



St. Xavier's College

Dr. Camil Bulcke Path, Ranchi

Faculty Profile

Name of Faculty Member	:	Dr. Bharti Singh Raipat
Gender	:	Female
Email ID	:	braipat@gmail.com
Name of Department	:	Department of Zoology
Designation	:	Associate Professor
Level of Teaching	:	Undergraduate and Postgraduate
Academic Qualification	:	M.Sc., Ph.D.
Total Teaching Experience	:	33 Years and 02 Months
UGC NET/SET Qualified	:	No

Research Papers Published:

- 1) **Bharti Singh Raipat** and Manoranjan Prasad Sinha, "**Biosorption of Lead from Aqueous medium by Cyanobacterium NOSTOC Carneum Agardh**", International Journal of Creativity Research Thoughts (IJCRT), Vol. 12, Issue 3, March 2024, ISSN: 2320-2882.
- 2) "**Green Nanotechnology: Synthesis of Silver Nanoparticles using Aqueous Leaf extracts of Swertia Chirayita and Punica Granatum**", An International quarterly Journal of Life Science, Vol. 18(3), Pg. 167-176, 2023.
- 3) "**Different techniques utilized for characterization of metallic nanoparticles synthesized using biological agents: A review**", Balneo and PRM Research Journal, 14(1): 534, 2023.
- 4) "**A Review on insect collection and preservation techniques**", European Journal of Pharmaceutical and Medical Research, 9(7): 233 – 239, 2022.
- 5) "**Concepts of Bioremediation, Bio augmentation and Biosensors**", Advance in Environmental Waste Management & Recycling, 4(2): 152 -155, 2021.

- 6) **"Different types of wings in insects"**, In Jeune Chercheur: Volume1: Basics of Entomology; Edited by Manoj Kumar; **ISBN: 978168494817**. Notion Press, Chennai, India. Pp – 01-48, 2021.
- 7) **"Different types of legs in insects"**, In Jeune Chercheur: Volume1: Basics of Entomology, 2021.
- 8) **"Sampling procedures and diagnosis technique of Human Coronavirus: A review. In Air quality, climate change and the environment effects referring to the pandemic COVID-19 lockdown"**, Edited by A. S. Gautam, S. Dhawan, T. Kandari, P. Semwal. **ISBN: 978-93- 84866-00-0**. Ancient Publishing House, Delhi (India). Pp 108-125, 2020.
- 9) **"Analysis of Noise Pollution of Some Industrial and Commercial Hubs in Ranchi"**, GENIUS-Volume – VI, Issue-II-ISSN- 2279-0489 (L.F.-4.954) February-July - 2018, 34, 2018.
- 10) **"Bio remedial efficacy of Nostoc carneum Agardh in industrial effluents treatment"**, Journal of microbiology and experimentation, February 7th, 2018.
- 11) **"Different blood collection methods from rats: A review"**, Baleno Research Journal, Vol.8, No.1, May 2017, 46-50, 2017.
- 12) **"Studies on Physico Chemical Parameters of 5 water bodies of Ranchi (Jharkhand)"**, Baleno Research Journal, Vol.8, No.1, May 2017, 51-57, 2017.
- 13) **"Population dynamics of soil microarthropods in Parthenium hysterophorus L"**, Vol – 13, The Bioscan – 22-27, 2015.
- 14) **"Population Dynamics of Soil Microarthropods in Parthenium Hysterophorus L. Infested Cropland"**, Konkan Geographer, Vol.No.13, Nov.- Dec.2015, ISSN 2277-4858, 67-70, 2015.
- 15) **"Hormonal profile & haematological parameters of male wistar albino rats treated with methanolic extract of Parthenium hysterophorus"**, Journal of Experimental sciences 4(1): 1-4, 2013.
- 16) **"Investigations on Growth of Soil Bacteruak Communities with relation to pesticides"**, J.Bio.Innov2(1)PP:23-32, 2013, ISSN 2277-8330 (Electronic), 2013.
- 17) **"Evaluation of soil microfauna under Parthenium hysterophorus (L) vegetation"**, Asian Journal of Experimental Sciences 26(2), 2012.
- 18) **"Alteration of thyroid hormone profile as a biomarker of carcinogenesis"**, Global Journal of Bioscience and Biotechnology 1(1): 212-223, 2012.

