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HEAD QUARTERS, KOLKATA

Dr. A.B.D. Selvam, Scientist 'D' conducted a field tour to different parts of Kerala and Karnataka from 2nd to 15th January 2018 for the collection of *Cycas* plants in connection with the project, "Pharmacognostic Studies on Indian Cycads". Dr. Selvam collected specimens by utilizing six field numbers belonging to four species, viz. *Cycas annaikalensis* Singh & Radha, *C. swamyi* Singh & Radha, *C. rumphii* Miq. and *C. circinalis* L.

Dr. Selvam also visited FRLHT, Bangalore for consulting herbarium, vegetable crude drug museum, herbal garden and ENVIS centre.

In connection with the ongoing projects on "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", "Liverworts and Hornworts Flora of Darjeeling District, West Bengal",

identification, drawings, camera lucida illustrations were done by the scientific officials of Cryptogamic section. Dr. Devendra Singh, Scientist 'D' prepared the database of 42 general liverwort specimens of CAL. Sri Arvind Parihar, Bot. Asst. accessioned and incorporated three specimens (including one holotype) received from Dr. C.K. Pradeep, Scientist, JNTBGRI, Thiruvananthapuram and P. Sridhar, Research Scholar, Botany, University of Madras, Chennai [*Crepidotus indicus* (Accession No. CAL-1647)-Holotype].



Dr. A.B.D. Selvam delivering lecture at Queen Mary's College, Chennai on 04.01.2018

Lectures delivered

Dr. A.B.D. Selvam delivered a lecture on "Conservation of biodiversity with special reference to Indian Medicinal Plants" in the 'National Seminar on Biodiversity of Medicinal Plants: Emerging trends and Challenges' held at Queen Mary's College, Chennai on 04.01.2018.

Dr. R.K. Gupta, Scientist 'D' delivered a lecture on 'Biomonitoring River and water bodies with particular reference to algae' in Zoological Survey of India, Kolkata for the trainees of pollution control board, Telangana.

Public service rendered

Dr. Kanad Das, Scientist 'D' reviewed the manuscripts one each for *Phytotaxa* and *Fungal Diversity*.

Dr. Selvam rendering guidance to Ms. Tino Ammini, M.Sc. Botany student of Bharathidasan University, Trichy, Tamil Nadu for her final year project work.

Sri Arvind Parihar explained the Basic techniques of Macro and Micro-morphological Identification of Macrofungi to Ms. Prila Hansepi, Research scholar, Assam University, Guwahati, Assam.

Publications

Das, K., Ghosh, A., Bhatt, R.P., Chakraborty, D., Hofstetter, V., Buyck, B. 2017. Fungal Biodiversity Profiles 41–50. *Cryptogamie Mycologie* 38 (4): 527–547.

Das, K., Verbeken, A., Chakraborty, D., Avchar, R., Baghela, A. 2017. Morphological and phylogenetic evidence for two new *Lactarius* species (Russulales, Basidiomycota) from India. *Cryptogamie Mycologie* 38 (4): 453–467.

Das, K., Ghosh, A., Santhosh, S. and Vizzini, A. 2017. Morphology and molecular phylogeny uncover the first collection of *Paxillus orientalis* (Paxillaceae) from India. *Kavaka* 49: 6–9.

CENTRAL NATIONAL HERBARIUM, HOWRAH

Dr. V.P. Prasad identified 10 Field numbers of Cyperaceae specimens collected from Andaman and Nicobar Islands in 2016 and three field numbers received from BSA.

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

Dr. Kumar Avinash Bharati, Scientist 'B' identified 12 species collected from Baraila lake Salim Ali Jubba Sahni Bird Sanctuary, Vaishali District, Bihar.

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

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

Dr. O.N. Maurya, Scientist 'C', identified two species collected from Udaipur Wildlife Sanctuary, Bihar.

Public Service rendered

Dr. Subir Bandyopadhyay Provided a write-up on Susil Kumar Mukerjee (1909–1997) to Sri Sandip Kisan Gavade, Research Scholar, Department of Botany, Shivaji University, Kolhapur, Maharashtra.

Dr. Bandyopadhyay also provided information regarding an author of plant name [Dr. P. Radha] for incorporation in the Author Query database of IPNI.

Dr. Bandyopadhyay responded a query on typification of two names in Cucurbitaceae received from Sri Mayank D. Dwivedi, Plant Systematics Lab., Department of Botany, University of Delhi.

Dr. K. Karthigeyan, Scientist 'D' Provided information on the Roxburgh's icones to Sandip Kisan Gavade, Department of Botany, Shivaji University, Kolhapur, Maharashtra.

Lecture delivered

Dr. Rajib Gogoi delivered a lecture on 11.01.2018 pertaining to "Phytodiversity of NE India" at AJCB College, Kolkata.

Imparted training on herbarium methodology for aquatic plants at AJCB Indian Botanical Garden addressing to batch of delegates from Pollution Control Board, Andhra Pradesh by Shyam Biswa and Anand Kumar Bot. Asst. on 18.01.2018.

Meetings/Seminar/conference attended

Dr. Prasanna & Dr. Bhattacharjee attended a meeting with ADG (wildlife), MoEF&CC, New Delhi in connection with NDF studies on *Dalbergia latifolia* & *Dalbergia sissoo* on 10.01.2018.

A meeting attended by K. Kartikeyan with Mrs. Ajanta Dey, Joint Director, NEWS regarding the evaluation of Mangrove afforestation programme on Sundarban area.

Visitors/students

Five students of class IX to XII from Nabasan Turtu Charan High School, West Bengal on 01.01.2018 on educational tour.

