

BSI NEWSLETTER

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Kolkata – 700 064



HEAD QUARTERS, KOLKATA

Dr. A.B.D. Selvam, Scientist 'D' conducted a field tour to different parts of Andaman Islands during the period from 25th September to 4th October 2018 for the collection of *Cycas* species in connection with the project, "Pharmacognostic Studies on Indian Cycas". During this tour Dr. Selvam collected five field numbers of *Cycas* plants (leaves, male and female cones) from South Andaman, Middle Andaman and North Andaman. Dr. Selvam also consulted the Herbarium of PBL, Andaman & Nicobar Regional centre, BSI, Port Blair and noted down the field data/details.

Dr. Devendra Singh, Scientist 'D' proceeded on field tour to Jharkhand: Parasanath, Hazaribag and Koderma Wildlife Sanctuaries from 22nd October 2019 for two weeks in connection with the project, "Bryoflora of Jharkhand".

Identification of Herbarium specimens

Dr. Kanad Das, Scientist 'D' identified specimens of three field numbers – KD 18-33 and KD 18-36 as *Russula subalpinogrisea* sp. nov. (Russulaceae) and KD 18-43 as *Russula* aff. *nigricans* (Russulaceae).

Dr. R.K. Gupta, Scientist 'D' studied seven algal samples and Identified and described four species viz., *Calothrix thermalis*, *Calothrix braunii*, *Synechococcus elongatus*, and *Phormidium tenue*.

Dr. Monalisa Dey Scientist 'B' identified 19 specimens belonging to nine species: *Drepanolejeunea herzogii* R.L. Zhu & M.L. So, *Dumortiera hirsuta* (Sw.) Nees, *Heteroscyphus bescherellei* (Steph.) S. Hatt., *Leptolejeunea elliptica* (Lehm. & Lindenb.) Schiffn., *Lejeunea curviloba* Steph., *Lopholejeunea subfusca* (Nees) Schiffn., *Metacalypogeia alternifolia* (Nees) Grolle, *Radula stenocalyx* Mont. and *Spruceanthus semirepandus* (Nees) Verd.

Dr. M.E. Hembrom, Botanist prepared ArcGIS map for the species *Funalia floccosa* (Jungh.) Zmitr. & Malysheva (Polyporaceae).

Ms. Sova Rudra, Botanist prepared database of 200 numbers of fern Specimens.

Public service rendered

Dr. A.B.D. Selvam pharmacognostically studied and authenticated six wood samples as heartwood of *Pterocarpus santalinus* L.f., which were received from Police department, Kolkata.

CENTRAL NATIONAL HERBARIUM, HOWRAH

Dr. Subir Bandyopadhyay, Scientist 'B' provided 11 images of type specimens of *Pueraria hirsuta* Kurz (including close-up of contents in the two packets) and description of the hairs on the leaves based on the type specimens, *Pueraria brachycarpa* Kurz, *P. collettii* Prain, *P. sikkimensis* Prain, *P. bella* Prain, *P. lacei* Craib and *P. textilis* K. Schum. & Lauterb.; image of a Wallichian specimen of *Dolichos frutescens* DC. and 23 images of *Pueraria tuberosa* DC., *P. sikkimensis* Prain, *P. bella* Prain, *P. collettii* Prain and *Shuteria hirsuta* Baker to Dr. Ashley N. Egan, Department of Biosciences, Aarhus University, Denmark.

Dr. S. Bandyopadhyay provided image of a holotype specimen deposited at CAL, for using as model to Shivaprakash Nedle, Senior Research Fellow & Research Scholar (Ph.D.), ICAR-Central Plantation Crops Research Institute, Dakshina Kannada, Karnataka.

Dr. S. Bandyopadhyay provided information regarding 2 authors of plant name [Dr. V.B. Hosagoudar and K. Vivekananthan] for incorporation in the Author Query database of IPNI.

Dr. S. Bandyopadhyay provided PDF of 101 pages from different volumes of *Bull. Bot. Surv. India* and *Rec. Bot. Surv. India* on taxonomic studies in Rubiaceae to Dr. Mohan Gangopadhyay, former Scientist, BSI.

Dr. K. Kartigeyan, Scientist 'D' provided four type images of the genus *Ischaemum* and one type image of *Cycas darshii*.

