

Building evidence for conservation globally

Journal of Threatened Taxa

40
Years
zooreach
Zoo Outreach Organisation



Open Access

10.11609/jott.2025.17.12.28011-28150

www.threatenedtaxa.org

26 December 2025 (Online & Print)

17(12): 28011-28150

ISSN 0974-7907 (Online)

ISSN 0974-7893 (Print)





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

Srivari Illam, No. 61, Karthik Nagar, 10th Street, Saravanampatti, Coimbatore, Tamil Nadu 641035, India
Registered Office: 3A2 Varadarajulu Nagar, FCI Road, Ganapathy, Coimbatore, Tamil Nadu 641006, India
Ph: +91 9385339863 | www.threatenedtaxa.org
Email: sanjay@threatenedtaxa.org

EDITORS

Founder & Chief Editor

Dr. Sanjay Molur

Wildlife Information Liaison Development (WILD) Society & Zoo Outreach Organization (ZOO),
Coimbatore, Tamil Nadu 641006, India

Assistant Editor

Dr. Chaithra Shree J., WILD/ZOO, Coimbatore, Tamil Nadu 641006, 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

Board of Editors

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. 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

Copy Editors

Ms. Usha Madgunaki, Zooreach, Coimbatore, India

Ms. Trisa Bhattacharjee, Zooreach, Coimbatore, India

Ms. Paloma Noronha, Daman & Diu, India

Web Development

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

Typesetting

Mrs. Radhika, Zooreach, Coimbatore, India

Mrs. Geetha, Zooreach, Coimbatore India

Fundraising/Communications

Mrs. Payal B. Molur, Coimbatore, India

Subject Editors 2021–2023

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 Banos, 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
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

continued on the back inside cover

Cover: Freshly emerged Footman Moth *Nepita conferta* from the cocoon on a brightly painted wall in the Nilgiris. Digital art on Procreate. © Aakanksha Komanduri.