26 students of B.Sc. (Botany Hons.) from Rishi Bankim Chandra College for Women, Naihati on 03.01.2018 on educational tour.

25 students accompanied by four teachers from Raja N.L. Khan Women's college, Midnapore on 04.01.2018.

90 students accompanied by four teachers from Vidyasagar College for Women, Kolkata on 05.01.2018.

Dr. Mukul Kumar Baruah and 26 students of B.Sc. (Botany Hons.) from Assam on educational tour and 35 Students of M.Sc. Botany along with Dr. Uma Sankar of North Eastern Hill University, Shillong, Meghalaya on 08.01.2018.

Mr. T.J. Shaikh from Shivaji University, Kolhapur for consulting family Poaceae in General and Type Herbarium II from 08.01.2018 to 12.01.2018.

40 students accompanied by two teachers from Ghatal Rabindra Satabarsiki Mahavidyalaya, Paschim Midnapore, West Bengal on 09.01.2018.

16 students of Class XI Standard from S.G.C. Netaji Subhas Vidyalaya (H.S.); 40 students of B.Sc. (Botany) from P.K. College, Contai, West Bengal and Sri Subhajit Goswami, JRF, I.I.E.S.T, Shibpur on 11.01.2018.

35 students of B.Sc. (Botany Hons.) from Siliguri College, Siliguri, West Bengal on 12.01.2018.

45 students of class IX to XII and four teachers from Baghbazar Multipurpose High School, Kolkata on 13.01.2018.

Six students of B.Sc. (Botany) accompanied by two teachers from Raja Peary Mohan College, Uttarpara, Hooghly, West Bengal on 16.01.2018.

20 students accompanied by two teachers from Scottish Church College, Kolkata; 71 students of B.Sc. (Botany Hons.) from Bangabasi Morning College, Kolkata; 15 students of B.Sc. (Botany Hons.) from Narajole Raj College, Paschim Medinipur, West Bengal; 19 students of M. Sc. (Botany) and 28 students of B.Sc. (Botany Hons.) from Bethune College, Kolkata; 14 students of B.Sc. (Botany Hons.) from Nabadwip College, West Bengal; 25 students of B.Sc. (Botany Hons.) from Scottish Church College, Kolkata and 10 students of B.Sc. (Botany Hons.) from Syamsundor College, West Bengal on 17.01.2018.

Ms. Manju Pandey, Joint Secretary, MoEF & CC visited the Central National Herbarium on 18.01.2018.

21 students of B.Sc. (Biology) from Sammilani Mahavidyalaya, Kolkata; 34 students of B.Sc. (Botany Hons.) from Raidighi College, West Bengal; 18 students of B.Sc. (Botany Hons.) from Pingla Thana Mahavidyalaya, West Bengal; 22 students of B.Sc. (Botany Hons.) from Asutosh College, Kolkata; 20 students of B.Sc. (Botany Hons.) from Sarojini Naidu College for Women, Kolkata; 59 students of B.Sc. (Botany Hons.) from Garhbeta College, West Bengal; 22 students of B.Sc. (Botany Hons. and M. Sc.) from Serampore College, Hooghly on 18.01.2018.

150 students of B.Sc. (Botany) accompanied by four teachers from Sarsuna College, Kolkata; 16 students of B.Sc. (Botany Hons.) from Bangabasi College, Kolkata on 19.01.2018.

11 students of class VI to X-th standard and eight teachers from Saroj Nalini Adult High School, Kolkata for on 29.01.2018.

Sri Prantik Sharma Baruah, SRF, Gauhati University; 15 students of B.Sc. (Botany Hons.) and five teachers from Tamralipta Mahavidyalaya, West Bengal for visiting General Herbarium on 30.01.2018 on educational tour.

Publications

Chowlu, K., Borah, S., Dash, S.S., Adamowski, W. and Gogoi, R. 2017. *Impatiens dorjeekhandui* (Balsaminaceae) a new species of *Impatiens* from Arunachal Pradesh, India. *Nelumbo* 59(2): 139–144.

Sampath Kumar, V. 2017. *Glycosmis lucida* (Rutaceae) - an unwanted guest? *Nelumbo* 59(2): 178–180.

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

INDUSTRIAL SECTION INDIAN MUSEUM, KOLKATA

The botanical paintings by Roxburgh are being interpreted with updated nomenclature. In this project, four members of Poaceae – *Andropogon monandrus* Roxb., *A. montanus* Roxb., *A. muricatus* Retz., *A. parviflorus* Roxb. were interpreted and following 16 species were described *Sporobolus indicus* (L.) R.Br., *Urochloa setigera* (Retz.) Stapf, *Cyrtococcum patens* (L.) A. Camus, *Setaria italica* (L.) P. Beauv., *Sacciolepis indica* (L.) Chase, *Digitaria filiformis* (L.) Koeler, *Stenotaphrum dimidiatum* (L.) Brongn., *Sacciolepis curvata* (L.) Chase, *Oplismenus burmannii* (Retz.) P. Beauv., *Hyparrhenia cymbaria* (L.) Stapf, *Phragmites karka* (Retz.) Trin. ex Steud., *Setaria verticillata* (L.) P.Beauv., *Eragrostiella bifaria* (Vahl) Bor, *Leptochloa chinensis* (L.) Nees., *Eragrostis nutans* (Retz.) Nees ex Steud. and *Imperata cylindrica* (L.) Raeusch. One species, *Diospyros exsculpta* Buch.-Ham. from Ebenaceae was also described.

Database of Herbarium Specimens

As a part of preparing a database of herbarium specimens at BSIS, 255 numbers of Dicot herbarium specimens were listed and documented.

