI, Indian Technological Limited, Kolkata to the new JPFs of Botanical Survey of India held at CNH on 07.09.2017 and 08.09.2017.

Hindi Diwas and *Hindi Karyashala* were organized in CNH from 11th to 15th September 2017.

The Botanical Survey of India (BSI), Kolkata/Howrah with BSI ENVIS centre celebrated the World Ozone Day by inviting a group of 36 students studying in Class IX and X along with teachers of Vivekananda Siksha Niketan School of Basanti block in South 24 Parganas district, West Bengal on 16.09.2017.

BSI ENVIS staff along with Dr. V. Sampath Kumar attended Workshop-cum-Training Programme on GIS/GEO-Mapping at Gandhinagar, Gujarat from 20th to 23rd September 2017. They also attended training at Bhaskaracharya Institute for Space Applications and Geo-informatics (BISAG) on 22.09.2017 and 23.09.2017.

Publications

Krishna, G., Karthigeyan, K., Arisdason, W. and Chakraborty, T. 2017. A new species of *Drypetes* (Putranjivaceae/Euphorbiaceae s.l.) from West Bengal, India. *Phytotaxa* 319(3): 271– 276.

Bandyopadhyay, S., Bhattacharjee, A. and Lakshminarashimhan, P. 2017. Doctoral studies carried out at Botanical Survey of India – Part II. *Int. J. Adv. Res. Bot.* 3(3): 8–14.

Bandyopadhyay, S., Krishna, G. and Venu, P. 2017. Missing holotypes of names in plants, fungi and algae published from India. *Int. J. Adv. Res. Bot.* 3(3): 34–39.

Chowlu, K., Bhattacharjee, A., Borah, S. and Rab., K.S. 2017. *Zeuxine reflexa* (Orchidaceae) - a new distributional record for Arunachal Pradesh, India with a note on its threat status in India. *Indian J. Forest.* 40(2): 205–207.

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

INDUSTRIAL SECTION INDIAN MUSEUM, KOLKATA

One field tour to Bargarh and Bolangir of Western Odisha was conducted by Dr. A.K. Sahoo, Scientist 'D' during 29th August to 8th September 2017 and 35 plant materials along with habitat photographs of useful plants were documented.

As a part of preparing a database of herbarium specimens at BSIS, 245 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, 125 names of Poaceae members in *Icones Roxburghianae* were listed and four species were interpreted viz., *Sporobolus coromandelianus* (Retz.) Kunth, *Sporobolus diandrus* (Retz.) P. Beauv., *Zoysia matrella* (L.) Merr., *Thysanolaena latifolia* (Roxb. Ex Hornem.) Honda and from family Ebenaceae description of two taxa viz., *Diospyros melanoxydon* Roxb., *Diospyros Montana* Roxb., was prepared.

Updating of nomenclature of digitized Herbarium Specimens at BSIS

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

Public service rendered

Under the Narcotic Drugs & Psychotropic Substances (NDPS) Act, 29 samples received from West Bengal Police were identified.

Workshop/Seminar attended

Dr. M. Bhaumik, Scientist 'D' & HoO attended Agro Biodiversity Workshop and delivered a lecture on 'Wild relatives of crop plants' organized by Indian Institute of Bio-Social Research & Development (IBRAD), Kestopur, Kolkata on 05.09.2017. Dr. Bhaumik also attended the World Ozone Day organized jointly by CNH and ENVIS centre at CNH, Howrah on 16.09.2017.

Visitors/students

Ms. Sumon Gopinath, Programme Executive, Archival & Museum fellowship, Bangalore visited gallery and J.D. Hooker's exhibition on 04.09.2017.



Photo: ISIM

Ms. Sumon Gopinath, Programme Executive, Archival & Museum fellowship, Bangalore visited Hooker's Exhibition at ISIM along with Director, BSI



Dr. M. Bhaumik explaining archival collections of Indian natural dyes of Thomas Wardle to Ms. Sumon Gopinath



Photo: ISIM

Sri B.C. Dey explaining exhibits of Botanical Gallery, ISIM to students of Kishore Bharati High School



Officials of ISIM participating in competition during celebration of Hindi Diwas 2017

Dr. Kaushal Yadav, IAS, Asstt. Secretary, MoEF & CC, New Delhi visited ISIM gallery and J.D. Hooker's exhibition on 07.09.2017.

Dr. Vaibhav Lohot and Dr. N. Thombare scientists from ICAR-IINRG, Ranchi visited gallery on 08.09.2017.

Around 40 students from Dum Dum Kishore Bharati High School visited Botanical Gallery on 09.09.2017 under the school projects on Education & Environment Awareness Programme (EEAP) by BSI and attended a lecture on 'Potential Dye yielding plants of India' by Sri B.C. Dey, Sr. Pres. Asst.

