SURESH CHANDRA SUBEDI, Ph.D.
Assistant Professor of Biology
Norfolk State University
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RESEARCH INTERESTS: Ecology and Environment, Biodiversity Conservation and Management.

EDUCATION

Ph.D. in Natural Resource Management. Department of Earth and Environment, Florida International University, Miami, Florida, USA. Dissertation: A Functional Trait Approach to Examine Plant Community Dynamics in South Florida Hardwood Hammock Forests. Earth and Environment Department. (Advisor: Dr. Michael Ross). 2012-2017.

M.S. in Environmental Studies. Department of Environmental Studies, Florida International University, Miami, Florida, USA. Thesis: Determination of nutrient limitation on trees growing in Loxahatchee Impoundment Landscape Assessment (LILA) tree islands, Florida". (Advisor: Dr. Michael Ross). 2008-2011.

M.Sc. in Botany. Department of Botany, Tribhuvan University, Nepal. Thesis: Distribution patterns of high altitude (above 3000m from mean sea level) plant species along elevation gradient in Himalayas. (Supervisor: Dr. Ram Prasad Chaudhary). 2001-2005.

PROFESSIONAL EXPERIENCE

RESEARCH

Assistant Professor of Biology- Norfolk State University, Norfolk, Virginia, USA. 2024 Jan-

Assistant Professor of Biology. Arkansas Tech University, Russellville, Arkansas, USA. 2020 August-2023 December

Quantitative Ecologist/Data Analyst. Everglades National Park, Homestead, FL. 2020-2021

Postdoctoral Associate. Wetland and Aquatic Research Center, United States Geological Survey, Gainesville, FL, USA. 2019-2020

Postdoctoral Associate. University of Miami, Coral Gables, Florida, USA. 2018 Jan-2019 Feb.

Research Assistant, Southeast Environmental Research Center, Florida International University. 2011-2012

Graduate Research Assistant, Freshwater Biogeochemistry lab (Dr. Scinto lab) Florida International University. LILA (Loxahatchee Impoundment Landscape Assessment) Tree Island, Ridge, Slough Studies and Site Management. 2009-2010.

Field technician: project "Study of rangeland management status in Sagarmatha National Park and Buffer zone and Langtang National Park in the Sacred Himalayas Landscape, Nepal, supported by EV-K2-CNR/RONAST**"** (Drs. Gianumberto Caravello and Alberto Baroni, Padova University, Italy). 2005-2007

Field technician, Tribhuvan University, Nepal, "Local Effects of Large-Scale Global Changes: A Case Study in Himalayas Nepal (Project ID: PR 04/2002). 2002-2004.

TEACHING

Assistant Professor. Department of Biology, Norfolk State University, Russellville, Arkansas, USA.

Assistant Professor. Department of Biological Sciences, Arkansas Tech University, Russellville, Arkansas, USA.

Adjunct Faculty. Department of Earth and Environment, Florida International University, Miami, FL. (Co-taught).

Graduate Teaching Assistant. Department of Earth and Environment, Florida International University, Miami, FL.

PUBLICATIONS (* for coauthors as Graduate or undergraduate students)

29. Shivish Bhandari, **Suresh C Subedi**, Binaya Adhikari, Rakshya Basnet, Kedar Baral, and Hari P sharma (2023). Increasing tiger population in Nepal: threats, challenges and opportunities. (Under preparation)

28. **Subedi SC**, Ruston B*, Bridges H.*. Oak diversity in North America and local assembly processes. **(In preparation)**

27. Carrington ME, Ross MS, **Subedi SC**. Successional change in species and community-weighted functional traits in tropical hardwood hammocks of the Florida Keys. (**Drafted**).

26. Bhandari*, S., *Adhikari, B., Baral, K. and **Subedi, S.C.,** 2023. Bengal tiger (*Panthera tigris*) diet landscape in the Indian subcontinent: a review. **Mammal Research (Under review).**

25. Ross, M. S., Stoffella, S. L., Ruiz, P. L., Subedi, S. C., Meeder, J. F., Sah, J. P., ... & Zhang, K. (2024). Transient vegetation dynamics in a tropical coastal wetland: Sea-level rise, glycophyte retreat, and incipient loss in plant diversity. *Journal of Vegetation Science*, *35*(3), e13267. https://doi.org/10.1111/jvs.13267

