

## Curriculum Vitae



**KAMALAKANNAN M.** MSc, MPhil, PhD  
Senior Zoological Assistant, Mammal & Osteology Section,  
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### RESEARCH INTEREST

Taxonomic studies of mammal components housed in the National Zoological Collections, ZSI,  
Tricho-taxonomy of Indian mammalian species (identification of species through hair samples),  
Identification of mammals with special reference to bats,  
Collection, preservation, maintenance and digitization of mammals,  
Identification of confiscated wildlife articles (mammals).

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### EDUCATIONAL QUALIFICATIONS

**PhD (Zoology)** - 2015

Zoological Survey of India & University of Kalyani, India

**MPhil (Zoology)** - 2010

Salim Ali Centre for Ornithology and Natural History & Bharathiar University, India

**MSc (Zoology)** - 2008

Bharathiar University, India

### Title of thesis

**PhD** - Tricho-taxonomic Study of Indian Mammal Species belonging to Orders- Artiodactyla and Lagomorpha

**MPhil** - Diurnal Activity of the Indian Rock Python *Python molurus molurus* Linn. (1758) in Keoladeo National Park, Bharatpur, Rajasthan, India

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### RESEARCH EXPERIENCES

- **MPhil Scholar @ Salim Ali Centre for Ornithology and Natural History (2007-2009)**  
Collection of data on the diurnal activity of Indian rock python at the Keoladeo National Park, Rajasthan.
- **Research Personal (JRF) @ Wildlife Institute of India (2009-2010)**  
Estimating and evaluating the tiger population status in Mudumalai Tiger Reserve, Tamil Nadu and Bandipur Tiger Reserve, Karnataka using camera traps, line –transect method and indirect evidences.

- **Assistant Field Officer @ Wildlife Trust of India (2010-2012)**  
Collection of data on ecology, behaviour and population of Eastern Swamp Deer (*Rucervus duvaucelii ranjitsinhi*) in Kaziranga National Park, Assam.
- **Jr & Sr. Zoological Assistant @ Zoological Survey of India (2012- till date)**  
Exploration of faunal resources with special reference mammals across the country,  
Collection, preservation, maintenance, identification and digitization of mammal specimens in the National Zoological Collections (NZC),  
Taxonomic studies of mammal components in NZC, data analysis and publication of results,  
Identification of confiscated wildlife materials received from the different wildlife enforcement agencies.

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### **FAUNAL SURVEY ACROSS THE COUNTRY**

Field knowledge on animal survey in several Tiger Reserves (TR) and National Parks (NP) across India: **Kaziranga TR, Sunderban TR, Kanha TR, Mudumalai TR, Bandipur TR, Wyanad TR, Rajaji TR, Nameri TR, Pakke TR, Silent Valley NP, Keoladeo NP and Dibru-saikuwa NP.**

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### **INTERNATIONAL CONFERENCE**

Presented a paper in the “*Student Conference on Conservation Science*”, held at the **Department of Zoology, University of Cambridge, Cambridge, United Kingdom** during 25 - 27<sup>th</sup> March 2014 (Deputed by the Zoological Survey of India, Ministry of Environment, Forest and Climate Change, Government of India).

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### **APPRECIATION/ AWARDS/MEDALS**

- The Science and Engineering Research Board, **Department of Science and Technology**, Government of India has granted a ‘**Young Scientist International Travel Support**’ (SB/ITS-Y/04976/2013-14, Dated: 17.02.2014), and the Zoological Survey of India, Ministry of Environment, Forest & Climate Change have also financially aided to meet the said international conference.
- **Contribution of national tiger monitoring:** The contribution efforts towards ‘**National Tiger population estimation**’ during 2010-2011 was **appreciated** by the National Tiger Conservation Authority (NTCA) and Wildlife Institute of India (WII).
- **II rank holder of B.Sc in Zoology**, Govt. Arts College, Coimbatore, Tamil Nadu.
- University level- **First rank** in essay writing of the “Wildlife Week Celebrations 2006-07”
- **Winner of Indira Gandhi National NSS award**
- **Wildlife Conservation Talk** (*Zoos’ Print Journal Volume XXIII, Number 2, February 2008 (RNI 9:5) 23-25 pp*).