- 19) **"¹⁶Sr DNA based identification of bacteria in the organophosphates treated agricultural soil"**, International Journal of Applied sciences and engineering research 1(2): 40-44, 2012.
- 20) **"Tolerance and biotic stress response of soil microflora against organophosphorus pesticides"**, The Bioscan, Vol-1 (Special issue): 99- 104, 2012.
- 21) **"Evaluation of soil microfauna under Parthenium hysterophorus L. vegetation"**, Asian Journal of Experimental Sciences 26(2) 25 – 30, 2012.
- 22) **"Alternation of thyroid hormone profile as a biomarker of carcinogenesis"**, Global Journal of Biosciences and Biotechnology 1(1): 212 – 223, 2012.
- 23) **"¹⁶Sr DNA gene-based identification of bacteria isolated from soil amended with Parthenium hysterophorus L"**, The Ecoscan Special issue (I): 63 – 69, 2011.
- 24) **"Identification and characterization of bacterium based on genomic analysis, isolated from ecosystem agro ecosystem of Ranchi"**, American-Eurasian Journal of Agriculture and Environmental Science 11(2): 154 – 158, 2011.
- 25) **"Phylogenetic analysis of tolerant bacteria from Parthenium hysterophorus L amended soil by bootstrap approach"**, The Bioscan 6(2): 176 – 183, 2011.
- 26) **"Assessment of impact of *Parthenium hysterophorus* L. on *Eisenia foetida* through vermicomposting"**, The Bioscan 5(1): 149-152, 2010.
- 27) **"Ecobiological and bioinformativ study of soil bacterium from agro-ecosystem"**, The Bioscan 5(1): 95-104, 2010.
- 28) **"Identification and characterization of bacterium based on genomic analysis, isolated from agro ecosystems of Ranchi"**, The Bioscan 5(1): 105-114, 2010.
- 29) **"Effect of organophosphorus insecticide on soil bacteria"**, The Bioscan 5(1): 239 – 246, 2010.
- 30) **"Studies on serum protein profiles as biomarker of cancer"**, The Bioscan 4(1): 157-160, 2009.
- 31) **"Impact of aging of earthworm midden on density dynamism and biomass of microbial population"**, The Bioscan 4(3): 535-538, 2009.
- 32) **"Restriction endonuclease based DNA polymorphism and analysis of carcinogenesis"**, The Bioscan 4(4): 621 – 624, 2009.
- 33) **"Some aspects of index of dispersion on negative binomial distribution of fresh water oligochaete population"**, The Ecoscan 2(1): 115-120, 2008.

- 34) "**Biosorption of cadmium from aqueous medium by cyanobacterium *Nostoc carneum* in agardh**", The Bioscan 2(1): 125-127, 2008.
- 35) "**Cadmium chloride induced dose and duration dependent biomass variation in *Nostoc punctiforme* AG – Inoculators**", The Bioscan, 2(2): 47-49, 2007.
- 36) "**Role of Education in Schools, Colleges and NGOs in developing sustainable lifestyle.**", Proceedings of National Conference on Environmental education, 64 – 70, 2006.

Participation in UGC-HRDC Course/FDP/OC/RC:

- 1) Participated in the Refresher Course in **Environmental Science** from 10.05.2011 to 30.05.2011 organized by UGC-ASC Ranchi University Ranchi.
- 2) Participated in the Refresher Course in **Environmental Science** from 30.07.2008 to 20.08.2008 organized by UGC-ASC Ranchi University Ranchi.
- 3) Participated in the Refresher Course in **Environmental Science** from 18.03.2005 to 07.04.2005 organized by UGC-ASC Ranchi University Ranchi.
- 4) Participated in the Orientation Programme from 01.07.2001 to 28.07.2011 organized by UGC-ASC Ranchi University Ranchi.
- 5) Participated in the Refresher Course in **Zoology** from 20.11.1998 to 10.12.1998 organized by UGC-ASC Ranchi University Ranchi.

Seminar/Conference attended/Paper Presented (National/International):

- 1) Paper presented titled "**Biomonitoring of a Tropical Freshwater Habit by Macro Benthic Community Analysis**", National Seminar on the impact of Pollution of Fishes and other Aquatic Life in different water Bodies, Jamshedpur Co-operative College on 5th & 6th February 2006.
- 2) Paper presented titled "**Role of Education in Schools/ College/ Universities and NGO's in Developing Sustainable Lifestyle**", National Seminar, Department of Zoology, Patna Women's College on 10th & 11th February 2006.
- 3) Paper presented titled "**Bioaugmentation of *Nostoc Punctiforme* for Heavy Metal Renewal**", National Seminar Ranchi Wome's College, Ranchi on 7th & 8th March 2006.