Mr. Simon Marks, Amita Mukherjee and Kanika Mukherjee from NGO Sutra visited on 11.09.2017 for consultation on upcoming seminar on Indigo at Kolkata.

Hindi Diwas celebration

Hindi Diwas 2017 was celebrated on 21.09.2017 at ISIM and all officers and staff members of ISIM, BSI participated in various events. Sri L.K. Singh, Pradhyapak, from Rajvhasha Department, Nizam Palace was invited as judge.

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

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

Total 1021 herbarium specimens belonging to families Euphorbiaceae, Moraceae, Loranthaceae, Musaceae, Poaceae and Orchidaceae were fed in the computer in a prescribed format.

Total 1277 numbers of herbarium sheets belonging to families Euphorbiaceae, Loranthaceae, Moraceae, Musaceae, Poaceae, Orchidaceae, Casurinaceae, Burmanniaceae, Fagaceae, Hydrocharitaceae and Ulmaceae were scanned as a part of digitization of specimens at PBL.



Photo: Sanjay Mishra

Musa paramjitiana in flowering and fruiting at Dhanikhari Experimental Garden cum Arboretum, Nayashshar

Seminar attended/meeting organised

Dr. Sanjay Mishra, Scientist 'B' performed duties as Judge in State Level Science Seminar at conference hall of Siksha Sadan, Port Blair organized by Directorate of Education in collaboration with Birla Institute of Technological Museum (BITM), Kolkata on 07.09.2017.

Dr. T.A.M. Jagadeesh Ram, Scientist 'D' and Dr. Mishra attended the inauguration function of seminar on world ozone day at Zoological Survey of India, ANRC, BSI, Port Blair on 16.09.2017.

Organized Official Hindi Council meeting on 25.09.2017 at ANRC, BSI, Port Blair.



Photo: G.A. Ekka

Theory and practical examinations conducted for the trainees of Green Skill Development Programme (GSDP), Foundation Course at ANRC, BSI, Port Blair on 6th and 7th September 2017 respectively

Hindi Fortnight 2017

Botanical Survey of India, Andaman & Nicobar Regional Centre, Haddo, organized Hindi fortnight from 1st to 15th September 2017. Various competitions for Hindi & non-Hindi categories were conducted to mark the celebration.

Hindi workshop

Two-day Hindi workshop was organized at main office, as well as Dhanikhari Experimental Garden cum Arboretum (DEGCA), Nayashahar on 27.09.2017 and 28.09.2017 respectively.

Visitors/students

Sri Kaju Majumdar, Technical Section, BSI Headquarter, Kolkata along with two members visited herbarium and library on 06.09.2017.

Dr. Sweta Banerjee, Scientist, Science and Technology, Kolkata visited on 13.09.2017.

Ms. Sangeeta Rani Das and Ms. Chitra Devi, students

of M.Sc. Plant Science, JNRM, Port Blair visited library and herbarium for consultation on 14.09.2017.

Sri Joju P. Alappatt, Director, FTI, Wimberligunj visited Herbarium for consultation on 20.09.2017.

अष्टमान निकोबार द्वीप समाचार

भारतीय वनस्पति सर्वेक्षण में हिन्दी कार्यशाला

पोर्ट ब्लेयर, 28 सितम्बर।
भारतीय वनस्पति सर्वेक्षण के क्षेत्रीय केन्द्र के मुख्य कार्यालय में 27 सितम्बर एवं 28 सितम्बर, 2017 को दो दिवसीय 'हिन्दी कार्यशाला' का आयोजन किया गया।

कार्यशाला का उद्घाटन करते हुए उप निदेशक एवं कार्यालयाध्यक्ष डॉ. लाल जी सिंह ने समस्त अधिकारियों व कर्मचारियों से अधिकाधिक हिन्दी का प्रयोग करने का आग्रह किया।

इस अवसर पर प्रशिक्षण का कार्य डॉ. संजय मिश्रा, वैज्ञानिक 'बी' राजभाषा अधिकारी द्वारा किया गया, जिन्होंने राजभाषा में सरकारी पत्र लेखन के बारे में कर्मचारियों को प्रशिक्षित किया।

हिन्दी अनुवादक श्री प्रकाश होरो ने उपस्थिति का स्वागत तथा परिरक्षण सहायक श्री गौतम अनुज एक्का ने धन्यवाद ज्ञापित किया।

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

CENTRAL REGIONAL CENTRE, ALLAHABAD

Dr. Pooja Gupta, AJC Bose PDF conducted a herbarium consultation tour to National Botanical Research Institute (NBRI), Lucknow from 4th to 6th September 2017 in connection with 'A taxonomic revision of the genus *Lecidea* Ach. in India' and 55 specimens were brought on loan for further studies.