24. Subedi, SC et al. (2023). Subedi, S. C., Drake, S., Adhikari, B., & Coggeshall, M. V. (2024). Climate-change habitat shifts for the vulnerable endemic oak species (Quercus arkansana Sarg.). *Journal of Forestry Research*, *35*(1), 23. https://doi.org/10.1007/s11676-023-01673-8

23. Freeman, K., Subedi, S. C., & Ross, M. S. (2024). Coastal dry tropical forests in Florida and the Caribbean in peril: A review. *Biotropica*, *56*(1), 185-197. **https://doi.org/10.1111/btp.13285**

22. Subedi, SC, Boone Ruston*, J. Aaron Hogan[3], Mark V. Coggeshall (2023). Defining the extent of suitable habitat for the endangered Maple-Leaf oak (*Quercus acerifolia*). **Frontiers of Biogeography,** 15(3). http://doi.org/10.21425/F5FBG58763

21. Adhikari B*, Bhandari S*, and **Subedi SC** (2023). Predicted decline in climatically suitable habitat of endemic spiny babbler. **Ecosphere, 14(6),** e4584. https://doi.org/10.1002/ecs2.4584

20. Ripu M Kunwar, Khum Thapa Magar, **Suresh C Subedi,** et al. (2023). Distribution of medicinal plants in Nepal under climate change: Past, Present and Future. **Journal of Ecological Indicator, 146, 109879.** https://doi.org/10.1016/j.ecolind.2023.109879

19. Bhattarai KR and **Subedi SC**. (2023). Important Medicinal and Aromatic Plants – Nepal. **Book chapter in UNESCO - Encyclopedia Life Support Systems (UNESCO-EOLSS).** https://www.eolss.net/ebooklib/sc_cart.aspx?File=E6-79a-54

18. Adhikari B*, Bhandari S*, and **Subedi SC** (2022). Raptors in risk: attributes of mortality in anthropogenic landscape of mid hills, Nepal**. Global Ecology and Conservation, 38: e02258.** https://doi.org/10.1016/j.gecco.2022.e02258-

17. Adhikari B*, Bhandari S*, Baral K. and **Subedi SC** (2022). Causes of wildlife mortality: a retrospective study from wildlife rescue center. **Conservation Science and Practice**. **DOI:** https://doi.org/10.1111/csp2.12799

16. **Suresh SC**, Susan Walls, William J. Barichivich, Ryan Boyles, Michael S. Ross, J. Aaron Hogan*, John Tupy (2022). Future changes in habitat availability for two specialist snake species in South Florida. **Conservation Science and Practice**. **DOI:** https://doi.org/10.1111/csp2.12802

15. *Bhandari, S., *Adhikari, B., Baral, K. and **Subedi, S.C.,** 2022. Greater one-horned rhino (*Rhinoceros unicornis*) mortality patterns in Nepal. **Global Ecology and Conservation**, p.e02189. https://doi.org/10.1016/j.gecco.2022.e02189

14. Kunwar, RM, **Subedi SC** et.al. 2022. Ethnomedicinal Landscape: Distribution of Medicinal Plants in Use in Nepal. **Journal of Ethnobiology and Ethnomedicine**, *18*(1), pp.1-11**.** https://doi.org/10.1186/s13002-022-00531-x

13. Subedi SC, Allen Preston*, Rosario V.*, Sternberg L., Ross, M., Afkhami M. 2022. Salinity Legacy: Microbiome's history affects mutualist-conferred salinity tolerance. **Ecology**, e3679. https://doi.org/10.1002/ecy.3679

12. Ross MR, Susana Stoffella, Rosario Vidales*, Jack Meeder**, David** Kadko, Leonard Scinto, **Suresh C Subedi**, Jed Redwine. 2022. Sea-level rise and the persistence of tropical hardwoods in coastal tree islands. **Ecosystems** *25*(3), pp.586-602. https://doi.org/10.1007/s10021-021-00673-1

11. Thapa S*, Kunwar RM, Adhikari B*, Paudel HR, and **Subedi SC.** 2021. *Trillium govanianum* (Himalayan Trillium): production, distribution and use in Nepal. **Nordic Journal of Botany**. https://doi.org/10.1111/njb.03356

10. Bhandari K.B.*, **Subedi S**., Kunwar R.M., Bussmann R.W., Paniagua-Zambrana N.Y. (2021) *Grewia disperma* Rottler ex Spreng. Malvaceae. In: Kunwar R.M., Sher H., Bussmann R.W. (eds) Ethnobotany of the Himalayas. **Ethnobotany of Mountain Regions**. Springer, Cham. https://doi.org/10.1007/978-3-030-45597-2_112-1