## **KNOWLEDGE ON ZOOLOGICAL MUSEUM**

A total of **507 exhibits of mammal species** of India and abroad have been **identified** in the '**Mammal Gallery**' of **Indian Museum** situated in Kolkata, India during 2016-17.

Working knowledge of the **Zoological gallery and Osteological gallery** of the Zoological Survey of India, Kolkata. Information on the natural history of animal exhibits of the galleries is being rendered to the visitors of the Zoological Survey of India.

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## **ADMINISTRATIVE EXPERIENCES IN ZSI**

Preparation and compilation of **all scientific reports, identification reports of seized wildlife articles, monthly report, E-news and RFD reports of ZSI and reply to MoEF & CC query regarding mammals** are being carried out.

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## **SECONDARY SKILLS**

Working knowledge on **field techniques and data analysis of ecology and population estimation of tiger, co-predators and its prey using camera trap, mark-recapture and distance sampling.**

Working knowledge on **Scanning Electron Microscope (SEM) and Optical Light Microscope** for identification of hair samples of mammal species.

**Wildlife photography** (having a wide collection of wildlife photographs).

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## **INVITED LECTURE**

**Kamalakaran M. 2018. Wildlife crime and morphological identification of wildlife confiscated materials.** Part of a hands-on-training on DNA-Barcoding: Methods and Applications" was held at the Freshwater Biology Regional Centre (FBRC), Zoological Survey of India, Hyderabad from 1-9<sup>th</sup> January 2018.

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## **SCIENTIFIC PUBLICATIONS** (selected)

### **NAAS/SCI Journals**

**Kamalakaran, M.** Dar, T.H. & Venkatraman, C. 2018. Durga Das's Leaf-Nosed Bat *Hipposideros durgadasi* Khajuria, 1970: A new distributional record to Uttar Pradesh, Northern India. Journal of Threatened Taxa (Accepted).

Dar, T.H. **Kamalakaran, M.**, Venkatraman, C and Chandra K. 2018. New distributional record of Greater Long-tongued Fruit Bat *Macroglossus sobrinus* K Anderson, 1911 (Chiroptera: Pteropodidae) from South 24- Parganas district of West Bengal, India. Journal of Threatened Taxa (Accepted).

**Kamalakaran, M.** 2017. Characterisations of hair of Red Panda *Ailurus fulgens* F.G. Cuvier (1825). Journal of Experimental Zoology, India. 20 (2): 1029-1031.

