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

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Madam,

Date: 02.01.2025

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 December, 2024.

Department: Botanical Survey of India

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

Scientists of BSI described four (04) new taxa as new to Science viz. *Jasminum adenophyllum* subsp. *saparlaense* Rasingam, Ranjana & Susmitha from Andhra Pradesh; *Cytospora azadirachtae* Mahadeoak., Josna & Maharachch.-a new species associated with dieback disease in *Azadirachta indica* from southern India; and *Cortinarius thindii* A. Bose & K. Das and *Cortinarius dhakuricus* A. Bose & K. Das from Indian Himalayas. Further, Scientists of BSI have also reported two (02) as new additions to India viz. *Hodgsonia tsaii* (Cucurbitaceae) and *Cortinarius* subg. *Telamonia* and four (04) as new additions to States viz. *Hypericum hookerianum* (Hypericaceae) and *Teucrium wightii* (Lamiaceae) to the flora of Kerala, and *Strobilanthes auriculata* (Acanthaceae) and *Veronica persica* (Scrophulariaceae) to the flora of Sikkim (Annexure I).

Scientists of BSI conducted 7 field / local tours and collected 322 field nos. of specimens. BSI prepared metadata of 2326 herbarium specimens. During this month, 16,63,450 visitors visited the official websites of BSI (14,01,420 visitors referred official website, 1,06,044 visitors referred archives, and 1,55,986 visitors visited Indian Virtual Herbarium).

Important events / programs organized / attended:

1. Dr. A. A. Mao, Director, Botanical Survey of India, was conferred with the prestigious Lifetime Achievement Award by The Orchid Society of Eastern Himalaya (TOSEHIM), in a ceremony held at Doomdooma College, Tinsukia, Assam on 19th December, 2024 for his outstanding contribution in the field of orchid taxonomy and conservation. He was also conferred with the Fellow of the National Academy of Sciences, India (NASI), in recognition of his contributions to angiosperm taxonomy and floristic studies, in the program held at IISER, Bhopal on 3rd December, 2024.
 2. Dr. S. S. Dash, Scientist-F & In-charge, Technical Section, BSI-HQ, Kolkata attended and represented India in the 11th session of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES 11), held in Namibia, Africa w.e.f. 9th to 16th December 2024. He was also conferred with the prestigious Dr. Gopinath Panigrahi Memorial Award by The Orrisa Botanical Society during the 47th Annual Conference of the Orrisa Botanical Society, held at Fakir Mohan University in Balasore on December 28, 2024.
 3. Dr Rashmi Dubey, Scientist-F, BSI, WRC, Pune, was conferred with the prestigious Prof. J. Muthumary Memorial Award by the Mycological Society of India, for her contribution in the field of Mycological Taxonomy, particularly her work in micro-fungal biodiversity, during the National Conference on Fungal Frontiers: Biodiversity, Biomolecules & Bioengineering Applications for Sustainable Perspectives held at Jodhpur on 27th November, 2024.
 4. BSI conducted a two weeks In-service training programme for the Botanical Assistants in BSI from 2nd to 16th December, 2024 at BSI-CNH, Howrah. The training was attended by 35 Botanical Assistant of BSI posted at different regional centres throughout the country. Prof. C. R. Babu, Professor Emeritus, University of Delhi, and Dr Ajit Kumar Shasany, Director, CSIR-National Botanical Research Institute, Lucknow, officially inaugurated the program, while many eminent professors and other officers were invited to deliver lectures during the training.
 5. BSI has been recognized as one of the top five institutions globally in the field of *Impatiens* Riv. ex L. or *Balsams* (Balsaminaceae) research, as published recently (16th November 2024) in the peer reviewed journal "MDPI-Horticulture" of Switzerland. Leading the charge in *Impatiens* (Balsams) study from BSI, Dr. Rajib Gogoi, a Scientist-F, and Head of Office at the BSI-Sikkim Himalayan Regional Centre (SHRC) placed fourth among the top ten scientists globally.
 6. BSI and ZSI organized one day "Brainstorming on IUCN National Red Listing Assessment for Indian Flora and Fauna" at the Central National Herbarium, BSI, Howrah, Kolkata under the chairpersonship of Ms Nameeta Prasad, Joint Secretary, MoEFCC on 11th December 2024. This was followed by 4 days training on IUCN Red Listing Assessment for Indian Flora and Fauna w.e.f. 12th -15th December, 2024. Tim L., Monika B., Katie H., Dr. Yash Veer Bhatnagar, Country Head, IUCN-India, Dr. Rahul Kaul, Senior Director were invited as resource persons for this workshop. 20 Scientists of BSI underwent this training.
 7. BSI observed "The International Mountain Day" on 11.12.2024 with the theme, "Mountain solutions for a sustainable future – innovation, adaptation and youth"
- During this month 34 research papers were 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 02/01/2025