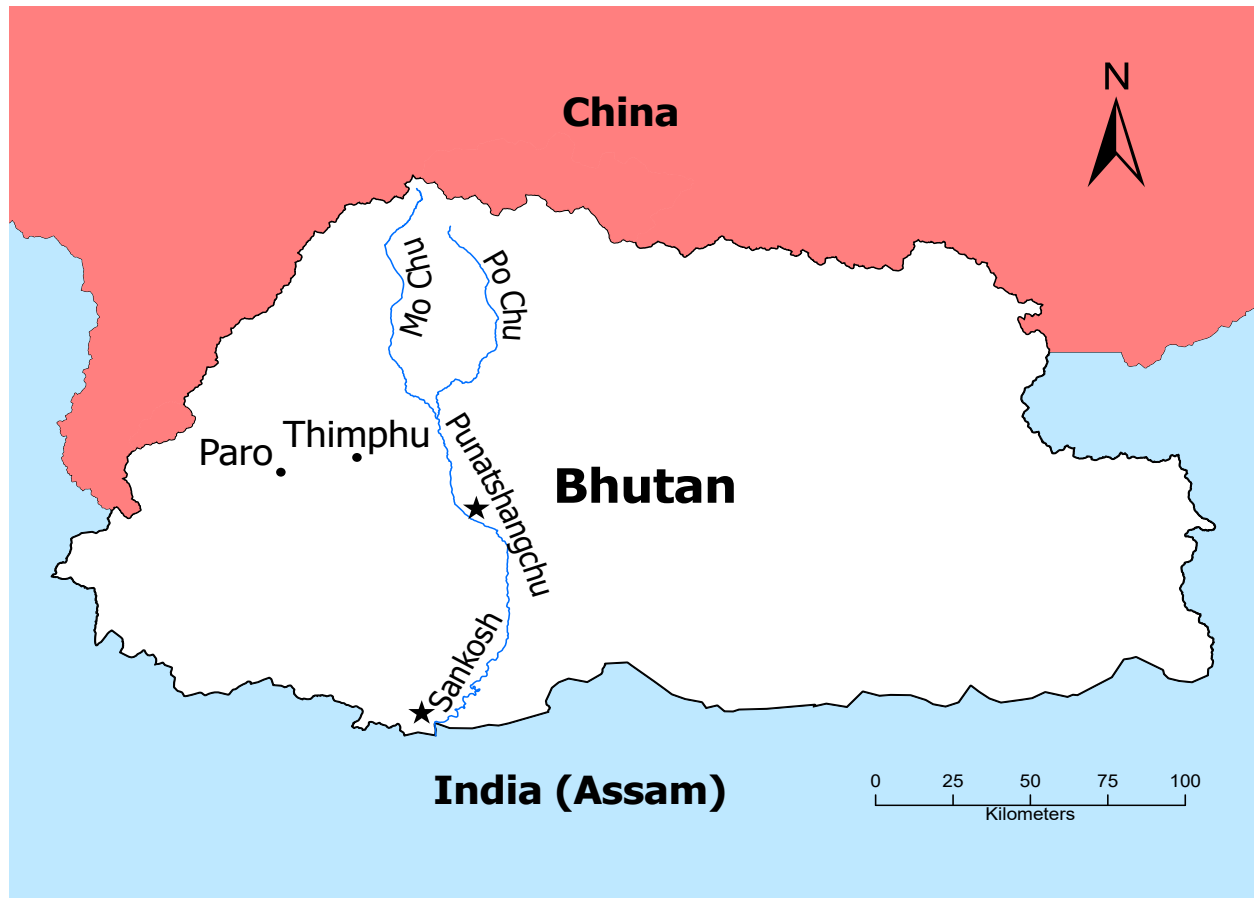


Image 1. Locations (stars) in Bhutan of living Oriental Darter *Anhinga melanogaster* observed on 20 April 2025 on the PunaTsangChu River, and of the Oriental Darter found dead on 13 May 2021 in the Sankosh River, Bhutan. This is the same river, only the name changes when it enters a different political district.

observed was a Great Cormorant *Phalacrocorax carbo*. Two of the authors (KD & RJG) simultaneously identified the darter using a spotting scope (Leica APO-Televid variable power) and binoculars (Swarovski EL 10 x 42), while others used binoculars. The darter was 200–400 m away on the far side of the lake. It was initially perched on an exposed branch of a fallen dead tree at the edge of the lake (Image 2). The darter then flew about 10 m to a small live tree or large shrub that was partially submerged in the water, approximately 7–10 m from the shore (Image 3). Although it is not clear if the bird moved in response to us because we were on a skyline above it, albeit distantly, it appeared to be aware of us because it made frequent intentional movements and ducked its head under the live vegetation. This is the first documented sighting of a live Oriental Darter in Bhutan.

Two of the authors (RG & KG) were most familiar with identifying Oriental Darters in the field, having seen them in India, Malaysia (Sabah), Thailand, and the Philippines, as well as observing the similar African

Darter *Anhinga rufa*, Anhinga *Anhinga anhinga*, and Australasian Anhinga *Anhinga novaehollandiae*. This reservoir represents a newly available lacustrine habitat.

Past observation of a dead Oriental Darter in Bhutan

Subsequent to our sightings, KD alerted birders of the Oriental Darter observation in Bhutan through one of their social media networks. We were informed of a dead Oriental Darter found on 13 May 2021 at Lhamoizhingkha, Dagana, Bhutan (26.741° N, 89.867° E), which is approximately 0.5 km from the border with Assam, a state of India adjacent to Bhutan's southern border (Images 1 & 4). This dead bird with plastic entangling its beak was found by PD floating in the Sunkosh River while he was on a forest patrol. Although the proximate cause of death (e.g., starvation, drowning, suffocation) cannot be determined retrospectively, the ultimate cause was likely the plastic entanglement as it would have impeded foraging, caused stress, and impacted the bird in other ways (e.g., Sigler 2014;



Image 2. Oriental Darter *Anhinga melanogaster* perched in a dead tree in newly created lake in central Bhutan on 20 April 2025.



