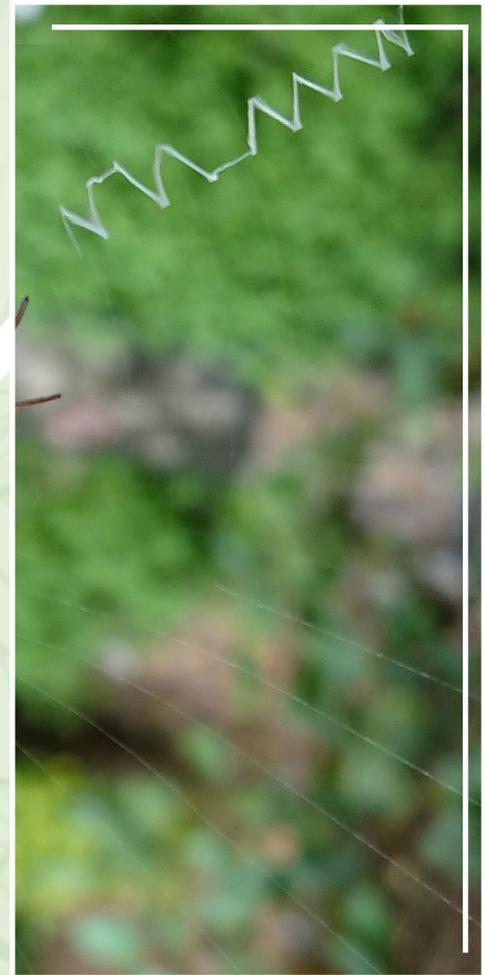
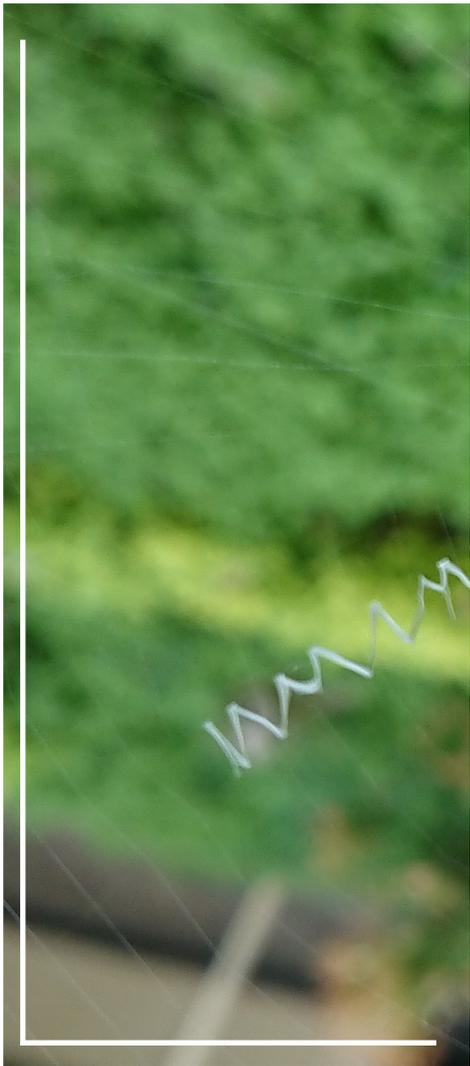


Newsletter

Department of Zoology/UOJ

DECEMBER 2021 VOLUME-V No-01 ISSN NO: 2550 - 2786



Editors' view.....

We, the Department of Zoology at the University of Jaffna, publish a newsletter every year to expand our knowledge and share our achievements with the society. In that regard, we enjoy compiling and presenting our insights for this year (2021) on these pages. Our faculty and students are making a name for themselves on a national and international level through their projects and publications. Sharing information means the creation of new values and the development of new action capacities. We hope that by sending out this news letter, we will be able to motivate ourselves and others to double the work productivity for the following year.

Editorial team:

Mr. M. N. Rafeedh, Mr. R. Nirujan, Miss. C. Thadshayini, Mrs. Nimasha M. Liyanagedara and Miss. W.M.Y.D. Wanasinghe



NEW HEAD FOR THE DEPARTMENT OF ZOOLOGY



One of the Senior Lecturers; **Dr. Mrs. Abyerami Sivaruban**, has been appointed as the Head of the Department of Zoology, University of Jaffna with effect from 30th march of 2021. On behalf of the Department of Zoology, heartfelt congratulations to the new Head of the Department.