To

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



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Publications for the Month of December 2024

1. AKHIL SAJAN, NAVYA S., AMRUTHA SUNDARAN AND K. A. SUJANA. 2024. *Hypericum hookerianum* (Hypericaceae) & *Teucrium wightii* (Lamiaceae): Two new additions to the flora of Kerala, India. *Nelumbo*, 66 (1), 154–155.
2. ARIGELA R.K., R.K.SINGH, S.KUMAR, AND CH.S.REDDY, 2024. Morphological variability, typification and a new synonym of *Striga angustifolia* (Orobanchaceae). *J. Biodivers. Conservation* 8(4): 120–129.
3. BOSE, A., T., NISKANEN, S., DATTA, A. GHOSH, A. VIZZINI AND K., DAS. 2024. Two new species and a new record of *Cortinarius* subg. *Telamonia* from India with morphological descriptions and molecular phylogenetic evidences. *European J. Taxonomy* 970: 38–60.
4. CHAKRABARTY, T., A. KUMAR AND P.P. GHOSHAL. 2024. Two new synonyms in Indo-Burmese *Litsea* (Lauraceae). *Trends in Current Biology* 2(4): 25–27.
5. CHAKRABORTY, K., B. BHATTACHARJEE, A. GHOSH AND A. BHATTACHARJEE. 2024. Rediscovery of *Erigeron jaeschkei* (Asteraceae: Astereae: Conyzinae) and notes on its correct protologue and typification. *Phytotaxa* 674(3): 275–280. [IF: 1.0]
6. CHOWLU, K., A. SHENOY, A. RAY, S. HALDER, S. S. DASH AND K. A. A. KABEER. 2024. *Hodgsonia tsaii* (Cucurbitaceae), a new record for India. *Nelumbo*. 66 (1). 128-129.
7. CROUS PW, MJ WINGFIELD, Ž JURJEVIĆ, S BALASHOV, ER OSIECK, Y MARIN-FELIX, S. MAHADEVAKUMAR, et al. 2024. Fungal Planet description sheets 1697–1780. *Fungal Systematics and Evolution*. 14, pp. 325-577. <https://doi.org/10.3114/fuse.2024.14.19>
8. DAWANRI MARWEIN, GARGI PRASAD, DEEPU VIJAYAN AND ASHIHO ASOSII MAO. 2024. Assessment of genetic stability of micropropagated *Rhododendron formosum* Wall.—an endemic plant to Eastern Himalaya. *In Vitro Cellular & Developmental Biology – Plant*. <https://doi.org/10.1007/s11627-024-10466-5>
9. DEBNATH SUPARNA AND DEEPU VIJAYAN. 2024. Conservation Priority and A New Locality Record of *Hedychium aureum* (Zingiberaceae): An Endangered Species of Meghalaya, India. *Ecology Environment and Conservation*. 30: 223-228.
