

Dr. Jnan Bikash Bhandari



Designation : Associate Professor

Qualification: M.Sc., B.Ed., Ph.D.
(*University of Burdwan*)

Experience :

Teaching:

Undergraduate Level : 11 Years

Postgraduate Level : 04 Years

Research: 17 Years

Contact

Address:

Department of Botany,
University of North Bengal,
P.O. - NBU, Dist. - Darjeeling,
West Bengal, Pin -734013, India.

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Institutions Served

- **University of North Bengal, Department of Botany**
Associate Professor
(Sep 14, 2018 to till date)
- **Siliguri College, Siliguri**
Assistant Professor of Botany
(April 12, 2007 to Sep 13, 2018)
- **Ilsora S.N. High School, Burdwan**
(Jan 16, 2001 to April 11, 2007)

Subject Specialization

Pteridology and Paleobotany

Research Interest:

Classical and Molecular Pteridology, Biodiversity Conservation, Stress Physiology, Bio-remediation.

Research Publications

Research Publications in International and National Journals: 28 (Twenty eight)

Books Published: 3 (Three)

Book Chapters: 5 (Five)

Conference Proceedings: 5 (Five)

Research Guidance

- PhD.s (Ongoing Supervision): 4
- PhD.s (Presently Registered): 1 (*University of North Bengal*)
- M.Sc. Dissertations: 10 (*University of North Bengal & Others University*)

Research Projects

- Studies on reproductive biology, antimicrobial properties and conservation strategies of some endangered epiphytic medicinal pteridophytes of Darjeeling District of West Bengal, India (F.PSW-128/09-10 (ERO) dated 8th October, 2009).
- Evaluation of the different hydroponic culture techniques as an alternative to conventional farming for sustainability. (F. PSW- 81/12-13 (ERO) dated 05.02.2013).
- Heavy Metal stress response of some selected Pteridophytes and characterization of associated Rhizospheric microbes of Darjeeling district. (1511/R-2020 dated 01.06.2020)

Research Publications

- Dey M. and **Bhandari J. B.** 2022: Diversity and Ethnomedicinal Pteridophytes of Jalpaiguri District West Bengal, India. *Indian Fern J.* 39(1) : 100-114. ISSN 0970- 2741.
- Saha M. and **Bhandari J. B.**, 2021: Antibacterial activities of the plant extracts and biochemical characterization of associated microbes of *Angiopteris evecta* (G. Forst.) Hoffm. and *Tectaria coadunata* (J. SM.) C. CHR. *Indian Fern J.* 38 : 101-114. ISSN 0970- 2741.

- Singh P. AND **Bhandari J. B.**, **2021**: Phytochemical evaluation and antioxidant activity of *Pteris biaurita* L. of Darjeeling district, West Bengal. *Indian Fern J.* **38** : 161- 170. ISSN 0970-2741.
- Saha M. and **Bhandari J. B.**, **2020**: Morphological & Biochemical Characterization of Rhizospheric Bacteria of some Ferns of Darjeeling District. *Indian Fern J.* **37** : 212-223. ISSN 0970-2741.
- Dey M. and **Bhandari J. B.**, **2020**: Study of spore morphology of some Pteridophytes occurring in Jalpaiguri district, West Bengal (India). *Indian Fern J.* **37**: 195 – 211. ISSN 0970-2741.
- Saha M., Mathur P. and **Bhandari J. B.**, **2019**. Antibacterial potential of different plant parts of *Davallia griffithiana* Hook., *Blechnum orientale* L. and *Phymatosorus cuspidatus* D. Don on some pathogenic bacteria. *Indian Fern J.*, 36: 241-252. ISSN 0970-2741.
- Dey M., Barman U. R. and **Bhandari J. B.**, **2019**. *Thelypteris triphylla* (Swartz) K. Iwatsuki [Thelypteridaceae]- a new record for the fern flora of Jalpaiguri district, West-Bengal, India. *Indian Fern J.*, 36: 283-286. ISSN 0970-2741.
- Bhandari, S. and **Bhandari, J. B.**, **2017**. Impacts of Global Climate Change on Medicinal and Aromatic Plants held on Indian Perspectives- A Review. *Climate Change and Adaptations*. Edited by Anirudra Gurung. Bishen Singh Mahendra Pal Singh, Dehradun, **2017**. pp 131-136. ISBN-978-81-211-0964-2
- Cultivation and Ex situ Conservation of a Threatened Evergreen Shrub *Ruscus hypoglossum* L. under Greenhouse Conditions. Authors: Cyaria Gurung, **Jnan Bikash Bhandari** and Anirudra Gurung. *J. Bot. Soc. Bengal* 70(2), **2016**. pp153-156. ISSN 0971-2976.
- Morpho-Anatomical and Biochemical Characterization of *Davallia griffithiana* Hook. Authors: Ishani Lahiri, Cyaria Gurung, **Jnan B. Bhandari** and Smitha Hegde *Indian Fern Journal*, **2016**. 33:Pp. (212-221). ISSN 0970-2741.
- Impacts of Global Climate Change on Medicinal and Aromatic Plants held on Indian Perspectives- A Review. S. Bhandari and **J.B. Bhandari**. *Climate Change and Adaptations*. Edited by Anirudra Gurung. Bishen Singh Mahendra Pal Singh, Dehradun, **2017**. pp 131-136. ISBN-978-81-211-0964-2.