Dr. V. Sampath Kumar, Scientist 'D' provided Scanned images of *Lasianthus* CAL0000031868 (Holotypus), A. *Lasianthus densifolius* var. *calycinus* Ridley 5679 – Syntype; B. *Lasianthus griffithii* var. *latibracteata* Ridley 10196, Ridley 9528, Scortechini s.n. – Syntypes; *Lasianthus flavicans* Ridley 4394, Ridley 6927, Scortechinii s.n., Ridley 2223, King's collector 10974- Syntypes; *Lasianthus flavicans* var. *subglabra* Curtis 1334, Ridley 4895- Syntypes; *Lasianthus ridleyi* Ridley 3620a – holotype; *Lasianthus singaporensis* Ridley 9095- Syntype to Dr. Ian Turner, Singapore Botanical Liaison Officer, RBG, Kew.



Dr. V. Sampath Kumar with other officials at Navrachana University, Vadodara in connection with the Plant awareness programme (left); participants attending the programme (right) on 30.10.2018

Conference attended/programme organized

Dr. V. Sampath Kumar attended the XXVII Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today & Tomorrow at Vadodara from 29th to 31st October 2018. Delivered a lecture in the Plenary session on the Topic "Present Scenario of Mint family in India" on the third day, 31.10.2018. On the first day, 29.10.2018, Dr. Kumar attended the inaugural programme in the forenoon. In the evening, as one of the judges evaluated the posters for S.R. Yadav Award: Poster presentations.

On the second day, 30.10.2018 along with other conference attending officials Dr. Kumar visited the Navrachana University, Vadodara in connection with the Plant awareness programme. In this programme interacted with the students and answered for the doubts raised by them.

In connection with the observance of Vigilance Awareness week (29th October to 3rd November 2018) arranged a talk on "Corruption and Vigilance" by Mr. Madhab Charan Prusty, Additional Govt. Advocate, Ministry of Law and Justice, Branch Secretariat, Kolkata at CNH Committee room.

Visitors/students

25 students from Tinu collage Nabari, Assam on 03.10.2018.

27 Students from Ramnagar College, Purba Midnapur on 04.10.2018.

30 Students from Krishnanagar Govt. College; Dr. J.P. Mishra, Govt. Science P.G. College, Mungeli, Chhattisgarh on 05.10.2018.

24 Students of B.Sc. Botany (Hons.) from Ramnagar College, Purba Medinipur; 17 Undergraduates from Loreto College, Kolkata on 10.10.2018.

23 Students of B.Sc. Botany (Hons.) from Netaji Mahavidyalaya, Arambagh, Hooghly on 11.10.2018.

Sri Sayak Chakraborty, Sri Shuvadip Sarkar and Ms. Shreyasi Nayak, JPFs, Sikkim Himalayam Regional Centre, Gangtok, Sikkim visited from 15th to 26th October 2018.

Sri Arjun Adit, Dept. of Botany, University of Delhi consulted the family Orchidaceae on 23.10.2018.

Publications

Karthigeyan, K. and Murugan, P. 2018. Lectotypification of *Themeda strigosa* (Poaceae, Panicoideae, Andropogoneae). *Phytotaxa* 372(2): 176–178.

Karthigeyan, K. and Jeyaprakash, K. 2018. Lectotypification of *Jasminum pentaneurum* (Oleaceae). *J. Jpn. Bot.* 93(5): 354–356.

Bandyopadhyay, S. and Lakshminarasimhan, P. 2018. Epitypification of *Bauhinia scandens* (Leguminosae: Cercidoideae). *J. Econ. Taxon. Bot.* 41(3-4): 137–138.

– Dr. V.P. Prasad
Scientist 'D' & HoO

ARID ZONE REGIONAL CENTRE, JODHPUR

In connection with the project, “Vegetation characterization and floristic studies in Bassi Wildlife Sanctuary, Rajasthan using remote sensing and GIS” Dr. P. Harikrishna, Bot. Asst. and Sri Ramesh Kumar, Bot. Asst. conducted one exploration tour from 1st to 14th October 2018 and collected specimens of 230 field numbers, 20 live plants of 12 species, 13 plant species seeds for *ex-situ* conservation. They also collected 24 quadrats (0.1ha) data for phytosociological analysis.



Photo: P. Harikrishna

Flowering of *Anogeissus pendula* (left) and *A. sericea* var. *nummularia* (right) at Bassi WLS, Chittorgarh, Rajasthan



Photo: P. Harikrishna

Phytosociological data collection at Bassi WLS, Chittorgarh, Rajasthan

In connection with the project, “Flora of Sariska Tiger Reserve, Alwar District, Rajasthan” Dr. M.K. Singhadiya, Botanist conducted one exploration tour from 16th to 29th October 2018 and collected specimens of 104 field numbers, 2 live plants (*Pandanus odoratissimus* & *Moringa oleifera*) for *ex-situ* conservation.

