

# V. Nipuni S. Sirimalwatta

+94812395249 | nipuni.siri@agri.pdn.ac.lk

Department of Agricultural Biology  
Faculty of Agriculture, University of Peradeniya  
Peradeniya, Sri Lanka 20400

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## **Career Overview:**

I am involved in teaching and research to nurture young, talented scientists while developing my own skills as a leading scientist and mentor in the field of Plant Sciences. I conduct research in various areas, including Plant Systematics, Genetics, and Molecular Biology. I have experience leading diverse groups of people to achieve shared goals in different settings. My ultimate goal in life is to combat hunger through multidisciplinary research and innovative solutions.

## **Professional Preparation:**

The University of Hawaii at Mānoa	Plant Systematics and Evolution	Ph.D. 2019
The University of Hawaii at Mānoa	Ecology, Evolution and Conservation Biology	M.Sc. 2018
The University of Peradeniya	Plant Protection Technology	M.Sc. 2010
The University of Peradeniya	Agriculture (Major Agricultural Biology)	B.Sc. 2008

## **Appointments:**

Lecturer	University of Peradeniya	2012-to date
Graduate Teaching Assistant	University of Hawai'i at Mānoa	2014-2019
Graduate Research Assistant	University of Hawai'i at Mānoa	2013-2014
Highschool Teacher	Lexicon International School	2010-2012
Demonstrator	University of Peradeniya	2009-2010
Research Assistant	University of Peradeniya	2008-2009

## **Dissertation:**

Ph.D. Phylogenetics and evolution of *Oreogrammitis*, *Radiogrammitis* and *Themelium* (Polypodiaceae) and population genetics of Hawaiian endemic *Oreogrammitis hookeri* and *Adenophorus tripinnatifidus*, Clifford W. Morden, advisor

## **Honors and Awards:**

2018	Faith C. Ai Memorial Scholarship for Teachers (USD 5000)
2018	Whitney R. Reyes Student Travel Award (to attend and present at Botanical Society of America Conference) (USD 1000)
2017 & 2018	American Society of Plant Taxonomists Travel Award (for two presentations at Botanical Society of America Conference) (USD 300)
2017	Founder Region Fellowship for Women in PhD, Soroptimist Americas (USD 10,000)
2016-2017	East West Center Alumni Scholar Award, East West Center, USA (USD 5000)
2016-2017	Toufiq & Ulrike Siddiqi Named Endowed Degree Scholarships, East West Center, USA (USD 3000)
2016	Torrey-Degener-Rock Scholarship, Botany Department, University of Hawai'i at Mānoa (USD 500)

## **Grants Awarded:**

2022	Multidisciplinary Research Grant, University of Peradeniya (\$7000)
2022	University Research Grant, University of Peradeniya (\$200)
2018	American Fern Society/Botanical Society of America Pteridological Section Student Award (USD 500)
2016 & 2018	Graduate Student Organization Grant Award, Graduate Student Organization, University of Hawai'i at Mānoa (USD 800 each)
2017	Maybelle Roth Fellowship, Ecology, Evolution and Conservation Biology, University of Hawai'i at Mānoa (USD 2500)
2016	American Society of Plant Taxonomists Graduate Student Research Grant (USD 800)
2013-2014	NSF Research Assistantship, Department of Botany, University of Hawai'i at Mānoa (USD 18,000)

### **Teaching Experience:**

BIO275 Cell and Molecular Biology  
BIO375 Concepts of Genetics  
BOT/ZOO 450 Natural History of Hawaiian Islands  
BOT101 General Botany  
BOT201 Plant Evolutionary Diversity  
BOT662 Ten Well-Chosen Samples: High Throughput Sequencing Approaches to Ecology and Evolution  
BOT661 Hawaiian Vascular Plants  
AB1201 Crop Systematics  
AB1101 Botany of Field Crops  
AB3210 Molecular Genetics  
AB4111 Bioinformatics  
AB5103 Plant Systematics

### **Professional Skills:**

Phylogenetic software: MEGA, PAUP\*, BEAST, MrBAYES, jMODELTEST, RaxML, ASTRAL, IQTree etc  
DNA sequence editing software: GENEIOUS and Sequencher  
Statistical software: SAS, Minitab  
Bioinformatics: Basic Python, R languages