- 4) Paper presented titled "**Traditional herbal Therapy for Gastroenterological Disorders**", National Seminar on Importance of Medicinal Plants Cultivation in Promoting the Rural Economy & Supporting Rural Health Care System, 2006.
- 5) Paper presented titled "**Resource based Competition among some fishes in composite culture**", National Conference on Scenario of Environmental Pollution, and its effects on living organism, Govt. College of Arts and Science, Aurangabad, December 2009.
- 6) Paper presented titled "**Isolation, Identification and Characterization of Dominant Bacteria**", International Conference on Energy, Environment and Development of Environment sciences, Sambalpur University in Collaboration with National Environmentalists Association, December 2010.
- 7) Paper presented titled "**Assessment of Impact of Parthenium Hystreophorus L. No Eisenia Through Vermicomposting**", National Conference on Global Warming and Environment Conservation, Marwari College, Ranchi in March 2011.
- 8) Paper presented titled "**Impact of methanolic extract of Parthenium hystreophorus on liver profile of wistar albino rats**", National seminar on 'Prospects of cultivation and marketing of medicinal plants in Jharkhand', Chas college, Bokaro, from April 11-12, 2015.
- 9) Paper presented titled "**Effect of methanolic extract of parthenium hystreophorus I. On histology of wistar albino rats**", National conference on 'Harmony with nature in context of environmental issues and challenges of 21st century', Faculty of earth sciences, MLSU, Udaipur, Rajasthan from 28-30 Nov, 2014.
- 10) Paper presented titled "**Duckweed: a tiny aquatic plant with a tremendous potential in waste water treatment and its positive impact on other environmental issues**", National Seminar on 'Encroachment of water bodies: challenges and remedies', Society for environment and social awareness (SESA), Jharkhand, 8-9 March, 2014.
- 11) Paper presented titled "**Status of women: health, safety and environmental hazards**", National Conference on Women and Occupational Health: stress, hazards and safety, Patna Women's College, 2012.
- 12) Paper presented titled "**Effect of methanolic extract of parthenium hystreophorus I. On histology of wistar albino rats**", National conference on harmony with nature in context of environmental issues and challenges of 21st century, Faculty of earth sciences, MLSU, Udaipur, Rajasthan from 28-30 Nov, 2014.

- 13) Paper presented titled "**Environmental Degradation: Challenges and Remedies**", 5th Annual Conference of Konkan Geographers, 5-6 November, 2015.
- 14) Attended NAAC sponsored workshop on 'Enhancing quality in higher educational institutions', IOAC cell, Nirmala College, Ranchi, 30th April to 1st May, 2016.
- 15) Attended National Seminar on Recent Advances in Civil and Environmental Engineering, Birla Institute of Technology, Mesra, Ranchi, 2016.
- 16) Attended National Conference on Construction management mechanization and Environmental Sustainability (CMMES), Department of Civil and Environmental Engineering, Birla Institute of Technology, 21-22 February 2017.
- 17) Invited as Resource person – International conference ISCB, on Interface of chemical biology in Drug Research, SRM University, 8-10 February 2017.
- 18) Attended National Conference on Harmony with nature in context of Biodiversity Conservation & Ecosystem Management, Department of Zoology, St. Xavier's College, Ranchi in Collaboration with National Environmentalists Association, India, 28-30 October, 2018.
- 19) Attended International Conference on Harmony with Nature in Context of Biotechnological Intervention and Biodiversity, Organized by National Environmentalists Association, India, 1-3 December, 2003.
- 20) Attended International conference on Environment, Forestry and Sustainable Agriculture, Organize by Department of Botany, St. Xavier's College, Ranchi, Jharkhand in association with International Academy of Science and Research, international Consortium of Contemporary Biologists in collaboration with Confederation of Indian Universities, New Delhi, 14-16 November, 2022.

Book Authored:

- 1) **Conceptual Environmental Studies**, published by Satyam Publishing House, 2022, ISBN: 978-93-89042-86-0.

