**SUMAN POUDEL**

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**Research Interests**

Plant systematics, Molecular Biology, Evolutionary genomics, Population genetics, Bioinformatics, Population Ecology, Medicinal plants, Climate change, Plant physiology, Biodiversity & Conservation biology

**EDUCATION**

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| **2016 – 2018**  3.70 CGPA   (A- grade) | **Masters of Science (MSc),** Central Department of Botany, Tribhuvan University, Nepal  **Botany: Plant Systematics and Biodiversity & Biogeography**  *Dissertation:* "Population structure and life history traits of *Nardostachys jatamansi* along fire gradient: Implication for conservation"  *Advisor:* Prof. Suresh Kumar Ghimire |
| **2012 - 2016**  First division  (65.45 %) | **Bachelor of Science (BSc).** Birendra Multiple Campus, Tribhuvan University, Nepal  **Botany (major)** and Chemistry (minor)  *Project Work*: "Ethno-pharmacological studies of Tharu, Darai and Bote tribes in Kumroj area, Chitwan, Nepal" |

**RESEARCH AND FIELD WORK EXPERIENCE**

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| 2023 -  present | **Assistant Research Fellow**  Nepal Academy of Science and Technology (NAST), Faculty of Science, Lalitpur, Nepal  **Lab Involvement:** **Molecular Biology Unit**  1) DNA barcoding and characterization of genetic diversity medicinal plants of Nepal  (Role: DNA extractions, PCR experiments, Sequencing and BLAST queries, phylogenetic analysis)  **Nepal Climate Change Knowledge Management Unit**  2) Ecosystem based Adaptation for climate resilient development  (Role: Leading role on field research activities, and technical supports)  3) Research on climate smart agriculture for sustainable food green cities - Hydroponics  (Role: research & community outreach) |
| 2021 | **Research Consultant - Plant taxonomist**  Nepal Health Research Council (NHRC), Kathmandu Nepal  **Project:** *Antidiabetic drug development from the available medicinal plants of Nepal*  (Role: Field work & assist in lab work for phytochemical extractions) |
| 2020 | **Field Research Assistant**  Ministry of Forests and Environment, Nepal and Kerala Forest Research Institute, India.  **Project:***Forest Health Monitoring of Nepal* funded by **Food and Agriculture Organization**  (Role: Ecological survey, Herbarium preparation, Data analysis and technical report writing) |
| 2019 | **Biology Group - research team member**  **National Geographic Society (NatGeo), USA** and Tribhuvan University, Nepal  **Project:** *Perpetual-Planet project for life at extreme from Everest region*  (Role: permanent research plot established, plant identification & herbarium preparation) |
| 2018 | **Field Research Assistant**  Missouri Botanical Garden, USA and Tribhuvan University, Nepal  **Project:** *Global Observation Research Initiatives in Alpine Environment* (GLORIA), revisit survey of Langtang National Park, Kanchenjunga and ApiNampa Conservation areas,  Nepal (Role: Field survey, data logger monitoring, herbarium preparation and plant identification) |

**PUBLICATIONS**

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| Research articles | Bhandari, P., Li, B. Z., Kunwar, A., **Poudel, S**., Zhou, S. L., & Zhang, S. R. (2024). Taxonomic study of Pan-Himalayan *Cyperus* species which used to be placed in the segregate genus *Pycreus*. *Phytotaxa*, *638*(**2**), 105-130. |
| Ojha, R., Poudel, Y. B., **Poudel, S**., Shah, S., Bashyal, S., Pandey, N., & Bhandari, P. (2023). Addition of Two Species of *Cyperus* (Cyperaceae) to the Flora of Nepal. *The Journal of Japanese Botany*, *98*(**5**), 271-274.  Subedi, B., Chettri, M.K., & **Poudel. S.** (2024). Ecological study of *Swertia Chirayita* (Roxb. ex Fleming) H. Karst in the upper region of Gorkha, Nepal. Journal of Ecology and Conservation. (under publication) |
| Text books | Mahaseth, A.K. and **Poudel, S**. (2024). *A textbook of Botany* for Plant and Animal Science, Samiksha Publication (1st edition) |
| Mahaseth, A.K. and **Poudel, S.** (2022). *Essential Textbook of Botany* for Health & Applied Science, Samiksha Publication (3rd edition - 2024).  **Poudel, S.**, Joshi, G., Nepuane, S., and Poudel, Y.B. (2019). *A complete Botany*, CDP publisher and distributors (2nd edition 2024). |
| Book chapter | **Poudel, S.** (2024). Urban biodiversity and ecosystem services at foothills of the Himalayas. In **(NCCKMC** (Ed.), *Climate change knowledge brief*. Nepal Academy of Science and Technology. |
| Manuscript | Paudel et al. (2024). The first record of two naturalized herb species, *Solidago canadensis* (Asteraceae) and *Pilea micropylla* (Urticaceae) in Nepal. Rheedea. (under-review)  Poudel, S., Devkota, B., Gautam, S., & Neupane, P.K. Sustainability approach of climate resilient soilless farming in context to Nepal: Productivity, nutritional value and cost-profit analysis. Journal of Plant Nutrition (under preparation) |

