

Curriculum Vitae

Personal Particulars

Name: Dr. Wagmare Balraju



Research Interests: Dendrochemistry (Reconstructing Long-Term Heavy Metal Pollution Dynamics), Environmental Pollution, Forest Resources Management, Climate Change.

Contact Information

Present Address: Birbal Sahni Institute of Palaeosciences, 53 University Road, Lucknow - 226007, Uttar Pradesh, India.

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Research Gate Profile: https://www.researchgate.net/profile/Wagmare-Balraju?ev=hdr_xprf

Title of Ph.D. thesis: “Dendro-Chemical Analysis of Selected Tree Species in Mizoram, North East India.”

Ph.D. Supervisor: Prof. S.K. Tripathi, Dept of Forestry, Mizoram Central University.

Academic Qualifications (From Class 10th Standard onwards)

Degree/Course	University/ Board	Year
Ph.D. Forestry	Mizoram Central University, Aizawl, Mizoram)	2024
M.Sc. Forestry & EVS	Guru Ghasidas University (GGU), Bilaspur, Chhattisgarh	2018
B.Sc. (BFC) Botany, Forestry, Chemistry	Telangana University, Telangana	2016
XII	Andhra Pradesh Social Welfare Residential Educational Institutions Society, Biknoor	2013
X	ZPHS (Boys) School, Andhra Pradesh	2011

Research Experience

S. No	Position Held	From	To	Project Title	Institute name
1.	Project Associate-I	25.07.2022	24.07.2024	Forest Resources & Plant Biodiversity (NMSHE TF-3 II nd Phase)	G.B. Pant National Institute of Himalayan Environment-Sikkim Regional Centre, Gangtok, (MOEF&CC) Govt. of India.
2.	Project Associate-II	25.07.2024	08.10.2025		
3.	Birbal Sahni Research Associate Fellowship (BSRA)	1.04.2025	To date	Historical Chemical Loading in the Western Himalaya: Insights from Tree-Ring and Soil Chemistry	Birbal Sahni Institute of Palaeosciences, Lucknow, Uttar Pradesh.

Teaching Experience

S. No	Position Held	From	To	University name
1.	Guest Faculty	13.09.2024	31.03.2025	Acharya Nagarjuna University, Guntur.

Awards and Recognitions

- Marketing and trading of tendu leaves (*Diospyrous melanoxylon*) at chaitam range, Arunachal University of Studies. **I was awarded the best oral paper presentation at the national conference on 'Natural resources management, sustainable and Sustainable Agriculture-2020' with reference to North-East India, held on 28th-29th January 2020.** Organized by the faculty of agricultural sciences.
- I am actively involved in ‘**the Green Revolution global certification program**’, which is an initiative by the International Centre for Culture & Education to educate, inspire & act against climate change, International Centre for Culture & Education (ICC), Green (R)evolution, and the United Nations Framework Convention on Climate Change (UNFCCC).

Full-length Articles:

- Balraju, W.**, Upadhyay, K. K., Dhyani, R., Joshi, R., Sharma, A., & Tripathi, S. K. (2025). Dendrochemical analysis of heavy metals in *Magnolia champaca* tree rings in Mizoram, Northeast India. *Environmental Monitoring and Assessment*, 197(4), 421. (IF: 3.2)
- Joshi, R., Tamang, N. D., **Balraju, W.**, & Singh, S. P. (2024). Spatial and seasonal patterns of temperature lapse rate along elevation transects leading to tree lines in different climate regimes of the Himalaya. *Biodiversity and Conservation*, 1-22. (IF: 3.5).
- Balraju, W.**, Dhyani, R., & Joshi, R. (2024). Tree ring-based monitoring of pollution and heavy metal concentrations in the Himalayan region. *ENVIS Bulletin: Himalayan Ecology*, 32, 19–28. G.B. Pant National Institute of Himalayan Environment. <https://gbpihedenviis.nic.in/publication.html>
- Balraju, W.**, Upadhyay, K. K., & Tripathi, S. K. (2023). Assessing Toxic Element Accumulation Trend in *Magnolia champaca* Tree Rings at Tuirial Dumping Site in Mizoram, Northeast India Using Dendrochemical Analysis. *Water, Air, & Soil Pollution*, 234(12), 1-18. (IF: 3.8)
- Balraju, W.**, & Tripathi, S. K. (2023). Potential Trees Species of North-East India for Dendroclimatological Studies. *Environment and Ecology*, 41(3B), 1821-1831. (NAAS: 4.87)
- Balraju, W.**, Dinesha, S., Patil, G., Pradhan, D., Arshad, A., & Tripathi, S. K. (2023). Socio-Economic Drivers for the Collection of Tendu Leaves, A Case Study from Katghora Forest Division, Chhattisgarh, India. *Environment and Ecology*, 41(2), 921-926. (NAAS: 4.89)
- Balraju, W.**, Upadhyay, K. K., & Tripathi, S. K. (2022). Remediation of Toxic Metals by Forest Trees: Concepts and Strategies. *Environment and Ecology*, 40(3D), 1798-1810. (NAAS: 4.87)

