

CURRICULUM VITAE

Dr. T. KUBENDRAN, M.Sc., M.Phil., Ph.D.

Scientist - C
High Altitude Regional Centre,
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RESEARCH INTEREST:

- Morpho and Molecular Taxonomy of Ephemeroptera, Plecoptera and Trichoptera; Biodiversity Conservation

ACADEMIC RECORDS:

| Course/ Degree | School/College/ University | Board/ University | Subject | Year of Passing | Percentage (%) |
|-----------------------|---|---------------------------------------|-------------|--------------------------------|----------------|
| Ph. D. | Thiagarajar College, Madurai | Madurai Kamarajar University, Madurai | Zoology | 12 th November 2014 | |
| M. Phil., | Thiagarajar College, Madurai | Madurai Kamarajar University, Madurai | Zoology | 2009 | 76.50 |
| M. Sc., | Ayya Nadar Janaki Ammal College, Sivakasi | Madurai Kamarajar University, Madurai | Zoology | 2008 | 81.75 |
| Dip. Sericulture | Vivekananda College, Madurai | Madurai Kamarajar University, Madurai | Sericulture | 2006 | 75.00 |
| Dip. Medicinal Botany | Vivekananda College, Madurai | Madurai Kamarajar University, Madurai | Botany | 2006 | 80.00 |
| B. Sc. | Vivekananda College, Madurai | Madurai Kamarajar University, Madurai | Zoology | 2006 | 74.00 |
| H.S. C. | Govt. Boys High. Sec. School, Theni Dt | State Board | Science | 2003 | 63.66 |
| S.S.L.C. | Govt. High. Sec. School, Theni Dt | State Board | - | 2001 | 73.80 |

PROJECT/DISSERDATION/THESIS:

- 👍 **Ph. D.** : "Contributions to the Systematics, Diversity, Phylogeny and Biomonitoring Potential of the Baetidae (Insecta: Ephemeroptera) of Some Hill Streams of southern Western Ghats, India".
- 👍 **M.Phil.,** : "Pathogenicity and proteome production of *Isaria fumosorosea* (= *Paecilomyces fumosoroseus*) (Wise) isolates against Lemon butterfly *Papilio demoleus* (Papilionidae: Lepidoptera)".
- 👍 **M.Sc.,** : "Survey of insect pests in green gram (*Phaseolus aureus*) using light traps in Elumalai Village, Madurai District".

ACADEMIC HONORS:

- 👍 **N-PDF (National Post-Doctoral Fellowship SERB-DST):** Dept. of Zoology, Bharathiyar University, Coimbatore, Tamil Nadu, project entitle "Molecular systematics, Phylogeny and Phylogeography of Baetidae (Ephemeroptera) of south India and delineation of the cryptic species complexes with potential implication as indicator taxa in freshwater biomonitoring".
- 👍 **Senior Research Fellow (University Grants Commission, Govt. of India):** project entitle "Taxanomy, Bioecology and Molecular Phylogeography of The cryptic species complex of Baetidae, Ephemeroptera in south Indian streams".
- 👍 **Junior Research Fellow (University Grants Commission, Govt. of India):** project entitle "Taxanomy, Bioecology and Molecular Phylogeography of The cryptic species complex of Baetidae, Ephemeroptera in south Indian streams".

PRESENT POSITION:

| Period | | Post held | Name of the Intuition |
|------------|---------|--|--|
| From | To | | |
| 10.04.2017 | onwards | Scientist – C | High Altitude Regional Centre Zoological Survey of India Ministry of Environment, Forest & Climate Change Government of India Saproon, Solan – 173 211, Himachal Pradesh, INDIA |
| 24.02.2018 | onwards | Scientist – C & Nodal Officer for AEBAS | High Altitude Regional Centre Zoological Survey of India Ministry of Environment, Forest & Climate Change Government of India Saproon, Solan – 173 211, Himachal Pradesh, INDIA |

