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A. A. Mao  
Director



सत्यमेव जयते

भारत सरकार  
पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय  
भारतीय वनस्पति सर्वेक्षण  
GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST  
& CLIMATE CHANGE  
BOTANICAL SURVEY OF INDIA

DO. No.: BSI – 8/1/PA/2019 / 1148

Date: 1.07.2024

Madam,

In reply to OM no. 24011/08/2019–GC dated. 25.03.2019 regarding monthly DO letter from Secretary (MoEF&CC) to the Cabinet Secretary, I am furnishing herewith the following major achievements of Botanical Survey of India for the Month of June, 2024.

Department: Botanical Survey of India

1. Important policy decisions taken, Major achievements during the month:

Scientists of BSI described two plant species new to science viz. *Petrocosmea arunachalense* Chowlu, A. Shenoy & Ajit Ray (Gesneriaceae) from West Kameng district of Arunachal Pradesh and *Exacum indicum* M.K. Pathak and Bhaumik, (Gentianaceae), from the Dihang Dibang Biosphere Reserve in Dibang Valley district, Arunachal Pradesh India. Scientists of BSI have also reported *Trichomanes bimarginatum* (Bosch) Bosch – as a new addition to the Pteridophytic Flora of Karnataka State.

Scientists of BSI conducted 8 field / local tours and one Herbarium Consultation tour. BSI prepared metadata of 5853 herbarium specimens. During this month, 3,90,038 visitors visited the official websites of BSI (1,39,762 visitors referred official website, 1,49,111 visitors referred archives, and 1,01,165 visitors visited Indian Virtual Herbarium).

Important events / programs organized / attended:

1. BSI and all its regional centres / units celebrated World Environment Day on 5 June 2024 by organizing various environmental awareness programs, awareness rally, Mass Plantation programme, endemic tree plantation, Nursery Visit, Plant Distribution etc. focusing on the theme "Land Restoration, Desertification and Draught resilience" under the slogan "Our land Our future We are Generation Restoration." The Central National Herbarium (CNH), Central Botanical Laboratory (CBL), and the BSI-EIACP jointly organised a *Sit and Draw competition* which attracted the participation of 266 enthusiastic students from various schools.
2. BSI, Eastern Regional Centre, Shillong hosted a one-day hands-on training in plant molecular taxonomy as part of the DST-SERB financed project's SSR Program. Sixteen M.Sc. students from William Carey University in Shillong attended the training on June 19, 2024.
3. BSI and all its regional centres / units celebrated International Yoga Day on June 21, 2024, under the theme "Yoga for Self and Society"
4. BSI, AZRC, Jodhpur organized a one-day Hindi workshop on Practical Knowledge of Hindi and Global Scenario 28 June 2024. Dr. Dalpat Singh Rajpurohit, Assistant Professor, Department of Asian Studies, University of Texas, USA, participated as the chief guest and speaker.
5. Dr. S.S. Dash, Scientist F & Incharge, Tech. Section attended the Hon'ble National Green Tribunal (NGT) meeting at the MoEF&CC, New Delhi on 3.6.2024.
6. Dr. Avishek Bhattacharjee, Scientist-E, BSI- CNH, Howrah, acted as a resource person in the bilateral meeting (India and Nepal) organized by the SAWEN (South Asian Wildlife Enforcement Network), Wildlife Crime Control Bureau, Govt. of India, TRAFFIC, India and WWF, Nepal at Siliguri on 26 June 2024.
7. BSI organized Heads of offices meeting and RCM at BGIR, Noida on 26<sup>th</sup> & 27<sup>th</sup> June, 2024. All Heads of Offices of BSI attended and presented the achievements of their respective centres.
8. All the scientists and officials of Botanical Survey of India attended the 109<sup>th</sup> Foundation Day programme of Zoological Survey of India, which was inaugurated by the Hon'ble Union Minister of MoEF&CC, Shri Bhupendra Yadav on 30<sup>th</sup> June, 2024 at Biswa Bangla Convention Centre, Kolkata. On this occasion, 5 BSI publications including 4 volumes of Flora of India (vol. 6, 15, 20, & 22) and Plant Discoveries 2023 was also released by the Hon'ble minister.
9. Dr. S. K. Yadav, Botanist, Hqrs., BSI and Shri Sanjay Kumar, Botanist, CNH, Howrah conducted Green Audit under Mission LiFE at Dum Dum Motijhil College, Kolkata on 22.06.2024.

During this month 12 research papers and 8 book chapters got published by BSI scientists in International and National publications apart from participating in scientific lectures and publishing seminar abstracts. (Annexure 1).