Gratitude are extended to the former Head of the Department of Zoology **Dr. T. Eswaramohan** for his invaluable service rendered to the department and faculty ever since his appointment. The guidance, encouragement and support provided through out the period are immeasurable. Especially, the efforts taken by him to carry out the academic activities during this pandemic period without much interruptions, is evidence for his commitment and dedication. His services will be remembered and cherished by each and everyone in our department.

PROMOTIONS



Prof S. N. Surendran has been promoted as the Chair Professor. He is the second Chair Professor of Zoology after Late Prof. V. K. Ganeshalingam.



Dr. K. Gajapathy has been promoted as a Professor in Zoology.



Ms. Ajanthini Aruthavaselvan has been promoted as the Technical Officer and got the transfer to the Department of Civil Engineering, Faculty of Engineering, University of Jaffna.

APPOINTMENTS



NSF has appointed **Dr. T. Eswaramohan** as a member of the working group on National Innovation Ecosystem Development with the Stakeholders with effect from 16.08.2021 to Initiate necessary corrective actions through NSF and NIA and other stakeholders for the continuous development of the national innovation ecosystem.



Mrs. Piratheepa Sivakumar appointed as a District Representative of Wildlife and Nature Protection Society of Sri Lanka (WNPS); one of the oldest environmental societies in the country, from 1st June 2021.

AWARD

Our staff members Prof. S. N. Surendran, Prof. K. Gajapathy, Ms. S. Kokila, Mr. S. Arthiyan and Postgraduate student; Mr. Tibutius Thanesh, have received “President’s Awards for Scientific Research-2018” for the publication titled, ‘Genotype and biotype of invasive *Anopheles stephensi* in Mannar Island of Sri Lanka’ [Parasites & Vectors 2018;11(1):3]. The ceremony was held on 06th April 2021 as a virtual event.



Surendran et al. Parasites & Vectors (2018) 11:3
DOI 10.1186/s13071-017-2601-y

Parasites & Vectors

RESEARCH

Open Access

Genotype and biotype of invasive *Anopheles stephensi* in Mannar Island of Sri Lanka

Sinnathamby N. Surendran^{1*}, Kokila Sivabalakrishnan¹, Kanapathy Gajapathy¹, Sivasingham Arthiyan¹, Tibutius T. P. Jayadas¹, Kalingarajah Karvannan¹, Selvarajah Raveendran², S. H. P. Parakrama Karunaratne³ and Ranjan Ramasamy⁴

Abstract

Background: *Anopheles stephensi*, the major vector of urban malaria in India, was recently detected for the first time in Sri Lanka in Mannar Island on the northwestern coast. Since there are different biotypes of *An. stephensi* with different vector capacities in India, a study was undertaken to further characterise the genotype and biotype of *An. stephensi* in Mannar Island.

Methods: Mosquito larvae were collected in Pesalai village in Mannar and maintained in the insectary until adulthood. Adult *An. stephensi* were identified morphologically using published keys. Identified adult *An. stephensi* were molecularly characterized using two mitochondrial (*cox1* and *cytb*) and one nuclear (ITS2) markers. Their PCR-amplified target fragments were sequenced and checked against available sequences in GenBank for phylogenetic analysis. The average spiracular and thoracic lengths and the spiracular index were determined to identify biotypes based on corresponding indices for Indian *An. stephensi*.

Results: All DNA sequences for the Mannar samples matched reported sequences for *An. stephensi* from the Middle East and India. However, a single nucleotide variation in the *cox1* sequence suggested an amino acid change from valine to methionine in the *cox1* protein in Sri Lankan *An. stephensi*. Morphological data was consistent with the presence of the Indian urban vector *An. stephensi* type-form in Sri Lanka.

Conclusions: The present study provides a more detailed molecular characterization of *An. stephensi* and suggests the presence of the type-form of the vector for the first time in Sri Lanka. The single mutation in the *cox1* gene may be indicative of a founder effect causing the initial diversification of *An. stephensi* in Sri Lanka from the Indian form. The distribution of the potent urban vector *An. stephensi* type-form needs to be established by studies throughout the island as its spread adds to the challenge of maintaining the country's malaria-free status.

Keywords: *Anopheles stephensi*, Biotype, *cox1*, *cytb*, Malaria vector, Mannar Island, Spiracular index, Sri Lanka, ITS2

GRANTS

The following staff members have won competitive research grants.

Prof. S. N. Surendran has received the following grant:

Grant Number: NSF/RG/2019/HS/02

Title: “Dengue transmission intervention using lure based adult suction traps and gravid *Aedes* (GAT): A cluster randomized trial approach in Jaffna municipal area”

Amount: 4 million LKR

Mrs. Piratheepa Sivakumar has obtained the following grant:

University research Grant 2021 - URG/2021/SEIT/23

Title- “Spatial distribution of water quality parameters of surface water and associated wells and ichthyofaunal diversity in Thondaimannaru lagoon.”

