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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

DO. No.: BSI – 8/1/PA/2019

Date: 02.11.2020

Dear Smt. Pandey,

In reply to OM no. 24011/08/2019 – GC dtd. 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 **October, 2020**.

Department: Botanical Survey of India

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

Scientists of BSI reported **5 novel plant species as new to Science** viz. *Peliosanthes ashihoana*, *Peliosanthes bipiniana* (Asparagaceae: Nolinoideae), *Boeica arunachalensis* (Gesneriaceae), *Impatiens bakthangensis* (Balsaminaceae) from the Eastern Himalayas and *Brachystelma telanganense* (Apocynaceae) from Telangana, India. Besides this, a plant species namely *Tripogonella minima* (Poaceae) has been reported as new record for Asia; **4 taxa** viz. *Cardamine trifoliolata*, *Elatostema cyrtandrifolium*, *Pilea medogensis*, *Salvia campanulata* var. *codonantha* as new additions to flora of India; **6 taxa** viz. *Strobilanthes mastersii*, *Strobilanthes oxycalycina*, *Pedicularis longiflora* var. *tubiformis*, *P. megalantha*, *P. pantlingii* and *P. trichoglossa* as new additions to the flora of Arunachal Pradesh state and **2 taxa** viz. *Goodyera recurva*, *Zeuxine gracilis* (Orchidaceae) new additions to the flora of West Bengal. In addition, scientists also rediscovered **2 taxa** viz. *Pedicularis denudata* (Orobanchaceae) after **135 years** from India and *Ceropegia odorata* (Asclepiadaceae) after **128 years** from Mount Abu wildlife sanctuary, Rajasthan.

Important events / programmes organized / attended during the month:

- Shri Babul Supriyo, Hon'ble Minister of State, MOEF&CC, New Delhi visited the AJCB IBG Howrah on 09.10.2020. During the visit, 3 publications of BSI i.e. Plant Discoveries 2019, Flora of India: An annotated checklist (Vols. 1-3) and Algae of India, Vol 4 (*Diatoms*) have been released.
- A virtual training programme on BSI website content management and MIS software management were organized by NIC at BSI Digital Herbarium, CNH, Howrah from 5th to 8th October 2020. The training was attended by all the Heads of Offices of BSI and the Nodal officers of IT cell of each regional centres.
- BSI, HAWHRC, Solan organized National Webinars on 'Plant Diversity of Cold Desert of Western Himalaya and its conservation strategies' and 'Micropropagation of threatened plant species and conservation in India' on 5th October, and 30th October, 2020 respectively.
- BSI, Deccan Regional Centre, Hyderabad organized a National Webinar on "Role of Botanical Survey of India in Biodiversity Conservation" on 14.10.2020.
- Director, BSI delivered a lecture on "Exploration, discovery and genetic characterization of India's Biodiversity" in the National Mission on Biodiversity and Human Well Being, held through Video conferencing on 6.10.2020.
- Director, BSI delivered an invited lecture in International Webinar Series (session 19) on "Reimagine Ethnopharmacology, organized by Institute of Bioresources & Sustainable Development, Shillong through Video conferencing on 10.10.2020.

Some important publications:

During this month, BSI published **29 research papers** in various international and national journals, **4 books** and **3 book chapters**, which are provided in **Annexure 1**.

2. **Important policy matter is held up on account of prolonged inter-ministerial consultation: Nil**

3. **Compliance of COS decisions: Nothing pending**

4. **No. of cases of 'Sanction for prosecution' pending for more than 3 months: Nil**

5. **Particulars of cases in which there has been a departure from the Transaction of Business Rules or established policy of the government: Nil**

6. **Status of implementation of e-governance: PFMS, CPGRAMS, e-Publications, GEM Portal, OJMS portal of Nelumbo etc., has already been implemented.**

7. **Details of cases in which ACC directions have not been complied with: Nil**

8. **Status of Public grievances:**

No. of public grievances redressed during the month	No. of Public grievances pending at the end of month
6	0

9. **Information on the specific steps taken by the ministry/department for utilization of the space technology based tools and applications in governance and development: NIL**

With regards,

Yours Sincerely,

(A. A. MAO)