Updating of nomenclature of digitized Herbarium Specimens at BSIS

410 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

Dr. M. Bhaumik, Scientist 'D' & HoO attended a lecture on "Temple heritage of a Chinese Migrant community: movement, connectivity and identity in Meritime World" by Dr. Tansen Sen, Professor, Sanghai University in Committee Room, Indian Museum on 10.01.2018. Dr. A.K. Sahoo, Scientist 'D' participated in the 235th Foundation day celebration of Asiatic Society at Kolkata and attended keynote address by Dr.K. Kasturirangan, ex-chief of ISRO, Bangalore on a topic entitled "The influence of India's Space endeavour on its societal development" organized at Vidyasagar hall of the institute on 15.01.2018.



Visitors at BSI stall at Ramakrishna Mela in Ramakrishna Mission Ashram, Narendrapur, West Bengal

As a part of its objective to spread awareness on importance of plants in human life, participated in "Tri Celebration" at R.K. Mission Ashram, Narendrapur, South 24 Paraganas, West Bengal from 26th to 29th January 2018. Ms. Sudeshna Datta and Sri B.C. Dey attended the exhibition and attended the visitors.



Photo: ISIM

Dr. M. Bhaumik explaining about importance of herbarium collections to the students



Lecture by Dr. Ms. K. Pagag on Natural Rubber to the students during their visit to ISIM



Photo: ISIM

Ms. S. Datta explaining about miscellaneous collections to the students during their visit to ISIM



Sri B.C. Dey explaining about the industrial process for preparation of match sticks to the students



Sri S. Sharma explaining about the different gum and resin collections to the students

Visitors/students

A group of students from Narain Dass Bangur Memorial Multipurpose School visited Botanical galleries on 06.01.2018 as a part of Environmental Education Awareness Programme and attended a lecture on 'Natural Rubber producing plants and its uses in mankind' delivered by Dr. (Ms.) Kangkan Pagag. Ms. Sudeshna Datta, Sri B.C. Dey and Sri S.K. Sharma attended the school students during their visit to botanical galleries.

The visit of Chief Justice, Sri Kolar to AJCBIG, Howrah on 01.01.2018 and Jt. Secy. Ms. Manju Pandey, MoEF & CC, New Delhi at CNH and AJCBIG

on 18.01.2018 was attended by Sri D.L. Sirodkar, Botanist. Dr. P.T. Balaram, Prof Visva-Bharati University, West Bengal visited botanical gallery on 19.01.2018 and Ms. Snhelata Pradhan and Sri Alister Adhikari visited Hooker's exhibition on 23.01.2018.

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

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

In connection with Flora of Kyd, Pitman & James Islands, South Andaman, Dr. Sanjay Mishra, Scientist 'B' conducted Herbarium and Library consultation tour to Central National Herbarium, Howrah from 10th to 20th January 2018. A total of 123 specimens were examined and identified eight specimens.

Digitization of herbarium specimens

Herbarium sheets Scanned: 298 numbers of Arecaceae, Commelinaceae, Flagellareaceae, Juncaceae and Menyanthaceae.

Herbarium details computerized in Excel format: 105 herbarium specimens of families Arecaceae were fed in the computer in a prescribed format.

Republic Day

Organized 69th Republic day Flag hoisting celebration at ANRC, BSI, Port Blair on 26.01.2018.

Public service rendered

Dr. Lal Ji Singh, Scientist 'D' & HoO reviewed a manuscript for *The Philippine Journal of Systematic Biology*.

The seedlings of *Horsfieldia glabra* Bl. Warb., *Myristica andamanica* Hook. f., *Knema andamanica* (Warb.) de Wilde were supplied (five numbers each) to Dr. Joseph John, Principal Scientist, ICAR-KARNBPGR, Thrissur, Kerala as requested.

Dr. C.P. Vivek, Bot. Asst. identified 17

ethnomedicinal plant species used by Onge tribes at Dugong Creek, Little Andaman and prepared the descriptions and other details of them for Andaman and Nicobar Tribal Research Institute (ANTRI), Port Blair.

Dr. Vivek identified 47 plant species growing wild in the campus of Kendriya Vidyalaya (KV-1), Aberdeen Bazar, Port Blair.

Meetings/workshop/functions attended

Dr. Lal Ji Singh participated research advisory committee meeting at office of the Principal Chief Conservator of Forests, Research & Working Plan, Haddo, Port Blair on 04.01.2018.

Dr. Sanjay Mishra, Scientist 'B' attended the workshop on NTRP, CDDO & EIS module under PMFS on 11.01.2018 and 12.01.2018 at INGAF, Kolkata.

Dr. Singh attended a meeting of Rashtriya Hindi Akadami at Andaman Club Port Blair on 19.01.2018.

Dr. Singh attended an inaugural function of Laboratory cum Administrative Building and Staff Quarters at National Institute of Ocean Technology, Ministry of Earth Science, Port Blair on 20.01.2018.

Dr. Singh attended 68th Republic Day Flag hoisting celebration at Netaji Subhas Chandra Bose Stadium, Port Blair on 26.01.2018.

Dr. Singh attended reception of 68th Republic Day Flag hoisting celebration at Raj Niwas Port Blair on 26.01.2018.

Dr. Singh and Dr. Mishra attended BEATING RETREAT Ceremony at Netaji Subhas Chandra Bose Stadium, Port Blair on 29.01.2018.



Photo: G.A. Ekka

Dr. Lal Ji Singh along with officers and staff, hoisting National Flag at ANRC, BSI, Port Blair on Republic Day

Visitors

Dr. Neetu Jain, Associate Professor, Indian Institute of Financial Administrations, New Delhi visited office on 02.01.2018.



