

# Journal of Threatened Taxa



Open Access

10.11609/jott.2024.16.3.24819-25018

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

26 March 2024 (Online & Print)

16(3): 24819-25018

ISSN 0974-7907 (Online)

ISSN 0974-7893 (Print)

Building evidence  
for conservation  
globally for



years

Silver Jubilee Issue



ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

Publisher  
**Wildlife Information Liaison Development Society**  
www.wild.zooreach.org

Host  
**Zoo Outreach Organization**  
www.zooreach.org

43/2 Varadarajulu Nagar, 5<sup>th</sup> Street West, Ganapathy, Coimbatore, Tamil Nadu 641006, India  
Registered Office: 3A2 Varadarajulu Nagar, FCI Road, Ganapathy, Coimbatore, Tamil Nadu 641006, India  
Ph: +91 9385339863 | [www.threatenedtaxa.org](http://www.threatenedtaxa.org)  
Email: [sanjay@threatenedtaxa.org](mailto:sanjay@threatenedtaxa.org)

#### EDITORS

##### Founder & Chief Editor

**Dr. Sanjay Molur**

Wildlife Information Liaison Development (WILD) Society & Zoo Outreach Organization (ZOO),  
43/2 Varadarajulu Nagar, 5<sup>th</sup> Street West, Ganapathy, Coimbatore, Tamil Nadu 641006, India

##### Deputy Chief Editor

**Dr. Neelesh Dahanukar**

Noida, Uttar Pradesh, India

##### Managing Editor

**Mr. B. Ravichandran**, WILD/ZOO, Coimbatore, Tamil Nadu 641006, India

##### Associate Editors

**Dr. Mandar Paingankar**, Government Science College Gadchiroli, Maharashtra 442605, India

**Dr. Ulrike Streicher**, Wildlife Veterinarian, Eugene, Oregon, USA

**Ms. Priyanka Iyer**, ZOO/WILD, Coimbatore, Tamil Nadu 641006, India

**Dr. B.A. Daniel**, ZOO/WILD, Coimbatore, Tamil Nadu 641006, India

##### Editorial Board

**Dr. Russel Mittermeier**

Executive Vice Chair, Conservation International, Arlington, Virginia 22202, USA

**Prof. Mewa Singh Ph.D., FASC, FNA, FNASC, FNAPsy**

Ramanna Fellow and Life-Long Distinguished Professor, Biopsychology Laboratory, and Institute of Excellence, University of Mysore, Mysuru, Karnataka 570006, India; Honorary Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore; and Adjunct Professor, National Institute of Advanced Studies, Bangalore

**Stephen D. Nash**

Scientific Illustrator, Conservation International, Dept. of Anatomical Sciences, Health Sciences Center, T-8, Room 045, Stony Brook University, Stony Brook, NY 11794-8081, USA

**Dr. Fred Pluthero**

Toronto, Canada

**Dr. Priya Davidar**

Sigur Nature Trust, Chadapatti, Mavinhalla PO, Nilgiris, Tamil Nadu 643223, India

**Dr. Martin Fisher**

Senior Associate Professor, Battcock Centre for Experimental Astrophysics, Cavendish Laboratory, JJ Thomson Avenue, Cambridge CB3 0HE, UK

**Dr. John Fellowes**

Honorary Assistant Professor, The Kadoorie Institute, 8/F, T.T. Tsui Building, The University of Hong Kong, Pokfulam Road, Hong Kong

**Prof. Dr. Mirco Solé**

Universidade Estadual de Santa Cruz, Departamento de Ciências Biológicas, Vice-coordenador do Programa de Pós-Graduação em Zoologia, Rodovia Ilhéus/Itabuna, Km 16 (45662-000) Salobrinho, Ilhéus - Bahia - Brasil

**Dr. Rajeev Raghavan**

Professor of Taxonomy, Kerala University of Fisheries & Ocean Studies, Kochi, Kerala, India

##### English Editors

**Mrs. Mira Bhojwani**, Pune, India

**Dr. Fred Pluthero**, Toronto, Canada

**Mr. P. Ilangovan**, Chennai, India

**Ms. Sindhura Stothra Bhashyam**, Hyderabad, India

##### Web Development

**Mrs. Latha G. Ravikumar**, ZOO/WILD, Coimbatore, India

##### Typesetting

**Mrs. Radhika**, ZOO, Coimbatore, India

**Mrs. Geetha**, ZOO, Coimbatore India

#### Fundraising/Communications

**Mrs. Payal B. Molur**, Coimbatore, India

#### Subject Editors 2020–2022

##### Fungi

Dr. B. Shivaraju, Bengaluru, Karnataka, India

Dr. R.K. Verma, Tropical Forest Research Institute, Jabalpur, India

Dr. Vatsavaya S. Raju, Kakatiya University, Warangal, Andhra Pradesh, India

Dr. M. Krishnappa, Jnana Sahyadri, Kuvempu University, Shimoga, Karnataka, India

Dr. K.R. Sridhar, Mangalore University, Mangalagangothri, Mangalore, Karnataka, India