Research Project Carried Out:

- 1) "**Feasibility of Adding Environmental value to Congress Grass and Long Grass through Vermitechnology**" during May-June 2009 as a Summer Research Fellowship Program under the supervision of Dr. Ravinder K. Kohli, Centre for Environment and Vocational Studies, Department of Botany, Punjab

University, Chandigarh. The Summer Research Fellowship Programme is jointly sponsored by IASc (Bangalore), INSA (New Delhi) and NASI (Allahabad).
Completed

- 2) **Co – Investigator** - Exploration, Antimicrobial Evaluation and Bio-molecular characterization of Ethnomycologically Potent Macrofungi of Assam, DBT-NER, Twinning Project between Gauhati University, Guahati and Ranchi University, Ranchi & Department of Zoology, St. Xavier's College, Ranchi- **Completed**.
- 3) MoU was signed between the **Students of University of Antwerp**, under guidance of Prof. Dominique Keikens and students of Department of Zoology, St. Xavier's College, Ranchi under the guidance of Head of the Department of Zoology, Dr. Bharti S. Raipat. The Purpose of this MoU is to establish a working relationship between the aforesaid in Environmental Sciences and Socio responsibilities for percolation of environmental Laws and human Rights, 22nd September, 2011.
- 4) Mentored Internship work of **Ms. Charlotte** a student from Antwerp University, Belgium: Comparative study: Percolation of environmental laws in Jharkhand and Antwerp.
- 5) Mentored internship work of **Anzu Enokida** a student from Antwerp University, Belgium on Quality of Potable Water: Comparative study in Belgium and Jharkhand, August, 2013.

Experience of Ph, D, Guidance:

- 1) **Ramita Kumari** is awarded Ph.D. in **2019** from **Ranchi University, Ranchi** under my Supervision. Research Topic "**Histological, haematological and immunological impact of methanolic extract of Parthenium hysteriphorus L. on wistar albino rat, Rattus norvegicus (Berkenhout)**".
- 2) **Mr. Deokant** is awarded Ph.D. in **2016** from **Ranchi University, Ranchi** under my Supervision. Research Topic "**Studies on some aspects of molecular, immunological, biochemical and hematological impact of carcinogenesis**".
- 3) **Nazia Siraj Sultan** is awarded Ph.D. in **2015** from **Ranchi University, Ranchi** under my Supervision. Research Topic "**Studies on impact of organophosphates and Biopesticides on soil microfauna**".
- 4) **Priyanka Saha** is awarded Ph.D. in **2015** from **Ranchi University, Ranchi** under my Supervision. Research Topic "**Studies on impact of Parthenium hysterophorus L on soil fauna**".

Invited Lecture/Special Lecture Delivered/Resource Person:

- 1) Delivered invited talk as a Resource Person on topic '**Biosorption of lead from aqueous medium by cyanobacterium *Nostoc carneum* Agardh**' in 2nd International Conference on Pollution, climate change, Global warming – ICPCG-2023, 17th – 18th , April, Dubai, UAE.
- 2) Resource Person in Refresher course in **Life Science** organized UGC HRDC, Ranchi University, Ranchi (from 18-07-2023 to 31-07-2023) on topic 'Conservation strategies of Biodiversity: A Review' on 26-07-2023 from 02.00 pm to 03.30 pm.
- 3) Resource person in Refresher course in 9th Faculty Induction Program (Guru Dakshata) organized by UGC HRDC, Ranchi University, (from 01-02-2022 to 28-02-2022) on topic '**Water Crisis and Water Management**'.
- 4) Invited as a resource person in **Tribal Development Meet-Endeavour for inclusive development: nurturing indigenous opulence** at Chanakya BNR, Ranchi, Jharkhand as Session moderator for opening remarks, 30 June, 2018.
- 5) Delivered an invited lecture during the International Biodiversity Day Celebration by JBB, **Hotel Chanakya BNR Hotel**, Ranchi, 22 May, 2018.
- 6) Delivered Invited Talks on "**Present Spectra of Research in India**", OPENCON, St. Xavier's College, Ranchi, 2017.
- 7) Delivered Invited Talks on **Biodiversity of Jharkhand and Conservation Strategies**, International Day for Biological Diversity JBB, Ranchi, 22nd May 2017.
- 8) Invited as a Resource Person to deliver a talk on **Environmental Sustainability** in National Conference on _ Management Mechanization & Environmental Sustainability (CAMMES 2017) organized at Department of Civil & Environmental Engineering BIT, Mesra on 21-22 Feb 2017.
- 9) Invited as Resource Person (Chaired Technical Session) in International Conference ISCB on **Interface of Chemical Biology in Drug Research** organized by SRM University, Feb 8-10th 2017.
- 10) Invited as Resource Person to deliver a talk in 2nd **Annual International Congress of Algae 2013**, Resources' on 10-02-2022 from 10.30 am to 12.00 noon, **Hangzhou, China, AICA-2013**.
- 11) Delivered invited talk on **Ecofriendly Lifestyles in National Seminar** in a conference on recent Advances in Civil & environmental Engineering by Department of Civil & Environmental Engineering at **BIT, Mesra, Ranchi**, Feb 25-26, 2016 (2015-2016).