- Kamalakaran, M.** 2017. Characterisations of bristle hair of the Indian Pangolin *Manis crassicaudata* E. Geoffroy, 1803 and Chinese pangolin *Manis pentadactyla* Linnaeus, 1758 (Manidae: Pholidata). Journal of Experimental Zoology, India. 20 (2): 1033-1036.
- Kamalakaran, M.** and De, J.K. 2017. Comparative hair morphology of the Indian Otter species *Aonyx cinerea*, *Lutra lutra* and *Lutrogale perspicillata* (Mustelidae: Carnivora: Mammalia) Journal of Entomology and Zoology Studies 5(3): 826-828.
- Kamalakaran, M.** and De, J.K. 2017. Hair Morphology of Striped Hyena *Hyaena hyaena* (Linnaeus, 1758). International Journal of Current Microbiology and Applied Sciences 6(5): 1438-1441.
- Kamalakaran, M.**, Manna, C.K. and De, J.K. 2017. Identification of dorsal guard hair of Tibetan Antelope *Pantholops Hodgsonii* (Abel, 1826) (Bovidae: Artiodactyla: Mammalia). International Journal of Science, Environment and Technology 6(2): 1426 – 1429.
- Kamalakaran, M.** 2017. Comparative hair morphology of the giant flying squirrels *Petaurista petaurista*, *Petaurista magnificus* and *Petaurista philippensis* (Sciuridae: Rodentia: Mammalia). Journal of Entomology and Zoology Studies 5(3): 84-86. [ISSN: 2349-6800]
- Sharma, G., **Kamalakaran, M.**, Manna, C.K. and Dam, D. 2016. Tricho-taxonomic studies for Identification of Indian Wild Boar *Sus scrofa* Linnaeus, 1758 (Suidae: Artiodactyla: Mammalia) by dorsal guard hairs. Records of Zoological Survey of India 116(3): 279-284.
- Sharma, G., **Kamalakaran, M.**, Manna, C.K. and Dam, D. 2016. Tricho-taxonomic studies for Identification of Indian Cervids, *Axis axis* (Erxleben, 1777), *Axis porcinus* Zimmermann, 1780, *Muntiacus muntjak* Zimmermann, 1780 and *Rusa unicolor* (Kerr, 1792) (Artiodactyla: Mammalia) by dorsal guard hairs. Biological Forum 8(2): 162-167.
- Sharma, G., **Kamalakaran, M.**, Dam, D. and Husain, A. 2014. Status and Conservation of Mammalian Diversity in Indian Himalaya. Biological Forum 6(2): 284-310.
- Seenivasan, C., Saravana Bhavan, P., Radhakrishnan, R. and **Kamalakaran, M.** (2010). Groundwater quality in Tirupur, Tamilnadu, India: A pilot-assessment, Research in Environment and Life Sciences 3(1) 27-32.

### **Others**

- Kamalakaran, M.** and De, J.K. 2013. Tricho-taxonomy a case study. ENVIS Newsletter 19(1): 13-16 (Published by the Director, Zoological Survey of India).
- Kamalakaran, M.** and Sharma, G. 2015. Tricho-taxonomic studies for identification of two Indian antelope species Blackbuck, *Antelope cervicapra* (Linnaeus, 1758) and Indian Gazelle or Chinkara, *Gazella bennettii* (Sykes, 1831) by dorsal guard hairs. Bio Bulletin 1(1): 1-6.
- Kamalakaran, M.**, De, J.K. & Manna, C.K. 2015. Tricho-taxonomic studies of dorsal guard hairs of Indian Cervids (Artiodactyla: Mammalia) for species identification. Biolife 3(2): 547-552.

**Kamalakaran, M.**, De, J.K. and Manna, C.K. 2013. Identification of dorsal guard hairs surface structure of Indian chevrotain *Moschiola Indica* Gray, 1852 (Tragulidae: Artiodactyla: Mammalia). *Biolife* 1(3): 155–158.

### **E-publications**

**Kamalakaran, M.** and Venkatraman, C. 2017. A Checklist of Mammals of India.

Updated till October 2017, available at <http://zsi.gov.in>.

Sharma, G., **Kamalakaran, M.** and Venkataraman, K. 2015. *A checklist of mammals of India with their distribution and conservation status*. Published by the Director, Zoological Survey of India, Kolkata, India. ZSI e-publication, 104 pp.

Sharma, G., **Kamalakaran, M.** and Venkataraman, K. 2014. *A checklist of mammals of India with their distribution and conservation status*. Published by the Director, Zoological Survey of India, Kolkata, India. ZSI e-publication, 123 pp.

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### **BOOKS**

Sharma, G., **Kamalakaran, M.** and Venkataraman, K. 2015. *An identification manual for Schedule Mammals of India [Indian Wildlife (Protection) Act, 1972]*. Published by the Director, Zoological Survey of India, Kolkata, India, 112 pp. (ISBN 978-81-8171-407-7)

### **BOOK CHAPTERS**

**Kamalakaran, M.**, Sharma, L.K. and Venkatraman, C. 2017. *Mammals*. In: Chandra *et al.* (eds.). *Fauna of Indian Himalayan Region*. Published by the Director, Zoological Survey of India, Kolkata, India.