9. Subedi SC, Bhattarai, KR, Perez*, T., Sah JP 2020. Gymnosperm distribution patterns in the Himalayas and Rapoport's rule. **Frontiers of Biogeography**, 12.1, e44232. http://dx.doi.org/10.21425/F5FBG44232

8. Subedi SC, J. Aaron Hogan*, Michael Ross, Jay P Sah, Christopher Baraloto 2019. Evidence for trait-based community assembly patterns in hardwood hammock forests. **Ecosphere**: e2956. https://doi.org/10.1002/ecs2.2956

7. Subedi SC, Sternberg L., DeAngelis D., Ogurcak D., Ross M. 2019. Using field data to verify predictions of a model simulating the interaction between coastal plant communities and their effect on sea-level rise. **Ecosystems**, 1-16. https://doi.org/10.1007/s10021-019-00423-4

6. Subedi SC, Ross MS, Sah JP, Redwine J., Baraloto, C. 2019. Trait-based community assembly pattern along a forest succession gradient in seasonally dry sub-tropical forest Florida Keys USA. **Ecosphere** 10(4): e02719. https://doi.org/10.1002/ecs2.2719

5. Subedi SC, Ross MR, Vilades* R, Sah JP, Sternberg L, 2018. Variation in stomatal characteristics of Bursera simaruba, a dominant tree species of tropical hardwood hammock forest across a habitat gradient in the Florida Keys. **American Journal of Plant Sciences**, 9, 2120-2139. https://doi.org/10.4236/ajps.2018.910154

4. Ross MR, Sah JP, Ruiz PL, Spitzig A, **Subedi SC**, 2016. Inferring implications of climate change in patchy tropical dry forests through analysis of metacommunity structure. **Diversity and Distribution**. 22:7, 783-796. https://doi.org/10.1111/ddi.12442

3. Subedi SC, Bhattarai KR, Chaudhary RP, 2015. Distribution patterns of Manang's species along the whole Himalayan gradient and their fate against global warming. **Journal of Mountain Science**, 12(6): 1345-1354. https://doi.org/10.1007/s11629-015-3495-9

2. Bhattarai, KR, Inger Måren, **Suresh Subedi** 2014. Biodiversity and invasibility: distribution patterns of invasive alien plant species in the Himalayas. **Journal of Mountain Science,** 11(3):1-9. https://doi.org/10.1007/s11629-013-2821-3

1. Subedi, S.C., Ross, M.S. and Scinto, L.J., 2012. Nutrient limitation in two everglades tree species planted on constructed tree islands. **Wetlands**, 32(6), pp.1163-1173. https://doi.org/10.1007/s13157-012-0346-0

TECHINICAL REPORT

Subedi, SC, Walls S (2021). Informing Future Condition Scenario Planning for Habitat Specialists of the Imperiled Pine Rockland Ecosystem of South Florida. Submitted to US Fish and Wildlife Service to aid in developing their Species Status Assessments. https://www.sciencebase.gov/catalog/item/5ba00122e4b08583a5c277a8

Sah, J. P., Ross, M. S., Ruiz, P. L. and Subedi, S. 2012. Monitoring of Tree Island Condition in the Southern Everglades. Annual Report-2011 submitted to US Army Corps and Engineer Research and Development Center.

Leonard J. Scinto, René Price, and Mike Ross 2011. LILA (Loxahatchee Impoundment Landscape Assessment Tree Island, Ridge, Slough Studies and Site Management. Annual report submitted to South Florida Water Management District (SFWMD, West Palm Beach, FL).

PRESENTATIONS (As a presenter)

Subedi SC (2024). Explaining Dry Tropical Forest using Functional Traits. North American Forest Ecology Conference, Asheville, NC. June 24-27, 2024.

Subedi SC and Boone Ruston (2023). Defining the extent of suitable habitat for the endangered Maple-Leaf oak (*Quercus acerifolia*). Ecological Society of America (ESA). Aug 6-Aug 11, 2023.

Subedi SC (2022). Oak diversity in Arkansas and local assembly processes. International Oak Society Conference, Las Cruces, NM. Aug 30-Sep 2, 2022.