Image 3. Oriental Darter *Anhinga melanogaster* perched in a partially submerged live shrub/small tree in a newly created lake in central Bhutan on 20 April 2025.

Sazima & D'Angelo 2015; Ryan 2018).

The discovery of this dead bird does not prove it arrived alive in Bhutan on its own, especially because it was so close to India where it naturally occurs (Inskipp et al. 2012; Orta et al. 2014), but a natural arrival is far more likely than it being brought into Bhutan (alive or dead) illegally or by a predator given the plastic entanglement. Hence, this bird found dead may represent the first record of an Oriental Darter in Bhutan.

DISCUSSION

Extralimital observations of birds are a topic of interest among birders and scientists – amongst the former due to the excitement of finding ‘vagrants’, and the latter because the phenomenon of vagrancy is not fully understood; new location records could portend something more important – range expansion (Veit et al. 2022). In our case, there are three potential alternatives to explain the live darter’s appearance in Bhutan: 1. ‘traditional’ explanations (e.g., genetic maladaptation, behavioural incompetence, or stochastic events (like storms)) (Byju & Raveendran 2022; Veit et al. 2022); 2. climate change/anthropogenic change resulting in development of suitable climate in a new location (or the opposite – climate changes driving dispersal), changes in food supply, and human induced habitat change (e.g., after visiting Bhutan, RJG and KG visited Krabi, Thailand, where they observed an Oriental Darter in a mangrove forest, and were told by a local long-time bird guide (Surasit Khueawan, pers. comm. 12 May 2025) that Oriental Darters had only appeared in the area in the past two years, which may be related either to food

supply or anthropogenic changes); and 3. Population dynamics (increases in population leading to population expansion via normal dispersal), driving range expansion and colonization of new areas or novel habitats – such as this newly created lake (Zawadzki 2019; Veit et al. 2022).

In this case, the construction of new hydroelectric dams in the foothills of Bhutan may be creating novel habitats for darters and other birds to colonize that were previously not, or not widely, available in Bhutan. The dammed river sustains a fish population that supports birds that prey on fish. The adjacent forest provides potential nest sites for fish-eating birds such as darters and herons (Ardeidae). The rising waters of an impoundment lake will likely inundate adjacent trees, kill them, and those dead trees will provide suitable perching and roosting sites for darters, as shown in Images 2 and 3. Thus, a suitable prey base, suitable nest sites, and roost sites, coupled with the change from a flowing stream to a placid lake, provide key features associated with Oriental Darters (Orta et al. 2014). Of course, determining the response of Oriental Darters to anthropogenic change and population dynamics in terms of dispersal into Bhutan requires more information than we have, but many non-migratory vagrant birds are found near the edge of their ranges, which may be the case here.

Hydroelectric development often has deleterious conservation impacts owing to the potential environmental damage it causes (e.g., loss of terrestrial habitat, disruption to fish migrations, disruption of natural hydrological cycles (Baxter 1977)). That said, depending on how lakes develop behind dams, they



Image 4. Oriental Darter *Anhinga melanogaster* found dead floating in the Sankosh River on 13 May 2021 approximately 0.5 km due north of Bhutan's southern border with the state of Assam, India.

may provide future habitat for some waterbirds, and as in this case, for bird species that occur in adjacent India that are also impacted by climate change or other stressors. Therefore, we recommend that biologists, conservationists, and birders consider newly created impoundments in the Himalaya Mountains as potential novel lake habitats that could be colonized by both resident and extralimital bird species rather than assuming they are 'bird-sterile environments'. In our case, this particular Puna Tsang Chu River system may be an important area for colonization by Oriental Darters in Bhutan, given that it flows into India, which has a known population of Oriental Darters, both darters we reported here were found on this river, and the river now has novel habitats owing to hydroelectric development.