In connection with the project, “Flora of Navsari District, Gujarat” Dr. Ramesh Kumar, Scientist ‘C’ conducted one Herbarium consultation tour to WRC, BSI, Pune from 28th September to 6th October 2018.

Identification of Herbarium specimen

In total specimens of 144 field numbers has been identified during the period under report.

GSDP: Advance Course for Para-taxonomists

Green Skill Development Program (GSDP) is going on as per scheduled programme.

Visitors

86 Forester trainees from Maru Van Kendra, Rajasthan State Forest Department, Jodhpur visited on 05.10.2018.

Lectures delivered

Dr. S.L. Meena, Scientist 'D' delivered lecture on "Phytodiversity of Arid and Semi-arid zones of Rajasthan" to 86 Foresters (trainees) from Maru Van Kendra, State Forest Department, Jodhpur on 05.10.2018.

Dr. M.K. Singhadiya, Botanist, delivered two lectures on "Phytodiversity of Rajasthan" and "Cultivated plants of Rajasthan" on 05.10.2018 to 86 Foresters (trainees) from Maru Van Kendra, State Forest Department, Jodhpur.



Photo: AZRC

Dr. M.K. Singhadiya delivering lecture to Forester trainees from Rajasthan forest department, jodhpur

Publications

Meena, S.L. and Hari Krishna, P. 2018. Eight additions to The Flora Of Gujarat State from Shoolpaneshwar Wildlife Sanctuary, Narmada District, India. *J. Econ. Taxon. Bot.* 41(3-4): 116–119.

Gena, C.B., Gene, D. and Meena, S.L. 2018. *Oenothera laciniata* Hill (Onagraceae) - A new record for the flora of Rajasthan (India). *J. Indian Forest.* 41(2): 205–206.

– Sri Vinod Maina
Scientist 'D' & HoO

CENTRAL REGIONAL CENTRE, ALLAHABAD

For the project, 'Cytotaxonomical studies of selected taxa of Indian subtribe Cassiinae', one field tour to Chitrakoot region was conducted and seven species of subtribe Cassiinae were collected for cytological studies by Dr. Asuthosh Kumar Verma, Scientist 'B'.

For the project, 'Studies of fossil and living plants with reference to the impact of climate change on flora of Gangetic Plains and Central India', Dr. Arti Garg, Scientist 'D' conducted tour to the BSIP, Lucknow and completed pollen description of the genus *Ludwigia* L., through LM, SEM and confocal microscope studies. Comparative studies on living species and fossil specimens, Copropollinitis (65 mya) and Karewa fossil pollen (2.5 mya) were concluded and affinities were drawn.

Photo: CRC



Wood sample collection from *Adansonia digitata* at Jhunsi Allahabad for age determination under a collaborated project with University of Romania

Identification of Herbarium specimens

For the project, 'Floristic diversity of Alwara wetland, Kaushambi district, specimens collected are being processed.

Cytological studies in *Senna alexandrina* Mill. was completed.

For the project, 'SEM studies of the species belonging to family Acanthaceae (available at BSA)', leaf epidermal biology of *Justicia adathoda* L. for different epidermal features was conducted.

A total of 42 specimens were identified in connection with the project, 'Identification of old unidentified specimens of BSA'.

Studies and habit images of five Type specimens of Graphidoid lichen from BM herbarium, Natural History Museum, London were completed by Dr. Pushpi Singh, N-PDF. Morphological, anatomical and spot test on seven specimens were also completed.

Ex-situ Conservation

All introduced/conserved plants/tree species of the garden were routinely maintained with assistance of MTS by Dr. Sheo Kumar, Scientist 'E' and nine species were introduced in the garden brought by Dr. A.K. Verma. Dr A.N. Shukla brought a sapling of *Ginkgo biloba* L. from Prof. N.B. Singh, University of Allahabad for introduction in BSA garden.

Public service rendered

Dr. Nitisha Srivastava authenticated four specimens (four species) of B. Pharma students and Sri Vineet Singh authenticated one specimen for M.Pharma (Pharmacology) student.

Symposium organized/papers presented/exhibition/programme attended

Botanical Survey of India, CRC, Allahabad in collaboration with Blue Planet Society, Allahabad and Govt. P.G. College, Saidabad, Allahabad organised two days International Symposium, "Recent Trends in Agriculture, Biodiversity and Social Sustainability" (ABSS-2018) on 30th September to 1st October 2018 wherein about 300 delegates participated. Dr. G.P. Sinha, Dr. Sheo Kumar and Dr. A. N. Shukla respectively acted as Patron, Co-Patron and Joint Organizing Secretary in the International Symposium.