Identification service rendered

A total of 38 specimens under 19 species were identified for the project, 'Floristic Diversity of Bhoj Wetland, M.P.'

A total of 97 specimens were identified for the project, 'Identification of old unidentified specimens of BSA'. Completed taxonomic description of 15 species for the project, 'Trees of Allahabad city and its Environs'.

Dr. G.P. Sinha, Scientist 'E' & HoO updated nomenclature, consequential changes in key to genera and species and editing of families Campanulaceae, Sphenocleaceae, Plumbaginaceae, Primulaceae, Myrsinaceae, Theophrastaceae and Sapotaceae for the project, 'Editing of Flora of Uttar Pradesh, Vol. II'.

Dr. A.K. Verma, Scientist 'B' and Sri V.K. Singh, Bot. Asst., updated nomenclature of 10 and 6 species respectively for 'Flora of Chhattisgarh' Vol. II.

Dr. Verma completed meiotic studies of *Cassia Roxburghii* DC. (2n=24), for the project, 'Cytotaxonomical studies of selected taxa of Indian subtribe *Cassiinae*'.

Dr. Pushpi Singh, DST-SERB, N-PDF identified four species under six specimens 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'.

Public service rendered

Sri Vineet Kumar Singh, Dr. Nitisha Srivastava and Dr. A.P. Tiwari, Bot. Assistants authenticated three, one and two herbarium specimens received from different institutions respectively.

Celebration of Hindi Pakhwada

Hindi Pakhwada was celebrated between 1st to 14th September 2017 during which various competitions such as - Hindi annual work review of office staff, Hindi typing, Essay, General Knowledge, Quiz and Antaksharii were organised. All the officers and staff actively participated in various programmes.



Closing ceremony of Hindi pakhwada organized by CRC, BSI, Allahabad from 1st to 14th September 2017



Swachh Bharat–campus cleaning drive at CRC, BSI, Allahabad on 29.09.2017

Swachh Bharat Pakhwada

Swachh Bharat Pakhwada was celebrated at CRC, BSI, Allahabad and special cleanliness drive was organized on 29.09.2017 and 02.10.2017.

Meeting/conference attended/lecture delivered

Dr. G.P. Sinha attended TOLIC meeting at Income Tax Office on 18.09.2017.

Drs. G.P. Sinha, A.N. Shukla, A.K. Verma, Pooja Gupta and Sri Vineet Kumar Singh attended National Conference on Ecological Imbalance: A Threat to Fauna, Flora, Economy and Human Survival held on 22nd to 23rd September 2017 at Vigyan Parishad Auditorium organized by DDU Government PG College, Saidabad, Allahabad, National Environmental Science Academy (NESA), New Delhi, Society of Life Sciences, Satna, M.P. and Environment & Social Development Association (ESDA), New Delhi.

Dr. G.P. Sinha delivered a lecture on ‘Flora of India with special reference to Uttar Pradesh’ on 22.09.2017 and Dr. A.N. Shukla, delivered a lecture on “Flora of Ladakh: an annotated checklist of vascular plants” in above mentioned National Conference on 23.09.2017.

Sri Vineet Kumar Singh, presented a paper ‘Over-exploited Medicinal plant Resources of Parvati Aranga Wild Life Sanctuary and adjacent Tikri Reserve Forest area, Gonda, Uttar Pradesh’ on 23.09.2017 and awarded Gold medal for best oral presentation in the above mentioned National Conference.

Dr. Pooja Gupta presented a paper on ‘Lichen diversity of Assam’ on 23.09.2017 and received 3rd best presentation award.



Valedictory function of Green Skill Development Programme at CRC, Allahabad on 11.09.2017



Trainee of Green Skill Development Programme receiving certificate at CRC, Allahabad on 11.09.2017

Green Skill Development Programme (GSDP)

Drs. A.N. Shukla, Ashutosh Kumar Verma, Nitisha Srivastava, A.P. Tiwari, Pushpi Singh, Pooja Gupta, Sri Vineet Kumar Singh and Sri Rakesh Kesharwani delivered lectures to the GSDP trainees.

Drs. Ashutosh Kumar Verma, Nitisha Srivastava, Pushpi Singh and Pooja Gupta made a local field tour with GSDP trainees to Sitamadhi, Bhadohi and Khusarobag nurse, Allahabad on 01.09.2017 for survey and collection of plant specimens.

Valedictory function of Foundation Course under GSDP was organised on 11.9.2017.

