

BSI NEWSLETTER

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Kolkata – 700 064



HEAD QUARTERS, KOLKATA

Botanical Survey of India celebrated its 128th Foundation Day by organizing a seminar “Progress and Prospects in Taxonomy” on 13th and 14th February 2018 at Ashutosh Birth Centenary Hall, ISIM, Kolkata. From Cryptogamic section Dr. M.E. Hembrom, Botanist delivered a lecture on “Taxonomic study on the corticoid fungi of Rajmahal hills, Jharkhand” on the occasion of 128th BSI foundation day celebration.

In connection with the Project, “Pharmacognosy of Indian Cycads” the micro-morphological features of the pollen grains of *Cycas annaikalensis* and *C. circinalis* were studied under Light Microscope (LM) by Dr. A.B.D. Selvam, Scientist ‘D’.

For the ongoing projects such as “Studies on Wild Mushrooms of Sikkim” “Wood rotting fungi of Rajmahal hills”, “Studies on the Macrofungi of AJCBIBG”, “Hot spring Algae of Rajgir and Mungar, Bihar”, “Revision of the family Metzgeriaceae in India” identification, drawings, photomicrographs and descriptions were made by the scientific officials of Cryptogamic section. Mr. M.E. Hembrom, Botanist prepared ArcGIS map for two species viz., *Hymenochaete* sp. 1 (Hymenochaetaceae) and *Ganoderma neojaponicum* (Ganodermataceae). Dr. Devendra Singh, Scientist ‘D’ prepared the database of 64 general liverwort specimens of CAL herbarium.

Sri Arvind Parihar, Bot. Asst. accessioned and incorporated 12 specimens including six holotypes and two paratypes. The type details are as follows:

Amanita subtropicana Mehmood & R.P. Bhatt; CAL1660 (Holotype).

Clavulina thindii U. Singh; CAL1661 (Holotype).

Lactarius nodulisporus Uniyal, K. Das & R.P. Bhatt; CAL1663 (Holotype).

Lactarius singeri Uniyal, K. Das & R.P. Bhatt; CAL1662 (Holotype).

Russula choptae A. Ghosh & K. Das; CAL1658 (Holotype).

Russula pseudocompacta A. Ghosh, K. Das, R.P. Bhatt & Buyck; CAL1641 (Holotype).

Russula pseudocompacta A. Ghosh, K. Das, R.P. Bhatt & Buyck; CAL1642 (Paratype).

Russula pseudocompacta A. Ghosh, K. Das, R.P. Bhatt & Buyck; CAL1643 (Paratype).

Lecture delivered

Dr. Kanad Das, Scientist ‘D’ delivered an invited lecture on “Genus *Russula* Pers. (Russulales): Development in Systematics with Morphology and Phylogeny” in a National Seminar on Recent Advancement in Cryptogamic Botany and 16th Probir Chatterjee Memorial Lecture in Department of Botany, University of Calcutta on 02.02.2018.

Public service rendered

Dr. A.B.D. Selvam pharmacognostically studied and authenticated a vegetable crude drug sample as barks of *Cinnamomum verum* J.S. Presl (Lauraceae), which was received from Techno India University, West Bengal.

Publications

Das, K., Hembrom, M.E., Ghosh, A., Parihar, A., Kuhar, F. 2018. *Thelephora sikkimensis* sp. nov. (Thelephoraceae) from the Eastern Himalayas (India). *Nova Hedwigia*. DOI: 10.1127/nova_hedwigia/2018/0475.

Singh, S.K. and Singh, D. 2018. A new species of the genus *Metzgeria* Raddi (Metzgeriaceae, Marchantiophyta) from India. *Cryptog. Bryol.* 39(1): 47–53.

Glimpses of 128th Foundation Day of Botanical Survey of India organized at Asutosh Birth Centenary Hall, Indian Museum, Kolkata on 13th and 14th February 2018





CENTRAL NATIONAL HERBARIUM, HOWRAH

Dr. V.P. Prasad , Scientist 'D' identified 40 specimens collected from Bihar by Anand Kumar.

Dr. Vinay Ranjan, Scientist 'D' and Sri Anant Kumar, Bot. Asst. identified 19 species collected from Neora Valley National Park, Darjeeling district, West Bengal.

Dr. Kumar Avinash Bharati, Scientist 'B' identified 34 species collected from Baraila Lake Salim Ali Jubba Sahni Bird Sanctuary, Vaishali District, Bihar.

Sri P.P. Ghoshal, Botanist, identified 16 species collected from Betla National park, Latehar, Jharkhand.

Dr. Rajib Gogoi, Scientist 'D' and Anand Kumar, Bot. Asst. identified five species of *Impatiens* L. collected from Sikkim and Darjeeling Himalayas.

Public Service rendered

Identification/authentication of seven plant samples received from different institutes/organizations.

Dr. Subir Bandyopadhyay, Scientist 'B' provided information on typification of the name *Saussurea laneana* W.W. Sm. to Ms. Shruti Kasan, Plant Systematics Lab., Department of Botany, University of Delhi.

Based on feedback of Dr. Bandyopadhyay, changes have been made in IPNI: *Elaeocarpus mastersii* King –J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 60(1): 139. 1891 [19 May 1891] has been replaced by *Elaeocarpus* – J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 60(1): 140. 1891 [19 May 1891] and *Trichospermum kurzii* King –J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 60(1): 113.

Dr. K. Karthigeyan, Scientist 'D' Provided information on Type sheet of *Tripogon jayachandranii* Arum. & Murugan as required by Ms. K. Thoiba from University of Calicut, Kerala.

Meetings/function attended

Participation of CNH personnel in the 128th foundation day celebration of BSI held at ISIM, Kolkata on 13.02.2018 and 14.02.2018. They also attended meetings and co-ordinated with other colleagues in making arrangements for this programme.