Photo: C.P. Vivek

Dr. Neetu Jain, IIFA, New Delhi during her visit to Andaman & Nicobar Regional Centre (ANRC), BSI, Port Blair

Ms. P.S. Prabitha, Asst. Director, ARC, New Delhi, visited Herbarium and Library on 05.01.2018.

Dr. Lalit Kapur, Advisor, Ministry of Environment, Forest and Climate Change visited office on 08.01.2018.



Photo: C.P. Vivek

Dr. Lalit Kapur during his visit to Andaman & Nicobar Regional Centre (ANRC), BSI, Port Blair

Sri M. V. Prabhudev, Ph.D. student and Sri Vinay R. Hegde, M.Sc. National Centre for Biological Sciences, Tata Institute of Fundamental Research, Bangalore visited garden on 24.01.2018.

Ms. Shaba Tarnnum, Ms. Sugandit Tirkey and Ms. Kartika, M.Sc. students of JNRM PG College Port Blair visited garden on 29.01.2018.

Dr. Joseph John, Principal Scientist, ICAR-KARNBPGR, Dr. K. Pradeep, Principal Scientist, ICAR-NBPGR, Dr. K. Venkteswar, Scientist, ICAR, CIARI visited garden on 31.01.2018.

Publications

Singh, L.J., Mishra, S., Vivek, C.P. and Ekka, G.A. 2018. Systematic Account of Family Musaceae in the Andaman and Nicobar Islands. In: *H.K. Chourasia and D.P. Mishra (Eds.), Plant Systematics and Biotechnology: Challenges and Opportunities 2018*, pp. 473–483. Today and Tomorrow's Printers and Publishers, New Delhi.

Jagadish Ram, T.A.M. and Sinha, G.P. 2018. Lichens of Neora Valley National Park. *Cryptogam Biodiversity and Assessment*, Special Volume: 144–175.

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

ARID ZONE REGIONAL CENTRE, JODHPUR

In association with Flora of Sariska Tiger Reserve, Alwar District, Rajasthan, Dr. M.K. Singhadiya, Botanist and Sri Ravi Prasad, Bot. Asst. conducted one field tour from 18th December 2017 to 6th January 2018 and collected specimens of 119 field numbers. In connection with Flora of Jambughoda Wildlife Sanctuary, Gujarat, Dr. S.L. Meena, Scientist 'D', conducted one field tour from 26th December 2017 to 9th January 2018 and collected specimens of 168 field numbers.



Photo: P. Hari Krishna

Flowering of *Allium porrum* at Botanical Garden, AZRC, BSI, Jodhpur



Flowering of *Allium porrum* at Botanical Garden, AZRC, BSI, Jodhpur



Photo: P. Hari Krishna

Flowering and fruiting of *Boswellia serrata* at Gir National Park, Gujarat



Photo: P. Hari Krishna

Flowering and fruiting of *Salvadora persica* at Botanical Garden, AZRC, BSI, Jodhpur



Photo: Ravi Prasad

Fruiting of *Capparis decidua* at Sariska Tiger Reserve, Alwar district, Rajasthan

GSDP: Advance Course for Para-taxonomists

Dr. S.L. Meena, Scientist 'D' delivered 4 lectures on 'Invasive alien species and impacts on biodiversity' on 18.01.2018.

Dr. C.S. Purohit, Scientist 'B' delivered five lectures along with practical on identification of family, genus and species with the help of microscope during 1st to 4th January 2018.

Dr. P. Harikrishna, Bot. Asst. delivered two lectures on GRIDSS and Ramsar Convention & importance and conducted practical's on Arc GIS Spatial Grid generation and Arc-Map preparation.

Sri Ravi Prasad, Bot. Asst. delivered lectures on Biosphere Reserve, Tiger Reserve, Elephant Reserve, National Park, Wildlife Sanctuary and Natural Heritage Sites of India.

Sri Sunil Sankhla, GIS Analyst, Rajasthan Forest Department, Jodhpur delivered lectures along with practical on QGIS applications from 10th to 19th January 2018.

Conducted one field tour to Sariska Tiger Reserve and Keoladev Bird Sanctuary of Rajasthan from 6th to 9th January 2018 by Sri Vinod Maina, Dr. Ramesh Kumar and Sri R. Kulloli for trainees of "Green Skill Development Programme (GSDP) as per the guidelines of MoEF & CC, New Delhi.

Conducted one field tour to Indroda Nature Park, Gandhi Nagar and Gir National Park, Sasan, Gujarat from 26th to 30th January 2018 by Vinod Maina, C.S. Purohit, Ravi Prasad and Ravikiran Kulloli along with trainees of "Green Skill Development Programme (GSDP) as per the guidelines of MoEF & CC, New Delhi.

Public service rendered

Identified 2 plant specimens (*Moringa oleifera* Lam.) brought by Mrs. Deepika Sharma and Ms. Anita Kumari M.Sc. (4th Semester) Chemistry, Department of Chemistry, Lachoo Memorial College of Science & Technology, Jodhpur on 17.01.2018

Publications

Kumar, R., Purohit, C.S. and Maina, V. 2018. Ethno-medicinal Plants of Meghalaya: An account on Sustainable Utilization. In: S.K. Jha (ed.). *Advances in Ethnobotany*, pp. 135–148. Satish Serial Publishing House, Delhi.

Purohit, C.S., Kumar, R., Shukla, J.K. and Maina, V. 2018. Medicinal and Economic Importance of Rhododendron in Sikkim Himalaya: An overview". In: S.K. Jha (ed.). *Advances in Ethnobotany*, pp. 361–380. Satish Serial Publishing House, Delhi.

Shukla, J.K., Purohit, C.S., Thapa, S. and Dhakat, P. 2018. Plants of Ethnomedicinal Importance from Sikkim Himalayan Region, India. In: S.K. Jha (ed.). *Advances in Ethnobotany*, pp. 63–99. Satish Serial Publishing House, Delhi. .