Publications

- Garg, A. and Singh, R.K. 2017. Honeybee response to landing guides in *Smithia hirsuta* Dalzell, an endemic herb of India. *J. Non Timber and Forest Prod.* 24 (2): 93–96.
- Gupta, P. and Sinha, G.P. 2017. Diversity and Distribution of lichens in Brahmaputra Valley of Assam, India. In: *Compendium on Botanical Research in Eastern India - A felicitation volume of Prof. S.K. Borthakur* (ed. Pramod Medhi), EBH Publishers, Guwahati. Pp. 1–13.
- Shukla, B.K. and Sinha, G.P. 2017. Uttar Pradesh ke godhumi kul ke paudhey. In: *Bharat ki vanaspati vividhta ke naye ayam* (eds. P. Singh & S.S. Dash), BSI, Kolkata, pp. 194-205. (Hindi).
- Singh, P. and Singh, K.P. 2017. New combinations in the family Graphidaceae (lichenized Ascomycota: Ostropales) from India. *Lichenologist* 49(5): 527–533.
- Singh, P., Joshi Yogesh and Singh, K.P. 2017. A new lichenicolous species of *Melaspilea* on *Nitidochapsa* from India. *Acta Bot. Hungaria.* 59(3-4): 439–443.
- Singh, P., Jagadeesh Ram T.A.M. and Singh, K.P. 2017. A new species of *Leiorreuma* (Ascomycota, Ostropales) from Great Nicobar Island, India. *Bangladesh J. Plant Taxon.* 24(1): 9–12.
- Singh, P., Jagadeesh Ram T.A.M. and Singh K.P. 2017. Record of graphidoid Graphidaceae (lichenized Ascomycota) from the Andaman and Nicobar Islands, India. *Geophytology* 47(1): 37–44.
- Sinha, G.P. and Gupta, P. 2017. Studies on microlichens of Sikkim, Eastern Himalaya, India. *Nelumbo* 59(1-3): 80–94.
- Sinha, G.P. and Jagadeesh Ram, T.A.M. 2017. Sundarban jeevmandal reserve ki saivak vividhta. In: *Bharat ki vanaspati vividhta ke naye aayam* (eds. P. Singh & S.S. Dash), BSI, Kolkata, pp. 259–282. (Hindi).
- Sinha, G.P., Jagadeesh Ram T.A.M. and Gupta, Pooja. 2017. Assam ke saivakon ki vividhta: ek addhyan. In: *Bharat ki vanaspati vividhta ke naye aayam* (Hindi) (eds. P. Singh & S.S. Dash), BSI, Kolkata, pp. 206–215. (Hindi).
- Srivastava, S.K., Mohd. Shabir and Shukla, A.N. 2016 (2017). Some notable ethnobotanical plants used by the tribes of Suru valley, Kargil, Ladakh, Jammu & Kashmir, India. *Ethnobotany* 28: 23–27.

– Dr. G.P. Sinha
Scientist 'E' & HoO

EASTERN REGIONAL CENTRE, SHILLONG

Two field tours were conducted by Dr. N. Odyuo, Scientist 'D', Dr. R. Daimary, Bot. Asst. and Dr. D.K. Roy, Bot. Asst. during 29th August to 19th September 2017 to Peren Forest Range, Pauna Mountain Range, Tesen Range, Poilo and Wokha (Pangti Village forest) districts of Nagaland and collected 395 herbarium specimens, 190 live specimens for Flora of Eastern Nagaland. Dr. M. Murugesan, Scientist 'B' conducted a tour to different reserve forests of Tripura during 23rd to 29th September 2017 and collected 127 live plants for *ex-situ* conservation in Botanical garden, Barapani.

During this period identified 33 species Flora of West & south-West Khasi hills district, Meghalaya with reference to the sacred groves by Dr. Chaya Deori, Scientist D and Dr. S.R. Talukdar, Bot. Asst. and Flora of Eastern Nagaland by Dr. N. Odyuo & Dr. R. Daimary, Bot. Asstt.

Studied the protologue of *Riccia fluitans* and related species like *Riccia fluitans* var. *bulbifera*, *Riccia fluitans* fo. *canaliculata*, *Riccia fluitans* subfo. *canaliculata*, *Riccia fluitans* subsp. *canaliculata*, *Riccia fluitans* fo. *gracilis*, *Riccia fluitans* subfo. *lata*, *Riccia fluitans* var. *lata*, *Riccia fluitans* fo. *limicola* by Dr. S.K. Singh, Scientist 'D'.

