

Building evidence for conservation globally

# Journal of Threatened TAXA

10.11609/jott.2025.17.3.26571-26762

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

26 March 2025 (Online & Print)

17(3): 26571-26762

ISSN 0974-7907 (Online)

ISSN 0974-7893 (Print)



Open Access





## Publisher

**Wildlife Information Liaison Development Society**[www.wild.zooreach.org](http://www.wild.zooreach.org)

Host

**Zoo Outreach Organization**[www.zooreach.org](http://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](http://www.threatenedtaxa.org)  
Email: sanjay@threatenedtaxa.org

## EDITORS

## Founder &amp; Chief Editor

**Dr. Sanjay Molur**

Wildlife Information Liaison Development (WILD) Society &amp; 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 &amp; Ocean Studies, Kochi, Kerala, India

**English Editors****Mrs. Mira Bhojwani**, Pune, India**Dr. Fred Pluthero**, Toronto, Canada**Copy Editors****Ms. Usha Madgunki**, 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, Kuvenpu University, Shimoga, Karnataka, India**Dr. K.R. Sridhar**, Mangalore University, Mangalagangotri, Mangalore, Karnataka, India**Dr. Gunjan Biswas**, Vidyasagar University, Midnapore, West Bengal, India**Dr. Kiran Ramchandra Ranadive**, Annaheb 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. Ferdinand 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, Anantapur, 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 Ranjan Housing Society, Pune, Maharashtra, India**Prof. A.J. Solomon Raju**, Andhra University, Visakhapatnam, India**Dr. Manda 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. Lakshminarasiham**, 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. Siru**, 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. Warrier**, 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**, Ilandudno, North Wales, LL30 1UP**Dr. Hemant V. Ghate**, Modern College, Pune, India**Dr. M. Monwar Hossain**, Jahangirnagar University, Dhaka, BangladeshFor 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: A bag worm with its beautiful heap of junk. Acrylics on 300 GSM paper by Dupati Poojitha based on a picture by Sanjay Molur.



NOTE

## New sighting and conservation implications of the endemic Sulu Boobook *Ninox reyi* Oustalet, 1880 at Bolobok Rock Shelter, a key archaeological site in the Sulu Archipelago, southern Philippines

Fauriza J. Saddari<sup>1</sup> , Yennyriza T. Abduraup<sup>2</sup> , Adzmer A. Juaini<sup>3</sup> , Roger A. Irlis<sup>4</sup> , Khalid D. Adam<sup>5</sup> , Mary Joyce Z. Guinto-Sali<sup>6</sup>  & Richard N. Muallil<sup>7</sup> 

<sup>1-7</sup> Mindanao State University Tawi-Tawi College of Technology and Oceanography, Bongao, Tawi Tawi 7500, Philippines.

<sup>1</sup>[faurizasaddari@msutawi-tawi.edu.ph](mailto:faurizasaddari@msutawi-tawi.edu.ph), <sup>2</sup>[yennyrizaabduraup@msutawi-tawi.edu.ph](mailto:yennyrizaabduraup@msutawi-tawi.edu.ph), <sup>3</sup>[adzmerjuaini@msutawi-tawi.edu.ph](mailto:adzmerjuaini@msutawi-tawi.edu.ph),

<sup>4</sup>[rogerirlis@msutawi-tawi.edu.ph](mailto:rogerirlis@msutawi-tawi.edu.ph), <sup>5</sup>[khalidadam@msutawi-tawi.edu.ph](mailto:khalidadam@msutawi-tawi.edu.ph), <sup>6</sup>[chancellor@msutawi-tawi.edu.ph](mailto:chancellor@msutawi-tawi.edu.ph),

<sup>7</sup>[rnmuallil@msutawi-tawi.edu.ph](mailto:rnmuallil@msutawi-tawi.edu.ph) (corresponding author)

The Sulu Hawk-owl *Ninox reyi*, also known as the Sulu Boobook, a member of the Strigidae family, is endemic to the Sulu Archipelago in the southern Philippines. Formerly classified as a subspecies of the Philippine Hawk-owl, it was reclassified as a distinct species in 2012 based on distinctive vocalizations and other evidence (Rasmussen et al. 2012). Kennedy et al. (2000) describes the Sulu Boobook as a modestly-sized owl, standing 20 cm tall, which places it between the larger Philippine Hawk-owl complex species and the smaller Luzon & Mindanao Boobooks in terms of size. Its plumage is characterized by brown stripes on the upper body, a warmer orange-brown hue on the underside, and noticeable white spots on the wings. A white throat mark and pale yellow eyes are its distinguishing traits. Unlike its congeners, the Sulu Boobook's call is a distinctive rattling sequence, not the usual hoots associated with Philippine owls.

