

DO. No.: BSI – 8/1/PA/2019

Date: 04.08.2020

Dear Smt. Pandey,

In reply to OM no. 24011/08/2019 – GC dtd. 25.03.2019 regarding monthly DO letter from Secretary (E & F) to the Cabinet Secretary, I am furnishing herewith the following major achievements of Botanical Survey of India for the month of July, 2020.

Department: Botanical Survey of India

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

Scientists of BSI reported **5 novel plant species new to science** viz. *Pedicularis raghvendrae* (Orobanchaceae) from Sikkim Himalaya, *Luisia diglipurensis* and *L. jarawana* (Orchidaceae) from the Andaman and Nicobar Islands and *Russula lakhanpalii* and *R. indocatillus* from the western Himalaya. Besides, they also reported **18 plant species**, consisting of 11 species of Algae, 2 species of Lichens and 5 species of Angiosperms as new additions to various states of India. In addition, scientists of BSI rediscovered **2 plant species** viz. *Pseudobartsia glandulosa* (Orobanchaceae), an endangered herb, after 179 years from India and *Phyllanthus tetrandrus* (Phyllanthaceae), after a lapse of six decades from Mizoram from the Eastern Himalaya. During this month the 62<sup>nd</sup> volume of official journal of BSI *Nelumbo*-the Bulletin of the Botanical Survey of India, containing 17 research articles was published online on its scheduled date 31<sup>st</sup> July, 2020. Post *Amphan* restorations of damaged plants are being done actively in the AJCB Indian Botanic Garden, Howrah.

**Important meetings / programmes / lectures organized / attended delivered during the month:**

- Director, BSI chaired a meeting through video conference (VC) with all the Heads of offices of BSI / team leaders of Flora of India and discussed the present status of the project on 14<sup>th</sup> July, 2020.
- Dr. S.S. Dash, Scientist E attended a meeting through VC in the Ministry on 17<sup>th</sup> July, 2020 to discuss the matter pertaining to *Aichi targets 11*.
- Dr. S.S. Dash, Scientist E attended a meeting through VC in the Ministry on 22<sup>nd</sup> July, 2020 to discuss the matter pertaining to the implementation of recent economic packages for promotion of herbal cultivation under *Atm Nirbhar Bharat*.
- *During the Van Mahotsav (1-7 July, 2020), plantations of important endemic and threatened plants were done in various Experimental gardens of BSI.*
- Dr. Kumar Ambrish, Scientist E delivered a lecture on “Challenges and issues of COVID 19 Pandemic and its solutions through Medicinal Plant Diversity” in a webinar held at Vivek College, Bijnor (U.P.) on 15<sup>th</sup> July, 2020. Besides, he also attended a meeting with Dean Forestry, UHF regarding development of herbarium and Botanical garden on 20<sup>th</sup> July, 2020.
- Dr. Chaya Deori, Scientist-E attended as an expert member of the Recruitment Committee of BRDC for selection of Junior scientist on 26<sup>th</sup> June 2020 at Additional Secretariat Building, Shillong.
- Dr. Kumar Avinash Bharati and Dr. Deepu Vijayan, Sci. C attended “Science Academies’ - Science Leadership Workshop” organized by the Central University of Punjab, Bathinda from 22<sup>nd</sup> to 28<sup>th</sup> June, 2020.
- Dr. Kumar Avinash Bharati, Sci. C delivered an invited lecture on “Floristic diversity of Baraila Lake Salim Ali Jubba Sahni Bird Sanctuary, Bihar” in a webinar organized by Dept. of Science, Vivek college, Bijnor, Uttar Pradesh on 15<sup>th</sup> July 2020.
- Dr. M. Sankara Rao Sci. C participated in a webinar on “Recent Biotechnological Tools for Crop Improvement” by Advanced Post Graduate Centre, Acharya N.G. Ranga Agricultural University, Guntur on 24.06.2020
- Sri. S. Nagaraju, Bot. Asst. attended the webinar on “Carbon finance: A tool to mitigate Human wildlife conflict and Climate change in Protected Areas of India” conducted on June 25<sup>th</sup>, 2020

**Some important publications:**

1. BORAH, D., R.K. SINGH, P. MIPUN AND D. NARAH 2020. Rediscovery of *Pseudobartsia glandulosa* (Orobanchaceae), a little known, critically endangered herb after 179 years from India, and first report from Eastern Himalayan state Arunachal Pradesh. *Phytotaxa* 451(1): 097–102.
2. DAS, S.K., D.S. RAWAT, R.K. GUPTA AND S.P. ADHIKARY 2020. A taxonomic appraisal on the rare green algal genus *Ecbalocystopsis* M.O.P. Iyengar (Chlorellales: Trebouxiophyceae): morphological and numerical approach. *Nordic J. Bot.* 38 (3): 1 – 8.
3. GARG, A., R.K. SINGH AND B.S. KHOLIA 2020. *Pedicularis raghvendrae* Arti Garg & R.Kr.Singh (Orobanchaceae), a new species from Sikkim Himalaya, India. *Phytotaxa* 452(1): 110–115. 2020.
4. GHOSH A., K. DAS, R.P. BHATT AND M.E. HEMBROM 2020. Two new species of the genus *Russula* from western Himalaya with morphological details and phylogenetic estimations. *Nova Hedwigia* 111(1–2): 115–130.
5. DOGRA, K. S., S. UNİYAL AND KUMAR AMBRISH 2020. Climate Change Issues and Challenges in the Western Himalaya: Its Impact on the Plant-diversity, Livelihood and Mitigation Strategies. *J. Non-Timber Forest Prod.* 26(2) 75-80.
6. KULLOLI, R.N. AND C.S. PUROHIT 2020. *Habenaria gibsonii* var. *foetida* (Orchidaceae): An addition to the flora of Rajasthan. *Species*, 21(67), 202-207.
7. KUMAR, A. AND O.N. MAURYA 2020. Nomenclature notes on type materials of six names in Linderniaceae. *Bot. Letters* 167: 378–387.