PROFESSIONAL EXPERIENCE:

| Post held with scale of pay | Name of the Funding Agency | Period of service | | Title of the project |
|---|---|-------------------|------------|---|
| | | From | To | |
| N-PDF (National Post-Doctoral Fellowship SERB-DST) ₹. 55,000/- | Department of Science and Technology, Govt. of India, New Delhi | 02.05.2016 | 31.03.2017 | Molecular systematics, Phylogeny and Phylogeography of Baetidae (Ephemeroptera) of south India and delineation of the cryptic species complexes with potential implication as indicator taxa in freshwater biomonitoring. |
| Senior Research Fellow ₹. 18,000+HRA | University Grants Commission, Govt. of India. | 12.03.2011 | 11.03.2014 | Taxonomy, Bioecology and Molecular Phylogeography of The cryptic species complex of Baetidae, Ephemeroptera in south Indian streams |
| Junior Research Fellow ₹. 16000+HRA | University Grants Commission, Govt. of India. | 10.06.2008 | 09.06.2010 | Taxonomy, Bioecology and Molecular Phylogeography of The cryptic species complex of Baetidae, Ephemeroptera in south Indian streams |

DISCOVERIES OF NEW SPECIES:

| S. No. | New species Name | Patent title | Name of the applicant (s) | Year of Award | Agency/Country | Status |
|--------|--|---|---------------------------|---------------|---|---------|
| 1 | <i>Labiobaetis soldani</i> | New Species discovered from India | Kubendran <i>et al.</i> , | 2014 | Entomological society of America, Science Daily | Awarded |
| 2 & 3 | <i>Nigrobaetis paramakalyani</i> and <i>Labiobaetis jacobusi</i> | Contribution to the knowledge of <i>Tenuibaetis Nigrobaetis</i> and <i>Labiobaetis</i> Baetidae) from the Western Ghats (India) | Kubendran <i>et al.</i> , | 2015 | Zootaxa, Switzerland | Awarded |

POPULAR ARTICLES:

- ☞ The New species *Labiobaetis soldani* was published in: Entomological Society of America, Science Daily, Science Today, Encyclopaedia, Wikipedia, Entomological News and all Entomological related journals all over the world (Reference: T. Kubendran *et al.*, 2014).

DESCRIPTION OF Ph.D WORK

In doctoral thesis, Systematics, diversity, phylogeny of Baetidae (Insecta: Ephemeroptera) of some hill streams of southern Western Ghats are investigated. Synoptic accounts of 25 species belonging to 9 genera of Baetidae are presented and dichotomous larval keys are prepared. Four species were found new to be science of which one new species belonging to genus *Baetis*, *B. klugei* sp. nov. two new species belonging to genus *Labiobaetis*, *L. jacobusi* sp. nov. and *L. soldani* sp. nov. and one new species belonging to genus *Nigrobaetis*, *N. gattolliati* sp. nov. are described. Taxonomic descriptions are provided followed by differential diagnosis in the larval and respective reared imaginal stage. Diversity profiles and patterns of distribution of the species of Baetidae from investigated river basins are analysed. Phylogenetic relationships of the genera and species of Baetidae recorded from the investigated river basins are traced based on morphological features and the phylogenetic tree is constructed. Biomonitoring potential of mayfly larvae in terms of environmental degradation in investigated river basins of the Western Ghats with special reference to bio-assessment aspects was analysed.

RESEARCH EXPERIENCE:

- ❖ Worked as a **Principal Investigator (PI)** in National Post Doctoral Fellowship funded by Science and Engineering Research Board (SERB-DST), Government of India, New Delhi at Bharathiar University, Coimbatore, Tamil Nadu from 2nd May 2016 to 31st March 2017.
- ❖ Worked as a **Senior Research Fellow** under Rajiv Gandhi National Fellowship funded by University Grants Commission, New Delhi at Thiagarajar College, Madurai from March 2010 to March 2014.
- ❖ Worked as a **Junior Research Fellow** under Rajiv Gandhi National Fellowship funded by University Grants Commission, New Delhi at Thiagarajar College, Madurai from July 2008 to March 2010.

AWARDS

- ☞ UGC- **Rajiv Gandhi Junior National Fellowship** during 2008–2009 M.Phil Research programme.
- ☞ UGC-RGNF **Senior Research Fellow (SRF)** 2010-2013 for Ph.D research programme.
- ☞ DST- SERB National Post Doctoral Fellowship (N-PDF) 2nd May 2016 onwards.
- ☞ Best Paper Presentation Award in National Seminar 2016.