10. GUPTA P., 2024. New Records of Cyanoprokaryotes and Algae from Brattnevet Peninsula of Larsemann Hills, East Antarctica. *International J. Biological Innovations* 6(2): 143-148.
11. HARIKRISHNA, P. AND S.P. PANDA. 2024. Diversity and Adaptation of Plant Life Forms in Bassi Wildlife Sanctuary: A Phytoclimatic Analysis. *J. Experimental Agriculture International* 46 (11):795-802. <https://doi.org/10.9734/jeai/2024/v46i113100>.
12. HYDE, K.D., M.T. NOORABADI, V. THIYAGARAJA, M. HE, S. MAHADEVAKUMAR, et al. The 2024 Outline of Fungi and fungus like taxa. 2024. *Mycosphere*, 15(1):5146–6239.
13. HYDE, K.D., M.T. NOORABADI, V. THIYAGARAJA, M.Q. HE, P.R. JOHNSTON, ... K. DAS AND E. ZVYAGINA. 2024. The 2024 Outline of *Fungi* and fungus-like taxa. *Mycosphere* 15(1): 5146–6239.
14. JOY, J., M. MAHESH, S. MAHADEVAKUMAR, S. S. N. MAHARACHCHIKUMBURA, K. R. SRIDHAR, S. CHANDRANAYAKA AND T. S. S. K. PATRO. 2024. *Cytospora azadirachtae* sp. nov. – A new species associated with dieback disease in *Azadirachta indica* from southern India. *Phytotaxa*, 670(1)(43): 54
15. JOY, J., S. MAHADEVAKUMAR, K. AJITHKUMAR, A. S. SAVITHA, K. R. SRIDHAR, S. CHANDRANAYAKA & N. LAKSHMIDEVI. 2024. Phytopathological investigations of collar rot of chia (*Salvia hispanica* L.) caused by *Macrophominaphaseolina* – A new host record from India. *Physiological and Molecular Plant Pathology* <https://doi.org/10.1016/j.pmpp.2024.102445>
16. MAITY, R., A. SHENOY, A., S.S. DASH, AND A.K. SONI, 2024. Taxonomy of *Globba rahmanii* (Zingiberaceae) and its addition to Indian flora. *Nelumbo* 66(1), 61–65.
17. MAO, A. A., TAPAN SEAL, GOPAL KRISHNA. 2024. *Maesa bengalensis*: Unlocking the hidden nutritional treasures and medicinal potential of an underutilized wild vegetable from Manipur, India. *Indian J. Traditional Knowledge*, 23 (12), 1123-1134.
18. MISHRA, S, S. MISHRA, L. J. SINGH, AND D. R. MISHRA. 2024. Ecotaxonomical and pharmacological studies on some medicinal plants of Bhadohi District, Uttar Pradesh, India. *Geophytology* 54(2): 221–238