- **Bhandari, J. B.** 2013. Evaluation of morpho-anatomical and Pharmacognosical properties of a medicinal Fern *Drynaria quercifolia* (L.) J. Sm. Biotechnology for People, Levant Books, Kolkata.
- **Bhandari, J.B.** 2013. Evaluation of Phyto-chemical Properties of of four Different Species of Epiphytic Ferns of Darjeeling District. Eco- Conservation and Sustainable Living, Narosa Publishing House, New Delh. Pp. 176-182.
- Ganguly, G., **Bhandari, J. B.** and Mukhopadhyay, R. 2005. Studies in the Morpho-Anatomy of some Indian Species of *Loxogramme* (Loxogrammaceae). *Geophytology*, 35 (1 & 2): 19-24.
- **Bhandari J. B.**, Choudhury, S. and Mukhopadhyay, R., 2004. Morphoanatomy and affinity of members of Antrophyums in India. *Indian Fern J.*, 21 : 26- 44.
- **Bhandari, J.B.** and Mukhopadhyay, R, 2003. Studies on the Morpho Taxonomy of Indian Vittarioid Ferns. In: Pteridology in the New Millennium, 205- 215 (EDS), Chandra, S. & Srivastava, M., Kluwer Academic Publishers, Netherlands.
- **Bhandari, J. B.** and Mukhopadhyay, R, 2001. Morphological, anatomical and phytochemical observations on two species of *Vittaria* Smith. *J. Econ. & Tax. Bot.* Additional Series No., (Recent Researchers in Plant Anatomy and Morphology) 19 :215-224.
- **Bhandari, J. B.** and Mukhopadhyay, R, 2001. Studies in the spore morphology of the genus *Loxogramme* (BL.) Presl. *Phytomorphology*, 51 (1) : 11-15.
- Dixit, R.D., **Bhandari, J. B.** and Mukhopadyay, R, 2001. A new species of *Lygodium* (Lygodiaceae) form North Andamans, India, *Nod. J. Bot* 21 (4): 427- 430.
- **Bhandari, J.B.** and Mukhopadhyay, R, 1999 Observation of the morphology of scales of the Indian Vittarioid ferns. *Sci & cult.* 65.
- **Bhandari, J.B.** and Mukhopadhyay, R, 1998 Morphological and anatomical ovservations on *Vittaria linearifolia* Ching *Indian fern J.*, 15:44-48.
- Mukhopadhyay, R. and **Bhandari, J.B.**, 1998. Occurrence of Microspore polyads in *Selaginella intermedia* (BI) Spring *Phytomorphology*, 49(1) 75-78.