2. Important policy matter held up on account of prolonged inter-ministerial consultations: NIL
3. No. of cases of 'Sanction for prosecution' pending for more than 3 months: NIL
4. Particulars of cases in which there has been a departure from the Transaction of Business Rules or established policy of the government: NIL
5. Status of Rationalization of Autonomous Bodies:-NA-
6. Information on the specific steps taken for utilization of the space technology based tools and applications in governance and development: NIL
7. Vacancy position of senior level appointments in the Ministry/ Department, including Autonomous Bodies/ PSUs: Communicated to the Ministry separately.
8. List of cases in which ACC directions have not been complied with: NIL

With regards,

Sincerely yours,

A. A. MAO 01/07/2024

To,  
Ms. Nameeta Prasad, JS, (CS-II), MoEF&CC, New Delhi – 3



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Publications for the Month of June 2024

1. ARON SANTHOSH KUMAR YOHANNAN., PALANISAMY M., S. K. YADAV AND M. SAVURIRAJAN. 2024. Account on the diversity and distribution of the genus *Ulva* from India. *Regional Studies of Marine Science*. <https://doi.org/10.1016/j.rsma.2024.103634>
2. CHOWLU, K., A. SHENOY AND AJIT RAY. 2024. *Petrocosmea arunachalense*: A new species of Gesneriaceae from Northeast India. *Nordic Journal of Botany*. 2024: e04423. 1-3
3. JESUBALAN, D., A. BENNIAMIN, KAUSHIK SARKAR, RAJESHWAR DAYAL AND ANUBHAB MONDAL. 2024. *Trichomanes bimarginatum* (Bosch) Bosch - A New Addition to the Pteridophytic Flora of Karnataka State, India. *Indian Forester*, 150 (2): 172-173.
4. JESUBALAN, D., A. BENNIAMIN, SUNDARI M.S, BAGATH SINGH C, KAUSHIK SARKAR AND RAJESHWAR DAYAL. 2024. Study on spore germination and optimal conditions for the formation of Gametophyte and Sporophyte in a primitive fern *Botrychium daucifolium* Wall. Ex Hook. & Grev. (Ophioglossaceae). *Indian Fern J.* 41(1) : 23-35
5. LIJA, R.K., LEKSHMI G.M., SINGH L.J. AND GANGAPRASAD, A 2024. Anti-diabetic activity of different solvent leaves extracts of *Knema andamanica* (Warb.) W.J.de Wilde (Myristicaceae). 2024 In: International Seminar on New Horizons in Plant Sciences NHPS- 2024, Kerala, India. Abs. 57.
6. PATHAK, M. K. AND MANAS BHAUMIK 2024. *Exacum indicum* sp. nov. (Gentianaceae), a new saprophytic species from India. *Nordic Journal of Botany* 2024 <https://doi.org/10.1111/njb.04342>.
7. SANKARARAO, M. 2024. 'Biodiversity Hotspots' in Telugu *Vivek magazine*, Pp. 62-65. (R.C. Reddy Publications)
8. SANKARARAO, M. 2024. 'Land restoration, desertification, and drought resilience' in *Telugu Yojana magazine*, Pp. 56-61. ISSN: 0971-8729.
9. SUBIN, K., S. KUMAR, P.A. JOSE, J. M. JOSE, K. T. MUFEEDA, V. BIBEESHNA AND S. MAHADEVAKUMAR Pathological investigation and morpho-molecular characterisation of *Lasiodyplodia theobromae* causing fruit rot diseases on *Hydnocarpus longipedunculatus* – A novel host record from India. 2024. *Physiological and Molecular Plant Pathology*, 132:102316. <https://doi.org/10.1016/j.pmpp.2024.102316>
10. SWAMY, J. AND L. RASINGAM. 2024. Notes on the distribution of *Eriolaena wallichii* (Malvaceae: Dombeyoideae). *J. Indian Bot. Soc.*, Doi: 10.61289/jibs2023.09.02.1100.
11. VIVEK C.P., S. MISHRA, AND L.J. SINGH. 2024. Notes on taxonomy, morphological variation and distribution of *Oryza meyeriana* (Zoll. & Moritzi) Baill. (Poaceae) in the Andaman and Nicobar Islands. *Tropical Plant Research* 10(3): 86–89.
12. YADAV P., S.NITHANIAL, S.D.MISHRA, AND M.P. GOUTAM 2024. Forensic application of DNA barcoding to differentiate toxic plant from the common medicinal plants for consumer safety. *African Journal of Biological Sciences*, 6(4): 1–10.