Dr. Avinash Kumar Bharati attended meeting with technical experts of CSICO, HP, Z-COM, GS computers, Vortex Company, D-link, Sea Info Tech. and Ruckus regarding establishment of Wi-Fi infrastructure in the CNH building.

Lecture delivered /programme organised/celebrated

World Wetlands Day was organized at CNH in collaboration with BSI-ENVIS RP on 02.02.2018.

National Level Workshop on "Herbarium Techniques and Plant Nomenclature" was organized at Ramakrishna Mission Vivekananda College, Rahara, Kolkata in collaboration with Central National Herbarium and BSI-ENVIS RP on 22nd and 23rd February 2018.

Visitors/students

Sri Subhasis Dutta, Headmaster, B.E. College Model School, Howrah and Mr. Abhoy Naskar, Teacher, Thanamakua High School on 02.02.2018.

31 students of B.Sc. (Botany Hons.) from Mahishadal Raj College, East Midnapur for visiting General Herbarium and Ms. Monica Ray, from Lloyd Harbor, New York for seeing the Roxburgh Icones on 05.02.2018.

Dr. Makoto Kawasa, University of Tsukuba, Japan and Dr. Toshiki Osada, Research Institute of Humanity and Nature, Kyoto, Japan; 10 students of B.Sc. (Botany) from Vidyasagar Evening College, University of Calcutta; 15 students of B.Sc. (Botany Hons.) from Charuchandra College, University of Calcutta and 11 students of B.Sc. (Botany Hons.) from Dhruba Chand Halder College, Dakshin Barasat, South 24 Parganas on 06.02.2018.

29 students of B.Sc. (Botany Hons.) from Egra Sarada Shashibhusan College, Purba Midnapur for visiting General Herbarium on 07.02.2018.

Sri Sandip K. Gavade from Kolhapur University from 7th to 20th February, 2018.

Dr. Avinash R. Gholave from Walchand Art and Science College, Sholapur and Sri Rohit Nivas Mane, from Shivaji University, Kolhapur for consulting General and Type Herbarium II from 5th to 9th February 2018.

Sandra Bannutha, Neisseng on 09.02.2018.



Glimpses of World Wetlands Day organized at Central National Herbarium on 02.02.2018



Glimpses of National Level Workshop on "Herbarium Techniques and Plant Nomenclature" organized at Ramakrishna Mission Vivekananda College, Rahara, Kolkata on 22nd and 23rd February 2018

39 students of B.Sc. (Botany Hons.) from Dinabandhu Andrews College, Garia, Kolkata; 30 students of B.Sc. (Botany Hons.) from Netaji Nagar College for Women, Kolkata on 08.02.2018.

11 students of B.Sc. (Botany Hons.) from Vivekananda College for Women, Kolkata; 17 students of B.Sc. (Botany Hons.) from Panihati Mahavidyalaya, Sodepur and Ms. Sumitra Maitra Chaudhury along with 3 teachers from Sheoraphuli Bibhas Ch. Daw Girls' High School on 09.02.2018.

14 students of B.Sc. (Botany Hons.) from Raghunathpur College, Purulia; 42 students of B.Sc. (Botany Hons. and General) from Lady Brabourne College, Kolkata and Dr. Sandra Knapp from Natural History Museum, London on 15.02.2018.

23 students of B.Sc. (Botany Hons. and General) from Govt. General Degree College, Singur on 16.02.2018 on educational tour.

45 students of B.Sc. (Botany Hons. and General) from Bidhannagar College, Salt lake and 14 students of B.Sc. (Botany Hons.) from Taki Govt. College, Hasnabad on 19.02.2018 on educational tour.

11 students of B.Sc. (Botany Hons.) from R.B.C. College, Naihati on 20.02.2018 on educational tour.

15 students of B.Sc. (Botany Hons.) from Narasimha Dutta College, Howrah (C.U.) and 21 students of Class IX Standard from Singur Mahamaya High School on 21.02.2018 on educational tour.

11 students of B.Sc. (Botany Hons.) from APC College, New Barrackpur and Mr. Sanjay Kumar Roy and his team on 23.02.2018.

46 students of B.Sc. (Botany Hons. and General) from Fakir Chand College, Diamond Harbour on 27.02.2018 on educational tour.

63 Forest Range Officer Trainees from Telangana State Forest Academy, Hyderabad for getting general idea about Herbarium and also for seeing Roxburgh icons on 28.02.2018.

Publications

Prasad, V.P. 2017. Notes on sedges (Cyperaceae) of Andaman and Nicobar Islands – seven new records and five exclusions. *Nelumbo* 59(2): 155–158.

Kumar, A., Krishna, G. and Prasad, V.P. 2017. Three species of sedges (Cyperaceae) new to Bihar, India. *Nelumbo* 59(2): 164–167.

Masatkar, V. 2017. Jharkhand Rajya ke Sanrakshit chhetra–Sankshipt Parichaya. *Bharat ki Vanaspti Vividhata Ke Naye Aayam* 173–178.

Ranjan, V. 2017. Parasnath vanya jeev Abhyarandya ki Vanaspati Vividata. *Bharat ki Vanaspti Vividhata Ke Naye Aayam* 235–243.



Photo: Mahesh

Dr. Sandra Knapp, NHM, London at Type Herbarium II, Central National Herbarium, Botanical Survey of India



Photo: Mahesh

Range Officer Trainees, Telangana State Forest Academy Dulapally, Hyderabad at CNH, BSI, Howrah

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

INDUSTRIAL SECTION INDIAN MUSEUM, KOLKATA

The botanical paintings by Roxburgh are being interpreted with updated nomenclature. Under this project, two members of Poaceae - *Andropogon pertusus* (L.) Willd.; *A. pumilus* Roxb. were interpreted and 12 members have been described viz., *Cymbopogon schoenanthus* (L.) Spreng., *Bothriochloa pertusa* (L.) A. Camus, *Bothriochloa ischaemum* (L.) Keng, *Chrysopogon aciculatus* (Retz.) Trin., *Zoysia matrella* (L.) Merr., *Eragrostis ciliaris* (L.) R. Br., *E. gangetica* (Roxb.) Steud., *E. uniolooides* (Retz.) Nees ex Steud., *E. viscosa* (Retz.) Trin., *Miscanthus fuscus* (Roxb.) Benth., *Eleusine indica* (L.) Gaertn. and *Ischaemum aristatum* L. From Ebenaceae *Diospyros malabarica* (Desr.) Kostel. has been described.