Scientific research on Philippine Hawk-owls is generally scarce. Available studies indicate that they typically inhabit tropical moist lowland primary and secondary forests up to 700 m, and can also be found along forest edges, in glades, and on plantations. For the Sulu Boobook in Tawi-Tawi, its presence have been recorded in mature mangroves and large trees near villages (Rasmussen et al. 2012). It has also been documented in various places within Tawi-Tawi, such as Sibutu municipality, Bongao & Sanga-Sanga islands in Bongao municipality, and Tarawakan, Balimbing, & Batu-Batu in Panglima Sugala municipality (Allen 2001; Rasmussen et al. 2012; BirdLife International 2016) (Figure 1).

Although initially documented in the late 19<sup>th</sup> century, scientific data on the Sulu Boobook remain limited (Allen 2001; van de Ven et al. 2019). The most

**Editor:** Mário Gabriel Santiago dos Santos, University of Trás-os-Montes e Alto Douro, Portugal.

**Date of publication:** 26 March 2025 (online & print)

**Citation:** Saddari, F.J., Y.T. Abduraup, A.A. Juaini, R.A. Irlis, K.D. Adam, M.J.Z. Guinto-Sali & R.N. Muallil (2025). New sighting and conservation implications of the endemic Sulu Boobook *Ninox reyi* Oustalet, 1880 at Bolobok Rock Shelter, a key archaeological site in the Sulu Archipelago, southern Philippines. *Journal of Threatened Taxa* 17(3): 26753-26756. <https://doi.org/10.11609/jott.9052.17.3.26753-26756>

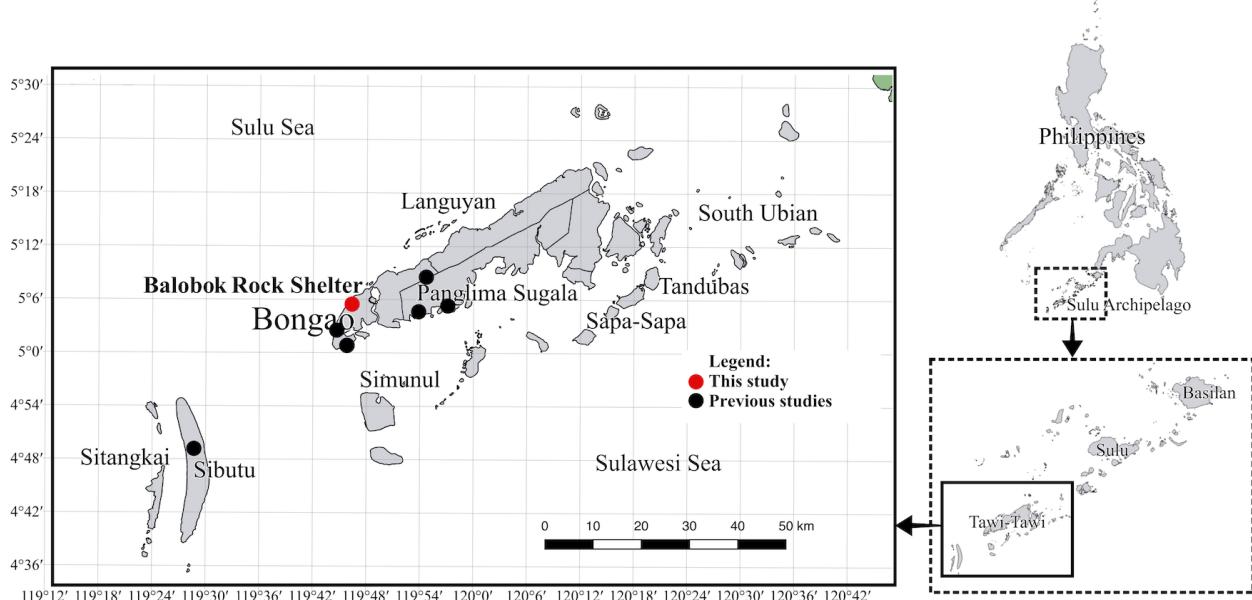
**Copyright:** © Saddari et al. 2025. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use, reproduction, and distribution of this article in any medium by providing adequate credit to the author(s) and the source of publication.