– Sri Vinod Maina
Scientist 'D' & HoO

CENTRAL REGIONAL CENTRE, ALLAHABAD

Dr. Arti Garg, Scientist 'D' and Dr. Arjun Prasad Tiwari, Bot. Asst. conducted a field exploration tour to Bhopal and adjoining wetland areas of the Bhoj Ramsar site, Madhya Pradesh during 7th to 19th January 2018 and collected 582 specimens utilising 190 field numbers.

Herbarium specimen identification

A total of 80 specimens under 40 species were identified under 'Floristic diversity of Kishanpur Wildlife Sanctuary, Lakhimpur Kheri, Uttar Pradesh.

Under the project 'Flora of Chhattisgarh' Vol.-II, Dr. A.K. Verma, Scientist 'B' updated nomenclature of 50 species and prepared identification key for members of Eriocaulaceae family. Dr. Nitisha Srivastava, Bot. Asst. completed taxonomic description of 10 species of family Poaceae.



A view of Bhoj Ramsar site wetland - water surface covered with *Azolla pinnata*

Photo: A. Garg



Glossostigma diandrum (L.) Kuntze at Bhoj Ramsar site wetland, Madhya Pradesh



Trifolium tomentosum L. at Bhoj Ramsar site wetland, Madhya Pradesh

Photo: A. Garg

A total of 62 specimens were identified in connection with the project 'Identification of old unidentified specimens of BSA'.

Sri Vineet Kumar Singh and Dr. Nitisha Srivastava, Bot. Asst. authenticated six and one specimen respectively for different Institutions.

Workshop/training attended

Dr. G.P. Sinha, Scientist 'E' & HoO attended a workshop on Molecular Systematics and National Conference of Indian Lichenological Society respectively on 26.01.2018 and 27th to 28th January 2018 at NBRI, Lucknow and presented a paper, 'Status of Lichen diversity in Sikkim' and also chaired a session of the conference.

Dr. Ashutosh Kumar Verma attended a training programme on "NTRP/EIS/CDDO" sponsored by PAO, BSI/ZSI, Kolkata at Institute of Government Accounts and Finance, Regional Training Centre, Kolkata on 11th and 12th January 2018.

GSDP: Advanced Course for Para-taxonomists

Drs. G.P. Sinha, Sheo Kumar, Arti Garg, A.N. Shukla, A.K. Verma, Nitisha Srivastava, A.P. Tiwari, Sri V.K. Singh and Dr. Pushpi Singh delivered lectures to GSDP Advanced Course trainees on various topics viz., Collection and Identification of lower plants including Lichens, GIS, Phytogeographic regions of India, Convention on Biodiversity and Aichi targets, *ex-situ* and *in-situ* conservation, detail introductory information about the topic Gathering pertinent information (library/internet) and Collection and identification of different plant groups.

Besides, two invited lectures were also organized for the trainees; delivered by Dr. H.P. Pandey, Ishwar Saran College, University of Allahabad on 'Phenological studies' and Dr. A.K. Verma, State University of Allahabad on 'Endangered Birds'.

Publications

Gupta, P. 2018. Lichen diversity in the Terai Regions of Uttar Pradesh. *Cryptogam Biodiversity and Assessment*, Spl. Vol.: 115–143.

Joseph, S., Nayaka, S. and Sinha, G.P. 2018. Bibliography to the Indian lichens from the year 2010 onwards. *Cryptogam Biodiversity and Assessment*, Spl. Vol.: 71–114.

Joseph, S., Sinha, G.P. and Ramchandran, V.S. 2018. Taxonomic revision of the lichen genus *Opegrapha sensu lato* (*Roccellaceae*) in India. *Indian J. Forest. Additional Series VI*, pp. 172.

Singh, K.P., Singh, P. and Sinha, G.P. 2018. Lichen diversity in the Eastern Himalaya biodiversity hotspot region, India. *Cryptogam Biodiversity and Assessment*, Spl. Vol.: 71–114.

Sinha, G.P., Nayaka, S. and Joseph, S. 2018. Additions to the Indian lichens from the year 2010 onwards. *Cryptogam Biodiversity and Assessment*, Spl. Vol.: 197–206.

– Dr. G.P. Sinha
Scientist 'E' & HoO

DECCAN REGIONAL CENTRE, HYDERABAD

Dr. G. Swarnalatha identified eight macro lichen specimens for the project, “Inventory of Macrolichen diversity of Odisha State”

Digitisation of Herbarium specimens

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

Public service rendered

Dr. L. Rasingam, Scientist ‘D’ & HoO and Dr. Sankararao Mudadla, Scientist ‘B’ inspected the Botanical Garden of Centre for Plant Molecular Biology (CPMB), Osmania University, Hyderabad on 12.01.2018.

Dr. L. Rasingam, identified two specimens for two Pharmacy Colleges.

Dr. J. Swamy, identified four plant specimens for Anwar-ul-Uloom College of Pharmacy, Hyderabad.

Dr. J. Swamy, provided service to Sri T. Mastan, Research Scholar, Yogi Vemana University, Kadapa, Andhra Pradesh.

Meeting/programme attended

Dr. L. Rasingam attended the review meeting of NDF studies of Red Sander at Ministry of Environment, Forest and Climate Change, New Delhi on 10.01.2018.

Dr. Sankararao Mudadla attended state level workshop on National Biodiversity Action Plan, National Biodiversity Targets in India’s Sixth National Report to Convention on Biological Diversity held at Telangana state Biodiversity Board, Hyderabad on 10.01.2018.