8. LAKSHMINARASIMHAN, P. AND W. ARISDASON 2020. Book Review: Flora of Central and North Tamil Nadu. *Rheedea* 30(2): 321–323.
9. MISHRA, S., J. JALAL, V. PAULOSE AND L. SINGH 2020. Two new species of *Luisia* (Vandaeae, Orchidaceae) from the Andaman and Nicobar Islands, India. *Phytotaxa* 453 (3): 255–264. 2020.
10. MUKHIA, S., Pb. MANDAL, D.K. SINGH AND D. SINGH 2019. Comparison of pharmacological properties and phytochemical constituents of in vitro propagated and naturally occurring liverwort *Lunularia cruciata*. *BMC complementary and alternative medicine*. 19: 181.
11. HARI KRISHNA, P., J. SWAMY, V. MAINA AND R. KUMAR 2020. *Ocimum filamentosum* Forssk. (Lamiaceae): A new distributional record for Rajasthan, India. *Indian J. Forestry* 42(4): 337-338.
12. KUMAR, P., H. SINGH, K. S. DOGRA AND S.K. SINGH 2020. *Arabis nuda* Bel. (Brassicaceae), A New Record for Himachal Pradesh, *Indian J. Forestry*, 42(4) 339-341.
13. PUROHIT C. S. 2020. *Dalechampia* & *Micrococoa* – Two generic addition for flora of Aravalli range, India with Status of Family-Euphorbiaceae of Todgarh-Raoli wildlife sanctuary, Rajasthan, India. *J. New Biol. Rep.* 9 (2): 209 – 219.
14. SINGH, P. AND K.P. SINGH 2020. Two new records of lichens for India from Maharashtra. *Indian J. Forestry* 42(4): 380-382.
15. RAVIKIRAN S. PAGARE, K.C. KISHOR AND W. ARISDASON 2020. Typification of seven names in *Dioscorea* (Dioscoreaceae) described by J.D. Hooker. *Rheedea* 30(2): 312–316
16. RATHI RS, BHATT KC, PANDEY ANJULA1, TIWARI UK, PRADHEEP K, PANWAR NS, AHLAWAT SP. 2020. *Tubocapsicum anomalum* (Franch. & Sav.) Makino: A New Record to the Flora of Arunachal Pradesh, India. *Indian J. Plant Gen. Res.* 33(1):115-118. 2020.
17. SAWMLIANA, M., G. KRISHNA AND T. CHAKRABARTY 2020. Notes on re-collection of *Phyllanthus tetrandrus* (Phyllanthaceae) from Mizoram, India. *Nelumbo* 62 (1): 62–65.
18. SINGH H., M. MISHRA AND P. A. DHOLE 2020. Ethnomedicinal Plants Used by the Tribal Communities of West Champaran District of Bihar, India *Plant Sci.* 3(4):38-44.
19. SINGH, L.J., G. A. EKKA, S. MISHRA, C.P. VIVEK, V. S. SHANKAR, M.C. NAIK AND F. SALEEM 2020. Habitat status of *Musa paramjitiana* L.J. Singh (Musaceae): a critically endangered, endemic species in Andaman & Nicobar Islands, India. 2020. *Pleione* 14(1): 121–127.
20. SINGH, VINEET, S.K. SRIVASTAVA AND L.M. TIWARI 2020. *Spermacoce alata* Aubl. (Rubiaceae) – A new record to the Flora of Uttar Pradesh from Tikri Reserve forest, Gonda district, India. *Indian J. Forestry* 42(3): 247-250.
21. SWAMY. J., P.V. RAMANA AND P. SWAMYNAIDU 2020. Taxonomy and distribution of the Desert Thorn apple *Datura discolor* Bernh. (Solanaceae) in India. *Nelumbo.* 62(1):70–72.
22. YADAV, S.K. AND M. PALANISAMY 2020. Eleven new additions to marine macro algal flora of Karnataka coast, India. *Nelumbo.* 62 (1): 90-102.

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, CPGRAM, e-Publications, GEM, portal, OJMS of Nelumbo are already been implemented in BSI.

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
Three (3)	Nil

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,

Sincerely yours,

  
A. A. MAO 04/08/2020

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