- **Bhandari, J.B.** and Mukhopadhyay, R, 1997 Morphological and anatomical studies on *Antrophyum callifolium* BL. *Phytomorphology*, 47(2) : 155-160.
- **Bhandari, J.B.** and Mukhopadhyay, R, 1996 Observation on the spore morphology of Indian Vittarioid ferns. *Flora and Fauna*, 2(1):69-73.
- **Bhandari, J.B.** and Mukhopadhyay, R, 1996 Morphological and anatomical studies on *Antrophyum coriaceum* (D.Don) Wall, *Indian fern J.*, 13:62-66.
- **Bhandari, J.B.** and Mukhopadhyay, R, 1996 Morphological and anatomical observations on *Vittaria amboinensis* Fee *Indian Fern J.*, 13:40-45:
- **Bhandari, J.B.** and Mukhopadhyay, R, 1996 Studies in the reproductive structures and spore output on the genus *Vittaria* Smith. *J. Nat Bot Soc.* 50:79-87
- **Bhandari, J.B.** and Mukhopadhyay, R, 1995. Studies in the morphology and anatomy of *Antrophyum reticulatum* (Frost) Kaulf, *Indian fern J*, 12: 24-28.
- **Bhandari, J.B.** and Mukhopadhyay, R, 1995 Studies in the spore morphology to some Vittarioid ferns. *Indian Fern J*, 12: 110-115.

Conference/Seminar/Symposium/Workshop Organised/Attended:

- Participated and presented a paper titled Antibacterial activity.... Ferns of Darjeeling... in the national seminar on "Sustainable Utilization of Plants and Microbes" held on the Department of Botany, Visva-Bharati, Santiniketan, on March 28, 2019.
- Attended the International Conference during March 8-10, 2019 and presented a paper entitled New report of an endangered fern... held on Jalpaiguri District.
- Participated and presented a paper in a National seminar on "Local Biodiversity" sponsored by West Bengal Biodiversity Board and organised by Department of Botany Raja Rammohun Roy Mahavidyalaya, Hooghly held on 13th January, 2018.
- Participated in the workshop of Subject Botany held on the conference Hall. University of North Bengal, organised by Council for Undergraduate Studies in Science, on 13th November 2017.

- Helped in enriching the knowledge of students especially the students held on backward class by taking successfully all the allotted UGC sponsored remedial classes in the session 2016-2017.
- Participated and presented a paper in UGC-Assisted International Interdisciplinary Seminar entitled "Hydroponics: The Ultimate Answer to Sustainability and Global Food Crisis", organised by Surya Sen Mahavidyalaya held on March 28-29, 2017.
- Participated in a Special Lecture on "Indian Rural Society: Sociological Perspectives & Muslim in India: A Sociological Enquiry" organized by the Department of Sociology on 31 March, 2017 at Siliguri College.
- Participated in the Seminar on "A Gentle Introduction to The Application of Mathematics, Mathematical Logic, and Computer Programming and Statistics" organised by Department of Mathematics and Statistics, Siliguri College, Siliguri held on 10 March, 2017.
- Participated in the National Seminar held at Sonamukhi College and presented paper (oral/poster) entitled "Some Medicinally important Ferns and Fern Allies in Darjeeling District" held on 4-5 October, 2016.
- Participated in National Workshop on "Exploitation of Plant and Microbial Resources of North Bengal" organised by Department of Botany, University of North Bengal held on 14-16 December, 2015.
- Participated in DST Sponsored One-Day Seminar on "Environment and Human Health" sponsored by Department of Science and Technology Govt. of West Bengal and organised by Nakshalbari College, Darjeeling held on 20th November, 2015.
- Participated in UGC Sponsored National Seminar on "Global Climate Change and its Impacts on Floral, Faunal and Microbial Biodiversity" organised by Department of Botany, St. Joseph's College, Darjeeling held on 26-28 June, 2015
- Participated and presented a paper in UGC Sponsored National Workshop on "Aspects and Prospects of Biofertilizer and Biomanure" organised by Raja Rammohun Roy Mahavidyalaya, Hooghly held on 5-6 December, 2014.
- Attended the 11th Orientation Program on NSS at Ramakrishna Mission Ashrama organised by Ramkrishna Mission, Narendrapur, Kolkata held on 9-15 November 2014.
- Organised an UGC sponsored National Level Workshop on "Recent Trends in Application of Modern Scientific... Researches" at Siliguri College, Siliguri held on 20-22 December, 2013.
- Presented a paper in National Seminar at P.D. Women's College, Jalpaiguri held on 4-5 December, 2012.