Dr. Sankararao Mudadla, Dr. G. Swarnalatha, Dr. J. Swamy and Dr. K. Chandramohan attended Hands-on-Training on DNA Barcoding: Methods and applications from 4th to 5th January 2018 at Freshwater Biological Regional Centre, Zoological Survey of India, Hyderabad.

Visitors/students

Director, Zoological Survey of India and Dr. Nagaraju Rao, Osmania University visited DRC, BSI on 05.01.2018.

Two research Scholars from National Botanical research Institute (NBRI), Lucknow visited this centre for herbarium consultation on 08.01.2018.

Publications

Chandramohan, K. and Prasanna, P.V. 2017. A new variety of *Dimeria connivens* Hack. (Poaceae) from India. *Bangladesh J. Plant Taxon.* 24(2): 237–240.

Ibanez, T., Keppe, G., Baider, C., Birkinshaw, C., Culmsee, H., Cordel, S., Florens, F.B.V., Franklin, J., Giardina, C.P., Gillespie, T.W., Laidlaw, M., Litton, C.M., Martin, T.G., Ostertag, R., Parthasarathy, N., Randrianaivo, R., Randrianjanahary, M., Rajkumar, M., Rasingam, L., Ratovoson, F., Reza, L., Sack, L., Aiba, S., Webb, E., Whitfeld, T.J.S., Zang, R. and Birnbaum, P. 2018. Regional forcing explains local species diversity and turnover on tropical islands. *Global Ecol. Biogeogr.* 1–13. <https://doi.org/10.1111/geb.12712>.

Swamy, J. and Venkatesham, E. 2018. Two new additions to the flora of Telangana, India. *Ann. Pl. Sci.* 7 (1): 1952–1953.

Prameela, R., Swamy, J. and Venkaiah, M. 2018. *Typhonium roxburghii* Schott (Araceae): A new Distributional Record for Andhra Pradesh, India. *Biosci. Discov.* 9(1): 104–106.



Director, Zoological Survey of India and Dr. L. Rasingam distributing certificate to participants on 05.01.2018.

– Dr. L. Rasingam
Scientist ‘D’ & HoO

EASTERN REGIONAL CENTRE, SHILLONG

During this period 27 species identified and described 17 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' & HoO, Dr. N. Odyuo and Dr. D.K. Roy, Bot. Asst.

In Taxonomic Revision of genus *Riccia* (Marchantiophyta) in India by Dr. S.K. Singh, Scientist 'D'. Taxonomic description completed of one species namely *Riccia disolor* collected from Maharashtra. Field tour undertaken on 06.01.2018 for collection of bryophyte to Jaintia hills and collected 15 samples of Lejeuneaceae Schizostipae along with SPF.

Under Taxonomy, phylogeny and *ex-situ* conservation of Micro-fungal diversity from North-east India with special emphasis on fungi associated with endemic and threatened plants of Meghalaya Working on phylogenetic tree for *Setosynnema isthmosporum* and a *Cryptophiale* sp. by Dr. Ashish Venkatesh Prabhugaonkar, Scientist 'B'.

For Micropropagation, Phytochemical Screening of Medicinal Plants and Molecular Characterization of Selected Species of NE India, DNA was extracted from *Pyrenaria khasiana*, *Pyrenaria khasiana* var. *lakhimpurensis*, *Pyrenaria barringtoniifolia* and the extracted DNA was quantified on 0.8% agarose gel and documented. DNA was extracted from *Pyrenaria camelliflora* and the extracted DNA was quantified on 0.8% agarose gel and documented by Dr. Deepu Vijayan, Scientist 'C'. Observed and recorded phenological data of flowering and fruiting of 67 plant species viz., *Acampe ochracea*, *Aesculus assamica*, *Agathis lanceolata*, *Albizia lucidior*, *Allamanda cathartica*, *Aloe vera*, *Bixa orellana*, *Bombax ceiba*, *Bulbophyllum careyanum*, *Bulbophyllum pteroglossum*, *Bulbophyllum reptans*, *Calanthe sylvatica*, *Caryota urens*, *Catunaregam spinosa*, *Cephalantheropsis obcordata*, *Cerasus cerasoides*, *Cheilocostus speciosus*, *Cleisostoma paniculatum*, *Cleisostoma racemiferum*, *Coelogyne ovalis*, *Coelogyne punctulata*, *Coelogyne viscosa*, *Cymbidium cyperifolium*, *Dendrobium chapaense*, *Dienia ophrydis*, *Dillenia indica*, *Dracaena angustifolia*, *Elaeocarpus floribundus*, *Epigeneium amplum*, *Eria bambusifolia*, *Eria stricta*, *Eria paniculata*, *Eurya accuminata*, *Exbucklandia populnea*, *Gastrochilus dasypogon*, *Hedychium aureum*, *Hedychium flavescens*, *Hedychium flavum*, *Hedychium thyriforme*, *Lagerstroemia speciosa*, *Liparis cordifolia*, *Liparis luteola*, *Liparis odorata*, *Liparis viridifolia*, *Litsea cubeba*, *Macuna bracteata*, *Magnolia champaca*, *Melastoma malabathricum*, *Musa aurantiaca*, *Nepenthes khasiana*, *Oberonia mucronata*, *Oberonia acaulis*, *Paphiopedilum insigne*, *Paphiopedilum vilosum*, *Pelatantheria insectifera*, *Phaius mishmensis*, *Pholidota imbricata*, *Rauwolfia serpentina*, *Sterculia hamiltonii*, *Tabernaemontana divaricata*, *Taxus wallichiana*, *Wendlandia wallichii*, *Zeuxine affinis*, *Zingiber murlenica*, *Zingiber neotruncatum*, *Zingiber roseum* and *Zingiber zerumbet* available at Experimental Botanic Garden, Barapani by Dr. M. Murugesan, Scientist 'B' and Sri L.R. Meitei, Bot. Asst.