Audience in International Symposium jointly organised at CRC, BSI, Allahabad



Dr. A.K. Verma briefing College students at BSI stall at IISF Expo 2018 in Lucknow on 4th to 9th October 2018

Dr. Nitisha Srivastava presented paper on "Studies on the Biological spectrum and Life form of Chandra Prabha Wildlife Sanctuary, Chandauli District, Uttar Pradesh".

Sri V. Singh presented a paper on 'Leguminous flora of Parvati Aranga Wildlife Sanctuary and adjacent Tikri Forest Area, Gonda District, Uttar Pradesh with details on Valuable Species'.

A team of four officials led by Dr. Arti Garg along with Dr. A.K. Verma and Sri Vineet Kumar Singh visited to display of exhibits of BSI, largely prepared by Dr. Sheo Kumar in India International Science Festival- 2018 (IISF) Mega Expo-2018 at Indira Gandhi Pratisthan, Gomti Nagar, Lucknow from 4th to 9th October 2018 and interacted with visitors.

Dr G.P. Sinha attended India International Science Expo 2018 at Lucknow on 07.10.2018.

Awards/honours received

Dr. G.P. Sinha was conferred 'Global Environment Sustainability Promotion Award' of International Academy of Science and Research, Kolkata.

Dr. Sheo Kumar was conferred 'Biodiversity Conservation Award' of Blue Planet Society, Allahabad.

Dr. A.N. Shukla received 'Green India Promotion Award of International Academy of Science and Research, Kolkata.

Sri Vineet Singh received 'Young scientist award' of the Blue Planet Society, Allahabad.

– Dr. G.P. Sinha
Scientist 'E' & HoO

EASTERN REGIONAL CENTRE, SHILLONG

One field exploration tour was conducted from 16th to 24th October 2018 to South India by Dr. S.K. Singh, Scientist 'D' & HoO for the project, 'Genus *Riccia* (Marchantiophyta) in India'. The area surveyed were Ootacamund, Valparai in Tamil Nadu and Silent Valley National Park in Kerala and collected 52 samples of *Riccia* and four numbers of other liverworts. Dr. Singh also consulted the library and 11 specimens of *Riccia* available at herbarium CAL while returning to Shillong.

Another field tour conducted by Dr. N. Odyuo, Scientist 'D' and team to Kiphire and Tuensang district of Nagaland from 9th to 21st October 2018 and collected 328 samples from there and 131 plants in live condition for incorporation and *ex-situ* conservation.

Another tour to Karbi Anglong-Golaghat area from 12th to 15th October 2018 was conducted by Dr. Ashish Venkatesh Prabhugaonkar, Scientist 'B' for the project, "Diversity and phylogeny of aquatic fungi from Northeast India". Dr. Prabhugaonkar isolated, prepared micro-photographs and permanent slides of 26 fungi.

One local field exploration tour was conducted to Upper Shillong, Meghalaya on 20.10.2018 and 24 live plant species collected by project staff under the project, "Strengthening of Lead Botanical Garden, BSI, ERC, Shillong".

Identification of plant/Herbarium specimens

13 plant species were identified and documented under project, "Flora of Eastern Nagaland (Mon, Tuensang, Kiphire & Longleng)" by Dr. N. Odyuo and Dr. R. Daimary, Botanist and 10 species documented for Flora of Nagaland (Vol. I & 2) by Dr. N. Odyuo and Dr. D.K. Roy, Botanist.

30 specimen listed and identified 20 species for project, "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.

For project, Genus *Riccia* (Marchantiophyta) in India Dr. S.K. Singh identified six samples of *Riccia* and also 94 samples of other liverworts from Manipur.

For the project, "DNA barcoding and Phylogenetic analysis of 20 selected endemic plant species of Northeast India and Phytochemical Screening of 11 medicinal Plants" Dr. D. Vijayan, Scientist 'C' and Dr. D.K. Roy, Bot. Asst. inoculated seeds of *Pyrenaria camelliflora* in Woody Plant Medium (WPM) and Murashige and Skoog (MS) Medium for seed germination studies. Seeds of *Pyrenaria camelliflora* were planted in peat moss (25% sand + 25% peat + 50% leaf mould) for *in vivo* studies. Vegetative cuttings (twigs) of *Pyrenaria barringtoniifolia* and *P. camelliflora* were planted in peat moss. Subculturing of *in vitro* raised plants of *Pyrenaria khasiana* in Woody Plant Medium (WPM).