**CONFERENCE ATTAINED**

* 2022. International Conference on Biodiversity and Bioprospecting, Kathmandu, Nepal. ***Paper presentation***. Abstract title: ‘*Population structure of Nardostachys jatamansi along a fire gradient: Implication for conservation*.’
* 2022. 9th National Conference on Science and Technology, Lalitpur, Nepal. ***Poster presentation****.* Abstract title: *‘Ethno-medicinal practice among Tharu, Darai, and Bote tribes in Kumroj area, Chitwan, Nepal.’*
* 2020. National conference on Integrating Biological Resources for Prosperity, Biratnagar, Nepal. ***Paper Presentation*.**  Abstract title: ‘*Population status and new conservation challenge for endangered Nardostachys jatamansi from alpine habitats in Langtang National Park.*’

**FELLOWSHIPS AND GRANTS**

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| 2023 – 2024 | Graduate Research Fellowship, Nepal Academy of Science and Technology ($3000) |
| 2019 - 2020 | Master Research Support - University Grant Commission Nepal ($500) |
| 2013 - 2015 | Undergraduate Study Support, University Grant Commission Nepal ($750) |

**TEACHING EXPERIENCE**

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| 2022 - 2023 | Graduate Teaching Assistant, Amrit Science Campus, Tribhuvan University  Botany Faculty - Part  time (Plant systematics) |
| 2020 - 2021 | Kathmandu Model College (KMC), Bagbazar, Kathmandu  Botany Lecturer - Full time (tutoring for higher secondary level students) |
| 2015 - 2017 | Gurukul Higher Secondary School, Bharatpur, Chitwan  Biology Laboratory Instructor  - Full time(for Cambridge A-level & +2 Science) |

**SYNERGISTIC ACTIVITIES**

* Media Coverage: Hydroponics research challenge and opportunities in Nepal, Kantipur F.M. 96.1. Science talk program. July, 2024. (<https://youtube.com/watch?v=DkTBmgmbj9Q>)
* National Conservation Forum - Restoring ecosystem through nature based solutions, Lalitpur Nepal. 27-30 June, 2024.
* Global Biodiversity Information Facility (GBIF) Biodiversity Data Mobilization Workshop, organized at Himalayan Resource Foundation, Lalitpur Nepal. 8-10th Jan, 2024.
* Nepal-CMS VATAVARAN Film Festival and Forum on Biodiversity Conservation and Climate Action. 15th - 17th Dec, 2023
* Earth observation and geospatial information technology for forest carbon monitoring organized by ICIMOD, AIRCAS and NAST Kathmandu Nepal. 14-18th August, 2023.
* International Winter School: Biodiversity, Ethnoecology and Bioprospecting in Nepal Himalaya. Tribhuvan University, Nepal and DAFNAE, University of Padova, Italy. 29th Jan - 8th Feb, 2018
* Basic Nature Guide Training organized by Chitwan National Park and Nature Guide association, Ratnanagar, Chitwan, Nepal.

**SKILLS**

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| Molecular techniques: RT-PCR, DNA sequencing  Analytical instrument: GCMS, HPLC, NMR  Bioinformatics: BLAST database queries, phylogenetic tree analysis | Statistical Analysis: Python, R- studio, SPSS  Softwares: QGIS, Github  Other: Photography, video editing, graftings |

**PROFESSIONAL MEMBERSHIPS**

Commission member IUCN CEC (Commission on Education and Communication)

Lifetime member - Botanical Society of Nepal       Biotechnology Society of Nepal - Lifetime member

President - Botanical Student Society Nepal (2018-2020)