ACCESSION NUMBER IN GENBANK-NCBI

| S.No | Name of fungal Organisms | Genbank Accession No. | Authors | Date of Published |
|------|----------------------------|-----------------------|---|-------------------|
| 1 | <i>Aspergillus terreus</i> | JX481965 | Moorthi,V., Chelliah,B., Thangavel Kubendran. and Banu,N | Oct 28, 2012 |
| 2 | <i>Isaria farinosa</i> | JX481966 | Moorthi,V., Chelliah,B., Thangavel | Oct 28, 2012 |

| | | | | |
|---|------------------------------|----------|---|--------------|
| | | | Kubendran. and Banu,N | |
| 3 | <i>Beauveria bassiana</i> | JX481967 | Moorthi,V., Chelliah,B., Thangavel Kubendran. and Banu,N | Oct 28, 2012 |
| 4 | <i>Paecilomyces variotii</i> | JX481968 | Moorthi,V., Chelliah,B., Thangavel Kubendran. and Banu,N | Oct 28, 2012 |
| 5 | <i>Beauveria bassiana</i> | HQ416713 | Balasubramanian,C., Vinayaga Moorthi,P. and Kubendran,T | Apr 24, 2011 |
| 6 | <i>Beauveria bassiana</i> | HQ848783 | Balasubramanian,C., Vinayaga Moorthi,P. and Kubendran,T | Apr 24, 2011 |

PUBLICATIONS IN JOURNALS & BOOKS

International and National Journals:

- ✚ **Kubendran, T.,** Selvakumar, C., Kailash Chandra and A. K. Sidhu. 2017. First record of the genus Bungona (Harker 1957) (Ephemeroptera: Baetidae) and range extension of two species belonging to Bungona in India. *Journal of Entomological Research*, 41 (4): 373-376.
- ✚ **Kubendran, T.,** Selvakumar, C., A. K. Sidhu, Murali Krishnan S. and Akhil Nair. 2017. Diversity and distribution of Baetidae (Insecta: Ephemeroptera) larvae of streams and Rivers of the southern Western Ghats, India. *Journal of Entomology and Zoology Studies*. 5(3): 613-625.
- ✚ **Kubendran, T.** Selvakumar, C., A. K. Sidhu, Akhil Nair and Murali Krishnan, S. 2017. Baetidae (Ephemeroptera: Insecta) as Biological Indicators of Environmental Degradation in Tamiraparani and Vaigai River Basins of Southern Western Ghats, India. *International Journal of Current Microbiology and Applied Sciences*. 6(6): 558-572.
- ✚ Selvakumar, C., **Kubendran, T.,** Sivaramakrishnan KG. and Janarthanan, S. 2017. Genetic diversity and conservation of South Indian Mayfly, Petersula courtallensis Sivaramakrishnan,1984 (Ephemeroptera: Leptophlebiidae). *Journal of Entomology and Zoology Studies*. 5(3): 1110-1114.
- ✚ **Kubendran T.** and Ramesh M. 2016. Composition and distribution of aquatic insect communities in relation to water quality in two freshwater streams of southern Western Ghats, India. *Journal of Entomology and Zoological Studies*. 4(5): 689-695.
- ✚ **Kubendran T.** and Ramesh M. 2016. Monitoring of adult aquatic insect activities and ecological role in the riparian zone of streams in the Western Ghats, India. *IRA-International Journal of Applied Science*. 4(3): 460-470.
- ✚ **Kubendran, T.,** Balasubramanian, C., Selvakumar, C. Gattolliat, J-L. and Sivaramakrishnan, K. G. 2015. Contribution to the knowledge of *Tenuibaetis* Kang & Yang 1994, *Nigrobaetis* Novikova & Kluge 1987 and *Labiobaetis* Novikova & Kluge 1987 (Ephemeroptera: Baetidae) from the Western Ghats (India). *Zootaxa*. **3957** (2): 188–200.
- ✚ **Kubendran, T.,** Rathinakumar, T., Balasubramanian, C., Selvakumar, C and Sivaramakrishnan, K. G. 2014. A new species of *Labiobaetis* Novikova & Kluge, 1987

(Ephemeroptera: Baetidae) from the southern Western Ghats in India, with comments on the taxonomic status of *Labiobaetis*. *Journal of Insect Science*. **14** (86) 1-10.