Dr. Gunjan Biswas, Vidyasagar University, Midnapore, West Bengal, India

Dr. Kiran Ramchandra Ranadive, Annasaheb Magar Mahavidyalaya, Maharashtra, India

##### Plants

Dr. G.P. Sinha, Botanical Survey of India, Allahabad, India

Dr. N.P. Balakrishnan, Ret. Joint Director, BSI, Coimbatore, India

Dr. Shonil Bhagwat, Open University and University of Oxford, UK

Prof. D.J. Bhat, Retd. Professor, Goa University, Goa, India

Dr. Ferdinando Boero, Università del Salento, Lecce, Italy

Dr. Dale R. Calder, Royal Ontario Museum, Toronto, Ontario, Canada

Dr. Cleofas Cervancia, Univ. of Philippines Los Baños College Laguna, Philippines

Dr. F.B. Vincent Florens, University of Mauritius, Mauritius

Dr. Merlin Franco, Curtin University, Malaysia

Dr. V. Irudayaraj, St. Xavier's College, Palayamkottai, Tamil Nadu, India

Dr. B.S. Kholia, Botanical Survey of India, Gangtok, Sikkim, India

Dr. Pankaj Kumar, Department of Plant and Soil Science, Texas Tech University, Lubbock, Texas, USA.

Dr. V. Sampath Kumar, Botanical Survey of India, Howrah, West Bengal, India

Dr. A.J. Solomon Raju, Andhra University, Visakhapatnam, India

Dr. Vijayasankar Raman, University of Mississippi, USA

Dr. B. Ravi Prasad Rao, Sri Krishnadevaraya University, Anantpur, India

Dr. K. Ravikumar, FRLHT, Bengaluru, Karnataka, India

Dr. Aparna Watve, Pune, Maharashtra, India

Dr. Qiang Liu, Xishuangbanna Tropical Botanical Garden, Yunnan, China

Dr. Noor Azhar Mohamed Shazili, Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia

Dr. M.K. Vasudeva Rao, Shiv Ranjani Housing Society, Pune, Maharashtra, India

Prof. A.J. Solomon Raju, Andhra University, Visakhapatnam, India

Dr. Mandar Datar, Agharkar Research Institute, Pune, Maharashtra, India

Dr. M.K. Janarthanam, Goa University, Goa, India

Dr. K. Karthigeyan, Botanical Survey of India, India

Dr. Errol Vela, University of Montpellier, Montpellier, France

Dr. P. Lakshminarasimhan, Botanical Survey of India, Howrah, India

Dr. Larry R. Noblick, Montgomery Botanical Center, Miami, USA

Dr. K. Haridasan, Pallavur, Palakkad District, Kerala, India

Dr. Analinda Manila-Fajard, University of the Philippines Los Baños, Laguna, Philippines

Dr. P.A. Sinu, Central University of Kerala, Kasaragod, Kerala, India

Dr. Afroz Alam, Banasthali Vidyapith (accredited A grade by NAAC), Rajasthan, India

Dr. K.P. Rajesh, Zamorin's Guruvayurappan College, GA College PO, Kozhikode, Kerala, India

Dr. David E. Boufford, Harvard University Herbaria, Cambridge, MA 02138-2020, USA

Dr. Ritesh Kumar Choudhary, Agharkar Research Institute, Pune, Maharashtra, India

Dr. A.G. Pandurangan, Thiruvananthapuram, Kerala, India

Dr. Navendu Page, Wildlife Institute of India, Chandrabani, Dehradun, Uttarakhand, India

Dr. Kannan C.S. Warriar, Institute of Forest Genetics and Tree Breeding, Tamil Nadu, India

##### Invertebrates

Dr. R.K. Avasthi, Rohtak University, Haryana, India

Dr. D.B. Bastawade, Maharashtra, India

Dr. Partha Pratim Bhattacharjee, Tripura University, Suryamaninagar, India

Dr. Kailash Chandra, Zoological Survey of India, Jabalpur, Madhya Pradesh, India

Dr. Ansie Dippenaar-Schoeman, University of Pretoria, Queenswood, South Africa

Dr. Rory Dow, National Museum of Natural History Naturalis, The Netherlands

Dr. Brian Fisher, California Academy of Sciences, USA

Dr. Richard Gallon, Llandudno, North Wales, LL30 1UP

Dr. Hemant V. Ghate, Modern College, Pune, India

Dr. M. Monwar Hossain, Jahangirnagar University, Dhaka, Bangladesh

For Focus, Scope, Aims, and Policies, visit [https://threatenedtaxa.org/index.php/JoTT/aims\\_scope](https://threatenedtaxa.org/index.php/JoTT/aims_scope)

For Article Submission Guidelines, visit <https://threatenedtaxa.org/index.php/JoTT/about/submissions>

For Policies against Scientific Misconduct, visit [https://threatenedtaxa.org/index.php/JoTT/policies\\_various](https://threatenedtaxa.org/index.php/JoTT/policies_various)

continued on the back inside cover

Cover: The breathtakingly beautiful Silver Jubilee cover of JoTT is done in color pencils and ink by the 13-year old darling, Elakshi Mahika Molur.



## Rodent - a part of culture and revolution in India

Hiranmoy Chetia<sup>1</sup> & Murali Krishna Chatakonda<sup>2</sup>

<sup>1,2</sup> Amity Institute of Forestry and Wildlife, Amity University, Noida, Uttar Pradesh 201313, India.