Recorded phenological data of flowering and fruiting of 61 plant species viz., *Acampe rigida*, *Aeschynanthus parviflorus*, *Ageratum conyzoides*, *Allamanda cathartica*, *Artocarpus heterophyllus*, *Arundina graminifolia* var. *gramnifolia*, *Bougainvillea glabra*, *Calanthe sylvatica*, *Caryota urens*, *Catunaregam spinosa*, *Caulokaemferia secunda*, *Cheilocostus speciosus*, *Cleisostoma paniculatum*, *Cleisostoma racemiferum*, *Coelogyne ovalis*, *Curcuma aurantiaca*, *Dendrobium chapaense*, *Dendrobium chrysanthum*, *Dendrobium moschatum*, *Dienia ophrydis*, *Dillenia indica*, *Dracaena angustifolia*, *Elaeocarpus floribundus*, *Etlingera linguiformis*, *Eulophia pauciflora*, *Eurya accuminata*, *Exbucklandia populnea*, *Globba racemosa*, *Gloriosia superba*, *Hedychium aureum*, *Hedychium coccineum*, *Hedychium coronarium*, *Hedychium ellipticum*, *Hedychium flavescens*, *Hedychium flavum*, *Itea macrophylla*, *Jacaranda mimosifolia*, *Kaempferia parviflora*, *Lagerstroemia indica*, *Lagerstroemia speciosa*, *Liparis odorata*, *Magnolia champaca*, *Melastoma malabathricum*, *Micromelum integerrimum*, *Nephelaphyllum cordifolium*, *Nepenthes khasiana*, *Oberonia mucronata*, *Pholidota articulata*, *Pholidota imbricata*, *Rauwolfia serpentina*, *Schima wallichii*, *Sterculia hamiltonii*, *Tabernaemontana divaricata*, *Thelasis khasiana*, *Vanda alpina*, *Vanda coerulea*, *Zingiber meghalayense*, *Zingiber murlenica*, *Zingiber mizoramensis*, *Zingiber neotruncatum*, *Zingiber roseum* and *Zingiber zerumbet* available EBG, Barapani by Dr. M. Murugesan and Sri L.R. Meitei.

Acrodontium crateriforme fungus associated with pitcher trap liquid and submitted four sequences of two fungi to NCBI-Genbank: *Fusicnidium indicum* ITS gene region MF588672, LSU gene region MF588673 and *Acrodontium cratariforme* LSU gene region MF613959, ITS gene region MF613646 by Dr. Ashish Venkatesh Prabhugaonkar, Scientist 'B'.

Public service rendered

Identified nine samples of specimens received from various institutions.

Hindi Saptah, 2017

Hindi Saptah celebrated during 11th to 15th September 2017 with a number of programmes such as Essay writing, Poetry reading and Quiz competition, attended by all the officers and staff of ERC, Shillong. Poetry reading and spelling for children was also conducted.

Workshop attended/lecture delivered

Dr. A.A. Mao, Scientist 'F' & HoO delivered 8 lectures (1 lecture in Pune University, 1 in D.Y. Patel University, Pune, 2 at University of Science and Technology, Meghalaya and 4 lectures in Mizoram University for the UGC Refreshers course for Asst. Prof.).

Visitors/students

One Scientist, seven Professor, one research scholars, 182 students and six other visitors from various Institutions, Colleges and Universities visited the Centre.

Publications

Prabhugaonkar, A. 2017. Isolation of *Acrodontium cratariforme* as inquiline from Pitcher trap liquid. *Curr. Res. Environ. & Appl. Mycology* 7(3): 203–207.

Roy, D.K. 2017. Lectotypification of the name *Gleadovia ruborum* Gamble & Prain (Orobanchaceae). *Phytotaxa* 323(2): 197–198.

Roy, D.K., Mao, A.A. and Averyanov, L.V. 2017. Lectotypification of *Peliosanthes macrophylla* (Asparagaceae), and its amended morphological description. *Phytotaxa* 323(2): 194–196.

Roy, D.K., Mao, A.A. and Averyanov, L.V. 2017. *Peliosanthes arunachalensis* (Asparagaceae), a new species from north-eastern India. *Turczaninowia* 20(3): 14–19.

– Dr. A.A. Mao
Scientist 'F' & HoO

NORTHERN REGIONAL CENTRE, DEHRADUN

Identified total 45 species and made description for 41 species of Angiosperm for 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* in India.

Digitization of Herbarium specimens

Scanned and digitized 89 specimens of the family Rubiaceae and of Pteridophytes.

Public Services rendered

Identified 17 species received from different institutes/Universities

Meetings/Workshop attended

Dr. Kumar Ambrish, Scientist 'D' & HoO attended 38th meeting of TRAC held on 07.09.2017 at Wildlife Institute of India, Dehradun.

Dr. Ambrish attended Regional Consultation Workshop on Mainstreaming Biodiversity organized by MoEF & CC and Punjab State Biodiversity Board from 14th and 15th September 2017 at Chandigarh.

Dr. P.K. Pusalkar, Scientist 'D' attended Expert and Manager Meet cum workshop on 'Preparation of Zonal Master Plan (ZMP) for Eco-Sensitive Zone (ESZ) around Protected Areas' held at Wildlife Institute of India, Dehradun.