Database of Herbarium Specimens

As a part of preparing a database of herbarium specimens at BSIS, 238 numbers of Dicot herbarium specimens were listed and documented.

Updating of nomenclature of digitized Herbarium Specimens at BSIS

625 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.

Awareness programme, Workshop, Seminar organized/attended

The 128th Foundation Day of Botanical Survey of India and Seminar on "Progress and Prospects in Plant Taxonomy" held at ABC Hall, Indian Museum, Kolkata during February 13-14, 2018. All the scientists and scientific staff from ISIM and CNH, AJCBIBG, CBL, HQ actively participated and assisted in organizing this two-day programme.

Dr. Sandra Knapp, Natural History Museum, London delivered the key-note address on "Past, Present and Future of Floristics - in relevance on Flora of modern world". Dr. Knapp along with her colleague Ms. Ranee Om Prakash, Natural History Museum, London actively participated on various discussions during the Seminar and gave a view on present status of Botanical Nomenclature. The one day scientific seminar was ended with



Dr. P. Singh, Director, BSI and Dr. Kailash Chandra, Director, ZSI along with retired Scientists of BSI on 128th Foundation Day

presentation of 19 speakers of BSI research students on various disciplines on Botany with the present trend of research in BSI. The retired scientists of BSI, invited guests and researchers of Botany from various universities of West Bengal participated in the event. The retired scientists of BSI were felicitated on the occasion of 128th Foundation Day.



Photo: ISIM

Dr. P.R. Sur, Retired Botanist, BSI delivering lecture to the students from Bagbazar Multipurpose Girl's School



Sri B.C. Dey explaining about gallery exhibits to students from Bagbazar Girl's School during their visit

Visitors/students

A group of 38 students along with 5 teachers from Bagbazar Mulltipurpose Girl's School, Kolkata visited Botanical galleries (2nd & 3rd floor) on 10.02.2018 as per Environmental Education Awareness Programme and attended a lecture on "Biodiversity and Uses of Medicinal Plants in India" delivered by Dr. P.R. Sur, Retired Botanist, BSI. Dr. (Ms.) K. Pagag, Ms. Sudeshna Datta, Sri B.C. Dey and Sri S.K. Sharma guided the school students during their visit of botanical galleries.



Photo: ISIM

Students from Bagbazar Girls High School visiting exhibition on J.D. Hooker on 10.02.2018



Photo: ISIM

Dr. G. Wolf, Professor of History, University of Sussex, UK observing herbarium specimens at BSIS, ISIM



Dr. Sandra Knapp and Ms. Rane Om Prakash, NHM, London visiting ISIM galleries on 15.02.2018

Dr. G. Wolf, Professor of History, University of Sussex, UK observing herbarium specimens at BSIS, ISIM
 Dr. Sandra Knapp and Ms. Rane Prakash, Natural History Museum, London visited Botanical Galleries and "BSIS" herbarium on 15.02.2018 and consulted herbarium specimens of *Solanum* spp. (Solanaceae).

– Dr. Manas Bhaumik
 Scientist 'D' & HoO

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

Herbarium sheets Scanned: 220 numbers of Arecaceae, Cycadaceae, Musaceae and Zingiberaceae.

Herbarium details computerized in Excel format: 120 herbarium specimens of families Arecaceae were fed in the computer in a prescribed format.

World Wetlands Day – 2018

On the occasion of World Wetland Day – 2018, ANRC organized Drawing competition for school students on “Wetlands for a Sustainable Urban Future” on 02.02.2018.

More than 80 participants along with students from Kendriya Vidyalaya No. 1, Carmal School and Government Senior Secondary School, Haddo of Port Blair participated in the competition. Teachers of the schools, Officers and staff members of this centre and local people also participated.



Drawing competition during the celebration of World Wetlands Day, February-2018 at ANRC, BSI



Dr. Lal Ji Singh delivering lecture during Workshop for Foresters at Forest Training Institute, South Andaman



Dr. Lal Ji Singh as a guest speaker during 1st Dr. T.C. Khatri Memorial Lecture-2018 at JNRM, Port Blair

Lectures delivered/function/seminar attended

Dr. Lal Ji Singh, Scientist 'D' & HoO delivered an invited lecture on Endemic Plant diversity of Andaman and Nicobar Islands for 1st Dr. T.C. Khatri Memorial Lecture-2018 at JNRM, Port Blair, South Andaman on 12.02.2018.

Dr. Singh delivered an invited lecture on Endemic Plant diversity of Andaman and Nicobar Islands and its conservation during one-week Refresher Course for Foresters of the Department of Environment and Forests, Andaman and Nicobar Islands at Forest Training Institute, South Andaman on 24.02.2018.

Dr. Lal Ji Singh attended thesis seminar, “Life History and Phylogenetic Study of Endangered Tree Frog *Polypedates insularis* Great Nicobar Islands, India” and “Taxonomy and Distribution of Family Peudocerotidae (Platyhelminthes: Polycladida) from Andaman and Nicobar Islands” at Zoological Survey of India, ANRC, Port Blair on 16.02.2018.

Special lecture on “Diversity of Family *Solanaceae*” by Dr. Sandra Knapp, Merit Researcher and Head of Algae, Fungi and Plants (AFP) Division Natural History Museum, London, U.K. was conducted on 21.02.2018 at ANRC, BSI, Port Blair.