Subedi SC (2021). Environmental Legacy: Microbiome's history affects mutualist-conferred stress tolerance in plants. Biology seminar series, Arkansas Tech University. Sep 13th, 2021.

Subedi SC (2021). Oak diversity and biogeography. Arkansas Native Plant Society. Aug 4th, 2021.

Subedi SC (2020). Predicting the impacts of future sea level rise on specialist snake species in Pine Rockland habitat in Florida. Webinar as part of Southeast Climate Adaptation Science Center Science Series in December 2020. North Carolina State University and US Geological Survey.

Subedi SC (2019). Predicting the impacts of future sea level rise on specialist snake species in Pine Rockland habitat in Florida. Southeast Climate Adaptation Science Center Regional Science Symposium. North Carolina State University and US Geological Survey, Nov 13-15, 2019, New Orleans, LA.

Mary E Carrington*, Michael S Ross, Suresh C Subedi* (2019). Successional change in species and community-weighted functional traits in tropical hardwood hammocks of the Florida Keys. Ecological Society of America, Louisville, Kentucky (Aug 11-16).

Subedi SC (2018). Using field data to verify predictions of a model simulating the interaction between coastal plant communities and their effect on sea level rise. American Geophysical Union Fall meeting, Washington DC, USA. Dec 10-14, 2018.

Subedi SC (2017). Trait-based community assembly pattern along a forest succession gradient in seasonally dry sub-tropical forest Florida Keys. American Geophysical Union, San Francisco, CA, USA. Dec 12-16, 2016.

Subedi SC (2016). Variation in stomatal density of *Bursera simaruba*, a dominant tree species of tropical hardwood hammock forest across a habitat gradient in the Florida Keys. International Biogeography Society Conference, Fort Lauderale, FL. Aug 9-14, 2016.

Subedi SC (2015). Patterns of plant trait–environment relationships along a forest succession gradient in Florida Keys. Ecological Society of America, Aug 9-14, Baltimore, MD, 2015.

Bhattarai KR (2014). Biodiversity and invasibility: distribution patterns of invasive alien plant species in the Himalayas, Nepal. Himalayan studies conference, Yale University. Mar 14-16, New Haven, CT, 2014.

Subedi SC (2013). The relationship between seed size and establishment conditions in tropical hardwood hammocks of the Florida Keys. Ecological Society of America, Aug 4-9, Minneapolis, MN, 2013.

Subedi SC (2011). Determination of nutrient limitation on trees growing in Loxahatchee Impoundment Landscape Assessment (LILA) tree islands, Florida. 8th North American Forest Ecology Conference, Roanoke, VA. June 19-23, 2011.

Subedi SC (2010). Determination of nutrient limitation on trees growing in LILA tree islands. GEER (Greater Everglades Ecosystem Restoration) 2010 Conference: The Everglades- A Living Laboratory of Change. Naples, FL, July 12-16, 2010.

STUDENT RESEARCH PROJECTS SUPERVISED

1. Rebecca Morse (2022)- Honors thesis on "The effects of arbuscular mycorrhizal fungi on native Arkansas plants". Department of Biological Sciences, Arkansas Tech University.
2. Kayla Medina, Harley Hines, and Andurin Rivero (2022)- undergraduate research on "Investigating antibacterial activity of extracts from American beautyberry, Devil's walking stick, and Winged sumac". Department of Biological Sciences, Arkansas Tech University.
3. Katie Huffman and Raven Turner (2022)- undergraduate research on "Evaluation of Antibacterial Activity of Native Plants, Aesculus Pavia and Celtis *laevigata*". Department of Biological Sciences, Arkansas Tech University.
4. Kade Zeiner (2022-)- Project on "Riparian vegetation patterns in Arkansas River and underlying assembly processes". Undergraduate project. Department of Biological Sciences, Arkansas Tech University.
5. Kaylee Freeman (2022)- Project on "Coastal dry tropical forests in Florida and the Caribbean in peril". Undergraduate project. Department of Biological Sciences, Arkansas Tech University.
6. Anju Ghimire (2022–)- Masters in Fisheries and Wildlife. Arkansas Tech University, Russellville, AR. (As Master thesis committee member). Fisheries and Wildlife Program, Department of Biological Sciences, Arkansas Tech University.
7. Alexander Gillies (2021-)- Project on "Can stomatal traits be used to measure plant stress?" (BS in Fisheries and Wildlife, Arkansas Tech University).
8. Jonathan Augirre (2021-)- Project on "Study of plant diversity in remnant herbaceous plant dominant communities (grasslands and prairies) in Arkansas River Valley." (BS in Environmental science, Arkansas Tech University.