Photo: Rajnikant

Dr. Giriraj Singh Panwar delivering a talk during Hindi *Pakhwada* celebrated during 1st to 14th September



Photo: Devraj Aggarwal

Sri Rajnikant, JRF presenting status of his work during Himalayan Day celebration on 09.09.2017

Hindi Pakhwada 2017

Celebrated *Hindi Pakhwada* from 1st to 14th September, 2017 at NRC, BSI, Dehradun.

Himalayan Day 2017

Celebrated Himalayan Day on 09.09.2017 at NRC, BSI, Dehradun.

Visitors/students

25 students from Doon P.G. College, Dehradun visited museum and garden of the centre.

Publications

Panwar, G.S., Srivastava, S.K. and Uniyal, P.L. 2017. Callus-mediated organogenesis in *Lilium polyphyllum* D. Don ex Royle: a critically endangered Astavarga plant. *Curr. Sci.* Vol. 113(5): 946–951.

Singh, H. and Kumar, P. 2017. A brief overview of vegetation of Pangi Valley (Chamba, Himachal Pradesh): a high altitude region of Northwest Himalaya, India. *Biosci. Biotech. Res. Asia*, 14(2), <http://www.biotech-asia.org/?p=26050>.

Dr. Kumar Ambrish
Scientist 'D' & HoO

SOUTHERN REGIONAL CENTRE, COIMBATORE

Dr. S. Kaliamoorthy, Scientist 'D' and Dr. M.Y. Kamble, Scientist 'D' conducted one day tour to Shevaroy temple for the collection and identification of grasses on 07.09.2017. Dr. Kamble along with Dr. T.S. Saravanan, Bot. Asst. visited to Manjakuttai (Yercaud) on 14.09.2017, while Dr. Saravanan also visited to Nagalur Main Road (Yercaud) on 18.09.2017 to collect plants and introduce in the National Orchidarium and Experimental Garden (NOEG), Yercaud.

Ex-situ conservation

Dr. S. Kaliamoorthy and his team (Dr. M.Y. Kamble, Dr. T.S. Saravanan and Sri B.S. Elango, Bot. Asst.) introduced 6 samples of orchids into the National Orchidarium and Experimental Garden (NOEG), Yercaud. They also multiplied 102 samples belonging to 19 taxa, developed 15 cuttings and recorded the phenological data of 18 species of orchids and 10 species of angiosperms.

Herbarium Identification

Dr. C. Murugan, Scientist 'D' and Dr. S. Arumugam, Bot. Asst. identified 20 field numbers collected from Meghamalai WLS, Tamil Nadu. Dr. K.A.A. Kabeer, Scientist 'D' and Mr. A. Ravi Kiran, Bot. Asst. identified 4 field numbers collected from Kodaikanal WLS, Tamil Nadu. Dr. J.H. Franklin Benjamin, Scientist 'C' and Sri Rakesh G Vadhyar, Bot. Asst. identified 31 field numbers for Flora of Kanniyakumari WLS, Tamil Nadu. Dr. M. Palanisamy, Scientist 'D' and Dr. S.K. Yadav, Bot. Asst. collected 12 references for Seaweeds Flora of Goa Coast, India. Dr. C. Murugan, Dr. J.V. Sudhakar, Bot. Asst. and Dr. S. Arumugam identified 10 Cyperaceae members in connection with documentation of Cyperaceae of Tamil Nadu.

Received three Isotypes (*Eriocaulon biappendiculatum* Manudev, Robi & Nampy; *Tripogon karnatakensis* Thoiba & Pradeep and *Tripogon munnarensis* Thoiba & Manudev (Poaceae) from Calicut University, Kerala, which were incorporated in MH Type herbarium.

Scanning Electron Microscopy (SEM)

With the help of SEM Technician, Dr. J.V. Sudhakar completed 90 SEM images from the nutlets of 15 species of cyperaceae.

Conference/workshop attended/lecture delivered

Dr. M. Palanisamy delivered a lecture on "Biodiversity and Its Conservation in India" in state level conference held at Department of Botany & Zoology, E.R.K Arts and Science College, Dharmapuri on 13.09.2017.

Dr. C. Murugan, Dr. S. Arumugam and Dr. V. Ravichandran attended International Workshop on Awareness for Conservation and Sustainable Use of Biodiversity in India held at Thiruvalluvar university, Vellore, Tamil Nadu on 18.09.2017 and 19.09.2017. Dr. C. Murugan delivered a lecture in the workshop.