19. NAITHANI, H. B., R. K. MEENA, M. S. BHANDARI, M. KANDWAL, S. T. S. LEPCHA. 2024. Recording of Gregarious Flowering of *Phyllostachys nigra* var. *henonis*: Report from Eastern Himalaya, India. *Natl. Acad. Sci. Lett.* <https://doi.org/10.1007/s40009-024-01577-z>
20. NITHYA, S.P., R. MANIKANDAN, C. SUDHAKAR REDDY, C. MURUGAN AND W. ARISDASON. 2024. Remote Sensing-based Assessment of Vegetation Cover Changes in Gulf of Mannar Marine National Park, Tamil Nadu, India *Nelumbo* 66(1): 65–73.
21. PARIA, S., PANDA, G., SHEE, N., PRASAD, R., KAMILA, P. K., MALLICK, P. H., DAS, P. K., ROUT, Y. AND PANDA, S. P. 2024. Notes on Extended Distribution of *Eranthemum roseum* R.Br. (Acanthaceae) in the State of West Bengal, India. *Flora and Fauna.* 3(2): 233–236. <https://doi.org/10.33451/florafaua.v30i2pp233-236> [Print ISSN: 0971-6920; Online e-ISSN: 2456-9364].
22. PRASAD G., DEEPU VIJAYAN AND A. A. MAO. 2024. Micropropagation and Screening Based on Polyphenol and Antioxidant Potential of Six Medicinal Orchids in Meghalaya. *Botanical Survey of India, Kolkata.* 96 pp. [ebook]
23. PURTI, N., L.J. SINGH AND A.K. PANDEY. 2024. New Mistletoe host for the butterfly herbivory in an island ecosystem. *J. Asia-Pacific Biodiversity* 17: 663-677
24. RASINGAM, L., J. RANJANA, G. SUSMITHA, K. NETHAJI, P. RANJITHKUMAR AND G. VARSHINI. 2024. A new subspecies of *Jasminum adenophyllum* (Oleaceae) from Andhra Pradesh, India. *Indian J. Forestry.* 47(2):112-115.
25. RESMI S., SANTHOSH NAMPY, K. KARTHIGEYAN AND NICO CELLINESE. 2024. Genus *Sonerila* (Melastomataceae): A Paleotropic Scenario. *Glimpses of Diversity: Fungi and Plants. Proceedings of the International Seminar on Plant Systematics: Present Status and Future Prospects. Indian Association for Plant Taxonomy.* pp. 194-228 (ISBN 81-901637-7-9)
26. SANTHOSH, C.R., S. MAHADEVAKUMAR, B.R. NUTHAN, M. BHARATH, J. PARASHIVA, M. MAHESH, S. CHANDRANAYAKA & S. SATISH. 2024. Multifaceted growth promotion and biocontrol of *Agroathelia rolfii* and induction of defence mechanism by *Bacillus amyloliquefaciens* SS_CR10 on chilli. *Physiologia plantarum.* <https://doi.org/10.1111/ppl.14627>
27. SENGUPTA, R. AND S. S. DASH. 2024. Species distribution modeling to identify invasion hotspots of *Argentina riparia* in Mizoram, India. *Asian J. Forestry.* 8 (2) :184-193.
28. SHERPA, N., P.T. LEPCHA, AND G. CHHETRI, 2024. Two new additions to the state flora of Sikkim, India. *Nelumbo* 66 (1): 150–151.
29. SHIL, T., A. MAJI AND K. KARTHIGEYAN. 2024. Traditional Wooden Dolls of East Bardhaman district, West Bengal, India. *EIACP Newsletter* 29(2): 4–5.
30. SINGH, L. J. AND D.R.MISHRA. 2024. Morpho-anatomical diversity in roots of *Epipremnum aureum* (Linden & André) G.S. Bunting (Araceae). *Geophytology* 54(2): 201–212
31. SINGH, L. J., B.C. DEY, P.K. MITRA, G.P. SHARMA AND C.P. KUSHWAHA. 2024. Diversity of reproductive phenology of trees in the tropical evergreen forest of Andaman and Nicobar Islands, India. *Tropical Ecology* 65 (2): 201-211 DOI: [10.1007/s42965-024-00326-z](https://doi.org/10.1007/s42965-024-00326-z)
32. THARANI, R., M. MURUGESAN, V. ANUSUBA AND B. KARTHIK CLEMATIS UDAYANII AND MILIUSA GOKHALAEI. 2024. Additions to the flora of Tamil Nadu, India. *Indian Forester* 150 (11): 1130–1133. DOI: [36808/if/2024/v150i11/170324](https://doi.org/10.36808/if/2024/v150i11/170324)
33. VEDASHREE, V., K. SHARATHCHANDRA, S. MAHADEVAKUMAR, S. AND K.R. SRIDHAR. 2024. Proximal, mineral, functional and bioactive attributes of the ectomycorrhizal edible mushroom *Ramaria versatilis*. *Fungal Biotech.* 4(1):111–124.
34. VIJAYAN DEEPU. 2024. Medicinal Plant of North East India: Biodiversity Conservation and their ethnomedical values with special reference to Meghalaya. *ARYAVAIDYAN.* 37(4): 28 – 32.