For Flora of India Project, "Updation of families Altingiaceae, Sonneratiaceae, Crypteroniaceae, Punicaceae, Trapaceae, Caricaceae, Datisceae for Flora of India Vol. 10", Dr. M. Murugesan, Scientist 'B' checked all the species belonging to the families Altingiaceae, Sonneratiaceae, Caricaceae, Datisceae, Crypteroniaceae, Punicaceae, Trapaceae from ASSAM Herbarium.

For Flora of India Project, "Vol. 20. Acanthaceae: Genus *Strobilanthes* of North-Eastern India and Himalaya" (ca 70 spp.) Dr. D.K. Roy recorded 20 taxa, namely *Strobilanthes glutinosa*, *S. griffithiana*, *S. hamiltoniana*, *S. helicta*, *S. himalayana*, *S. inflata*, *S. inflata* var. *aenobarba*, *S. khasyana*, *S. lachenensis*, *S. laevigata*, *S. maculata*, *S. maingayi*, *S. mastersii*, *S. multidens*, *S. nobilis*, *S. nutans*, *S. oligocephala*, *S. oxycalycina*, *S. panichanga* and *S. monadelphica* from ASSAM.



Photo: ERC

***Cheirostylis tabiyahanensis* (Orchidaceae) - A New addition to the Orchid Flora of India**

For the project *ex-situ* conservation of Endemic, threatened and economically important plants of the region and recording phenological data on flowering and fruiting of species growing in the Garden, Dr. M. Murugesan and Sri L.R. Meitei, Bot. Asst. observed and recorded phenological data of flowering and fruiting of 60 plant species which are available in the garden.

Programme organized

A valedictory function of certificate course on "Plant tissue culture techniques and its application" under Green Skill Development Programme was organized on 26.10.2018 and was attended by all officers and staff along with the students.

Vigilance Awareness Week 2018 (29th October to 3rd November) was observed with integrity pledge with theme "My Vision-Corruption Free India" on 29th October 2018 and was attended by all officers and staff of ERC, Shillong.



Photo: ERC

Valedictory function of certificate course on "Plant tissue culture techniques and its application" under Green Skill Development Programme was organized on 26th October, 2018

Publication

Odyuo, N., Roy, D.K., Deori, C. and Daimary, R. 2018. *Cheirostylis tabiyahanensis* (Hayata) N. Pearce & P.J. Cribb. (Orchidaceae) - A New Addition to The Orchid Flora of India. *The MIOS Journal* 19(10): 2–6.

– Dr. S.K. Singh
Scientist 'D' & HoO

NORTHERN REGIONAL CENTRE, DEHRADUN

Identified 61 and described total 23 species of Angiosperm and Pteridophyte in connection with the projects, Flora of Himachal Pradesh Vol. I, Flora of Sechu-Tuan Nala Wildlife Sanctuary, Chamba District, Himachal Pradesh, Floristic Diversity of Sukhna Lake Wildlife Sanctuary, Trees of Dehradun city, Plant diversity of Cold Desert Biosphere Reserve, Lahaul-Spiti, North-west Himalaya – Analysis, Pictorial Flora of Pteridophytes of Uttarakhand. Revision of Genus *Adiantum* L. in India.

Digitization of Herbarium specimens

Scanned and digitized 111 specimens housed at BSD, BSI, Dehradun.



Cymbidium iridioides D. Don (ORCHIDACEAE)
Blooming in NRC, BSI, Dehradun Orchidarium

Photo: NRC



Swachh Bharat Abhiyaan celebrated on
02.10.2018 at BSI, NRC, Dehradun



Dr. Kumar Ambrish delivering lecture in Botany Division
of Vivek College of Education, Bijnaur, Uttar Pradesh

Photo: NRC



Valedictory event of GSDP-Plant Tissue Culture
on 12.10.2018 at NRC, BSI, Dehradun

Meetings/function/workshops/attended/organized

Swachh Bharat Abhiyaan celebrated on 2nd October 2018 at BSI, NRC, Dehradun.

Dr. G.S. Panwar and Dr. Puneet Kumar, Scientist 'B' attended and presented research papers in International Biodiversity Congress, 2018 from 4th to 6th October 2018 organized by Uttarakhand Biodiversity Board, FRI, Dehradun as one of the subject experts.

Dr. Kumar Ambrish, Scientist 'D' & HoO delivered a lecture on "Plant Taxonomy and Conservation: Significance and Upcoming Trends" on 09.10.2018 in Botany Division of Vivek College of Education, Bijnaur, Uttar Pradesh.