- 12) Chaired Technical session in International Conference at St. Xavier's College, Ranchi on 3.11.2012.
- 13) Lecture delivered on '**Role of Women in the Changing Scenario**' in a seminar on "**Freedom of Women in Free India**" organized by Pratigya, St. Xavier's College, Ranchi, on 17th October 2012.
- 14) Lecture delivered on '**Herbal Medicines**' at **Loreto Convent**, Ranchi, on 12.05.2012.
- 15) Invited as Delegate in International Conference & member of panel discussion panel on **Impact of Mining on water resources** at **University of Gent, Belgium**, 8th March, 2012.
- 16) Delivered Lecture on '**Impact of Mining on Water Resources**' in Jharkhand-India in International Conference at **Antwerp University, Belgium**, on 05.03.2012.
- 17) Deliver Lecture on **Status of Women: Health, Safety and Environmental hazards** in National Seminars organized by **Patna Women's College**, Patna, 17th to 18th Jan 2012.
- 18) Delivered Lecture on '**Bioremediation of organically polluted waste water**' in international Conference at **University of Kerala**, on 09.12.2011.
- 19) Organizing Secretary of International Conference organized by department of Zoology at St. Xavier's College, Ranchi from 2nd to 4th November 2012
- 20) Organizing Secretary of National Conference organized by department of Zoology at St. Xavier's College, Ranchi from 28th to 30th October 2018.
- 21) Lecture delivered on '**Green Cities plan for the planet**' World Environment Day Celebrations, at Institute of Engineers, Ranchi, 05.06.2005.
- 22) Lecture delivered on '**Environmental Education & Sustainable Development**' in UGC ASC at **Ranchi University**, on 18.03.2006.
- 23) Lecture delivered on '**Environmental Education & Sustainable Development**' in UGC ASC at **Ranchi University**, on 19.03.2006.
- 24) Lecture delivered on '**Sustainability Component in Environmental Education**' in UGC ASC, at **Ranchi University**, on 20.03.2006.

Any Special Award/Achievement:

- 1) Appointed as judge in Jharkhand Science and Environment Festival-14 at BIT, on 9.01.2014.

- 2) Appointed as Course Coordinator for Refresher course Environmental Science from 05.01.2013 to 25.01.2013 at UGC Academic Staff College Ranchi University, Ranchi.

Extension Work/Community Service:

- 1) **Coordinator of Women's Cell, St. Xavier's College, Ranchi**
- 2) **Member of Grievance Redressal Cell, St. Xavier's College, Ranchi**
- 3) **Presiding Officer of Internal Complaints Committee (ICC & SH) of St. Xavier's College, Ranchi.**
- 4) **Founder and Co-Ordinator of Eco Task Force – VANDEEP of St. Xavier's College, Ranchi since June 2006.**
- 5) Organised several Plantation drives in and around Ranchi
- 6) Organised Environmental quizzes in the college and schools of Ranchi
- 7) Organizing counselling sessions for girl students
- 8) Organizing Symposia on Girl's health problems
- 9) Organizing visit to old age homes, Cheshire home, Blind school
- 10) Associated with organization carrying out skill developmental programmes for women in Jharkhand
- 11) Associated with 'Balsanrakshan kendra' in designing of academic and extra-curricular activities and member of its functioning body.
- 12) Participated in Discussion on 'Nav Bharat Manthan – Vikasit Bharat' organized by Doordarshan, Ranchi on 20th February, 2024.

[Dr. Bharti Singh Raipat]