Public service rendered

Identified about 11 samples of specimens received from various institutions.

Meeting/training attended

Dr. A.A. Mao attended review meeting of NIF program at Ahmedabad on 08.01.2018.

Dr. Deepu Vijayan attended a training programme on NTRP/EIS/CDDO at Institute of Government Accounts and Finance, RTC, Kolkata organized by PAO, BSI/ZSI, Kolkata from 11th and 12th January 2018.

Dr. A.A. Mao attended ABG review meeting at MoEF & CC, New Delhi on 19.01.2018.

Visitors/students

Five scientists, one professor, two lecturer, two research scholars, 64 students and nine other visitors from various Institutions, Colleges and Universities visited the Centre.

Publications

Pratibha, J. and Prabhugaonkar, A. 2018. Notes on two rare fungal isolates from Western Ghats, Goa India. *Kavaka* 49: 28–31.

Deori, C. and Talukdar, S.R. 2018. Floristic diversity of Laokhowa wildlife sanctuary, Assam, India. *Nelumbo* 59(2): 168–177.

– Dr. A.A. Mao
Scientist 'F' & HoO

SOUTHERN REGIONAL CENTRE, COIMBATORE

Dr. S. Kaliamoorthy, Scientist 'D' and Dr. T. S. Saravanan, Bot. Asst. conducted an *ex-situ* conservation tour to Mukurthi National Park, Nilgiris, Tamil Nadu from 3rd to 11th January 2018 and collected 56 species belonging to 38 genera under 20 families.

Dr. R. Manikandan, Scientist 'D' conducted a botanical exploration tour to Cauvery North Wildlife Sanctuary, Tamil Nadu from 22nd to 31st January 2018 and vouched 318 field numbers, belonging to 287 species.



A view of Dry Evergreen Forests at Gutheryan Reserve Forest in Cauvery North Wildlife Sanctuary

Herbarium Identification

Identified total 215 species under the projects on Flora of Kodaikanal WLS; Kanniyakumari WLS, Tamil Nadu; Flora of Kanniyakumari WLS; Flora of Meghamalai WLS; Flora of Seaweeds from Goa coast and Flora of Cauvery North WLS.

Identified 10 specimens of Cyperaceae of Tamil Nadu and updated nomenclatural citations, distribution data and description of 5 taxa of the family Caprifoliaceae.

Ex-situ conservation

Dr. S. Kaliamoorthy, Dr. M.Y. Kamble, Scientist 'D' and their team introduced 27 species belonging to 16 genera of the family Orchidaceae and 29 species belonging to 22 genera under 19 families at the National Orchidarium and Experimental Garden (NO & EG), Yercaud. They also multiplied 70 samples, belonging to 16 species, developed 14 seedlings, 67 cuttings of 7 taxa and transplanted one sample of *Cycas rumphii* and recorded the phenological data of 15 plants, including 5 orchids and 10 other angiosperms.

Public service rendered

Identified 93 plant specimens for the students / research scholars of various institutions.

Drawings/translations/photographs made

Sri R. Suresh, Artist Gr 1, illustrated 21 illustrations/charts/boards, whereas Sri A.T. Durgadas, Artist is involved in oil painting on a project based on "Endangered species of Western Ghats". Sri U.V. Shrivastava, JHT, prepared and translated 9 Hindi letters. Sri V. Ramesh, Photographer, photographed the various functions/programs held at the centre and scanned 306 nos. of herbarium sheets.

Meetings/seminar attended

The Scientific officials of the centre attended the Ph.D. public viva-voce of Ms. N.B. Sivapriya held at IFGTB on 12.01.2018.

Dr. M. Palanisamy attended the National Seminar organized by PG & Research Department of Botany, Queen Mary's College, Chennai held on 05.01.2018 and delivered a lecture on 'Biodiversity and Its conservation values in India'.

Hindi workshop organised

One day Hindi Workshop was conducted at BSI, SRC, Coimbatore on 02.01.2018 under the chairmanship of Dr. C. Murugan, HoO and Dr. M. Palanisamy, Hindi Adhikari. Sri P. Kavetirangan, Member Secretary, TOLIC and the chief guest of the program, delivered classes to the staff and encouraged for the promotion of Hindi language in official communication.

Green Skill Development Program (GSDP)

Dr. M. Palanisamy conducted tour to Gulf of Mannar bio sphere reserve, CMFRI & CSMCRI for trainee students from 02.01.2018 to 04.01.2018 for the exposure of Marine biological diversity and delivered a lecture on Introduction to Algae to the trainees. Dr. R. Manikandan and Sri A. Ravi Kiran, undertaken a field tour to Kodaikanal WLS.



Photo: SRC

GSDP Students getting forest fire control training at Devadanapatty range, Kodaikanal WLS, Tamil Nadu



Training session on Seaweed cultivation demonstrated by Dr. M. Palanisamy at Thonothurai, Ramnad District

Dr. S.K. Yadav delivered lectures on *Algal classification and cellular organisation* and *Economic importance of Algae* on 01.01.2018 and demonstrated hands on training for processing of the Algal specimens; Dr. S. Arumugam given lecture on *collection and processing of specimens, mounting of specimens* and practical classes for collection and processing of monocot specimens, mounting of specimens and functions of Herbarium; Sri Rakesh G. Vadhyar lectured on *Plant Classification by its ecology, Plant processing – Poisoning and Hands on Training – Stitching of Specimens*; Ms. R. Mehala Devi lectured on *Botanical History of South India, Shoot & Root System, Inflorescence and its type* and Given Hands on Training on processing of specimens and Compilation of Course material Part 1. Ms. M. Ananthalakshmi delivered on *Poisoning methods, Threat causing Factors for Forest degradation and Ecological restoration of Terrestrial forest* etc. Dr. J.V. Sudhakar delivered a lecture on BSI functions, Herbarium Methodology, Old collection of MH, Typification etc.