- ✚ Rathinakumar, T., Balasubramanian, C and **Kubendran, T.** 2014. Decomposition of three leaf litter species and associated aquatic insects in Kurangani stream of Western, South India. *International Journal of Environment Biology*, **4** (2): 100-106.
- ✚ Rathinakumar, T., Balasubramanian, C and **Kubendran, T.** 2014. Species composition, diversity of mayflies (Insecta: Ephemeroptera) and their relationship with the environmental variables in hill streams of Tamiraparani river basin, Tamil Nadu. *Acta Biologica Indica*, **3**(2):712-725.
- ✚ Vinayaga Moorthi, P., Balasubramanian, C., Pasco B. Avery, Selvarani, S., **Kubendran, T.**, Rathinakumar, T and Najitha Banu, A. 2014. Pathogenicity and proteome production of *Isaria fumosorosea* (= *Paecilomyces fumosoroseus* WISE) isolates against lemon butterfly, *Papilio demoleus* (Papilionidae: Lepidoptera). *African Journal of Entomology*. **13** (43) 4176-4182.
- ✚ Kluge, N. J, Sivaramakrishnan, K. G., Selvakumar, C. and **Kubendran, T.** 2013. Notes about *Acentrella* (Liebebiella) vera (Muller-Liebenau, 1982) (D *Pseudocloeon difficilum* Muller-Liebenau, 1982 syn. n. D *Platybaetis arunachalae* Selvakumar, Sundar, and Sivaramakrishnan, 2012 syn. n.) (Ephemeroptera: Baetidae). *Aquatic Insects*, **35** (3-4) 63-70.
- ✚ Vinayaga Moorthi, P., Balasubramanian, C., Pasco B. Avery, Najitha Banu, A. and **Kubendran, T.** 2012. Efficacy of fungal entomopathogens against red cotton stainer, *Dysdercus cingulatus* Fabricius (Hemiptera: Pyrrhocoridae). *Journal of Biopesticide*, **5**(2): 140-143.
- ✚ Vinayaga Moorthi, P., Balasubramanian, C. and **Kubendran, T.** 2012. Laboratory evaluation of *Metarhizium anisopliae* isolates against army worm, *Spodoptera litura* and caster hairy caterpillar, *Euproctis fraterna*. *Journal of Entomological Research*, **36** (1): 45-51.
- ✚ Vinayaga Moorthi, P., Balasubramanian, C. and **Kubendran, T.** 2011. Efficacy of local isolates of *Beauveria bassiana* against *Spodoptera litura* (F.) (Lepidoptera: Noctuidae). *Journal of Biological Control.*, **25** (1): 22-25.
- ✚ Vinayaga Moorthi, P., C. Balasubramanian and **Kubendran, T.** 2011. Laboratory evaluation of 7 isolates of fungi against army worm, *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae) and Castor hairy caterpillar, *Euproctis fraterna* (Moore) (Lepidoptera: Lymantridae), *Journal of Biological Control.*, **25** (4): 32-345.
- ✚ Gayathri, G., Balasubramanian, C., Vinayaga Moorthi, P. and **Kubendran, T.** 2010. Larvicidal potential of *Beauveria bassiana* (Balsamo) Vuillemin and *Paecilomyces fumosoroseus* (Wize) Brown and Smith on *Culex quinquefasciatus* (Say). *Journal of Biopesticide*, **3**: 143-147.

BOOK CHAPTERS

1. **Kubendran, T.**, Balasubramanian, C., Rathinakumar, T. and Vinayaga Moorthi, P. 2013. *Hydrochemistry and Generic diversity of Aquatic insects of Kurangani and Valiparai streams of Western Ghats, Theni District, Tamil Nadu, India.* (Eds.) Dhanna, D.A., Chopra, A.K., Matta, G., Singh, V. and Bhutiani, R. 2013. *Impact of Global climate change on Earth Ecosystems.* Biotech Books, New Delhi, Pp. 155-171.

PAPER PRESENTATION(S) INTERNATIONAL CONFERENCES

- ✓ Presented a Paper in 2nd Biospesticide International Conference (BIOCICON 2009) entitled “Larvicidal potential of *Beauveria bassiana* (Bals.) Vuillemin and *Paecilomyces fumosoroseus*

(Wize,) Brown and Smith on *Culex quinquefasciatus* (Say)” held on 26-28 November 2009 at crop protection Research centre, Department of Advanced Zoology and Biotechnology, St. Xavier’s College, Palayamkottai, Tamil Nadu.