- Participated in a three days National Conference on Biology and Bioinformatics of Economically Important Plants and Microbes and also presented a paper on “Phyto Economica Chemical Studies and...” in Darjeeling District, organised by Department of Botany and Bioinformatics, NBU held on 17-19 February, 2012.
- Participated in a three day National Seminar on Diversity Conservation and Sustainable Utilization of Plants and Traditional Knowledge in Eastern Himalaya and also presented a paper on "Comparative Morpho-Anatomical... Antibacterial Properties" organised by Department of Botan, NBU held on 14-16 December, 2010.
- Participated in the International Symposium on "Ferns and Fern Allies: Diversity. Bioprospection and Conservation" organized by the Institute of Himalayan Bioresource Chandie CSIR Palampur. Himachal Pradesh, India and The Indian Fern Society. Organised by The Institute of Himalayan Bioresource Technology, CSIR Palampur, Himachalpradesh, India held on November 10-12, 2010.
- Participated and presented a paper entitled "Evaluation of the antibacterial occurring bacteria" In the above symposium organised by Department of Botany, NBU held on February 28 - March 1, 2009.
- Participated in the International Symposium on "Perspectives in Pteridophytes" organized by The Indian Fern Society and National Botanical Research Institute, Lucknow, during November 27-29, 2008.
- Participated and presented a paper in oral session entitled Occurrence and distribution of some medicinal Pteridophytes of Kurseon Sub division of West Bengal in the above symposium organised by Department of Botany, NBU held on January 24-25, 2008.
- Participated the seminar and presented the paper entitled "Perspectives and Quality Control Standardization in Homeopathic Medicinal Plant" organised by Department of Botany, University of Burdwan held on March 15-16, 2008.
- Participated in the conference and presented a paper entitled "Studies in the spore morphology of Indian Tectarioid Fern" organised by Department of Botany, University of Burdwan held on March 20-21. 2004.
- Participated in the National Seminar on "Pteridophytes-The Vanishing Plants belon Department of Botany, Panjab University, Chandigarh and also presented a paper entitled "MorphoAnatomy and Affinity of the Antrophyums of India" organised by Department of Botany, Panjab University, Chandigarh held on November 25-26. 2002.
- Participated in the National Symposium held a Jivaji University held on November 12 to 14, 1999, and act as Reporteur.

- Participated and delivered a lecture Third West Bengal State Science Congress on Spore morphology of some Indian Vittarioid Ferns organised by University of Burdwan, 28th February- 1st March, 1996.
- Participated and contributed a paper in the National Symposium on Researches in Pteridology held on the Department of Botany, J.N. Vyas University, Jodhpur held on October 5-7, 1995.
- Participated and delivered a lecture in National Symposium on Researches in Pteridophytes on Morphotaxonomy of *Antrophyum* organised by Department of Botany, J. N. Vyas University, Jodhpur 5-7th October 1995.

Books Published

- **The Vittarioid ferns of India. Bhandari, J.B. and Mukhopadhyay, R. 2009. Bishen Singh and Mahendra Pal Singh, Dehradun.**
- **Eco-Conservation and Sustainable Living. Edited by C. Gurung and J.B. Bhandari (Narosa Publishing House, New Delhi, 2013).**
- **Manual on Instrumentation in Biology. Edited by Bhandari, J.B. and Gurung, C. (Narosa Publishing House, New Delhi, 2021)**

Membership

- **Life Member of Indian Fern Society since 1995**
- **Natural Member of Eastern Himalayan since 2000 Society for Spermatophyte Taxonomy since 2011**
- **Life Member of Botanical Society of Bengal since 2021**

Awards

- **Awarded with Certificate of Merit for the year 2000.**
- **Awarded with Professor S.S. Bir Medal in Pteridology for the year 2009.**

Administrative Experience

- **Member of Undergraduate Board of Studies in 2011-12, and 2108-19.**
- **Member of Postgraduate Board of Studies since 2018.**
- **Head- Department of Botany, Siliguri College for 1.6 years (approx.).**
- **Working as NSS coordinator of Siliguri College from 2008-2011.**