Dr. Kumar Ambrish and Dr. G.S. Panwar, Scientist 'C' & Course Coordinator organized GSDP-Tissue culture valedictory function on 12.10.2018 in the office.

Dr. Kumar Ambrish organized a review committee on 16.10.2018 for assessment and up gradation of 3 JPF to SPF under NMHS (Medium Grant) project in the office.

Dr. Kumar Ambrish attended Research Advisory Committee meeting of FRI, Dehradun on 04.10.2018 and 17.10.2018 at FRI, Dehradun.

Scientist and office staff took Integrity Pledge on 30.10.2018 at 11.00 in NRC, BSI, Dehradun.



Photo: NRC

Scientist and office staff taking Integrity Pledge on
30th October 2018 at NRC, BSI, Dehradun

Visitors/students

90 students from Dolphin P.G. College, Dehradun visited BSD herbarium as a part of their study.

Publications

Kumar, P., Rana, P.K., Singhal, V.K. Singh, H. and Kholia, B.S. 2018. Chromosome count, meiotic abnormalities and pollen sterility in Lahaul sweetvetch (*Hedysarum astragaloides* Benth. ex Baker, Fabaceae), an endemic and threatened species from India. *Acta Bot. Croatica* 77(2): 203–208.

Kumar, P., Singh, H. and Ambrish, K. 2018. Traditional knowledge of medicinal and threatened plants used by the local inhabitants dwelling in and around Sechu-Tuan Nalla: a high altitude wildlife sanctuary in Himachal Pradesh, Northwest Himalaya in *International Biodiversity Congress (IBC 2018)* held at FRI, Dehradun From 4th to 6th October, 2018, pp. 25 & 357.

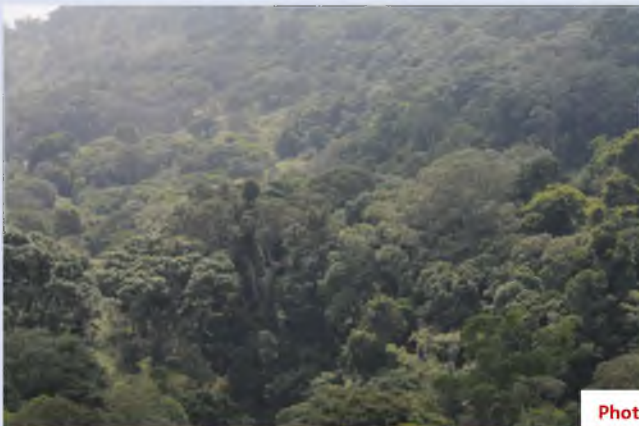
Dogra, K.S. and Ambrish, K. 2018. Invasive Alien species in Himachal Pradesh - A need for documentation and inventorisation. *National Conference on Multidisciplinary Approaches of Plant Sciences*, Department of Botany, Dolphin Institute of Biomedical & Natural Sciences, Dehradun, p. 36.

Dr. Kumar Ambrish
Scientist 'D' & HoO

SOUTHERN REGIONAL CENTRE, COIMBATORE

Dr. K.A.A. Kabeer scientist 'D' and Sri A. Ravi Kiran, Bot. Asst. conducted a botanical exploration from 4th to 12th October 2018 at Kodaikanal WLS, Tamil Nadu and vouched 105 field numbers and also completed identification for specimens of 25 field numbers from the previous collection.

Dr. R. Manikandan, Scientist 'D' and Ms. R. Mehala Devi, Sr. Pres. Asst. conducted one botanical exploration from 9th to 17th October 2018 to Cauvery North WLS, Tamil Nadu, and also completed identification for specimens of 49 field numbers under Cauvery North WLS, Tamil Nadu.



A view of moist deciduous forests Cauvery North WLS, Tamil Nadu



A view of Savannah Grassland of Kodaikanal WLS, Tamil Nadu

Photo: SRC

Identification of herbarium specimens

Dr. J.H. Franklin Benjamin, Scientist 'B' and Sri Rakesh G. Vadhyar, Bot. Asst. completed identification for specimens of 20 field numbers from Kanniyakumari WLS, Tamil Nadu. Dr. C. Murugan, Scientist 'D' and Dr. S. Arumugam, Bot. Asst. completed identification for specimens of 50 field numbers from Megamalai WLS, Tamil Nadu. Dr. M. Palanisamy, Scientist 'D' and Dr. S.K. Yadav, Bot. Asst. completed taxonomic description of 12 taxa of marine macro algae from Goa coast and collected 10 Literatures pertaining to the study area. In connection with documentation of Phytodiversity, Dr. C. Murugan and Dr. S. Arumugam, completed identification for specimens of 10 field numbers for Cyperaceae of Tamil Nadu.