Dr. Sandra Knapp, Natural History Museum, London, U.K. delivering lecture on “Diversity of family *Solanaceae*” at BSI, ANRC on 21.02.2018

Dr. Singh attended the passing out ceremony of Refresher Course for Foresters as a Chief Guest at the Forest Training Research Institute, South Andaman on 24.02.2018.

Dr. Singh attended Ph.D. thesis viva voce examination on “Distribution, Diversity and Reproductive Biology of Resident Tide Pool Ornamental Fishes along the Coast of South Andaman, Andaman Sea, India” at Pondichery University, Brookshabad Campus, Port Blair on 28.02.2018.

Visitors/students

Teachers and Students of Kendriya Vidyalay No. 1; Carmal School, Port Blair and Govt. Senior Secondary School, Port Blair visited herbarium and library on 02.02.2018.

Ms. D. Puspha Kumari, Assistant Professor and Ms. K. Jyothsna, Assistant Professor, PG Department of Plant Science, JNRM, Port Blair visited library and herbarium on 08.02.2018.

Sri Arun Singh, Secretary, Andaman Avian Club, Port Blair, along with seven team members visited the garden on 16.02.2018.

Prof. Jayant Kumar Mishra, Dept. of Ocean Studies and Marine Biology, Pondicherry University, Brookshabad Campus, Port Blair visited office on 16.02.2018.



Dr. Sandra Knapp and Ms. Ranee Om Prakash, Natural History Museum, London during their visit to ANRC, BSI

Dr. Sandra Knapp, Merit Researcher and Head of Algae, Fungi and Plants (AFP) Division Natural History Museum, London, U.K. and Ms. Ranee Om Prakash, Curator- Flowering Plants, Natural History Museum, London, U.K. consulted herbarium and library from 18th to 21st February 2018 and visited garden on 21.02.2018.

Sri Joju P. Alappatt, Director, Forest Training Institute, South Andaman along with 24 trainees and 3 trainers visited garden on 21.02.2018.

Professors, faculty members and students of Department of Plant Science, JNRM, Port Blair visited library and herbarium on 21.02.2018.

Dr. Depanshu Singh, Professor and Dr. E. Muthu Kumaran, Professor and NSS, Co-ordinator, Dr. B.R. Ambedkar Institute of Technology, Port Blair visited garden on 26.02.2018.

Dr. Anil Kr. Dubey, Scientist, ZSI, Port Blair visited library on 28.02.2018.

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

ARID ZONE REGIONAL CENTRE, JODHPUR

In association with Flora of Navsari District, Gujarat, Dr. Ramesh Kumar, Scientist 'C' and Sri Vinod Maina, Scientist 'D' conducted one field tour during 2nd to 15th February 2018 and collected specimens of 201 field numbers.



Seasonal ornamental flowering plants in the campus of AZRC, BSI, Jodhpur



Ephedra foliata flowering in the Botanical Garden, AZRC, BSI, Jodhpur

Herbarium specimen identification

127 Field numbers has been identified during the period under report.

Public service rendered

Identified six plants, viz., *Caralluma adscendens* var. *fimbriata* (Wall.) Grav. & Mayur, *Withania somnifera* (L.) Dunat and *Cyperus rotundus* L. brought by Sri Jeetesh Dave, CVAS, Udaipur and *Ziziphus nummularia* (Burm.f.) Wight & Arn., *Cissus quadrangularis* L.; *Lantana camara* L. brought by Ms. Bhawna Rajpurohit, Research Scholar, G.D. Memorial College of Pharmacy, Jodhpur.

Workshop attended/lecture delivered

Sri Vinod Maina attended Botany Fest-2018, chaired the inaugural secession and judged the various competitions at National workshop on "Biodiversity and Conservation" in Navsari Agriculture University, Waghai organized by Dept. of Botany, M.S. University, Baroda and Gujarat Ecological commission on 09.02.2018. Sri Vinod Maina also delivered a lecture on "Plants used for making Musical instruments" and Dr. Ramesh Kumar, Scientist 'C' delivered a lecture on "Plant diversity and Conservation".

GSDP: Advance Course for Para-taxonomists

GSDP Advanced course Parataxonomist examination was conducted by this office on 24.02.2018. Dr. C.S. Purohit, Scientist 'B' worked as a internal examiner; Dr. P. HariKrishna, Bot. Asst., & Sri Ramesh Kumar, Bot. Asst. worked as invigilators.

– Sri Vinod Maina
Scientist 'D' & HoO

CENTRAL REGIONAL CENTRE, ALLAHABAD

A total of 56 species were identified for 'Floristic diversity of 'Bhoj Ramsar Site' in Madhya Pradesh.

A total of 266 specimens belongs to 105 species were identified under 'Floristic diversity of Kishanpur Wildlife Sanctuary, Lakhimpur Kheri, U.P.'

Completed updation of nomenclature, consequential changes in key to genera and editing of families Plantaginaceae, Nyctagenaceae, Amaranthaceae, Chenopodiaceae, Basellaceae, Phytolaccaceae, Polygonaceae, Aristolochiaceae and Piperaceae for Flora of Uttar Pradesh, Vol. –II.

Taxonomic descriptions of 17 species were completed for the project 'Trees of Allahabad city and its Environs'.

Completed Cytological investigations of *Cassia fistula* L. for 'Cytotaxonomical studies of selected taxa of Indian subtribe Cassiinae'.

For the project, 'Flora of Chhattisgarh' Vol.-II, Dr. A.K. Verma, Scientist 'B' updated nomenclature of 35 plant species and prepared identification key for genus *Cyperus* and Dr. Nitisha Srivastava, Bot. Asst. completed taxonomic description of nine species of family Poaceae.

A total of 101 specimens were identified in connection with the project, 'Identification of old unidentified specimens of BSA'.

Symposia/seminars/workshop attended

Dr. A.N. Shukla, Scientist 'B' attended a National Symposium on 'Pteridological studies in India: Perspective and Modern approaches in relation to environment & Climate Change' conducted at Botanical Survey of India, APRC, Itanagar, on 22nd to 23rd February 2018.

