Department of Zoology

Faculty of Science / University of Peradeniya



Prof. Rupika Subashini Rajakaruna (Amarakoon)

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About Me

My research and teaching reflect my interests in Infectious Diseases especially eco-epidemiology of vector-borne diseases, Ecotoxicology, and Disease Ecology of Amphibians and Marine Turtle Conservation. I teach a wide variety of courses at the University of Peradeniya. My current teaching includes Applied Parasitology, Vector-Borne Diseases, Research Methods, and Data Analysis, and Scientific Writing.

Higher Education Qualifications

PhD	MPhil	BSc
Memorial University of Newfoundland - Canada Canada (2003)	University of Peradeniya - Sri Lanka Sri Lanka (1997)	University of Peradeniya - Sri Lanka Sri Lanka (1994)

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Awards, Scholarships, Memberships & Fellowships

- President's Awards for Research 2016, 2015, 2014, 2011, 2010 & 2008
- Fulbright Advanced Research and Lecturing Fellowship, Georgia Southern University, USA 2020
- SUSRED (Support Scheme for Supervision of Research Degrees) National Science Foundation, SL.2017, 2019
- Award for Excellence in Scientific Research, Young Scientists Forum (YSF), National Science and Technology Commission (NASTEC) Sri Lanka 2010
- National Research Council Merit Award for Scientific Publications 2013
- Merit Certificate for Research, Young Scientists Forum (YSF), National Science and Technology Commission (NASTEC) Sri Lanka 2009
- Fellow of the Graduate School, School of Graduate Studies, Memorial University of Newfoundland in recognition of continued academic excellence throughout the Ph.D. 2002
- Association of Commonwealth Universities Blue Charter Fellowship, Brunel University London, UK. 2019
- Endeavour Research Fellowship, James Cook University, Australia 2017
- Fellow of the Graduate School, School of Graduate Studies, Memorial University of Newfoundland. 2002
- Fellow of the National Academy of Sciences Sri Lanka
- Faculty Research Awards 2016 to 2025

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Positions Held

- Assistant Secretary (Council of the National Academy of Sciences Sri Lanka)- (2025)
- Associate Editor Ceylon Journal of Science- (2002 to 2025)
- President/AAUP (Alumni Association of the University of Peradeniya)- (2016 and 2023)
- Council Member (National Academy of Sciences Sri Lanka)- (2024)
- Chairperson, Board of Study in Zoological Sciences, PGIS, University of Peradeniya
- Head, Department of Zoology, University of Peradeniya
- Member of the Committee on Sexual and Gender-based Harassment and Violence at the University of Peradeniya
- Member of Board of Discipline, University of Peradeniya
- Faculty Coordinator/International Research Centre (InRc), University of Peradeniya
- Deputy Proctor/Faculty of Science, University of Peradeniya
- Member of the Physical Education and Sports Advisory Committee of the University of Peradeniya
- Warden, Ramanathan Hall, University of Peradeniya
- Member, Editorial Board, Ceylon Journal of Science (Biological Science)
- Member, Editorial Board, Open Ecology Journal, Bentham Science Publishers
- Member, National Bioethics Committee, National Science Foundation, Sri Lanka
- Deputy Coordinator, World Bank Project on Improving Relevance and Quality of Undergraduate Education (IRQUE) Project, Faculty of Science, University of Peradeniya

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My Teachings

- AS402: Research methodology and scientific writing
- BIO1003: Basic Life Sciences
- BL103: Plant and Animal Form and Function
- BL107: Basic Microbiology
- ZL323: Vector-Borne Diseases
- ZL404: Applied Parasitology
- ZL421: Scientific Writing and Presentation
- ZL424: Research Methodology and Data Analysis

Research Interests (Research Fields/ Projects)

Parasitology
Assessment of genes linked to drug resistance, genetic diversity of the malaria parasite, hidden parasite reservoirs in the human host. Gastrointestinal and blood parasites of wild, captive and domesticated animals and their zoonotic potential. Tick species associated with otoacariasis of humans and domesticated animals, life cycle studies, seasonal dynamics, risk factors, infectious agents carried by ticks and level of acaricide resistance in different tick species infesting domesticated animals
Sea turtle conservation, genetics and biology