9. Boone Ruston (2020-)- Project on “Distribution pattern of oak species (*Quercus sp.*) in Arkansas and local assembly processes”. (BS in Fisheries and Wildlife, Arkansas Tech University).
10. Hannah Bridges (2020-)- Project on “Distribution pattern of oak species (*Quercus sp.*) in Arkansas and local assembly processes”. (BS in Fisheries and Wildlife, Arkansas Tech University).
11. Preston Allen (201802019)– Project on “Leaf endophyte communities in Red Mangrove (Rhizophora mangle L.) and their role in salt-tolerant for host plant”. (BS in environmental studies, University of Miami)
12. Tonio K_Tori (2015-2016)– Project on “Soil nutrient analysis methods and their applications in environmental science”. (BS in environmental studies, Florida International University, 2016)
13. Cheldina Jean (2016) – Project on “Variation in soil characteristics across the habitat gradient in Florida Keys and Everglades National Park”. (Miami Beach Senior high school).
14. Rosario Vidales (2013-2014) – Project on “Stomatal traits variation in tropical hardwood hammock species and its significance in adaptation across environmental gradient in the Florida Keys”. (BS in environmental studies, Florida International University).
15. Leah Ramnath (2014)– Project on “Plant species response across stress gradient in South Florida”. (BS in environmental studies, Florida International University, 2014).
16. Juan Rodriguez (2015)– Project on “Variation in hardwood hammock tree species’ response to change in environment: A case study in Long Pine Key, Everglades National Park Florida”. (BS in environmental studies, Florida International University)

AWARDS

2023 Wetland Assessment Project, U.S. Environmental Protection Agency (collaboration with Alliance Technical Group) – ($62K- 32K and 30K from university matching)- proposal submitted and pending.

2023 Outstanding Faculty Research, Department of Biological Sciences, Arkansas Tech University.

2023 Professional Development Grant (2023), Arkansas Tech University - $2000

2022-2023 NSF AEDC DART Seed Grant (subcontract)- $2,800

2023 Undergraduate Research Grant (Arkansas Tech University) - $2,000

2023 Acquisition of a Fluorescence and Absorbance Spectrometer for Research (AR INBRE Grant) - $ 28,938.00 (Co-PI)

2023 Arkansas Division of Higher Education (SURF)- Research- $4,000

2022 Acquisition of a fluorescence microscope for research (AR INBRE Grant) - $ 29,984.65 (Co-PI)

2022- Travel grant (Arkansas Tech University, Dean Office)- 2,000

2022 Arkansas Division of Higher Education (SURF)- Research- $8,000

2021 Undergraduate Research Grant (Arkansas Tech University) - $4,000

2021 Arkansas Native Plant Society (ANPS) – Student research- $2,000

2021 Arkansas Division of Higher Education (SURF)- Research- $4,000

2016 International Center for Tropical Botany (ICTB) Graduate Research Fellowship ($8, 500)

2016 ICTB Graduate Student Research Award ($8,000)

2016 Doctoral Evidence Acquisition Award, Florida International University ($8,300)

2014 Graduate Scholarly Forum Award, Florida International University ($2,000)

2014 Kelly Foundation Tropical Botany Scholarship ($2,000)

2013 FCE-LTER Student Travel Award ($1,250)

GIS AND REMOTE CENSING CERTIFICATE:

Environmental GIS, Geospatial and Environmental Analysis; Fundamental of GIS; GIS Data Formats, Design, and Quality; Remote Sensing

DATA SCIENTIST IN R:

Cleaning Data in R; Cluster Analysis in R; Importing and Cleaning Data in R (Part I and II): Case studies; Data Visualization in R; Hierarchical and Mixed Effects Models in R; Inference for Numerical Data in R; Intermediate R; Introduction R; Induction to Writing Function R; R for Finance; Introduction to the Tidyverse; R Programming Language for Biologist

MINOR IN STATISTICS:

Introduction to Statistics; Biostatistics; Experimental Design; Advanced Regression Analysis; Multivariate Analysis; Non-parametric Analysis

PROFESSIONAL ORGANIZATION:

American botanical society (member); Ecological society of America (member), American Geophysical Society (member), International Oak Society (member), Arkansas Native Plant Society (member)