### **Publications:**

- 2021      Dissanayake E.J.M.S.K., Jayawardana N.U., Yakandawala D.M.D., and Sirimalwatta V.N.S.,  
Secondary data-based Phylogenetic reconstruction of South Asian *Capparis* species to reveal  
the necessity for a Systematic revision of Sri Lankan *Capparis*. Proceedings of the Faculty of  
Agriculture undergraduate Research Symposium- FAuRS [ISSN 24207683]
- 2020      Bernard, J., Wall, C. B., Costantini, M. S., Rollins, R. L., Atkins, M. L., Cabrera, F. P., Cetraro, N. D.,  
Feliciano, C. K. J., Greene, A. L., Kitamura, P. K., Olmedo-Velarde, A., **Sirimalwatta, V. N. S.**, Sung, H. W.,  
Thompson, L. P. M., Vu, H. T., Wilhite, C. J., and Amend, A. S. 2020. Plant part and a steep environmental  
gradient predict plant microbial composition in a tropical watershed. *The ISME Journal* 15, 999-1009  
<https://doi.org/10.1038/s41396-020-00826-5>
- 2017      Bogner, K. & **Sirimalwatta, V. N. S.** *Labordia hosakana* (amended version of 2016 assessment). The IUCN  
Red List of Threatened Species: e.T91115648A114893092. <https://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T91115648A114893092.en>

### **Manuscripts (in-prep)**

**Sirimalwatta, V. N. S.**, Wolf, P., Rowe, C. Ranker, T. A., Wood, K. N., and Morden, C. W. Investigation of  
Population Structure of Polymorphic Hawaiian Endemic *Adenophorus tripinnatifidus* (Polypodiaceae).  
**Sirimalwatta, V. N. S.**, Sundue, M. A., Ranker, T. A., Parris, B. and Morden, C. W. Phylogenetics and  
Biogeography of *Oreogrammitis*, *Radiogrammitis* and *Themelium* (Polypodiaceae).  
**Sirimalwatta, V. N. S.**, Wolf, P., Rowe, C. Ranker, T. A., Wood, K. N., and Morden, C. W. Population  
Genomics of Hawaiian Endemic *Oreogrammitis hookeri*

### **Presentations:**

- 2018      Population Genomics of *Oreogrammitis hookeri* (Polypodiaceae), an endemic fern to the Hawaiian Islands.  
Botanical Society of America Conference, Rochester, Minnesota, USA
- 2017      Phylogeny of the ORT clade. Botanical Society of America Conference, Fort Worth, Texas, USA
- 2016      Phylogeny, Evolution, and Biogeography of the genera *Radiogrammitis* Parris and *Oreogrammitis* Copel.  
(Polypodiaceae). 41<sup>st</sup> Annual Albert L. Tester Memorial Symposium, University of Hawai'i at Mānoa.
- 2016      Phylogenetics of Grammitid Ferns. Ecology, Evolution and Conservation Biology Program, University of  
Hawai'i at Mānoa.
- 2012      *Glossadelphus*; Discovery of a Novel Genera of Moss in Sri Lanka. Proc. of the Seventeenth International  
Forestry and Environment Symposium.
- 2008      Insect diversity and abundance in vegetation in conventional and pesticide free mixed vegetable ecosystems.  
Proc. 64<sup>th</sup> Sri Lanka Association for the Advancement of Science

### **Research and Trainings:**

- 2018 Fungal and bacterial interactions between plant part and a steep environmental gradient in a tropical watershed using amplicon sequencing in Illumina MiSeq
- 2009 Evaluation of Carbosulfan 200 g/I SC and Imidacloprid 200 g/I SL against aphids on chili.
- 2009 Evaluation of traditional liquid fertilizer on improvement of growth and insect resistant of tomato
- 2007-2008 Assessment of plant and insect diversity in conventional and pesticide free agro-ecosystems in different agro-ecological zones of Sri Lanka
- 2007-2008 Evaluation of floral fitness of *Cotesia plutellae*, a larval parasitoid on Diamondback moth, *Plutella xylostella* (DBM)
- 2006-2007 Five-month practical training in Agriculture at the dry zone of Sri Lanka. This course involved cultivation (involved all the work from field preparation to harvesting) of forty crops (main vegetables, legumes and grains), communicating with farming communities, farmer training programs, field visits to farms around the area and many agriculture related activities.