- ✓ Presented a paper in International Conference on Bioresource Technology (ICBRT 2010) entitled “Diversity of aquatic insects, biomonitoring and hydrochemistry of Kurangani and Natham streams of Southern Western and Eastern Ghats, Tamil Nadu” held on 7-8 October 2010 at Department of Botany, Nirmala College for Women, Coimbatore, Tamil Nadu, India.
- ✓ Presented a Paper in 2nd Biospesticide International Conference (BIOCICON 2009) entitled “Larvicidal potential of *Beauveria bassiana* (Bals.) Vuillemin and *Paecilomyces fumosoroseus* (Wize,) Brown and Smith on *Culex quinquefasciatus* (Say)” held on 20-30 November 2009 at crop protection Research centre, Department of Advanced Zoology and Biotechnology, St. Xavier’s College, Palayamkottai, Tamil Nadu.
- ✓ Presented a paper in International Conference on Bioresource Technology (ICNANO 2011) entitled “Synthesis of silver nanoparticles by using entomopathogenic fungi against *Culex quinquefasciatus* (Say)” held on 18-21 December 2012 at Department of Zoology, Delhi University, New Delhi, India.

NATIONAL CONFERENCES AND SYMPOSIUM:

- ✓ Presented a paper entitled “Screening and Secretomic analysis of *Metarhizium anisopliae* (Matsch) Sorokin isolates in response to *Orthaga exuvinaeae* (Noctuidae:Lepidoptera)” in National symposium on Non- Chemical Insect Pest Management held on 5-6 February 2009 at Entomology Research Institute, Loyola College Chennai.
- ✓ Presented a paper in State level Student seminar entitled “Smart DNA Programming the molecular of life for work” held on 26th February 2009 at Department of Zoology, Thiagarajar College, Madurai, Tamilnadu.
- ✓ Presented a paper in “Biodiversity Conservation 2012” organised by NSS College, Pandalam, Kerala held on 17- 19 October 2012.

REGIONAL SEMINARS:

- ✦ Participated in “Regional Seminar on BIOINFORMATICS” held on 3rd January 2005 organised by Department of Zoology, Vivekananda College, Madurai, Tamilnadu.
- ✦ Participated in State Level Symposium on “Vermicomposting Technology for Rural Development” held on 23rd December 2005 organised by Department of Zoology, Vivekananda College, Madurai, Tamilnadu.
- ✦ Participated in “National Seminar on Applied Zoology” held on 7th and 9th February 2007 organised by Department of Zoology, Ayya Nadar Janaki Ammal College, Sivakasi, Virudunager, Tamilnadu.
- ✦ Participated in State Level Seminar on “Role of Microbes in Aquaculture” held on 15th and 16th 2008 organised by Department of Zoology, Kamarajar College, Tuticorin, Tamilnadu.
- ✦ Participated in State Level Seminar on “Bio safety in Environment” held on 28th February 2008 organised by Department of Zoology, Sri Parasakthi College for Women, Courtallam, Tamilnadu.

SUBJECT KNOWLEDGE

- ★ Basics in Zoology, Invertebrate, Chordate, Entomology, Biochemistry, Biotechnology, Physiology, Genetics, Immunology, Ecology, Applied Entomology, Molecular Biology, Biostatistics, Biodiversity, Microbiology, Sericulture techniques and General laboratory techniques.

TECHNIQUES KNOWN & HANDLED

Separation Techniques such as

- ✓ Agarose Gel Electrophoresis
- ✓ SDS-Poly Acrylamide Gel Electrophoresis (SDS-PAGE)
- ✓ Thin Layer chromatography
- ✓ Fourier Transform-Infra Red (FT-IR)

STATISTICAL ANALYSIS

- ❖ Microsoft Excel (Basic statistics, Correlation, ANOVA)
- ❖ SPSS (Correlation, ANOVA, Regression, 't' Test)
- ❖ PAST (Diversity Indices, Correlation)

REFERENCES

Dr. AVTAR KAUR SIDHU., Ph.D.,

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Dr. K.G. SIVARAMAKRISHNAN, Ph.D

Emeritus Scientist (2011-2013)
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Dr. S. SENTHILNATHAN, Ph.D.

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S PKCES, Manonmaniam University
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PERSONAL PROFILE:

Name : **Dr. T. KUBENDRAN, M.Sc., M.Phil., Ph.D.**
Fathers Name : Sri.V. Thangavel
Date of Birth : 20.04.1986
Proficiency in Languages : English and Tamil
Permanent Address : 3/44 North Street, M. Subbulapuram, Aundipatty,
Theni - 625 517, Tamil Nadu, INDIA
Address for Communication : Type III, Quarter # 11, ZSI Colony,
Saproon, Solan – 173 211,
Himachal Pradesh, INDIA.

CERTIFICATION

Hereby, I assure that the information furnished above is true, complete and correct to the best of my knowledge and belief and these data correctly describe my qualifications, my experience and me.

Place: Solan

Date:



(T.KUBENDRAN)