<sup>1</sup> hiranmoychetia@gmail.com, <sup>2</sup> mkchatakonda@amity.edu (corresponding author)

The term rodent came from the Greek word 'roderē', meaning gnaw (Legendre 2003). Rodents are characterised by prominent, continuously growing incisors which are present in both the upper and lower jaw (Waggoner 2000). Rodents fall under the order Rodentia of the class Mammalia. With 35 families comprising more than 534 genera and 2,652 species (Mammal Diversity Database 2023), they constitute 40% of all mammals. Rodents are found native to all continents except Antarctica, New Zealand, and certain other islands (Nowak 1999; Macdonald 2009). They inhabit a wide range of ecological niches, encompassing terrestrial landscapes and human-constructed environments. According to their habitat preferences, species may exhibit arboreal, fossorial (burrowing), saltatorial, or semi-aquatic behaviour. Rodents play important ecological roles like seed dispersal and are an important part of the food chain in maintaining a healthy prey-predator relationship. Apart from being important to the ecosystem rodents are also responsible for various diseases and health problems. Rodents are vectors for many viruses and pathogens. The infamous bubonic plague which claimed 70–200 million human

lives was spread through rodents (Glatter & Finkelman 2021).

India is home to 102 rodent species distributed among 47 different genera (Srinivasulu & Srinivasulu 2012). Of these, 19 species are categorized as agricultural and commensal pests (Tripathy et al. 2017). Some species are widely distributed, while some are locally important (Sridhara & Tripathi 2005). It is important to note that India suffers a huge economic loss because of rodents. Different crops like rice, wheat, maize, vegetables, fruits, and poultry farms face a great threat because of different rodent species (Singleton 2003; Tripathi 2014). While there is a prevailing negative perception of rodents, there are also instances of rodents being an inseparable part of cultures and being responsible for some important historical events.

### Rodents as a part of culture From Krauncha to Mushakraj

The oldest mentioned and the most famous rodent which is a part of culture is Mushakraj, the vahana (mount) of Lord Ganesha. As the name suggests Mushakraj was a rat. Legend has it that Krauncha, a

**Editor:** P.O. Nameer, Kerala Agricultural University, Thrissur, India.

**Date of publication:** 26 March 2024 (online & print)

**Citation:** Chetia, H. & M.K. Chatakonda (2024). Rodent - a part of culture and revolution in India. *Journal of Threatened Taxa* 16(3): 25016–25018. <https://doi.org/10.11609/jott.8811.16.3.25016-25018>

**Copyright:** © Chetia & Chatakonda 2024. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use, reproduction, and distribution of this article in any medium by providing adequate credit to the author(s) and the source of publication.

**Funding:** Science and Engineering Research Board, Department of Science and Technology, Govt. of India, Project ID-ECR/2017/000594.

**Competing interests:** The authors declare no competing interests.

**Acknowledgements:** We would like to express our gratitude to Mr. Mingkeng Panggeng, Mr. Ojing Ering and Mr. Talem Ering, who accompanied us during our study in Pasighat, Arunachal Pradesh. We also thank the funding agency, Science and Engineering Research Board, Department of Science & Technology, Government of India for supporting the study.



musician-God, stepped on the foot of Muni Vamadeva, who in turn cursed Krauncha to become a giant mouse. Upon recovering from his anger Vamaveda told Krauncha that a day would come when the gods would bow down to him (Krauncha). One day Ganesha was invited to the Ashram of Maharishi Parashar. But Krauncha ended up stepping on the Ashram thereby destroying it. Ganesha then wanted to meet Krauncha and teach him a lesson. Upon meeting him, he unleashed his weapon 'pasha' which looped around Krauncha's neck and brought him down to his (Ganesha's) feet. Krauncha asked for forgiveness and begged Ganesha to make him his mount. But Krauncha was unable to bear the weight of Ganesha and requested him to become lightweight, to which Ganesha obliged. And thus, Krauncha became Mushakraj, the mount of Ganesha (Astroved 2022).

### Karni Mata and Rats

In a temple in Deshnok, Bikaner, Rajasthan, devoted to goddess Karni Mata, rats are not seen as pests or vermin but are revered, so much so that it can be called a temple of rats. The legend is prevalent here is, that the stepson of Karni Mata, Lakshman, drowned in a pond named Kapil Sarovar when he tried to drink water from it. Karni Mata then approached Yama, the god of death, to revive Lakshman. At first, Yama refused, but he then relented, permitting Lakshman and all the male children of Karni Mata to be reincarnated as rats; hence, rats are revered in this temple. The temple is home to about 25,000 Black Rats *Rattus rattus* (Lostal 2021).

### A dowry of rodent

Within the Adi tribe of Arunachal Pradesh, the Orange-bellied Himalayan Squirrel *Dremomys lokriah*, holds significant cultural importance. In the Adi language, this species is referred to as "Leiboh/Leipoh." It plays a pivotal role in the traditional marital customs of this community (Chetia et al. 2022). As part of the marriage ritual, the groom is required to present a dowry consisting of two pairs of these squirrels to the bride's family.

The Adi tribe has a captivating folklore explaining the rationale behind using the squirrel as a bride price. According to the legend, in ancient times, Doying Bote, the King of Knowledge, fell in love with Kine Nane, the Queen of Abundance. However, Doying Bote found it exceedingly challenging to persuade Kine Nane's family to accept their union. He attempted to send various forms of life to convince them, but none of these emissaries succeeded.