### **Workshops:**

- 2023 6<sup>th</sup> Workshop on Lichen of Sri Lanka organized by the University of Peradeniya, University of Sabaragamuwa, Sri Lanka, Center for Ecology and Hydrology, Natural History Museum, Royal Botanic Garden, Edinburgh, UK.
- 2018 Using Digitized Herbarium Data in Research: Applications for Ecology, Phylogenetics, and Biogeography. Pamela Soltis, Natural History Museum, University of Florida. Botany Symposium and Colloquium, Rochester, Minnesota.
- 2017 Next Generation Research Uses of Biodiversity Collections. Robert Gropp. Botany Symposium and Colloquium, Fort Worth, Texas.
- 2012 Participated for six-day national workshop on “Biodiversity, Taxonomy and Conservation of Sri Lankan Bryoflora” organized by Royal Botanic Garden, Peradeniya, Sri Lanka
- 2010 Participated for three-day workshop on “Bio-safety: Risk Assessment and Management of Genetically Modified Organisms, Food, Feed and Processed Products” organized by Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka.
- 2007 Participated for four-day workshop on “GIS for Resource Management in Agriculture” organized by Soil Science Society of Sri Lanka, SRICANSOL Resource Centre, Faculty of Agriculture. University of Peradeniya, Sri Lanka.

### **Professional Societies:**

- 2019-to date Alumni, East West Center, University of Hawai‘i at Mānoa
- 2015-to date Botanical Society of America University of Hawai‘i Student Chapter
- 2013-to date American Society of Plant Taxonomists
- 2017-2019 Graduate Women in Science University of Hawai‘i Student Chapter
- 2014-2019 Ecology, Evolution and Conservation Biology Program, University of Hawaii at Mānoa
- 2016-2019 Student Affiliate, East West Center, University of Hawai‘i at Mānoa

### **Additional Activities:**

- 2022-2025 Secretary, Board of Study in Agricultural Biology, Postgraduate Institute of Agriculture, University of Peradeniya.
- 2021 to date Senior Student Counselor, Faculty of Agriculture, University of Peradeniya.
- 2020 Department Representative, Innovative and Healthy Practices Subcommittee, Faculty Quality Assurance Cell, Faculty of Agriculture, University of Peradeniya
- 2020 Member, Language Teaching Unit (LTU), Faculty of Agriculture, University of Peradeniya
- 2018-to date Mentor, PlantingScience Team ([www.plantingscience.org](http://www.plantingscience.org))
- 2017 & 2018 Moderator at the International Graduate Student Conference (Session: Environmental Issues), East West Center, University of Hawai‘i at Manoa
- 2016-to date IUCN Red List Assessor
- 2018-2020 Instructor at Summer Outreach College, University of Hawai‘i at Manoa
- 2016 & 2017 Hosted workshops at Expanding Your Horizons in Science and Mathematics (EYH) conference for girls, University of Hawai‘i at Mānoa

2016 & 2017 Volunteer at GENE-ius Day Program K-12 STEM Education, University of Hawai'i at Mānoa

2016-2019 Organize and volunteer events (e. g. International Graduate Student Research Conference, Wednesday Evening Seminars, Intercultural Potluck, East West Fest) at the East West Center, University of Hawai'i at Manoa

2015-2018 Organize book clubs (some books referred: On the Origin of Species, What Plants Know, Next Generation Sequencing, The Song of the Dodo, Island Biogeography, A Crack in Creation), Department of Botany, University of Hawai'i at Mānoa

2015-2018 Volunteer at Invasive Weed Management Team, O'ahu County, Hawai'i

2012-2013 Secretary, Computer Science Society, Faculty of Agriculture, University of Peradeniya

2008-2009 Student member, Sri Lanka Association for Advancement of Science (SLASS)

2003-2008 Member at the faculty chess and table tennis teams, Faculty of Agriculture, University of Peradeniya