Public service rendered

26 digital images of herbarium specimens belonging to the families Amaranthaceae (8 images to Dr. K. Pradeep, NBPGR, New Delhi), Dipterocarpaceae (12 images to KFRI, Kerala), Cleomaceae (4 images to Prof. Vatsavaya S. Raju, Kakitaya Univ., Warangal) and Clusiaceae (2 images to Prof. S. Krishnan, Goa Univ., Goa) were provided.

Visitors/students

During this month, 193 scientific personnel/officials/scholars visited the museum, herbarium and library of this regional centre whereas 723 persons under 91 parties visited the NOEG, Yercaud.

Publications

Yadav, S.K., Palanisamy, M. and Murthy, G.V.S. 2017. Additions of two red algae to marine macro algal flora of Kerala coast, India. *Nelumbo* 59(1): 100–104.

Sudhakar, J.V. and Murthy, G.V.S. 2017. Taxonomy and distribution of *Ficus talbotii* (Moraceae) in India. *Rheedea* 27(1): 16–19.

– Dr. C. Murugan
Scientist 'D' & HoO

WESTERN REGIONAL CENTRE, PUNE

Dr. Priyanka Ingle, Scientist 'B' conducted one field survey during 1st to 16th September 2017 for the project, "Floristic diversity of Wan Wildlife Sanctuary, Maharashtra".

Mrs. A.M. Neelima, Bot. Asst. conducted one field survey to Amboli, Kavalsaad and Mahabaleshwar during 22nd to 24th September 2017 for the project, "Seed morphology and cyto-taxonomy of some selected orchids of Northern Western Ghats".

Identification of herbarium specimens

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

Dr. C.R. Jadhav, Botanist identified 10 field numbers for the project, "Floristic survey of Someshwara Wildlife Sanctuary, Karnataka".

Sri S.C. Patil, Bot. Asst. identified 9 field numbers for the project, "Flora of Pushpagiri Wildlife Sanctuary, Karnataka".

Dr. A. Benniamin, Scientist 'D' identified 5 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 3 field numbers for the project, "Pteridophyte flora of Kudremukh National Park, Karnataka with 10% periphery".

Dr. Rashmi Dubey, Scientist 'D' processed 11 litter samples, 4 soil samples, 14 dry specimens, 16 live specimens and prepared 33 temporary slides for the project, "Taxonomic Studies of microfungi of Sanjay Gandhi National Park along with its 10% peripheral area".

Smt. Shreya Sengupta, SPF identified 9 field numbers, examined 16 dry specimens and 86 slides for the project, "Microfungi of Biligiri Rangaswamy Temple wildlife Sanctuary, Karnataka".

Public services rendered

10 plant specimens identified and authenticated for the 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 attended the Regional Consultation Workshop on Mainstreaming Biodiversity at Ahmedabad on 07.09.17 and 08.09.17, organised by MoEFCC, NBA & UNDP and was part of group from Maharashtra and submitted the structured questionnaires in the form of worksheets during the first two technical sessions on "National Biodiversity Action Plan and National Biodiversity Targets" and "Mobilizing resources and mainstreaming biodiversity".

Dr. J. Jayanthi delivered a lecture on Ozone layer during the "International Day for Preservation of Ozone layer" on 15.09.2017 held at Zoological Survey of India, Western Regional Centre, Pune.

Dr. A. Benniamin attended and presented a paper, "Ferns and Fern Allies of Mizoram, North East India" during XXXX All Indian Botanical Conference of Indian Botanical Society at Punjabi University, Patiala, Punjab from 15th to 17th September 2017.

Dr. Rashmi Dubey attended and presented a paper, "Taxonomic Studies of floristic microfungi from North Western Ghats" during XXXX All Indian Botanical Conference of Indian Botanical Society at Punjabi University, Patiala, Punjab from 15th to 17th September 2017 and Microfungi of Western Ghats: during 5th Academic Achievement Awards-2017 at Mumbai on 10.09.2017.



Green Skill Development Programme training classes at WRC, BSI, Pune

Green Skill Development Programme (GSDP)

Introduction to Biodiversity, Biogeographic regions, Vegetation types & Major ecosystems, Biodiversity hotspots in India and endemism, Protected Areas (PAs) and their relevance in conservation of biodiversity in India specific to Maharashtra, Introduction to basic classification of plants & different plant groups (algae, diatoms, fungi, bryophytes, pteridophytes, gymnosperms, angiosperms, orchids, grasses), Introduction to common local flora with their Local and scientific names, Importance of local names, Introduction to popular species concepts, Introduction to the concept of Rare, Endangered and Threatened flora, Understand the causes for threat (Maharashtra), Economic botany, Medicinal plants and traditional knowledge, Introduction to economic botany, medicinal plants and Traditional knowledge, Ethno botanical surveys - inventories/introduce medicinal plants of the locations, Local Health Traditions (Documentation), Sacred groves and components, Collection and preservation techniques of Voucher specimen –Herbarium Techniques, Introduction and definition of wetlands, types and classification, Introduction to Characteristics of wetlands, Physico-chemical properties of wetlands and Biodiversity of wetlands, Importance and benefits of wetlands (with reference to Maharashtra) were covered during this month.