**Kamalakaran, M.**, Venkatraman, C. and Sharma, G. 2017. *Mammalia*, pp. 615-624. In: Chandra *et al.* (eds). *Current Status on Freshwater Faunal Diversity of India – An Overview*. Published by the Director, Zoological Survey of India, Kolkata, India.

Srivastava, J.P., Sharma, G. and **Kamalakaran, M.** 2015. *Mammals*, pp. 111-130. In: Hegde, V.D. and Venkataraman K. (eds.). *Fauna of Uttar Pradesh. State Fauna Series*. Published by the Director, Zoological Survey of India, Kolkata, India, 22 (Part- I).

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### **ABSTRACT PRESENTED IN INTERNATIONAL / NATIONAL CONFERENCES**

**Kamalakaran, M.** 2014. Identification of hairs of Indian Cervids through trichotaxonomy (Artiodactyla: Mammalia). Abstracts of papers in the '*Student Conference of Conservation Science*' held at the University of Cambridge, Cambridge, United Kingdom. March 25–27, 2014, 29.

Bhupathy, S., **Kamalakaran, M.** and Ramesh, C. 2010. Basking of the Indian Python in Keoladeo National Park, Bharatpur. Annexure II, *Abstracts of papers presented in the Annual Research Seminar, Keoladeo National Park, Bharatpur, Rajasthan*.

## **PAPER PRESENTED IN SYMPOSIUM**

Sharma, G. and **Kamalakaran, M.** 2014. Studies on the species diversity, status and conservation of mammals of India. *The 8<sup>th</sup> Indian symposium of Odonatology and Tropical Biodiversity*. Department of Zoology, Hislop College, Nagpur. 17-18 August 2014: 36-61.

## **POSTER PRESENTED**

**Kamalakaran, M.**, De, J.K. and Manna, C.K. 2014. Identification of hairs of Indian Cervids through tricho-taxonomy (Artiodactyla: Mammalia). A poster presented in the '*Student Conference of Conservation Science*' held at the **University of Cambridge, Cambridge, United Kingdom**. March 25–27, 2014.

Sharma, G., Venkataraman, K. **Kamalakaran, M.** and Dam, D. 2015. *Schedule Mammals of India- Wildlife (Protection) Act, 1972*. A brochure published by the Director, Zoological Survey of India, Kolkata.

## **CONTRIBUTIONS OF MAMMALS PHOTOS**

Contributed my **photographs of mammals** to the book titled '*Indian Mammals- A field guide*', written by Mr. Vivek Menon [Ref. Menon, V. 2014. *Indian mammals- a field guide*. Hachette (India) Pvt. Limited. Page Nos. 26 & 167]. [ISBN 978-93-5009-760-1]

Contributed my photographs of animals for exhibiting at the Zoological Survey of India's Headquarters Office, Kolkata, for uploading in the ZSIFIS website, and for various publications of ZSI on mammals.

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## **RESEARCH REPORTS**

- **Kamalakaran, M.** and Bhupathy, S. 2007. Reptiles of Western Ghats. A short-term summer training. Salim Ali Centre for Ornithology and Natural History, Coimbatore. Final Report submitted to the Director, SACON, Coimbatore.
  - Barman, R., **Kamalakaran, M.** and Gupta, S.D. 2010. Large mammals survey in and around Nameri National Park, Assam. Wildlife Trust of India. Final Report submitted to the Divisional Forest Officer, National Park, Assam.
  - **Kamalakaran M.** 2013. The Illegal Wildlife Trade- A Literature Review Study, IGNOU. A project report submitted to Chair for Sustainable Development, IGNOU, New Delhi.
  - Status of Tigers, co-predators, prey and their habitat in India. Wildlife Institute of India, Dehra Dun, 2011 (**Contributed as a member of research team**).
  - Status survey of Swamp deer *Rucervus duvaucellii* in India. Zoological Survey of India, Kolkata, 2015 (**Contributed as a member of research team**).
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## DNA SEQUENCES (MAMMALS) SUBMITTED ON NCBI, GENBANK

Thakur,M., Basu,S., Sharma,L.K., **Kamalakaran,M.**, Venkatraman,C. and Chandra,K.