To
Smt. Manju Pandey, Jt. Secretary, (CS), MoEF & CC, New Delhi – 3



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Some important publications

RESEARCH PAPERS

1. BENNIAMIN, A., M.S. SUNDARI AND V.K. RAWAT 2020. *Polystichum tangmaeinse* (Dryopteridaceae), A threatened fern from Arunachal Pradesh. *Bull. Arunachal Forest Res.*, 34(1&2): 18–20.
2. BORAH, D., R.K. SINGH AND ARTI GARG 2020. New records of four *Pedicularis* species (Orobanchaceae) for the Flora of Arunachal Pradesh state, India, and two new synonyms for *Pedicularis pantlingii*. *NeBio*: 11(3): 180–186.
3. BORAH, D., R.K. SINGH AND ARTI GARG 2020. Rediscovery of *Pedicularis* denudate (Orobanchaceae), a little known, rare herb, after 135 years from India. *Phytotaxa* 461(2):136–138.
4. BORAH, D., R.K. SINGH, M. TARAM AND A.P. DAS 2020. *Boeica arunachalensis* (Gesneriaceae), a new species from Indian Eastern Himalaya and typification of five names in *Boeica*. *Indian Forester* 146(9): 871–874.
5. DAS, S. AND K. KARTHIGEYAN 2020. Notes on the lectotype of *Tetrapogon roxburghianus* (Poaceae: Chloridoideae: Cynodonteae). *Phytotaxa* 464(3): 249–251.
6. GARG ARTI AND A.P. TIWARI 2019. Floristic account of the Van Vihar National Park in Bhopal. M.P., India. *Indian J. Forestry* 42(4): 323–336.
7. GOGOI, R. 2020. Methodology of study of *Impatiens* (Balsaminaceae): A Morphological approach. *Plant systematics and ethnobotany: methods and practices* 85–97.
8. GOGOI, R., N. SHERPA AND G. CHHETRI 2020. *Impatiens bakthangensis* sp. nov. (Balsaminaceae): a new species from Sikkim, India. *Nordic J. Botany*, doi: 10.1111/njb.02872
9. JOSHI, P., V.K. RAWAT, B. KUMAR AND H. DWIVEDI 2019. Taxonomic studies of genus *Goniophlebium* and *Selliguea* of District Tehri Garhwal, Indian Central Himalaya. *Bull. Arunachal Forest Res.* 34(1&2): 1–10.
10. KULLOLI, R.N., C.S. PUROHIT, V. MAINA AND B. KARI 2020. Recollection of Critical Endangered Plant *Ceropegia odorata* Nimmo ex J. Graham (Asclepiadaceae) after 128 years from Mount Abu Wildlife Sanctuary, Rajasthan, India. *J. New Biol. Reports* 9(3): 277 – 280.
11. KUMAR, ANAND 2020. Second-step lectotypification of six names of *Litsea* (Lauraceae). *Phytotaxa* 460(3): 214–224.
12. KUMAR, ANAND AND O.N. MAURYA 2020. Lectotypification of *Boschniakia himalaica*, the basionym of *Xylanche himalaica* (Orobanchaceae). *Rheedeia* 30(3): 404–406.
13. KUMAR, ANAND, T. CHAKRABARTY, S. BANDYOPADHYAY AND A. BHATTACHARJEE 2020. Notes on nomenclature and typification of *Heteropogon fischerianus* and *H. contortus* var. *distichus* (Poaceae). *Rheedeia* 30(3): 388–390.
14. LAKSHMINARASIMHAN, P., N. ODYUO, C. DEORI, D. VIJAYAN, D. L. BIATE AND K. N. GANDHI 2020. A Report on the Fourth Botanical Nomenclature Course Organized by the Botanical Survey of India at Shillong. *J. Jpn. Bot.* 95(5): 315–317.
15. LODH, P., V. SAMPATH KUMAR, S.K. MUKHERJEE AND S.N. SINHA 2020. *Salvia roborowskii* Maxim. - an addition to flora of Western Himalaya, India. *NeBio* 11(3): 189–191.
16. MISHRA, S. J.S. JALAL, C.P. VIVEK, G.A. EKKA, D.K. AGRAWALA AND L. J. SINGH 2020. A note on the occurrence of *Luisia unguiculata* (Orchidaceae) in Andaman & Nicobar Islands, India. *Nelumbo* 62(1): 50 – 53.
17. MURUGESAN, M., L.I. CHANU, A. A. MAO AND S. K. SINGH 2020. Notes on the occurrence of *Begonia × ricinifolia* A. Dietr. (Begoniaceae) in Meghalaya, India. *NeBio*. 11(2): 87–89.
18. PATIL, SAMEER. 2020. Nomenclatural notes and lectotypification in the monotypic genus *Getonia* (Combretaceae). *Rheedeia* 30(3): 400–403.
19. PRAMEELA, R., J. SWAMY AND J. PRAKASH RAO 2020. Notes on distribution of *Xanthosoma sagittifolium* (L.) Schott (Araceae) in Peninsular India. *J. Indian Bot. Soc.* 100 (1&2): 87–90.
20. RANJAN, V., G. KRISHNA, A. BHATTACHARJEE AND ANANT KUMAR 2020. Addition of two rare ground orchids in flora of West Bengal (India). *Richardiana* 4: 147–155.