In the end, it was the turn of Leiboh/Leipoh, the

squirrel, to go and mediate on behalf of Doying Bote. Remarkably, this attempt proved successful, and the marriage was allowed to proceed. As a result of the squirrel's pivotal role as an intermediary in the union of Doying Bote and Kine Nane, it has become an integral and inseparable element of the Adi tribe's cultural heritage (Chetia et al. 2022).

### Rodents as a part of Revolution: The Birth of a State

Until 1987, Mizoram was part of the undivided state of Assam. Mizoram is home to a type of bamboo known as *Melocanna baccifera*, which covers 31% of its total geographical area. This bamboo species blooms every 45–50 years, leading to a sudden increase in the population of Black Rats *Rattus rattus*. This phenomenon, known as a 'rat flood', occurs when the bamboo dies and regrows from seeds, the rats feed on the seeds, which boosts the size of rat litter. This surge in the rat population results in widespread destruction of food sources, leading to large-scale famines. In the Mizo language, this cyclic famine is referred to as 'mautam'.

In 1958–59, a mautam event resulted in the loss of 100 lives and crop and property damage (Goswami 2008). When the people of Mizoram sought assistance from the Assam and Indian governments, their concerns were not taken seriously. This negligence led to the establishment of the Mizo National Famine Front (MNFF) by Pu Laldenga, which provided relief to the remote famine-affected areas. On 22 October 1961, the famine front evolved into the Mizo National Front (MNF). The armed wing of MNF, known as the Mizo National Army (MNA), demanded the creation of a sovereign state for the Mizo people on 28 February 1966. On 1 March 1966, they declared independence from Assam by launching attacks on government offices and security force posts.

### Conclusion

Human civilization is deeply intertwined with myth and history, often influenced by the surrounding environment and cultural elements. In many civilizations, various animals hold significant cultural roles within hierarchical structures. The unique reverence for rodents in Indian mythology and history is particularly intriguing. Nowhere else in the world has there been a revolution resulting in the birth of a new state, with rats playing a central role, as seen in India.

Therefore, it's evident that beyond their ecological significance, rodents hold immense mythological and historical importance, contributing significantly to the shaping of India's culture and history.

## References

- Astroved (2022).** Why is mouse the vahana of Lord Ganesha? <https://www.astroved.com/blogs/why-mouse-is-the-vahana-of-lord-ganesha>. Electronic version accessed on 01 October 2023
- Chetia, H., M.K. Chatakonda & J.L. Koprowski (2022).** Squirrels and Tribes: Hunting Techniques and Related Ethnozoology of Tribes of Arunachal Pradesh. In: Smith, C., K. Pollard, A.K. Kanungo, S.K. May, S.L.L. Varela & J. Watkins (eds.). *The Oxford Handbook of Global Indigenous Archaeologies*. (online edn, Oxford Academic. <https://doi.org/10.1093/oxfordhb/9780197607695.013.58>)
- Glatter, K.A. & P. Finkelman (2021).** History of the plague: an ancient pandemic for the age of COVID-19. *The American Journal of Medicine* 134(2): 176–181. <https://doi.org/10.1016/j.amjmed.2020.08.019>
- Goswami, N. (2008).** Mizoram on the verge of another mautam? *Manohar Parrikar Institute for Defence Studies and Analyses*. [https://www.idsa.in/idsastrategiccomments/MizoramonthetheVergeofAnotherMautam\\_NGoswami\\_010408](https://www.idsa.in/idsastrategiccomments/MizoramonthetheVergeofAnotherMautam_NGoswami_010408)
- Legendre, L.F. (2003).** Oral disorders of exotic rodents. *Veterinary Clinics: Exotic Animal Practice* 6(3): 601–628.
- Lostal, M. (2021).** De-objectifying animals: Could they qualify as victims before the International Criminal Court? *Journal of International Criminal Justice* 19(3): 583–610.
- Macdonald, D.W. (2009).** *The Encyclopaedia of Mammals*. Facts On File, New York, 930 pp.
- Mammal Diversity Database (2023).** Mammal Diversity Database (Version 1.11) Zenodo. Accessed on 15 November 2023. <https://doi.org/10.5281/zenodo.7830771>
- Nowak, R.M. (1999).** *Walker's Mammals of the World (Vol. 1)*. JHU Press, United Kingdom, 1936 pp.
- Singleton, G. (2003).** Impacts of rodents on rice production in Asia. *IRRI Discussion Paper Series* 45(1): 1–30.
- Sridhara, S. & R.S. Tripathi (2005).** Distribution of Rodents in Indian Agriculture. All India Network Project on Rodent Control (ICAR). Central Arid Zone Research Institute, Jodhpur, 136 pp.
- Srinivasulu, C. & B. Srinivasulu (2012).** *South Asian Mammals: Their Diversity, Distribution, and Status*. Springer, New York, 467 pp.
- Tripathi, R.S. (2014).** Integrated management of rodent pests, pp. 419–459. In: Abrol, D.P. (ed.). *Integrated Pest Management*. Academic Press, 561 pp. <https://doi.org/10.1016/C2012-0-00720-X>
- Tripathy R.S., B.K. Sahoo & G. Sahoo (2017).** Integrated rodent pest management in field and stores. *ENVIS Centre of Odisha's State of Environment*.
- Waggoner, B. (2000).** *Introduction to the Rodentia*. University of California Museum of Paleontology, 564 pp.