## BOOK CHAPTER

1. SHARIEF, M.U., S.S. HAMEED, M.MURUGESAN, W.ARISDASON, R. MANIKANDAN, MEHALA DEVI, R., PREMKUMAR, M. AND S.P.NITHYA, In: Mao, A.A., Agrawala, D.K., Dash, S.S., Vivek, C.P., Mukherjee, S., Jayanthi, J. & Jalal, J.S. (Eds.), 2024. Vellode Bird Sanctuary, Tamil Nadu. Botanical Survey of India, Kolkata. *Compendium on Phytodiversity of Ramsar Sites in India*; ISBN: 978- 81-965332-8-1. 773–786.
2. NITHYA, S.P., R. MANIKANDAN, AND C. MURUGAN. 2024. Gulf of Mannar Marine Biosphere Reserve, Tamil Nadu. Botanical Survey of India, Kolkata *Compendium on Phytodiversity of Ramsar Sites in India*; ISBN: 978- 81-965332-8-1. 569–590.



3. ARISDASON, W., M. MURUGESAN, R. MANIKANDAN, S.S. HAMEED, M. ANANTHA LAKSHMI, S.P. NITHYA, AND E. ANGELIN FELICIA, In: Mao, A.A., Agrawala, D.K., Dash, S.S., Vivek, C.P., Mukherjee, S., Jayanthi, J. & Jalal, J.S. (Eds.), 2024. Vembannur Wetland Complex, Tamil Nadu Botanical Survey of India, Kolkata. Compendium on Phytodiversity of Ramsar Sites in India; ISBN: 978- 81-965332-8-1. 787–804.
4. MURUGESAN, M., W. ARISDASON, S.S. HAMEED, R. MANIKANDAN, M. ANANTHA LAKSHMI, B. KARTHIK, AND M.U. SHARIEF, In: Mao, A.A., Agrawala, D.K., Dash, S.S., Vivek, C.P., Mukherjee, S., Jayanthi, J. & Jalal, J.S. (Eds.), 2024. Suchindram Theroor Wetland Complex, Tamil Nadu. Botanical Survey of India, Kolkata, Compendium on Phytodiversity of Ramsar Sites in India; ISBN: 978- 81-965332-8-1. 699-720.
5. HAMEED, S.S., ARISDASON, W., MURUGESAN, M., MANIKANDAN, R., ANANTHA LAKSHMI, M. & SHARIEF, M.U. In: Mao, A.A., Agrawala, D.K., Dash, S.S., Vivek, C.P., Mukherjee, S., Jayanthi, J. & Jalal, J.S. (Eds.), 2024. Koonthankulam Bird Sanctuary, Tamil Nadu. Botanical Survey of India, Kolkata. Compendium on Phytodiversity of Ramsar Sites in India; ISBN: 978- 81-965332-8-1. 627–638.
6. KAUSHIK SARKAR, D. JESUBALAN, RAJESHWAR DAYAL AND A. BENNIAMIN. Ranganathittu Bird Sanctuary, Karnataka. In: Mao, A.A., Agrawala, D.K., S.S.Dash., Vivek C.P., Sinjinin Mukherjee., J. Jayanthi and J.S. Jalal (eds) Compendium on Phytodiversity of Ramsar Sites in India. Botanical Survey of India, Ministry of Environment, Forest and Climate Change. Pg.461, 2024.
7. HAMEED, S.S., MANIKANDAN, R., MURUGESAN, M., ARISDASON, W., RAVICHANDRAN, V., MEHALA DEVI, R. AND PREMKUMAR, M. In: Mao, A.A., Agrawala, D.K., Dash, S.S., Vivek, C.P., Mukherjee, S., Jayanthi, J. & Jalal, J.S. (Eds.), 2024. Kanjirankulam Bird Sanctuary, Tamil Nadu. Botanical Survey of India, Kolkata, Compendium on Phytodiversity of Ramsar Sites in India; ISBN: 978- 81-965332-8-1. 591–602.
8. MANIKANDAN, R., HAMEED, S.S., ARISDASON, W., MURUGESAN, M., MEHALA DEVI, R., RAVICHANDRAN, V. AND PREMKUMAR, M. In: Mao, A.A., Agrawala, D.K., Dash, S.S., Vivek, C.P., Mukherjee, S., Jayanthi, J. & Jalal, J.S. (Eds.), 2024. Chitrangudi Bird Sanctuary, Tamil Nadu. Botanical Survey of India, Kolkata. Compendium on Phytodiversity of Ramsar Sites in India; ISBN: 978- 81-965332-8-1. 559–568