Sri Vineet Singh, Bot. Asst. attended a two days National Seminar on 'Diversity and Utilization of Tropical Plants' and also presented a paper, 'Economically valuable Non-Timber Forest Products of PAWS and Adjacent Tikri forest area, Gonda, Uttar Pradesh' organized by Department of Botany, Deendayal Upadhyay Gorakhpur University, Gorakhpur during 22nd and 23rd February 2018.

Dr. Nitisha Srivastava attended a National workshop on 'Recent technologies for food security and rural development' (19th to 25th February 2018) organized by SBSRD, Allahabad and K.A.P.G. College, Allahabad in collaboration with Zoological Survey of India, Kolkata and ESW Society, U.P. Chapter, and delivered a lecture on "Nanotechnology for Agricultural improvement".

Dr. G.P. Sinha, Scientist 'E' & HoO, Dr. Arti Garg, Scientist 'D', Dr. A.K. Verma, Dr. Nitisha Srivastava and Dr. Pushpi Singh attended 15th Dr. J.P. Srivastava Memorial Lecture 2018 at CMP College, Allahabad on 09.02.2018 on 'Bryophyte Diversity: Conservation and Bio-prospection' delivered by Dr. Ashish Asthana of NBRI, Lucknow.

Identification services rendered

Dr. Nitisha Srivastava authenticated one plant specimen received from Department of Botany, Govt. N.P.G. College of Sciences, Raipur, Chhattisgarh.



Audience attending key note address during World Wetland Day—2018 at CRC, BSI, Allahabad



Participants of World Wetland Day—2018 being explained about aquatic plants in the garden pond

World Wetland Day –2018

World Wetland Day was celebrated on 02.02.2018, wherein over 70 UG students of ISD College participated. Two lectures were delivered by Dr. H.P. Pandey, Head Botany Department, ISD College and Dr. Arti Garg in the programme. All Scientific and technical staff of BSI, CRC, Allahabad actively participated in this celebration.

GSDP: Advance Course for Para-taxonomists

Four invited lectures were organized for GSDP Trainees, on Wetlands and their importance, Wetland Avifauna, Gymnosperms and Rural Technology and entrepreneurship delivered respectively by Dr. H.P. Pandey, Dr. A.K. Verma, Prof. D.R. Misra and Dr. Anand Pandey of University of Allahabad.

Besides this Dr. G.P. Sinha delivered lectures on Collection, preservation, broad categorisation and identification of lichens; Dr. Sheo Kumar, Scientist E on GIS; Dr. Arti Garg on Plant diversity in Hotspots, IUCN categories and phytogeography; Dr. A.N. Shukla on Botanic Gardens; Dr. A.K. Verma on *in situ* & *ex situ* conservation.; Sri Vineet Kumar Singh, Bot. Asst. on Eco-restoration of Natural Habitats; Dr. Nitisha Srivastava on Detail introductory information about the topic Gathering pertinent information (Library/ Internet) and Dr. Pushpi Singh, N-PDF on Collection and identification of different plant groups.



GSDP Trainees learning laboratory techniques and sample preparation at CRC, BSI, Allahabad



GSDP Trainees practising Collection techniques during field visit to Eco-restored area, Shankargarh, Allahabad

Two Field tours were conducted by Dr. Arti Garg and Dr. Pushpi Singh to Samsaspur Bird Sanctuary and Indira Gandhi Botanical Garden in Raebareilly, U.P. for plant collection methodology and *in-situ*, *ex-situ* conservation on 20.02.2018 and by Sri Vineet Kumar Singh to Shankargarh and adjoining areas for site visit of degraded habitats and eco-restored site of silica sand and stone mining on 15.02.2018 for GSDP Trainees.

Publication

Singh, V. and Srivastava, N. 2017. *Trifolium tomentosum* L. (Fabaceae), An addition to the Leguminous Flora of Madhya Pradesh, India. *Indian J. Forestry* 40(4): 385-388.

– Dr. G.P. Sinha
Scientist 'E' & HoO

DECCAN REGIONAL CENTRE, HYDERABAD

Dr. G. Swarnalatha identified five macro lichen specimens for the project, "Inventory of Macrolichen diversity of Odisha State"

Digitisation of Herbarium specimens

80 herbarium sheets were scanned belonging to various families at BSID.

Public service rendered

Dr. J. Swamy, provided service to Ms. K. Thoiba, Dept. of Botany, Calicut University, Kerala on 08.02.2018.

Dr. G. Swarnalatha and Dr. J. Swamy explained about Botanical Survey of India, Herbarium and Museum to 20 students and staff from T.C. College, Baramati, Maharashtra on 08.02.2018 and 50 students and staff from Satish Pradhan Dhyanasadhana College, Thane, Maharashtra on 15.02.2018.

Dr. J. Swamy identified nine specimens for various universities, institutions and colleges viz., *Woodfordia fruticosa*, *Oxalis corniculata*, *Macroptilium atropurpureum* (02), *Digera muricata*, *Bryophyllum pinnatum*, *Abelmoschus esculentus*, *Moringa oleifera* and *Xanthium strumarium*.



Dr. L. Rasingam delivering keynote address in State level workshop on Herbarium - Its role and significance in Plant Taxonomy at Government Degree College, Siddipet, Telangana (left); participants (right)

Meeting/programme attended/lecture delivered

Dr. M. Sankara Rao, Scientist 'B' delivered talk on "Conservation of Medicinal plants in Sacred Groves in International symposium on Biodiversity of Medicinal plants & Orchids, Emerging trends and challenges held at Acharya Nagarjuna University on 11.02.2018.

Dr. L. Rasingam, Scientist 'D' & HoO attended Departmental Direct Recruitment Committee meeting at Institute of Forest Biodiversity, Dulapally to select Driver, Steno and LDC on 14.02.2018.