Mr. Jatishwor Singh Irungbam, Biology Centre CAS, Branišovská, Czech Republic.  
Dr. Ian J. Kitching, Natural History Museum, Cromwell Road, UK  
Dr. George Mathew, Kerala Forest Research Institute, Peechi, India  
Dr. John Noyes, Natural History Museum, London, UK  
Dr. Albert G. Orr, Griffith University, Nathan, Australia  
Dr. Sameer Padhye, Katholieke Universiteit Leuven, Belgium  
Dr. Nancy van der Poorten, Toronto, Canada  
Dr. Kareen Schnabel, NIWA, Wellington, New Zealand  
Dr. R.M. Sharma, (Retd.) Scientist, Zoological Survey of India, Pune, India  
Dr. Manju Siliwal, WILD, Coimbatore, Tamil Nadu, India  
Dr. G.P. Sinha, Botanical Survey of India, Allahabad, India  
Dr. K.A. Subramanian, Zoological Survey of India, New Alipore, Kolkata, India  
Dr. P.M. Sureshan, Zoological Survey of India, Kozhikode, Kerala, India  
Dr. R. Varatharajan, Manipur University, Imphal, Manipur, India  
Dr. Eduard Vives, Museu de Ciències Naturals de Barcelona, Terrassa, Spain  
Dr. James Young, Hong Kong Lepidopterists' Society, Hong Kong  
Dr. R. Sundararaj, Institute of Wood Science & Technology, Bengaluru, India  
Dr. M. Nithyanandan, Environmental Department, La Ala Al Kuwait Real Estate. Co. K.S.C., Kuwait  
Dr. Himender Bharti, Punjabi University, Punjab, India  
Mr. Purnendu Roy, London, UK  
Dr. Saito Motoki, The Butterfly Society of Japan, Tokyo, Japan  
Dr. Sanjay Sondhi, TITLI TRUST, Kalpavriksh, Dehradun, India  
Dr. Nguyen Thi Phuong Lien, Vietnam Academy of Science and Technology, Hanoi, Vietnam  
Dr. Nitin Kulkarni, Tropical Research Institute, Jabalpur, India  
Dr. Robin Wen Jiang Ngiam, National Parks Board, Singapore  
Dr. Lionel Monod, Natural History Museum of Geneva, Genève, Switzerland.  
Dr. Asheesh Shivam, Nehru Gram Bharti University, Allahabad, India  
Dr. Rosana Moreira da Rocha, Universidade Federal do Paraná, Curitiba, Brasil  
Dr. Kurt R. Arnold, North Dakota State University, Saxony, Germany  
Dr. James M. Carpenter, American Museum of Natural History, New York, USA  
Dr. David M. Claborn, Missouri State University, Springfield, USA  
Dr. Kareen Schnabel, Marine Biologist, Wellington, New Zealand  
Dr. Amazonas Chagas Júnior, Universidade Federal de Mato Grosso, Cuiabá, Brasil  
Mr. Monsoon Jyoti Gogoi, Assam University, Silchar, Assam, India  
Dr. Heo Chong Chin, Universiti Teknologi MARA (UiTM), Selangor, Malaysia  
Dr. R.J. Shiel, University of Adelaide, SA 5005, Australia  
Dr. Siddharth Kulkarni, The George Washington University, Washington, USA  
Dr. Priyadarsanan Dharma Rajan, ATREE, Bengaluru, India  
Dr. Phil Alderslade, CSIRO Marine And Atmospheric Research, Hobart, Australia  
Dr. John E.N. Veron, Coral Reef Research, Townsville, Australia  
Dr. Daniel Whitmore, State Museum of Natural History Stuttgart, Rosenstein, Germany.  
Dr. Yu-Feng Hsu, National Taiwan Normal University, Taipei City, Taiwan  
Dr. Keith V. Wolfe, Antioch, California, USA  
Dr. Siddharth Kulkarni, The Hormiga Lab, The George Washington University, Washington, D.C., USA  
Dr. Tomas Ditrich, Faculty of Education, University of South Bohemia in Ceske Budejovice, Czech Republic  
Dr. Mihaly Foldvari, Natural History Museum, University of Oslo, Norway  
Dr. V.P. Uniyal, Wildlife Institute of India, Dehradun, Uttarakhand 248001, India  
Dr. John T.D. Caleb, Zoological Survey of India, Kolkata, West Bengal, India  
Dr. Priyadarsanan Dharma Rajan, Ashoka Trust for Research in Ecology and the Environment (ATREE), Royal Enclave, Bangalore, Karnataka, India