Photo: SRC

Argyreia cuneata at Cauvery North WLS, Tamil Nadu*Bridelia retusa* at Kodaikanal WLS, Tamil Nadu

Photo: SRC

Ceropegia elegans at Cauvery North WLS, Tamil Nadu*Cinnamomum bejolghota* at Kodaikanal WLS, Tamil Nadu

Photo: SRC

Habenaria elliptica at Kodaikanal WLS, Tamil Nadu*Vanda spathulata* at Kodaikanal WLS, Tamil Nadu

Ex-situ conservation

Dr. S. Kaliamoorthy, Scientist 'D', Dr. M.Y. Kamble, Scientist 'D' and his team multiplied 23 plants belonging to nine genera, developed 63 seedlings of 15 taxa, 55 cuttings of eight taxa and recorded the phenological data of 38 plants, including 27 orchids and 11 other angiosperms at NO & EG, Yercaud.

Scanning Electron Microscopy (SEM)

Ms. R. Mehala Devi and Ms. M. Ananthalakshmi, Sr. Pres. Assts., completed descriptions of 30 species tribe Cyperae completed based on SEM study and 25 species of tribe Fimbristyledeae nutlets segregated from specimen. Dr. S. Kaliamoorthy and Dr. T. S. Saravanan collected the pollinia from 11 species of orchids and fixed into FAA for further SEM studies. They also studied 26 species of Orchid pollinia using SEM.

Public service rendered

Identified 31 plant species for the students/research scholars of various institutions.

Dr. S. Arumugam, Sri Rakesh G. Vadhyar and Ms. R. Mahela Devi delivered a lectures on BSI and its activities to the students (M. Sc., Botany) and research scholars from South Travancore Hindu college, Nagarcoil, Kanniyakumari, Department of Fruit Crops and Department of Environmental Sciences, TNAU and St. Joseph's College, Devagiri. Kerala.

Research students

Sri Basil Paul, JPF completed descriptions for 13 taxa, belonging to the family Boraginaceae, Acanthaceae, Solanaceae and Orobanchaceae. Sri P. Murugan, JPF completed descriptions for 11 taxa, belonging to the families Boraginaceae, Acanthaceae, Solanaceae, Oleaceae, Buddlejaceae and Orobanchaceae. Sorted out two type sheets i.e. *Ligustrum microphyllum* Bedd. (MH00250089) and *Buddleja colvilei* Hook.f. & T.Thomson (Acc. No.: 32945) from general herbarium and submitted to the respective type section. Sri M. Sulaiman, JPF completed descriptions for 20 species belonging to the family Orchidaceae. Ms. M. Uma Maheshwari, JPF documented 67 sheets of herbarium pertaining to family Urticaceae and completed description of 3 species in the family Proteaceae.

Programme attended

Dr. R. Manikandan attended and presented poster presentation at International Biodiversity congress (IBC, 2018) held at Forest Research Institute, Dehradun from 4th to 6th October 2018 and also visited NRC, BSI, Dehradun.

Visitors/students

During this month, a total of 46 scientific personnel/officials/students/scholars including five VIPs visited the museum, herbarium and library of this regional centre whereas 110 persons in 252 parties visited the NO & EG, Yercaud.

Publication

Murugan, P. and Karthigeyan, K. 2018. Notes on *Jasminum andamanicum* N.P. Balakr. & N.G. Nair (Oleaceae) from Andaman and Nicobar Islands, India. *J. Threatened Taxa* 10(10): 12439–12441.

– Dr. C. Murugan
Scientist 'D' & HoO

WESTERN REGIONAL CENTRE, PUNE

Dr. Jeewan Singh Jalal, Scientist 'D' conducted one field tour in South India exploring parts of Kerala and Tamil Nadu from 10th to 25th October 2018 for the project, "A Taxonomic revision of the genus *Luisia* Gaudich. (Orchidaceae) from India".

Dr. Rashmi Dubey, Scientist 'D' conducted one field tour to explore the microfungi from 18th to 24th October 2018 for the project, "Taxonomic Studies of Microfungi of Sanjay Gandhi National Park along with its 10% peripheral area".

Dr. A. Benniamin, Scientist 'D' conducted one field tour to Goa from 29th October to 7th November 2018 for the project "Pteridophytes of Goa".