**Funding:** Department of Science and Technology – National Research Council of the Philippines.

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

**Acknowledgements:** This study is an output of MSU TCTO's DOST-NRCP-funded project titled "Mainstreaming Islamic and Indigenous Knowledge and Practices for Sustainable Environmental Conservation and Climate Change Adaptation in Tawi-Tawi." Gratitude is extended to all individuals who aided in the observation and documentation of this Sulu Boobook and to the local community for their efforts in preserving the natural environment of Bolobok Rock Shelter.





**Figure 1.** Map of the Philippines showing the location of Bolobok Rock Shelter and other locations of previous sightings of Sulu Boobook from others studies.



**Image 1.** Sulu Boobook *Ninox reyi* perched on a bare, slender vine at the Bolobok Rock Shelter.

recent comprehensive surveys in Tawi-Tawi, which documented the Sulu Boobook in its natural habitat, were carried out by Allen in the late 1990s. In 2016, Birdlife International classified the Sulu Boobook as Vulnerable, citing its declining population, estimated at fewer than 1,000 individuals, and threats from

deforestation, and other anthropogenic disturbances. In 2019, the Department of Environment and Natural Resources (DENR) Administrative Order No. 2019-09 also listed the species as Vulnerable, highlighting the critical need for updated field observations. This article reports a new sighting of the Sulu Boobook



**Image 2.** Varied landscapes, flora and fauna at Bolobok Rock Shelter, showcasing karst formations and potential habitats within the ecological niche of the Sulu Boobook *Ninox reyi*.

at the Bolobok Rock Shelter, an unrecorded location for this species situated along the coast overlooking the Sulu Sea in Barangay Lakit-Lakit, Bongao, Tawi-Tawi (Figure 1). An individual was observed at noon on 10 July 2023, perched quietly but alertly on the limestone ceiling at the entrance of Bolobok Rock Shelter at an elevation of 13.41 m (Image 1).

The immediate environment was characterized by a karstic limestone formation with an irregular and rugged surface (Image 2). The texture of the rock behind the owl was rough and pitted with erosion features, which are common in limestone that has been subjected to dissolution by acidic rainwater over time. Vegetation around the perch was sparse. The owl was perched on a bare, slender vine. The surrounding rock served as a microhabitat that likely supported various forms of wildlife, including this owl, which seemed well adapted to blend into the grayish-brown palette of the rock face. The crevices and fissures in the rocks could have provided shelter and nesting spots for the owl and other avian species. The shaded location of the rock

shelter, coupled with its humid and quiet ambiance, are conditions that are often preferred by owls for roosting (Rebollo et al. 2023).

The owl exhibited a sense of undisturbed tranquility in the presence of observers, providing an opportunity to document and confirm its identification. It was confirmed as a Sulu Boobook based on key morphological features: prominent uniformly barred on crown and breast, distinctive mustard-yellow eyes, prominent white "X" markings around the bill, and a noticeable white patch on its throat, which match the characteristics of the species as described in Kennedy et al. (2000) and Rasmussen et al. (2012).

Bolobok Rock Shelter, located in Barangay Lakit-Lakit, Bongao, Tawi-Tawi—the southernmost province of the Sulu Archipelago—is an Important Cultural Property (National Museum Declaration No. 24-2016). It holds significant prehistoric artifacts, including polished shell adzes from *Tridacna gigas*, showcasing early tool-making (Faylona 2010; Bautista 2022; Muallil et al. 2024). Radiocarbon dating places these artifacts

between 6810–3190 BCE (8,760–5,140 years ago), making Bolobok one of the Philippines' earliest known human settlements.

On the other hand, Lakit-Lakit is a remote barangay in Bongao, located along the Sibutu Passage in the northern part of the municipality. It has a population of about 1,500 and a coastal length of 2.72 km. The majority of its residents rely on farming, making Lakit-Lakit a primary source of agricultural produce in Bongao, which is the capital and commercial center in the province of Tawi-Tawi. Lakit-Lakit was once densely forested but suffered severe deforestation due to extensive logging and farming expansion, particularly in the 1990s (Sansawi et al. 2020). The local residents identified the species as 'lukluk' in Tausug and 'mongkok' in Sinama. They reported hearing the calls of the bird early in the evening and sometimes spotting the birds in trees near residential areas.

The discovery of the Sulu Boobook at Bolobok Rock Shelter not only provides a new locality record for Lakit-Lakit but also underscores the species' adaptability to varied microhabitats, suggesting that the Sulu Boobook may have a wider range than previously documented. A single sighting of the species in a new locality does not necessarily confirm a resident population, as its high mobility suggests it may be transient. To establish a sustained population at Bolobok Rock Shelter, multiple sightings over time, evidence of breeding pairs, or juveniles are necessary (Pradel & Sanz-Aguilar 2012). Nevertheless, this finding underlines the urgency for comprehensive field surveys and conservation efforts to ensure the survival of this vulnerable owl. Additionally, our research highlights the critical need to protect the Bolobok Rock Shelter, not only as a cornerstone of cultural heritage but also as an essential habitat for this species.