Visitors/students

60 students and 5 teachers from Poona College, Pune visited WRC, BSI, Pune.

Three research students from Department of Botany University of Calicut, Thenjipalam, Kerala visited WRC, BSI, Pune for herbarium consultation.

One research student from The Zamorin's Guruvayurappan College, Kozhikode, Kerala visited WRC, BSI, Pune for herbarium consultation.

Publications

Jalal, J.S. 2017. New distributional records of orchids from Goa. *Indian J. Forestry* 40(2): 197–200.

Lakshminarasimhan, P. and Neelima, A.M. 2017. A report on the second Botanical Nomenclature course organized by Botanical Survey of India at Pune. *Nelumbo* 59(1): 118–120.

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



Barleria prionitis L. (ACANTHACEAE), commonly known as porcupine flower, native to temperate-tropical Asia and Africa, grown as an ornamental and medicinal plant, often also cultivated as hedge plant as it reaches up to 1.5 m height. In Sanskrit it is known as Vajradanti, means it makes teeth as hard as diamond and most commonly used in Ayurveda for dental care.

Photo: K. Karthigeyan

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Hindi fortnight by BSI

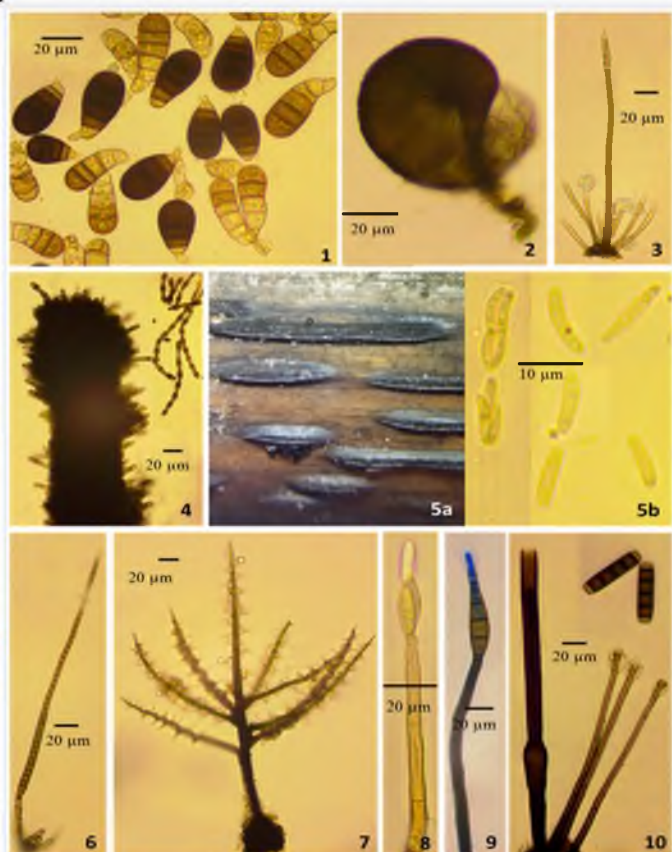


Port Blair, Sept 15: The Botanical Survey of India, Andaman & Nicobar Regional Centre, Haddo, organized Hindi fortnight celebration from 1st to 15th September. Various competitions for Hindi & Non-Hindi persons were conducted to mark the celebration. The valedictory function of the fortnight was organized on 15th September 2017. Inaugurating the valedictory function of Hindi Fortnight, Dr. Lal Ji Singh, Deputy Director & HOO, emphasized upon the importance

of using Hindi works in the office as well as in day to day life. He also urged all the staffs to signature in Hindi in all their application, attendance registers and submission of application in Hindi etc. He also emphasized that Hindi can be a cementing force in making India a superpower and facilitate the winners of various competitions. Dr. Sanjay Mishra, Scientist B and Hindi Officer welcomed the gathering and Shri Prakash Horo delivered vote of thanks.



Peliosanthes arunachalensis D.K. Roy, A.A. Mao & Aver (new species)



1. *Bactrodesmium* sp., 2. *Cirenalia nigrospora*, 3. *Codineae* sp., 4. *Didymobotryum rigidum*, 5. *Eutypa linearis*, 6. *Ellisembia* sp., 7. *Paraceralocladium seychellarum*, 8. *Pterigosporopsis fragilis*, 9. *Sporidesmium* sp., 10. *Sporoschisma hemipilum*

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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Compiled and Edited by Dr. V. Sampath Kumar
Scientist 'D', CNH, BSI, Howrah