Dr. Rasingam delivered a keynote address on recent trends in Plant Taxonomy at State level workshop on 'Herbarium- Its role and significance in Plant Taxonomy' held at Government Degree & PG College, Siddipet, Telangana on 21.02.2018.

Dr. G. Swarnalatha delivered a lecture on "Introduction to the Lichenized Fungi" at State level workshop on 'Herbarium- Its role and significance in Plant Taxonomy' held at Government Degree & PG College, Siddipet, Telangana on 21.02.2018.

Dr. J. Swamy and Sri. S. Nagaraju delivered a lecture on the topic, 'Herbarium- Its Role & Significance in Plant Taxonomy' and "General Grass Morphology" respectively in one day State level workshop on Herbarium Techniques – Role and Significance in Plant Taxonomy organized by Govt. Degree & PG College, Siddipet, Telangana on 21.02.2018.

World Wetland Day—2018

World wetland day—2018 was celebrated on 02.02.2018 in collaboration with Fresh Water Biology Regional Center, Zoological Survey of India. A total of 30 School students from Gowtham Model School, Attapur, New Brilliant High School, Hyderabad, Delhi School of Excellence, Hyderguda and Janapriya School, Hyderguda were participated.



Participants of World Wetland Day painting competition at DRC, BSI, Hyderabad on 02.02.2018

Visitors/students

20 students and one faculty members of T.C. College, Baramati, Maharashtra visited this centre on 08.02.2018.

50 students and four faculty members from Satish Pradhan Dhyanasadhana College, Thane, Maharashtra visited this centre on 15.02.2018.

– Dr. L. Rasingam
Scientist 'D' & HoO

EASTERN REGIONAL CENTRE, SHILLONG

During this period 27 species identified and described 20 species for Flora of West and 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., Flora of Eastern Nagaland by Dr. N. Odyuo, Scientist 'D' and Dr. R. Daimary, Bot. Asst. and Flora of Nagaland (Vol. I & 2) by Dr. A.A. Mao, Scientist 'F', Dr. N. Odyuo, Scientist 'D', and Dr. D.K. Roy, Bot. Asst.

Observed and recorded phenological data of flowering and fruiting of 47 plant species viz., *Acampe ochracea*, *Aesculus assamica*, *Agathis lanceolata*, *Albizia lucidior*, *Allamanda cathartica*, *Aloe vera*, *Bixa orellana*, *Bombax ceiba*, *Bulbophyllum careyanum*, *Bulbophyllum reptans*, *Caryota urens*, *Catunaregam spinosa*, *Cephalantheropsis obcordata*, *Cerasus cerasoides*, *Coelogyne micrantha*, *Coelogyne ovalis*, *Coelogyne schultesii*, *Coelogyne viscosa*, *Cymbidium cyperifolium*, *Dendrobium heterocarpum*, *Dillenia indica*, *Dracaena angustifolia*, *Elaeocarpus floribundus*, *Eria bambusifolia*, *Eria paniculata*, *Eria lasiopetala*, *Esmeralda clarkei*, *Eurya accuminata*, *Exbucklandia populnea*, *Gastrochilus dasypogon*, *Goodyera procera*, *Iris laevigata*, *Mahonia pycnophylla*, *Musa aurantiaca*, *Paphiopedilum insigne*, *Paphiopedilum venustum*, *Paphiopedilum vilosum*, *Pelatantheria insectifera*, *Phaius mishmensis*, *Pholidota imbricata*, *Rauvolfia serpentina*, *Tainia latifolia*, *Taxus wallichina*, *Vitex negundo*, *Wendlandia wallichii*, *Zeuxine affinis* and *Zingiber zerumbet* available at EBG, Barapani by Sri L.R. Meitei Bot. Asst.

Public service rendered

Identified five samples of specimens received from various institutions.

Meeting/training attended

Dr. A.A. Mao, Scientist 'F' attended 7th Training Programme on "Science, Technology and Emerging Trends in Governance" during 12th to 16th February 2018 sponsored by Department of Science & Technology, Govt. of India, New Delhi and Organised by Indian Institute of Public Administration, New Delhi.

Visitors/students

Six lecturer, 38 students, one N-PDF and five other visitors from various Institutions, Colleges and Universities visited the Centre.

Publications

Ricky, L.M., Devi, N.P., Deori, C. and Mao, A.A. 2018. Additions to the Orchid Flora of Manipur, India. *The MIOS Journal* 19(2): 2–8.

Roy, D.K. and Mao, A.A. 2018. *Tupistra leonidii* (Asparagaceae, subfamily Nolinoideae), a new species from north-eastern India. *Taiwania* 63(1): 3740.

– Dr. A.A. Mao
Scientist 'F' & HoO

NORTHERN REGIONAL CENTRE, DEHRADUN

Identified total 56 species and made description for 43 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 170 specimens of the family Rubiaceae and of Pteridophytes.

Public services rendered

Identified 24 species for visitors from different institutes/Universities.

Meetings/workshop attended

Dr. Kumar Ambrish, Scientist 'D' & HoO attended Jammu and Kashmir Biodiversity Board meeting on 15.02.2018 for the finalization of the list of RET plants for the state.

Dr. Kumar Ambrish attended a Consultative workshop on India's Sixth National Report to CBD and progress achieved on Biodiversity Targets-6, organized by WII, Dehradun and UNDP, New Delhi and delivered a PPT on Status and Trends of Floral Diversity in India on dated 19.02.2018 at WII, Dehradun.

Dr. Kumar Ambrish attended RAC meeting of Forest Ecology as one of the Executive members.

World Wetland Day—2018

World wet land day was celebrated by centre on 02.2.2018 and talks were delivered regarding conservation of wet lands.