REFERENCES

- Baxter, R.M. (1977). Environmental effects of dams and impoundments. *Annual Review of Ecology and Systematics* 8(1): 255–283.
- Bird Life International (2024). *Anhinga melanogaster*. In IUCN 2025. 2025 IUCN Red List of Threatened Species. Downloaded on 23 May 2025.
- Byju, H. & N. Raveendran (2022). First Asian record of Light-mantled Albatross *Phoebastria palpebrata* (Foster, 1785) from Rameswaram Island, Tamil Nadu, India. *Journal of Threatened Taxa* 14(7): 21473–21475. <https://doi.org/10.11609/jott.7992.14.7.21473-21475>
- Inskipp, T., R. Grimmett & C. Inskipp (2012). *Birds of the Indian Subcontinent*. Princeton University Press, Princeton, NJ, USA, 528 pp.
- Orta, J., E. Garcia & P.F.D. Boesman (2014). Oriental Darter (*Anhinga melanogaster*), version 1.0. In: del Hoyo, J., A. Elliott, J. Sargatal, D.A. Christie & E. de Juana (eds.). *Birds of the World*. Cornell Lab of Ornithology, Ithaca, NY, USA, <https://doi.org/10.2173/bow.darter2.01>
- Ryan, P.G. (2018). Entanglement of birds in plastics and other synthetic materials. *Marine Pollution Bulletin* 135: 159–164.
- Sazima, I. & G.B. D'Angelo (2015). Dangerous traps: Anhingas mistake anthropogenic debris for prey fish at an urban site in South-eastern Brazil. *Revista Brasileira de Ornithologia* 23(4): 380–384.
- Sigler, M. (2014). The Effects of Plastic Pollution on Aquatic Wildlife: Current Situations and Future Solutions. *Water, Air, and Soil Pollution* 225: 2184. <https://doi.org/10.1007/s11270-014-2184-6>
- Veit, R.R., L.L. Manne, L.C. Zawadzki, M.A. Alamo & R.W. Henry III (2022). Editorial: Vagrancy, exploratory behavior and colonization by birds: Escape from extinction? *Frontiers in Ecology and Evolution* 10: 960841. <https://doi.org/10.3389/fevo.2022.960841>
- Zawadzki, L.C., R.R. Veit & L.L. Manne (2019). The influence of population growth and wind on vagrancy in a North American passerine. *Ardea* 107(2): 131–147. <https://doi.org/10.5253/arde.v107i2.a2>

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
Mr. 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 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. 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 Dubai, UAE.
Prof. Dr. Wayne J. Fuller, Near East University, Mersin, Turkey
Prof. Chandrashekher 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

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, SAGON, 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 Sunde, 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, SAGON, 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, SAGON, 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, Sri S. Ramasamy Naidu Memorial College, Virudhunagar, 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 2021–2023

Due to pausity of space, the list of reviewers for 2021–2023 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,
3A2 Varadarajulu Nagar, FCI Road, Ganapathy, Coimbatore,
Tamil Nadu 641006, India
ravi@threatenedtaxa.org & ravi@zooreach.org

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



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. 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)

December 2025 | Vol. 17 | No. 12 | Pages: 28011–28150

Date of Publication: 26 December 2025 (Online & Print)

DOI: 10.11609/jott.2025.17.12.28011-28150

www.threatenedtaxa.org

Articles

Morphometry and feeding notes of an endemic frog *Amolops spinapectoralis* (Amphibia: Ranidae) from Hue City, central Vietnam

– Loi Duc Duong, Giang Van Tran & Nghiep Thi Hoang, Pp. 28011–28025

Ectoparasites of Sumatran Elephants at Tangkahan Elephant Camp, Langkat, North Sumatra

– Kaniwa Berliani, Destiny Simarmata, Wahdi Azmi, Fithria Edhi & Cynthia Gozali, Pp. 28026–28035