Photo: SRC

Large scale Production of Micro algae as a feed stock for ornamental fishes at CMFRI, Mandapam, Ramnad

Lecture delivered

Sri Rakesh G. Vadhyar delivered lectures about BSI, Museum and MH Collections and about nomenclatural types to 3 batches of Botany students from Kerala: B.K. College, Amalagiri, Kottayam (05.01.2018), U C College, Aluva, Ernakulam on 10.01.2018 and Govt. College, Kasargod on 11.01.2018, whereas Ms. R. Mehala Devi explained about the activities of BSI to 27 M.Sc. Students from Nirmala Collage of Arts & Science, Coimbatore.

Visitors/students

During this month, 99 scientific personnel/officials/students /scholars visited the museum, herbarium and library of this regional centre whereas 704 persons in 74 parties visited the NOEG, Yercaud.

– Dr. C. Murugan
Scientist 'D' & HoO

WESTERN REGIONAL CENTRE, PUNE

Sri S.C. Patil, Bot. Asst. conducted one field tour from 7th to 22nd January 2018 for the project, "Flora of Pushpagiri Wildlife Sanctuary, Karnataka".

Dr. J. Jayanthi, Scientist 'D' conducted Garden inspection tour to FRLHT, Bengaluru on 17.01.2018 under the scheme "Assistance to Botanic Garden".

Identification of herbarium specimens

Dr. C. R. Jadhav, Botanist, identified 30 field numbers for the project, "Floristic survey of Someshwara Wildlife Sanctuary, Karnataka".

Dr. Priyanka Ingle, Scientist 'B', identified 15 field numbers for the project, "Floristic diversity of Wan Wildlife Sanctuary, Maharashtra".

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

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

Dr. Rashmi Dubey, Scientist 'D' processed 22 dry samples, 40 foliicolous samples, one water sample and inoculated on PDA, PCA and MEA plates. Nearly 125 slides were made 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 seven micro fungi for the project, "Microfungi of Biligiri Rangaswamy Temple wildlife Sanctuary, Karnataka".

Public services rendered

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

Meetings/training/conference attended

Dr. P. Lakshminarasimhan, Scientist 'E' & HoO and Mrs. A.M. Neelima, Bot. Asst. has attended the meeting of Expert Group on "Assistance to Botanic Gardens" held at Godavari Hall, Ministry of Environment, Forest and Climate Change, New Delhi on 19.01.2018.

Dr. Jeewan Singh Jalal, Scientist 'D' and Dr. A. Benniamin, Scientist 'D' attended Training Programme on NTRP/EIS/CDDO sponsored by PAO, Kolkata on 11th and 12th January 2018 at Regional Training Centre at Kolkata.

Dr. P. Lakshminarasimhan and Dr. Rashmi Dubey attended the National Conference on "Emerging Trends in Mycology" on 05.01.18 organised by G.M. Momim Women's College, Bhiwandi (in their college) & Mycological Society of India under the aegis of University of Mumbai. Dr. P. Lakshminarasimhan delivered the inaugural address "Diversity of Algae, Fungi, Lichens and Non-Flowering and Flowering plants of India: An Overview"; besides gave a short talk on WRC, BSI, Pune and also the work on the work done on Fungi by BSI.

69th Republic day observed

Dr. P. Lakshminarasimhan and all officials of WRC celebrated the 69th Republic Day flag hoisting ceremony at WRC on 26.01.2018.



Dr. P. Lakshminarasimhan hoisting flag during celebration of Republic Day at WRC, BSI, Pune



Photo: WRC



Practical and theory classes of Green Skill Development Programme of Parataxonomist

Green Skill Development Programme (GSDP)

Under the GSDP Advanced Course on Parataxonomist in WRC, BSI, Pune the trainee students were taken to Mulshi, Tamhini Wildlife Sanctuary and Dongarwadi as a part of field tour on 07.01.2018. During this month classes were taken on identification, collection and processing of different plant group.

Visitors/students

Dr. Rajdeo Singh and Dr. Rahul Mungikar, Scientists from Bombay Natural History Society, Mumbai, consulted the WRC herbarium for study of endemic and threatened plants of Maharashtra on 11.01.2018.

Dr. P.J. Michael, Deputy Secretary, Ministry of Environment, Forest and Climate Change, New Delhi visited WRC on 18.01.2018 for OM inspection.

Sri Shashi Gupta from Dravyaguna Department, I.P.G.T & R.A, Gujarat Ayurved University, consulted herbarium of WRC to study *Pittosporum floribundum* on 24.01.2018.

15 students and two teachers from Gogate Jogalekar College, Ratnagiri, Maharashtra visited WRC during this month.

One research student from School of Sciences, Sandip University, Nashik, Maharashtra visited WRC for herbarium consultation.

Dr. K. Prasad, AJCBPDF, CNH, BSI, Howrah visited WRC for consultation of herbarium to study orchid genera *Peristylus* and *Habenaria*.



Photo: WRC

Dr. P.J. Michael, Deputy Secretary from MoEF & CC interacting with GSDP students at WRC, BSI, Pune

Dr. P. Lakshminarasimhan
Scientist 'E' & HoO



Visit of Ms. Manju Pandey, Joint Secretary, MoEF & CC to AJCBIBG and CNH, BSI, Howrah on 18.01.2018

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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