Specimen Identification

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

Dr. Priyanka Ingle, Scientist 'B' identified specimens of 10 field numbers for the project, "Floristic diversity of Wan Wildlife Sanctuary, Maharashtra".

Sri S.C. Patil, Bot. Asst. identified specimens of 35 field numbers for the project, "Flora of Pushpagiri Wildlife Sanctuary, Karnataka".

Ms. A.M. Neelima, Bot. Asst. conducted mitotic chromosome studies of two orchids for the project, "Seed morphology and cyto-taxonomy of some selected orchids of Northern Western Ghats".

Dr. Rashmi Dubey identified six species for the project, "Taxonomic Studies of Micro fungi of Sanjay Gandhi National Park along with its 10% peripheral area".

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

Public service rendered

During this month 19 plant specimens were identified and issued authentication certificates to students from B. Pharm, M. Pharm. colleges, Ph.D. and P.G. students from different institutions.

Meeting/conference attended

Dr. P. Lakshminarasimhan, Scientist 'E' & HoO attended the first meeting on the newly reconstituted Steering committee AICOPTAX held at BGIR, BSI, NOIDA on 03.10.2018 and 04.10.2018 which was attended by Sri A.K. Jain, Additional Secretary, MOEF & CC, Prof. A.K. Bhatnagar (Chairman), Dr. Madhumita Biswas, Advisor, MoEF & CC and other steering committee members and experts.

Dr. P. Lakshminarasimhan attended the meeting to discuss agenda items of CoP-14 to the CBD, CoP-MoP 99 to Cartagena Protocol and CoP-MoP 3 to Nagoya Protocol held on 30.10.2018 in MoEF & CC, New Delhi under the chairmanship of Dr. A.K. Mehta, Additional Secretary, MoEF & CC, New Delhi.

Dr. Priyanka Ingle attended XXVIII Annual Conference of IAAT & International Symposium on Conservation of Angiosperm Diversity at Vadodara, Gujarat from 29th to 31st October 2018 and presented a paper on the topic 'Ethnobotanical Survey & Wild Edibles of Wan Wildlife Sanctuary'.



Photo: WRC

Prof. Chowghule delivering lecture to GSDP students



Dr. Mandar Datar delivering lecture to GSDP students

Green Skill Development Programme (GSDP)

During this month five lectures were arranged with different resource persons for the trainees for the course titled "Parataxonomy including People's Biodiversity Register (PBR). Also arranged training classes on "People's Biodiversity Register (PBRs) for sustainable development" during the period 29th October to 2nd November 2018 with Dr. Rahul Mungikar, Asst. Director, Policy Division, BNHS, Mumbai & former Member of Maharashtra State Biodiversity Board, Pune.

Visitors/students

Dr. Ramesh Kumar, Scientist 'C' from Arid Zone Regional Centre, Jodhpur visited WRC herbarium on 01.10.2018.



Photo: WRC

Students from Davangere University visited WRC, Pune



Students from Anjuman school visited WRC, BSI, Pune

Dr. R. Manikandan, Scientist 'D' from Southern Regional Centre, Coimbatore visited WRC herbarium during first week of this month.

A total of 88 students and two teachers from Anjuman E Islam English School, Pune, visited WRC during this month as part of their curriculum.

A total of 40 M.Sc. students and two teachers from Davangere University, Davanagere, Karnataka visited WRC during this month as part of their curriculum.

A total of 45 students and four teachers from Millennium National School, Pune, visited WRC during this month as part of their curriculum.

A total of 100 students and three teachers from The Orbis School, Pune, visited WRC during this month as part of their curriculum.



Photo: WRC

Students from Orbis School visited WRC, BSI, Pune

Publication

Hoque, A., Lakshminarasimhan, P. and Maity, D. 2018. *Dioscorea longipedicellata* (Dioscoreaceae), a new species from the Indian subcontinent. *Phytotaxa* 367(2): 173–178.

Suyal, R., Rawal, R.S. and Jalal, J.S. 2018. Noteworthy Additions to the Orchids of Kumaun Himalaya, India. *Indian Forester* 144(8): 778–780.

Dubey, R. and Pandey, A.D. 2018. Percentage distribution of foliicolous fungi of Maharashtra, India with respect to their disease symptoms: a novel study. *Mycologia Iranica* 4(2): 103–120.

– Dr. P. Lakshminarasimhan

Scientist 'E' & HoO



Dr. V. Sampath Kumar, CNH, BSI along with officials of XXVII Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and participants of Awareness Programme on Plant Systematics at Navrachana University, Vadodara, Gujarat on 30.10.2018

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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