Documenting the traditional hunting practices of the Nocte Tribe in Arunachal Pradesh: a case study of cultural legacy for posterity

– Miatcha Tangjang, Ajay Maletha & Kausik Banerjee, Pp. 28036–28047

Floristic composition and plant functional types on the lateritic plateau of Panchgani Tableland, Maharashtra, India

– Sarita Gosavi, Pratiksha Mestry, Swapnil Vyas & Ankur Patwardhan, Pp. 28048–28065

Communications

Distribution of Smooth-coated Otters (Mammalia: Carnivora: Mustelidae: *Lutrogale perspicillata*) in the coastal mangroves of Maharashtra: a case study of Savitri River and Kalinje Mangrove Ecosystem

– Swanand R. Patil & Manas Manjrekar, Pp. 28066–28075

Population dynamics and habitat preference in Painted Stork *Mycteria leucocephala* and Woolly-necked Stork *Ciconia episcopus* in Dighal Wetland, Jhajjar, Haryana, India

– Sony & Sarita Rana, Pp. 28076–28082

A preliminary checklist of avian fauna of the Raha sub-district of Nagaon, Assam, India

– Bhrigumohan Manta, Jonmani Kalita, Afifa Kausar, Barnali Sarma, Lalit Mohan Goswami & Suranjan Debnath, Pp. 28083–28095

Assemblage structure and diversity of ichthyofauna in a low-order stream of the Pamba River in the Western Ghats of southern Kerala, India

– Ruby Thomas & K. Raju Thomas, Pp. 28096–28103

Addition of *Wallophis brachyura* (Günther, 1866) (Colubridae) and *Calliophis melanurus* (Shaw, 1802) (Elapidae) to the reptile fauna of Rajasthan, India

– Vivek Sharma, B.L. Meghwal, Love Kumar Jain & Dharmendra Khandal, Pp. 28104–28110

Checklist of moths (Lepidoptera: Heterocera) of Lumami campus, Nagaland University, India

– Keneisano Yhoshii & Lobeno Mozhui, Pp. 28111–28124

New population report of the ‘Critically Endangered’ Golden Himalayan Spike *Phlomooides superba* (Magnoliopsida: Lamiaceae) from Samba and Udhampur districts of Jammu & Kashmir, India

– Nisha Bhagat, Hina Upadhaya, Rupali Nanda & Rajesh Kumar Manhas, Pp. 28125–28130

Short Communication

A new bird record of Oriental Darter *Anhinga melanogaster* (Suliformes: Anhingidae) in Bhutan: range expansion and plastic entanglement mortality

– Kelzang Dorji, Khandu Subba, Pema Dorji, Kaye L. Gutiérrez & R.J. Gutiérrez, Pp. 28131–28134

Notes

The first distribution record of semelparous plant *Thottukurinji Strobilanthes integrifolia* (Dalzell) Kuntze (family Acanthaceae) for Gujarat, India

– Rasik Sojitra, Snehal Gamit, Kamlesh Gadhvi, Suhas Vyas & Sandip Gamit, Pp. 28135–28139

Cardamine fragariifolia O.E.Schulz (Brassicaceae): a new addition to the flora of Sikkim, India

– Srijana Mangar, Rohit Dutta, Phurba Lhamu Sherpa, Arun Kumar Rai & Arun Chettri, Pp. 28140–28143

Passiflora vesicaria var. *vesicaria* (Passifloraceae) - a new record for the flora of West Bengal, India

– S. Chowdhury, P. Barua & T.K Paul, Pp. 28144–28147

Monocarpic plietesial behaviour in *Lepidagathis* Willd. (Acanthaceae)

– Rutuja R. Kolte, Rahul D. Prabhukhanolkar, Prabha M. Pillai, Sharad S. Kambale, Gunadayalan Gnanasekaran & Malapati K. Janarthanam, Pp. 28148–28150

Publisher & Host



Threatened Taxa