21. RASINGAM L. AND J.SWAMY 2020. *Brachystelma telanganense* (Apocynaceae: Asclepiadoideae- Ceropegieae) – a new species from Telangana, India. *Rheedeia* 30(3): 379-382. DOI: <https://dx.doi.org/10.22244/rheedeia.2020.30.03.02>
22. ROY, D.K., N. ODYUO AND N.TANAKA 2020. *Peliosanthes ashihoana* and *Peliosanthes bipiniana* (Asparagaceae: Nolinoideae) - two new species from Northeastern India. *Taiwania* 65(4): 493–499.
23. SHARIEF M.U. AND S.P. PANDA 2020. Folklore artefacts of aboriginal Shompen tribe in great Nicobar Island, India. *Genetic Resources and Crop Evolution*. DOI 10.1007/s10722-020-01027-x.
24. SINGH, M., J.S. JALAL, D.K. AGRAWALA AND H. NEGI 2020. *Liparis pygmaea* (Malaxideae, Orchidaceae), a new distributional record from Western Himalaya, India with notes on typification. *Richardiana* n.s. 4: 126 – 133.
25. SINGH, R. K., R.K ARIGELA., D. BORAH AND M. TARAM 2020. *Henckelia collegii-sancti-thomasi* (Gesneriaceae), a new synonym of narrow endemic species *H. hookeri* of Northeast India. *NeBio* 11(3): 205-207.
26. SINGH, R.K., ARIGELA, R.K., BORAH, D. & TARAM, M. (2020). *Henckelia collegii-sancti-thomasi* (Gesneriaceae), a new synonym of narrow endemic species *H. hookeri* of Northeast India. *NeBio* 11(3): 205-207.
27. SINGH, R.K., V. RAVICHANDRAN AND C. MURUGAN 2020. On the identity and typification of *Sonerila speciosa* Zenker (Melastomataceae), a little known and narrow endemic species of Southern Western Ghats, India. *NeBio* 11(2): 90-98.
28. SWAMY, J. 2020. *Tripogonella minima* (Poaceae: Chloridoideae: Cynodonteae: Tripogoninae), a new record for Asia from Peninsular India. *Rheedeia* 30(3):396-399.
29. TIWARI, UMESHKUMAR L. AND V.K. RAWAT 2020. Some addition to the flora of Arunachal Pradesh and India. *Bull. Arunachal Forest Res.* 34(1&2): 29–33.

BOOKS

1. Plant Discoveries 2019. Botanical Survey of India, Kolkata.
2. Flora of India: An annotated checklist (Vols. 1-3). Botanical Survey of India, Kolkata.
3. Algae of India, Vol. 4 (Diatoms). Botanical Survey of India, Kolkata.
4. Flora of Gorumara National Park. Botanical Survey of India, Kolkata.

BOOK CHAPTERS

1. BHATTACHARJEE, A. 2020. Basic concept on orchids and their identification. In: Maity, D. (Ed.) *Plant Systematics and Ethnobotany: Methods and Practices*. Department of Botany, University of Calcutta, pp. 45–58.
2. GUPTA, R.K., P. BASU AND S.K. DAS 2020. How to know Freshwater algae of India: An Annotated key for Identification of Important genera. In: D. Maity (Ed.) *Plant systematics and ethnobotany: methods and practices*. The Proceedings of the 3rd and 4th National Workshops under Taxonomy Training Centre, AICOPTAX, MoEF & CC. & Department of Botany, University of Calcutta. pp. 131–190.
3. KARTHIGEYAN, K. 2020. Island Flora: Diversity and Endemism in the Flora of Andaman & Nicobar Islands - an Overview in: Maity, D. (Ed.) *Plant systematics and ethnobotany: methods and practices* (The Proceedings of the 3 and 4 National Workshops under Taxonomy Training Centre, AICOPTAX, MoEF & CC) Govt. of India. Department of Botany, University of Calcutta. Pp. 59–84.