Amount: 800,320.00 LKR

EVENTS

The **Saraswathi Pooja**; traditional festival of celebrating the goddess of education, was held at the Department on 13th of October 2021. Head of the department and staff participated in this spiritual event. demonstrators and non-academic staff arranged the programme.



The Annual Christmas party was held on 20th December 2021 at the Department by adopting the health regulations.

ZSA COMPETITION

A Three Minute Thesis (3MT) challenge was conducted by the Zoological Students' Association on 23rd December of 2021. The event was organized as a part of an effort to develop presentation skills among zoology undergraduates. 10 students took part in the challenge. **Ms. S. Kokularathai** won the first prize. Mr. S. Arthiyam, Mr. A. Tharsan and Mr. D. Naruwan G. Dayananda have helped the event as judges.



Winner
Ms. S. Kokularathai (4M)



REMEMBRANCE

In remembrance of Late Dr. K. Chitravadivelu and Mrs. Navamani Selvarajah, who have left us this year! They were tremendous academics, supporting younger staff. May their souls rest in peace!

Dr. Karthigesu Chitravadivelu

BSc (London), MSc, PhD (Charles, Czech Republic), Dip-in-Ed. (Sri Lanka).
Retired Associate Professor in Zoology.
Former Head, Departments of Zoology and Botany.
Former Director,
Centre for Development of Fisheries.

Mrs. Navamani Selvarajah

BSc (University of Ceylon), MSc (London, UK),
Retired Associate Professor in Zoology,
Former Head, Department of Zoology (July 1978 - Sept 1979,
Oct 1986 - Dec 1987, Mar 1988 - July 1990,
Nov 1996 - Mar 1997).

OUTREACH AND CONSULTANCIES

Mrs. P. Gajavathany conducted a webinar on "Avifauna of Sri Lanka" which is organized by the JSA on 01.09.2021

Mrs. P. Gajavathany conducted a webinar in Tamil language on "Ilangaiparavaigal (Birds of Sri Lanka)" organized by an Indian Ornithological Society, CrowNest, on 29th August 2021.

Prof. Mrs. R. Gnaneswaran conducted a virtual session on the management of the mangroves in Tamil. The event was organized by Save a Life on 12.11.2021.

Prof. K. Gajapathy did a webinar on Challenges and current trends in Biodiversity conservation on 22.05.2021 organized by the American Corner, Jaffna.

Prof. K. Gajapathy participated as a resource person in a webinar on the "importance of English language in University education" on 21st June 2021 organized jointly by the American Corner, Jaffna

Prof. K. Gajapathy involved in an ecological survey and report submission for the river restoration programme for the CEA in Kanagarayan river, Mullaitivu.

Mrs. P. Sivakumar served as a resource person for writing scientific names and their corresponding common names in Tamil for Fishes incorporated in a book titled "School Marine groups guidelines" published by MEPA, 2021.

Mrs. P. Sivakumar conducted a webinar on "Thondaimanaru lagoon, Jaffna, Sri Lanka" organized by Young Water Professionals (YWP) Session 4th April 2021.

Dr. Mrs. Thulasitha William Shanthakumar conducted a webinar on 'Research Skills Training for student researchers' organized by Jaffna Science Association Section-A on 12.12.2021.

ALUMNI CORNER

Miss. A. Vithusha (40th Batch)



Award Winner of

- Sir Sangarapillai Pararajasingam prize in Zoology for best performance in the Honours Degree Examination in Science (Zoology).
- Dean's List 2017
- Dean's List 2016

Miss. A. Salomi (41st Batch)



Award Winner of

• Sir Sangarapillai Pararajasingam Prize in Zoology for best performance in the Honours Degree Examination in Science (Zoology).

• Vathsaladevi Ponnudurai Memorial Scholarship for the best performance in Zoology units of general degree examination in science level 1G & 2G.

- Dean's List 2017.
- Dean's List 2016.
- Works as Research Analyst in He Health (Singapore).
- Completed MSc in Clinical and Health Psychology from University of West London .

Miss. P. Vashini Olivia (41st Batch)



Employed as an Operational Data Analyst at Synergen Health.

Mr. A.A.K.P. Amarasinghe (41st Batch)



Temporary Research Assistant at Department of Parasitology, Faculty of Medicine, University of Jaffna.