Conservation issues of sea turtles: genetic diversity, nest paternity, behavioral and biometric data of nesting female turtles, eggs and hatchlings at Kosgoda turtle rookery needed for their protection to aid population recovery. These are matched with rural community based surveys to assess their contribution towards sea turtles conservation and to build capacity to utilize the natural resources for sustainable tourism while providing local impetus to support the conservation of turtles and their natural environment.
Disease ecology of amphibians
Effect of anthropogenic and natural stressors on amphibian populations especially focusing the lone and combined effects of pesticides, ultraviolet B radiation and trematode infections on amphibian species. Laboratory experiments are integrated with mesocosm and field surveys to understand the processes in natural systems

Ongoing Research and Projects

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Ecoepidemiology of tick borne diseases with special focus on ricketsioses

We investigate the type of pathogens, vertebrate reservoir community composition and the tick species on circulation and maintenance of pathogens of spotted fever group recketsioses (SFGR) in the Central Province, an area with high disease prevalence. The sampling is carried out in three ecosystems in areas with recent cases of SFGR: a wildlife ecosystem, agricultural /rural ecosystem and a peri-urban/urban ecosystem. Types of vertebrate hosts in the area are noted down and blood samples are collected to examine the presence of the pathogen. Among wild and peri-domestic vertebrates, special attention is given to the non-volant small mammals because they are the most important hosts for the sub-adult stages of many tick species in addition to being suitable reservoirs for many pathogens.

Lethal and sublethal effects of pesticides and parasites on amphibians

Sea turtle conservation

Contribution of turtle hatcheries towards sea turtle conservation; Hatching success of hatchery relocated sea turtle eggs; These are matched with rural community based socio-ecological research to assess their contribution towards sea turtles conservation and to build capacity to utilize the natural resources for sustainable tourism while providing local impetus to support the conservation of turtles and their natural environment. Status of the hatcheries under Covid19 pandemic situation and survey of egg poacher.

Canine vector-borne diseases

Canine vector-borne diseases (CVBDs)are a significant health problem among dogs, especially among pedigree dogs and the military working dogs of Sri Lanka. They die early and CVBDs have been listed as one of the speculated causes. We examine CVBDs in the working dogs of the Sri Lanka Air Force together with free-roaming and privately-owned dogs country-wide.

plastic and microplastic pollution in marine and freshwater environment

Plastic pollution is recognized as a severe anthropogenic issue in coastal and marine ecosystems across the world. Unprecedented and continuous accumulation of growing plastic contaminants into any respective aquatic ecosystem by the anthropogenic sources causes direct and/or indirect interruption to ecosystem structure, functions, and consequently, services and values. Currently, we assess the levels of microplastics in sea salt, drinking water bottles, sea sand, and river water. We conduct surveys on the knowledge, practices and attitudes of the community on microplastics and plastic pollution.

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Key Publications

Nothing to show under this subheading !!!

Conferences

105th Southeast Branch meeting of the American Society of Microbiology (ASM)

HELD AT : University of Alabama, USA - (2020)
TOPIC : *Canine Trypanosomosis in Sri Lanka: An Emerging Problem Reported from Three Distinct Geographic Locations.*

39th Annual Symposium on Sea turtle Conservation and Biology

HELD AT : Charleston, SC, USA. - (2019)
TOPIC : *Post-war tourism developments and coastal light pollution: Effect on sea turtles in Sri Lanka. .*

Association for Tropical Biology and Conservation, Asia Pacific (ATBC-AP) Meeting

HELD AT : Thulhiriya, Sri Lanka - (2019)
TOPIC : *Additive and antagonistic effects of exposure of two cercariae types in Polypedates cruciger tadpoles*

XV International Congress of Acarology

HELD AT : Antalya, Turkey - (2018)
TOPIC : *Human otoacariasis in Sri Lanka: Tick species associated and risk factors.*

38th Annual Symposium on Sea turtle Conservation and Biology.

HELD AT : Kobe, Japan - (2018)
TOPIC : *Fishers' perception and practices on turtle by-catch in Sri Lanka*

My Publications

Please goto the website.

https://sci.pdn.ac.lk/zoology/staff/Rupika-Rajakaruna-Amarakoon

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