#### Fishes

Dr. Neelesh Dahanukar, IISER, Pune, Maharashtra, India  
Dr. Topiltzin Contreras MacBeath, Universidad Autónoma del estado de Morelos, México  
Dr. Heok Hee Ng, National University of Singapore, Science Drive, Singapore  
Dr. Rajeev Raghavan, St. Albert's College, Kochi, Kerala, India  
Dr. Robert D. Sluka, Chiltern Gateway Project, A Rocha UK, Southall, Middlesex, UK  
Dr. E. Vivekanandan, Central Marine Fisheries Research Institute, Chennai, India  
Dr. Davor Zanella, University of Zagreb, Zagreb, Croatia  
Dr. A. Biju Kumar, University of Kerala, Thiruvananthapuram, Kerala, India  
Dr. Akhilesh K.V., ICAR-Central Marine Fisheries Research Institute, Mumbai Research Centre, Mumbai, Maharashtra, India  
Dr. J.A. Johnson, Wildlife Institute of India, Dehradun, Uttarakhand, India  
Dr. R. Ravinesh, Gujarat Institute of Desert Ecology, Gujarat, India

#### Amphibians

Dr. Sushil K. Dutta, Indian Institute of Science, Bengaluru, Karnataka, India  
Dr. Annemarie Ohler, Muséum national d'Histoire naturelle, Paris, France

#### Reptiles

Dr. Gernot Vogel, Heidelberg, Germany  
Dr. Raju Vyas, Vadodara, Gujarat, India  
Dr. Pritpal S. Soorae, Environment Agency, Abu Dhabi, UAE.  
Prof. Dr. Wayne J. Fuller, Near East University, Mersin, Turkey  
Prof. Chandrashekhar U. Rivonker, Goa University, Taleigao Plateau, Goa, India  
Dr. S.R. Ganesh, Chennai Snake Park, Chennai, Tamil Nadu, India  
Dr. Himansu Sekhar Das, Terrestrial & Marine Biodiversity, Abu Dhabi, UAE

**Journal of Threatened Taxa** is indexed/abstracted in Bibliography of Systematic Mycology, Biological Abstracts, BIOSIS Previews, CAB Abstracts, EBSCO, Google Scholar, Index Copernicus, Index Fungorum, JournalSeek, National Academy of Agricultural Sciences, NewJour, OCLC WorldCat, SCOPUS, Stanford University Libraries, Virtual Library of Biology, Zoological Records.

NAAS rating (India) 5.64

#### Birds

Dr. Hem Sagar Baral, Charles Sturt University, NSW Australia  
Mr. H. Byju, Coimbatore, Tamil Nadu, India  
Dr. Chris Bowden, Royal Society for the Protection of Birds, Sandy, UK  
Dr. Priya Davidar, Pondicherry University, Kalapet, Puducherry, India  
Dr. J.W. Duckworth, IUCN SSC, Bath, UK  
Dr. Rajah Jayapal, SACON, Coimbatore, Tamil Nadu, India  
Dr. Rajiv S. Kalsi, M.L.N. College, Yamuna Nagar, Haryana, India  
Dr. V. Santharam, Rishi Valley Education Centre, Chittoor Dt., Andhra Pradesh, India  
Dr. S. Balachandran, Bombay Natural History Society, Mumbai, India  
Mr. J. Praveen, Bengaluru, India  
Dr. C. Srinivasulu, Osmania University, Hyderabad, India  
Dr. K.S. Gopi Sundar, International Crane Foundation, Baraboo, USA  
Dr. Gombobaatar Sundev, Professor of Ornithology, Ulaanbaatar, Mongolia  
Prof. Reuven Yosef, International Birding & Research Centre, Eilat, Israel  
Dr. Taej Mundkur, Wetlands International, Wageningen, The Netherlands  
Dr. Carol Inskipp, Bishop Auckland Co., Durham, UK  
Dr. Tim Inskipp, Bishop Auckland Co., Durham, UK  
Dr. V. Gokula, National College, Tiruchirappalli, Tamil Nadu, India  
Dr. Arkady Lelej, Russian Academy of Sciences, Vladivostok, Russia  
Dr. Simon Dowell, Science Director, Chester Zoo, UK  
Dr. Mário Gabriel Santiago dos Santos, Universidade de Trás-os-Montes e Alto Douro, Quinta de Prados, Vila Real, Portugal  
Dr. Grant Connette, Smithsonian Institution, Royal, VA, USA  
Dr. P.A. Azeez, Coimbatore, Tamil Nadu, India