Mr. H.G.D. Madhusanka (41st Batch)



Started working as Research Assistant and Project Assistant under AHEAD-DOR Project at Environmental Microbiology Laboratory, Department of Civil Engineering, Faculty of Engineering, University of Jaffna.

Miss. R. Gayathri (42nd Batch)



Temporary Research Assistant at Department of Parasitology, Faculty of Medicine, University of Jaffna.

Miss. W.M.Y.D. Wanasinghe (42nd Batch)



Research assistant, Centre for Research in Entomology, Department of Zoology, University of Jaffna.

GRADUATION 2021

Congratulations to all those who successfully completed Honours Degree in Zoology and graduated in 2021!

40th Batch

- Mr. A. Tharsan
- Miss. A. Vithusha
- Miss. K. Shanika Lakmali
- Miss. S. Nitharani
- Miss. Aarani
- Miss. Vihara
- Miss. Aniththa

41st Batch

- Miss. A. Salomi
- Mrs. M. A. F. Hasna
- Miss. K. Vithushi
- Mr. Nadika D. Abeyweera
- Mr. G.W.A.L.K. Wijewantha
- Miss. R. Malariny
- Miss. Imesha D. Gamage
- Miss. P. Vashini Olivia
- Mrs. N.M. Liyanagedara
- Mr. K.A.L.K. Jayanatha
- Mr. H.G.D. Madhushanka
- Mr. D.N.G. Dayananda
- Mr. A.A.K.P. Amarasinghe



RECRUITMENTS



Mr. R. Partheepan joined the department as Technical Officer from 03rd March 2021.



Mr. Kanagaratnam Kirubananthan joined as Lab Attendant from 02nd August 2021.

PUBLICATIONS

A new batch of Academic Supportive Staffs were recruited to the department from 11th October 2021. We warmly welcome the following members to be part of the Zoology

- | | |
|---|----------------------------|
| 1.Mr. D. N. G. Dayananda
(Assistant Lecturer) | 8.Mrs. Nimasha Madubashini |
| 2.Mr. G.W.L.K. Wijewantha
(Research Assistant) | 9.Mr. M. N. Rafeedh |
| 3.Miss. A. Vithusha | 10.Mr. R. Nirujan |
| 4.Miss. K. Shanika Lakmali | 11.Miss. C. Thadshayani |
| 5.Miss. K. Vithushi | 12.Miss. K. Mayurathy |
| 6.Mr. Nadika D. Abeyweera | |
| 7.Miss. Imesha D. Gamage | |



NEW HONOURS DEGREE STUDENTS

New 3M students were selected.

Ms. B. Barathy

Ms. A.M. Hilmiya Banu

Ms. M.R. Shanlaa Banu

Ms. B. Aarani

Ms. H.M. S. M. Herath

Ms. M. Mathula

Ms. N.N. Dhilani

Ms. G.B.N. Priyadharshana

Ms. M.R. Luckshika

Ms. V. Thilaksika

Ms. H.I.P. Sathsarani

Mr. W.M.B. Umesh

Ms. D.M.S.G. Dissanayake

Ms. M.N.F. Fahira

Ms. H.M.S.A. Herath



Book:

Gajapathy, K. Sandfly taxonomy and pictorial guide to Sri Lankan sandflies. Published with the support of NSF, Sri Lanka.

Research Papers:

- Ramasamy, R., Thiruchenthooran, V., Jayadas, T.T., Eswaramohan, T., Santhirasegaram, S., Sivabalakrishnan, K., Naguleswaran, A., Uzest, M., Cayrol, B., Voisin, S.N. and Bulet, P., 2021. Transcriptomic, proteomic and ultra-structural studies on salinity-tolerant *Aedes aegypti* in the context of rising sea levels and arboviral disease epidemiology. *BMC Genomics*, 22(1), pp.1-16.
- Surendran, S.N., Jayadas, T.T., Thiruchenthooran, V., Raveendran, S., Tharsan, A., Santhirasegaram, S., Sivabalakrishnan, K., Karunakaran, S., Ponnaiah, B., Gomes, L. and Malavige, G.N., 2021. Aedes larval bionomics and implications for dengue control in the paradigmatic Jaffna peninsula, northern Sri Lanka. *Parasites & Vectors*, 14(1), pp.1-13.
- Surendran, S.N., Nagulan, R., Sivabalakrishnan, K., Arthiyani, S., Tharshan, A., Jeyadas, T., Raveendran, S., Kumanan, T. and Ramasamy, R., 2021. Reduced Dengue Incidence During COVID-19 Restrictions in Sri Lanka From March 2020 to April 2021.
- Thanihaichelvan, M., Surendran, S.N., Kumanan, T., Sutharsini, U., Ravirajan, P., Valluvan, R. and Tharsika, T., 2021. Selective and electronic detection of COVID-19 (Coronavirus) using carbon nanotube field effect transistor-based biosensor: A proof-of-concept study. *Materials Today: Proceedings*.
- Gnaneswaran, R., 2021. Taxonomic studies on Idiocerini Leafhoppers (Hemiptera: Cicadellidae: Eurymelinae: Idiocerini) of Sri Lanka. *Vingnanam Journal of Science*, 16(1).
- Amarasinghe, A.A.T.N., Eswaramohan, T. and Gnaneswaran, R., 2021. Gastropods Diversity in Thon-daimanaru Lagoon (Class: Gastropoda), Northern Province, Sri Lanka. *Journal of Geoscience and Environment Protection*, 9(3), pp.21-30.
- Nirujan, R. and Thulasitha, W. S. 2021. Marine sponges of coastal waters of Mandaitivu island, Northern Province, Sri Lanka. Proceedings of the 41st Annual Sessions of Institute of Biology, held on 24th September 2021. Pp.36.
- Vithushi, K. and Thulasitha, W.S. 2021. Toxicity of phenanthrene in the early life stages of Zebrafish (*Danio rerio*). International Conference on multidisciplinary approaches in science 2021 (ICMAS2021), Faculty of Science, University of Colombo to be held on 24-26, November 2021. Pp.75.
- Wanasinghe W.M.Y.D. and Piratheepa S. 2021. Freshwater fishes in Maha wewa at Ihala Kadigamuwa village, North Western Province of Sri Lanka. Proceedings of 27th sessions of the Sri Lanka Association For Fisheries and Aquatic Resources. Pp22.

9. Arani, Y & Nithiyagowry R. 2021. Study on bioactivity of lime, *Citrus aurantifolia* (Christm.) against larvae of Diamond back moth, *Plutellaxylostella* (L.) on cabbage crop under laboratory conditions. *Vingnanam Journal of Science*, 16(1).
10. Kandasamy, G., Weerakoon, D. K., Sivaruban, A., & Jayasiri, H. B. (2021). Habitat use by shorebird assemblages in Kavutharimunai. Submitted for Annual Scientific Sessions of the Sri Lanka Association for Fisheries and Aquatic Resources, 2021.
11. Vithusha, A., and Piratheepa, S., 2021. Diversity and Abundance of Macroinvertebrates in Kaakkaithivu coastal waters, Jaffna estuary. *Vingnanam Journal of Science*, 16(2), pp.8-13.

NEWS PAPER ARTICLES

1. An article published in Valampuri newspaper on 12/03/2021 by **Mrs. P. Sivakumar**. Title-“நமது சூழலை காப்பது எமது பொறுப்பு.”
2. A newspaper article is published by **Prof. S. N. Surendran** and **Miss. S. Kokila** in Uthayan daily newspaper on the impact of COVID-19 in the Dengue control. An intriguing article assessing the ground situation.
3. **Gajavathany, P.** has published a Tamil article on “Vada piraandhiyaththil Pullimookku vaaththu” (Spot-billed duck (*Anas poecilorhyncha*) in the Northern Region) submitted for Warana trilingual Journal, 2021.

WORKSHOPS

Prof. S. N. Surendran and **Prof. K. Gajapathy** served as resource persons to a virtual workshop on Application of Molecular Techniques in Vector-Borne Disease Research organized by the University of Peradeniya on 18th and 19th December 2021.

NEW ZSA COMMITTEE

New committee of Zoological Students Association (ZSA) had been selected. Dr. Mrs. T. W. Shanthakumar was proposed as the senior treasurer. Executive Committee members are:

- S. Gobika (Vice Secretary)
- C. Thadshayini (Junior treasurer)
- M.N. Rafeedh (Editor)
- Y. Abiraami (Ex. Member-3M)
- Senaka Pushpakumara (Ex. Member-3G)
- B. Baarathy (Ex. Member-2G)
- U.R. Pernal Ransika (Ex. Member-1G)
- R. Nirujan (President)
- M. A. Azmanul Haq (Vice President)
- W.M.Y.D. Wanasinghe (Secretary)

Cover page image: *Argiope argentata* (Spider)
Photograph and designing by Mr. M. N. Rafeedh

GALLERY-2021



New head appointment on 31/03/2021



Marine biology field work on 25/03/2021



Nocturnal moth sampling at Mandaiteevu on 17/12/2021



Field visit for mangrove identification at Mandaiteevu on 07/12/2021



Sponge sampling at Eluvaiteevu on 20/02/2021