MG053415- *Pseudois nayaur*

MG053416- *Alticola stoliczkanus*

MG053417- *Ursus thibetanus*

MG053418- *Vulpes vulpes*

MG053419- *Ursus thibetanus*

MG053420- *Ursus thibetanus*

MG053421- *Ursus thibetanus*

MG053422- *Ailurus fulgens*

MG053423- *Panthera tigris tigris*

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## ADDITIONAL COURSES

- **Appreciation Programme in Sustainable Management of Biodiversity** with a project entitled 'The Illegal Wildlife Trade- A Literature Review Study' by Chair for Sustainable Development, IGNOU, New Delhi (2012).
  - **Certificate Program in Forest and Wildlife Management** by Rajiv Gandhi Institute of Distance Education, Pune (2012).
  - Computer -cum- Internet Literacy programme by Directorate of Collegiate Education, Department of Higher Education, (2005) Govt. of Tamil Nadu, Chennai.
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## TRAINING/SEMINAR/SYMPOSIUM/WORKSHOP/CONFERENCE

- National conference on '**Current Status of Faunal Diversity of Mangrove Ecosystem in India**' held at the Zoological Survey of India, Kolkata on 1<sup>st</sup> & 2<sup>nd</sup> July 2017.
- Workshop on **DNA Barcoding** organised by the Centre for DNA Taxonomy, Molecular Systematics Division held at the Zoological Survey of India, Kolkata on 07-08<sup>th</sup> March 2016.
- Training workshop on **Schedule Animals** held at the Zoological Survey of India, Kolkata on 12-13<sup>th</sup> March 2015.
- Training on **GIS in Faunal Studies, Data basing and Digitization of Faunal Collections** held at the Zoological Survey of India, Kolkata on 15-16<sup>th</sup> January 2014.
- Application of **Scanning Electron Microscopy (SEM) in Animal Taxonomy** held at the Zoological Survey of India, Kolkata on 17-18<sup>th</sup> July 2013.
- National Symposium on "**Live organisms and their expressions in the Environment**" organized by the Department of Botany (Centre of Advanced Study), University of Calcutta & Ethological Society of India (ESI), Kolkata, held on November 26, 27 and 28<sup>th</sup> 2012.

- Training Programme on **Instrumentation and Analytical Techniques** between 27-07-2009 and 31-07-2009 at the Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore.
- Career Guidance Training Programme on **Electrophoresis (PAGE and AGE)** organised by the Department of Zoology, Bharathiar University, Coimbatore on 28<sup>th</sup> and 30<sup>th</sup> March 2008.
- Seminar on “**Wealth from the Waste**” organized by the Department of Environmental Sciences, School of Life Sciences, Bharathiar University, Coimbatore, held on 26<sup>th</sup> March 2008.
- Seminar on **Sustainable Aquaculture and Rural Development** (BuAqua 2008) held on 28<sup>th</sup> February 2008 at the Department of Zoology, Bharathiar University, Coimbatore.
- Short term **summer training on ‘Reptiles of Western Ghats’** at the Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore.
- National seminar on **Genes, Environment and Cancer** (GEC 2007) held on 10<sup>th</sup> and 11<sup>th</sup> 2007 at the Department of Zoology, Bharathiar University, Coimbatore.
- “MOTIF’ 06” One-day National level Symposium on **Bioinformatics** held on 11<sup>th</sup> October 2006 conducted by the Department of Bioinformatics, Bharathiar University, Coimbatore.

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#### **Books under review**

- Dentition in Indian terrestrial mammals.
- Tricho-taxonomy of Indian mammal species.

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#### **Current Research Project**

Validation of Chiropteran (Bat) collections housed in the National Zoological Collections of Zoological Survey of India.

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**(Kamalakaran M.)**