#### Mammals

Dr. Giovanni Amori, CNR - Institute of Ecosystem Studies, Rome, Italy  
Dr. Anwaruddin Chowdhury, Guwahati, India  
Dr. David Mallon, Zoological Society of London, UK  
Dr. Shomita Mukherjee, SACON, Coimbatore, Tamil Nadu, India  
Dr. Angie Appel, Wild Cat Network, Germany  
Dr. P.O. Nameer, Kerala Agricultural University, Thrissur, Kerala, India  
Dr. Ian Redmond, UNEP Convention on Migratory Species, Lansdown, UK  
Dr. Heidi S. Riddle, Riddle's Elephant and Wildlife Sanctuary, Arkansas, USA  
Dr. Karin Schwartz, George Mason University, Fairfax, Virginia.  
Dr. Lala A.K. Singh, Bhubaneswar, Orissa, India  
Dr. Mewa Singh, Mysore University, Mysore, India  
Dr. Paul Racey, University of Exeter, Devon, UK  
Dr. Honnavalli N. Kumara, SACON, Anaikatty P.O., Coimbatore, Tamil Nadu, India  
Dr. Nishith Dharaiya, HNG University, Patan, Gujarat, India  
Dr. Spartaco Gippoliti, Socio Onorario Società Italiana per la Storia della Fauna "Giuseppe Altobello", Rome, Italy  
Dr. Justus Joshua, Green Future Foundation, Tiruchirappalli, Tamil Nadu, India  
Dr. H. Raghuram, The American College, Madurai, Tamil Nadu, India  
Dr. Paul Bates, Harison Institute, Kent, UK  
Dr. Jim Sanderson, Small Wild Cat Conservation Foundation, Hartford, USA  
Dr. Dan Challender, University of Kent, Canterbury, UK  
Dr. David Mallon, Manchester Metropolitan University, Derbyshire, UK  
Dr. Brian L. Cypher, California State University-Stanislaus, Bakersfield, CA  
Dr. S.S. Talmale, Zoological Survey of India, Pune, Maharashtra, India  
Prof. Karan Bahadur Shah, Budhanilakantha Municipality, Kathmandu, Nepal  
Dr. Susan Cheyne, Borneo Nature Foundation International, Palangkaraja, Indonesia  
Dr. Hemanta Kafley, Wildlife Sciences, Tarleton State University, Texas, USA

#### Other Disciplines

Dr. Aniruddha Belsare, Columbia MO 65203, USA (Veterinary)  
Dr. Mandar S. Paingankar, University of Pune, Pune, Maharashtra, India (Molecular)  
Dr. Jack Tordoff, Critical Ecosystem Partnership Fund, Arlington, USA (Communities)  
Dr. Ulrike Streicher, University of Oregon, Eugene, USA (Veterinary)  
Dr. Hari Balasubramanian, EcoAdvisors, Nova Scotia, Canada (Communities)  
Dr. Rayanna Hellem Santos Bezerra, Universidade Federal de Sergipe, São Cristóvão, Brazil  
Dr. Jamie R. Wood, Landcare Research, Canterbury, New Zealand  
Dr. Wendy Collinson-Jonker, Endangered Wildlife Trust, Gauteng, South Africa  
Dr. Rajeshkumar G. Jani, Anand Agricultural University, Anand, Gujarat, India  
Dr. O.N. Tiwari, Senior Scientist, ICAR-Indian Agricultural Research Institute (IARI), New Delhi, India  
Dr. L.D. Singla, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, India  
Dr. Rupika S. Rajakaruna, University of Peradeniya, Peradeniya, Sri Lanka  
Dr. Bahar Baviskar, Wild-CER, Nagpur, Maharashtra 440013, India

#### Reviewers 2020–2022

Due to pausivity of space, the list of reviewers for 2020–2022 is available online.

The opinions expressed by the authors do not reflect the views of the Journal of Threatened Taxa, Wildlife Information Liaison Development Society, Zoo Outreach Organization, or any of the partners. The journal, the publisher, the host, and the partners are not responsible for the accuracy of the political boundaries shown in the maps by the authors.

Print copies of the Journal are available at cost. Write to:  
The Managing Editor, JoTT,  
c/o Wildlife Information Liaison Development Society,  
43/2 Varadarajulu Nagar, 5<sup>th</sup> Street West, Ganapathy, Coimbatore,  
Tamil Nadu 641006, India  
ravi@threatenedtaxa.org



OPEN ACCESS



The Journal of Threatened Taxa (JoTT) is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at [www.threatenedtaxa.org](http://www.threatenedtaxa.org). All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use, reproduction, and distribution of articles in any medium by providing adequate credit to the author(s) and the source of publication.

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

March 2024 | Vol. 16 | No. 3 | Pages: 24819–25018

Date of Publication: 26 March 2024 (Online & Print)

DOI: 10.11609/jott.2024.16.3.24819-25018

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

#### Editorial

##### Celebrating 25 years of building evidence for conservation

– Sanjay Molur, Pp. 24819–24820

#### Articles

##### Identifying plants for priority conservation in Samar Island Natural Park forests (the Philippines) over limestone using a localized conservation priority index

– Inocencio Escoton Buot, Jr., Marne Ga Origenes, Ren Divien Del Rosario Obeña, Jonathan O. Hernandez, Noba F. Hilvano, Diana Shane A. Balindo & Edelyn O. Echapare, Pp. 24821–24837

##### Status of floristic diversity and impact of development on two sacred groves from Maval Tehsil (Maharashtra, India) after a century

– Kishor Himmat Saste & Rani Babanrao Bhagat, Pp. 24838–24853

##### Faunal inventory and illustrated taxonomic keys to aquatic Coleoptera (Arthropoda: Insecta) of the northern Western Ghats of Maharashtra, India

– Sayali D. Sheth, Anand D. Padhye & Hemant V. Ghate, Pp. 24854–24880

#### Communications

##### A checklist of wild mushroom diversity in Mizoram, India

– Rajesh Kumar & Girish Gogoi, Pp. 24881–24898

##### New plant records for the flora of Saudi Arabia

– Abdul Wali Al-Khulaidi, Ali M. Alzahrani, Ali A. Al-Namazi, Eisa Ali Al-Faify, Mohammed Musa Alfaifi, Nageeb A. Al-Sagheer & Abdul Nasser Al-Gifri, Pp. 24899–24909