Dr. Sandra Knapp from British Museum, London delivering a talk at NRC, BSI, Dehradun



Dr. G.S. Rawat, WII, Dehradun delivering a talk to GSDP students at NRC, BSI, Dehradun



Ms. Rani Prakash from Natural History Museum, London delivering a talk at NRC, BSI, Dehradun



Dr. Alexander Sukharukhov, Moscow delivering a talk to NRC officials and GSDP students at NRC, BSI, Dehradun

Visitors/students

Dr. Sandra Knapp, Ms. Rani Prakash from Natural History Museum, London and Dr. Alexander Sukharukhov from Moscow visited the centre.

Dr. Anandi Subramanian, Sr. Econ. Advisor, MoEF & CC and Sri Kumar Rajnish, National Programme Coordinator, ENVIS Secretariat, MoEF & CC, New Delhi visited the centre on 5th February, 2018 to interact with GSDP trainees (Advance course- Para-taxonomists) and for the evaluation of GSDP course.

A batch of 20 M.Sc. students of RIMT University Chandigarh visited the centre.

– Dr. Kumar Ambrish
Scientist 'D' & HoO



Visit of Dr. Anandi Subramanian, Sr. Econ. Advisor, MoEF & CC and Sri Kumar Rajnish, National Programme Coordinator, ENVIS Secretariat, MoEF & CC, New Delhi at NRC, BSI, Dehradun on 5th February, 2018

SOUTHERN REGIONAL CENTRE, COIMBATORE

Dr. C. Murugan, Scientist 'D' and Dr. S. Arumugam, Bot. Asst. conducted a botanical exploration to Meghamalai WLS, Tamil Nadu during 5th to 14th February 2018 and vouched specimens of 186 field numbers. They also identified 60 field numbers from the previous collections.



Panaromic view of Meghamalai WLS, Tamil Nadu



Cissampelopsis calcadensis



Chondria armata



Caulerpa sertularioides

Dr. M. Palanisamy, Scientist 'D' and Dr. S. K. Yadav, Bot. Asst. conducted a survey on marine macro algae cum herbarium consultation to Goa coast during 12th to 25th February, 2018 and vouched specimens of 324 field numbers of seaweeds and preserved 65 field numbers of seaweeds into wet forms. Also consulted the herbarium and library of the National Institute of Oceanography (NIO), Goa and referred 105 field numbers of herbarium specimens.

Herbarium Identification

Dr. K.A.A. Kabeer, Scientist 'D' and Sri A. Ravi Kiran, Bot. Asst. completed identification for 17 field numbers in connection with Kodaikanal WLS, Tamil Nadu. Dr. J.H. Franklin Benjamin, Scientist 'C' and Sri Rakesh G. Vadhyar, Bot. Asst. completed identification for 14 field numbers pertaining to Kanniyakumari WLS, Tamil Nadu.

Dr. R. Manikandan, Scientist 'D' completed identification for 50 field numbers pertaining to North Cauvery WLS, Tamil Nadu. In connection with documentation of Phytodiversity, Dr. C. Murugan and Dr. S. Arumugam completed identification for 10 field numbers of Cyperaceae of Tamil Nadu. Dr. R. Manikandan, Sri R.K. Singh, Botanist and Smt. R. Mehala Devi, Sr. Pres. Asst. updated nomenclatural citations, distribution data and description of 2 taxa of the family Caprifoliaceae for Flora of Kerala.

Ex-situ conservation

Dr. S. Kaliamoorthy, Scientist 'D', Dr. M.Y. Kamble, Scientist 'D' and his team introduced four species of *Curcuma* and multiplied 130 samples, belonging to 15 species and 90 numbers of *Bentinckia condapanna*, developed 10 seedlings, 83 cuttings of 7 taxa and recorded the phenological data of 28 plants, including 19 orchids and 9 other angiosperms at the National Orchidarium and Experimental Gardens (NOEG), Yercaud.

Scanning Electron Microscopy (SEM)

Drs. S. Kaliamoorthy and T.S. Saravanan fixed the flowers of 11 orchid species into fixative agents for SEM study.

Public service rendered

Identified 100 plant species for the students / research scholars of various institutions.

Dr. M.Y. Kamble delivered lecture on Plant conservation methods' to the 61 students of B. Sc. Botany, Bishop Heber College, Trichy on 02.02.2018.

Dr. S.K. Yadav delivered a lecture on "Seaweed diversity and Methodology for seaweed Herbarium" to 30 UG & PG students of Alva's College, Moodbidri, Karnataka on 07.02.2018.

Sri Rakesh G. Vadhyar delivered lectures about BSI, Museum and MH Collections and about nomenclatural types to 5 batches of students from Kerala, Tamil Nadu and Karnataka. Ms. R. Mehala Devi and Ms. M. Ananthalakshmi explained activities of BSI to 25 M.Sc Students from Annamalai University, Chithambaram, Tamil Nadu.

Meetings/seminar attended

All the scientific officials of the centre attended an special lecture on 'Basic Concept of GIS' delivered by Sri Natarajan Palani, IFGTB, Coimbatore on 07.02.2018 at SRC, BSI, Coimbatore.

Dr. M.Y. Kamble participated in the 21st Punjab Science Congress with theme "Scientific Advances for Inclusive Development and Environmental Protection "Organized by Punjab Agricultural University, Ludhiana, held on 7th-9th February 2018 and made Poster presentation on the research titled, "Ethno-Medicinal Plants Used in Liver Disorders by Native Tribes of Andaman and Nicobar Islands, India: A Review " by Mane Santosh, Kolhe Rasika, Kamble Mayur and Tiwari, R.K.

Dr. M. Palanisamy delivered an invited lecture on "Perspectives of Indian Seaweed Diversity" at Dr. N.G.P College of Arts & Science, on 07.02.2018.

Dr. K. Althaf Ahamed Kabeer delivered a lead lecture on "Diversity and Taxonomy of Grasses" in IFGTB, Coimbatore on 08.02.2018.

Dr. S. Kaliamoorthy delivered a lecture on "Plant Biodiversity and Conservation - with a special note on orchids" at the Department of Biotechnology, Selvam College of Arts & Science, Namakkal, on 09.02.2018

Dr. R. Manikandan attended farmer's day celebration at TNAU, Coimbatore on 10.02.2018.