Book Chapters:

- Balraju, W.**, & Skylab, G. (2022). Tree ring is an effective component to assess the historical and spatio-temporal trends of ecological contaminants and climate change: a brief introduction. Ecosystem services with sustainable development, 65.
- K., T.P., Santosh, S., **Wagmare, B.**, Madegowda, J., & Dey, A. N et al. (2025). Nanomaterials for Soil Carbon Sequestration: Implications in Agroforestry. In: Jabborova, D., Sarkar, D., S., R., Datta, R., Singh, S. (eds) Nanomaterials in Agroforestry Systems. Smart Nanomaterials Technology. Springer, Singapore. https://doi.org/10.1007/978-981-96-1337-3_6

Paper presentation

- Presented a paper entitled “**Dendrochronological investigations from the Eastern Himalayan region: potential trees and future opportunities**” in India’s G20 Presidency & Green-growth strategies for sustaining Himalayan societies under changing climate: Policy, Pathway & Tools held from 27th June to 28th June 2023

- Presented a paper entitled “**The dendrochronological potential of tree species from Eastern Himalaya: Application to the reconstruction of pollution history**” in the 3rd international workshop on Biodiversity and climate change-Sustainable development perspective (BDCC-2023) held from 16th February to 19th February 2023.
- Presented a paper entitled “**Dendrochemical Analysis: Unveiling Urban and Industrial Pollution Trends through Tree Rings for Efficient Environmental Management**” at 20th Commonwealth Forestry Conference-2021 At: Vancouver Campus, Canada, Affiliation: University of British Columbia. (Virtual mode) held from 14th August to 16th August, 2021.
- Presented a paper entitled “**The study of tree rings is an effective component of assessing the historical and Spatio-temporal trends of ecological contamination**” at the International Conference on Restore our Earth ICORE-2021 held from 21st April to 22nd April 2021.
- Presented a paper entitled “**Marketing and trading of tendu leaves (*Diospyrous melanoxylon*) chaitam forest range.**” at the National Conference on Natural Resources Management and Sustainable Agriculture held from 28th January to 29th January 2020.
- Presented a paper entitled “**Dendrochronological application in forestry field**” in an international workshop on novel methods for nutrient management in shifting cultivation in NE India: Balancing the old and the new held from 22nd January to 24th January 2020.

Participation in various conferences

- I participated in the 12th Annual Conventions of Biotechnology and Pharmacy (ABAP) & International Conference on Biodiversity, Environment and Human Health; Innovations and Emerging Trades organized at the School of Life Science, Mizoram University, from 12-14, November 2018.
- I participated in ‘The one-day national workshop on IPR and Plant Protection with Special Reference to North East India’. Organized by the Department of Botany, Mizoram University, on 18th December 2019.
- I participated in the ‘National Workshop on Ethics in Research and Preventing Plagiarism’ Organized by the Department of Physics, Mizoram University, on 3rd October 2019.

Training-Cum-workshop (Hands-on-training)

- Completed a 2-day training on **Statistical tools in Biomedical Research**, organized by the Department of Biotechnology, Mizoram University, Aizawl (23rd - 24th November 2018).
- Completed a 5-day training on **Remote Sensing and GIS Applications in Forestry and Ecology**, organized by North Eastern Space Application Centre (NESAC), Umiam, Meghalaya (21st - 25th October, 2019).
- Completed a 3-day training on **General Orientation to Geospatial Technology and Applications**, organized by Mizoram University (NRDMS-DST) (24th - 26th July 2019).
- Completed a 5-day training on **Statistical Applications in Ecological Research**, organized by GBP-NIHE, Sikkim Regional Centre, Gangtok (2nd - 6th March 2020).
- Completed a 5-day training on **Climate change adaptation for natural resource management**, jointly organized by IIFM, Bhopal, Mizoram University, Aizawl (11th - 15th March 2021).
- Completed a 6-day training on **Instruments in Biotechnology: Theories and Practices**, organized by the Department of Biotechnology, Mizoram University, Aizawl (30th - 5th June 2021).
- Completed a 3-day training on **Geomatics and Data analytics using open sources**, organized by IIT-Kharagpur (16th - 19th February 2023).
- Completed a 3-day training on **"Statistical Methods in Environmental Studies (SMES) using R software"**, organized by GBP-NIHE, Sikkim Regional Centre, Gangtok (1st – 3rd March 202

Reference

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Declaration

I hereby declare that all statements made in this resume are true and complete to the best of my knowledge and belief, and nothing has been concealed/ distorted.

Place: Lucknow, Uttar Pradesh.



Dr. W. Balraju