##### Seagrass ecosystems of Ritche's Archipelago in the Andaman Sea harbor 'Endangered' *Holothuria scabra* Jaeger, 1833 and 'Vulnerable' *Actinopyga mauritiana* (Quoy & Gaimard, 1834) sea cucumber species (Echinodermata: Holothuroidea)

– Amrit Kumar Mishra, R. Raihana, Dilmani Kumari & Syed Hilal Farooq, Pp. 24910–24915

##### *Styopodium* Kütz. - a new generic record for India from the Bay of Bengal

– Y. Aron Santhosh Kumar, M. Palanisamy & S. Vivek, Pp. 24916–24922

##### First report of *Macrochaetus sericus* Thorpe, 1893 and *Lecane tenuiseta* Haring, 1914 (Rotifera: Monogononta) from Jammu waters (J&K), India

– Deepanjali Slathia, Supreet Kour & Sarbjeet Kour, Pp. 24923–24929

##### Spider diversity (Arachnida: Araneae) at Saurashtra University Campus, Rajkot, Gujarat during the monsoon

– Jyotil K. Dave & Varsha M. Trivedi, Pp. 24930–24941

##### Records of three gobioid fishes (Actinopterygii: Gobiiformes: Gobiidae) from the Gujarat coast, India

– Piyush Vadher, Hitesh Kardani, Prakash Bambhaniya & Imtiyaz Beleem, Pp. 24942–24948

##### Species distribution modelling of Baya Weaver *Ploceus philippinus* in Nagaon District of Assam, India: a zoogeographical analysis

– Nilotpall Kalita, Neeraj Bora, Sandip Choudhury & Dhruvaji Saharia, Pp. 24949–24955

##### Diversity and species richness of avian fauna in varied habitats of Soraipung range and vicinity in Dehing Patkai National Park, India

– Anubhav Bhuyan, Shilpa Baidya, Nayan Jyoti Hazarika, Sweeta Sumant, Bijay Thakur, Amit Prakash, Nirmali Gogoi, Sumi Handique & Ashalata Devi, Pp. 24956–24966

##### D'Ering Memorial Wildlife Sanctuary, a significant flyway and a preferred stopover (refuelling) site during the return migration of the Amur Falcon *Falco amurensis* (Radde, 1863)

– Tapak Tamir, Abprez Thungwon Kimsing & Daniel Mize, Pp. 24967–24972

##### Breeding of the 'Critically Endangered' White-rumped Vulture *Gyps bengalensis* in the Shan Highlands, Myanmar

– Sai Sein Lin Oo, Nang Lao Kham, Marcela Suarez-Rubio & Swen C. Renner, Pp. 24973–24978

##### Nurturing orphaned Indian Grey Wolf at Machia Biological Park, Jodhpur, India

– Hemsingh Gehlot, Mahendra Gehlot, Tapan Adhikari, Gaurav & Prakash Suthar, Pp. 24979–24985

#### Short Communications

##### New records of forty-nine herbaceous plant species from lateritic plateaus for Ratnagiri District of Maharashtra, India

– D.B. Borude, P.P. Bhalekar, A.S. Pansare, K.V.C. Gosavi & A.N. Chandore, Pp. 24986–24991

##### First report of moth species of the family Tineidae (Lepidoptera) in regurgitated pellets of harriers in India

– S. Thalavaipandi, Arjun Kannan, M.B. Prashanth & T. Ganesh, Pp. 24992–24995

#### Notes

##### Capturing the enchanting glow: first-ever photographs of bioluminescent mushroom *Mycena chlorophos* in Tamil Nadu, India

D. Jude, Vinod Sadhasivan, M. Ilayaraja & R. Amirtha Balan, Pp. 24996–24998

##### Extended distribution of *Clematis wightiana* Wall. (Ranunculaceae) in the Indian State of Arunachal Pradesh – a hitherto endemic species of the Western Ghats, India

– Debasmita Dutta Pramanick & Manas Bhaumik, Pp. 24999–25002

##### *Smilax borneensis* A.DC. (Smilacaceae): an addition to the flora of India

– Kishor Deka, Sagarika Das & Bhaben Tanti, Pp. 25003–25005

##### Recent record of True Giant Clam *Tridacna gigas* from the Sulu Archipelago and insight into the giant clam fisheries and conservation in the southernmost islands of the Philippines

– Richard N. Muallil, Akkil S. Injani, Yennyryza T. Abduraup, Fauriza J. Saddari, Ebrahim R. Ondo, Alimar J. Sakilan, Mohammad Gafor N. Hapid & Haidisheena A. Allama, Pp. 25006–25009

##### A record of the Hoary Palmer *Unkana ambasa* (Moore, [1858]) (Insecta: Lepidoptera: Hesperidae) from Assam, India

– Sanath Chandra Bohra, Manmath Bharali, Puja Kalita & Rita Roy, Pp. 25010–25012

##### Sighting of Large Branded Swift *Pelopidas sinensis* (Mabille, 1877) (Hesperidae: Hesperinae) in Delhi, India

– Rajesh Chaudhary & Sohail Madan, Pp. 25013–25015

##### Rodent - a part of culture and revolution in India

– Hiranmoy Chetia & Murali Krishna Chatakonda, Pp. 25016–25018

Publisher & Host



Threatened Taxa