Green Skill Development Program (GSDP)

Under the Green Skill Development Program (GSDP), various classes and plant exploration were undertaken under the coordination of Dr. R. Manikandan and Dr. J.H. Franklin Benjamin. Dr. S.K. Yadav and Ananthalakshmi also undertaken a local field trip with the students to Rice Breeding Station, Dept. of Rice, TNAU, Coimbatore on 01.02.2018. Dr. P. Jayaprakash, Prof., given a lecture and made necessary arrangements in Museum and Rice field for field exposure to the students; Dr. S. Arumugam lectured on (1) Protected areas, (2) *In-situ* conservation, Germplasm conservation institutes of India and (3) Herbarium methodology & incorporation of specimens; Ms. R. Mehala Devi and Ms. M. Ananthalakshmi explained about Local Native species, Non-Native species & Control measures, National Parks, Wildlife Sanctuaries and NBR.



Dr. S.K. Yadav with GSDP trainees at Rice field of Tamil Nadu Agricultural University, Coimbatore

Drawings/paintings made

Mr. R. Suresh, Artist Gr 1, made 20 illustrations/charts/boards whereas Mr. A.T. Durgadas, Artist, is involved in oil painting on a project based on "Endangered species of Western Ghats".

Visitors/students

During this month, 47 scientific personnel/officials/students/scholars visited the museum, herbarium and library of this regional centre whereas 1110 persons in 64 parties visited the NOEG, Yercaud.

– Dr. C. Murugan
Scientist 'D' & HoO

WESTERN REGIONAL CENTRE, PUNE

Dr. A. Benniamin, Scientist 'D' made one field tour to unexplored areas of Karnataka during 29th January to 12th February for the project "Ferns of Karnataka".

Dr. Priyanka Ingle, Scientist 'B' along with Ms. Madhuri Pawar, Pres. Asst. conducted one field tour from 10th to 24th February 2018 for the project, "Floristic diversity of Wan Wildlife Sanctuary, Maharashtra".

Sri D. Jesubalan, Bot. Asst. conducted one field tour from 27th January to 10th February 2018 for the project, "Pteridophytic flora of Pushpagiri Wildlife Sanctuary, Karnataka with 10% periphery".

Specimen Identification

Dr. J.S. Jalal, Scientist 'D' identified eight orchid species and prepared description for the project, "An Assessment of Orchid diversity of Central Western Ghats: Goa".

Dr. C.R. Jadhav, Botanist identified specimens of 20 field numbers for the project, "Floristic survey of Someshwara Wildlife Sanctuary, Karnataka".

Ms. A.M. Neelima made SEM studies of capsules and pollinia of two orchids for the project, "Seed morphology and cyto-taxonomy of some selected orchids of Northern Western Ghats".

Dr. A. Benniamin identified seven species for the project, "Ferns of Karnataka".

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

Sri D. Tripathi, Senior Project Fellow identified four species for the project, "Pteridophyte flora of Kudremukh National Park, Karnataka".

Dr. Rashmi Dubey, Scientist 'D' processed 26 samples including dry and foliicolous and prepared 75 slides for the project, "Taxonomic Studies of Micro fungi of Sanjay Gandhi National Park along with its 10% peripheral area".

Ms. Shreya Sengupta, Senior Project Fellow identified 11 micro fungi under the project, "Microfungi of Biligiri Rangaswamy Temple wildlife Sanctuary, Karnataka".

Public service rendered

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

Workshop attended

Dr. A. Benniamin, Sri Jesubalan and Sri Devendra Tripathi has attended and presented paper on National Symposium on Pteridological Studies in India: Perspectives and Modern Approaches in Relation to Environment and Climate Change 2018 at APRC, BSI, Itanagar on 22nd and 23rd February 2018.

World Wetland Day 2018

World Wetlands Day was organized at WRC, Pune on 2nd February 2018 with the theme 'Wetlands for a Sustainable Urban Future'. The students from Savithribhai Phule Pune University and trainee students of GSDP – Parataxonomist course participated in the programme as well as in the drawing competition held.

Visitors

A team of participants of the Pune Heritage Festival visited WRC on 14.02.2018 as part of the INTACH activity on Pune Heritage Festival 2018, during which the participants visited the Heritage building (Moti Mansion) in WRC.



Photo: WRC



Celebration of World Wetland Day at WRC , BSI, Pune



Photo: WRC

GSDP students field tour to Lonavala to study quadrats



GSDP students field tour to Junnar-Durgawadi Sacred grove

Green Skill Development Programme

For the GSDP Advanced Course on "Parataxonomist" the trainee students have conducted one field tour to Lonavala and Ambey Valley for GRIDS study on 10.02.2018.

Conducted one field tour to Junnar-Durgawadi area on 16.02.2018 to study the sacred groves.

Conducted a field tour to Botanical Garden Mahabaleshwar and its surrounding area on 24.02.2018 to study the endemic plants of the micro-endemic centre of Western Ghats.



GSDP field tour to Mahabaleshwar Biodiversity park

Publications

K. Chowlu and J.S. Jalal. 2018. Record of the endemic orchid *Biermannia jainiana* (Orchidaceae) from its type locality, India. *J. Threatened Taxa* 10: 1231–1233.

S. Shalini, P. Lakshminarasimhan and D. Maity. 2017. A new combination and lectotypification in *Argyreia* (Convolvulaceae). *Nelumbo* 59(2): 145–148.

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



Signing of Memorandum of Understanding between Botanical Survey of India and Natural History Museum, UK in presence of Dr. Harsh Vardhan, Union Minister of Environment, Forest and Climate Change, Sri C.K. Mishra, Secretary, MoEF & CC and Sri A.K. Jain, Addl. Secretary, MoEF & CC during on 16th February 2018

Thanks to all the scientists and staff of regional centres and units of BSI for contributing to this Newsletter

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