## References

Allen, D. (2001). The hawk owls of the Sulu archipelago, Philippines. *Asian Raptor Bulletin* 2: 22–23.

Bautista, G. (2022). Bolobok Rockshelter. *National Museum of the Philippines*. Accessed on 16 February 2025. Retrieved from <https://www.nationalmuseum.gov.ph/2022/06/28/bolobok-rockshelter/>

BirdLife International (2016). Species factsheet: Sulu Boobook *Ninox reyi*. <https://datazone.birdlife.org/species/factsheet/sulu-boobook-ninox-reyi>. Accessed on 6 March 2025

Faylona, M.G.P.G. (2010). The ancient giant clam shells from Balobok Rockshelter, Philippines as potential recorders of environmental changes: A diagenesis assessment and sclerochronology study. *Sezione di Museologia Scientifica e Naturalistica* 6: 33–42.

Kennedy, R.S., P.C. Gonzalez, E.C. Dickinson, H.C. Miranda Jr. & T.H. Fisher (2000). *A Guide to the Birds of the Philippines*. Oxford University Press, 392 pp.

Muallil, R.N., A.S. Injani, Y.T. Abduraup, F.J. Saddari, E.R. Ondo, A.J. Sakilan, M.G.N. Hapid & H.A. Allama (2024). 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. *Journal of Threatened Taxa* 16(3): 25006–25009. <https://doi.org/10.11609/jott.8917.16.3.25006-25009>

Pradel, R. & A. Sanz-Aguilar (2012). Modeling trap-awareness and related phenomena in capture-recapture studies. *PLoS ONE* 7(3): e32666. <https://doi.org/10.1371/journal.pone.0032666>

Rasmussen, P.C., D.N.S. Allen, N.J. Collar, B. DeMeulemeester, R.O. Hutchinson, P.G.C. Jakosalem, R.S. Kennedy, F.R. Lambert & L.M. Paguntalan (2012). Vocal divergence and new species in the Philippine Hawk Owl *Ninox philippensis* complex. *Forktail* 28: 1–20.

Rebollo, S., L. Pérez-Camacho, S. Martínez-Hesterkamp, L. Tapia, J.M. Fernández-Pereira & I. Morales-Castilla (2023). Anything for a quiet life: shelter from mobbers drives reproductive success in a top-level avian predator. *Journal of Avian Biology* 2023(3–4): e03060. <https://doi.org/10.1111/jav.03060>

Sansawi, A.K., R.N. Muallil & K.D. Adam, L.E.P. de Guzman (2020). From logging to farming in Bongao, Tawi-Tawi, pp. 108–122. In: Zamora, O.B., L.E.P. de Guzman & R.V. Tatlonghari (eds.). *Stories of Adaptation to Climate Change*. Department of Agriculture-Bureau of Agricultural Research (DA-BAR) & University of the Philippines Los Baños-College of Agriculture and Food Science (UPLB-CAFS).

van de Ven, W., R. Muallil & N.D. Realubit (2019). Living on the edge: current status of rare Sulu endemic avifauna. *Journal of Environmental Science and Management* SP-1 (1–7). [https://doi.org/10.47125/jesam/2019\\_sp1/01](https://doi.org/10.47125/jesam/2019_sp1/01)



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. Karen 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 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. Lional 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. Karen 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. Priyadarshan 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. Priyadarshan 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 KV, 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. Raja Vyas, Vadodara, Gujarat, India  
Dr. Pritpal S. Soorae, Environment Agency, Abu Dhabi, UAE.  
Prof. Dr. Wayne J. Fuller, Near East University, Mersin, Turkey  
Prof. Chandrashekher U. Rironker, 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. Biju, 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 Jayopal, 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 Inskip, Bishop Auckland Co., Durham, UK  
Dr. Tim Inskip, 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, Budhanilkantha Municipality, Kathmandu, Nepal  
Dr. Susan Cheyne, Borneo Nature Foundation International, Palangkaraya, 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 Helleni 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. Bharat Baviskar, Wild-CER, Nagpur, Maharashtra 440013, India

#### Reviewers 2021–2023

Due to paucity 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

## Articles

### ***Dasymaschalon leilamericanum* (Annonaceae), a new species with evidence of non-monophyly from Mount Lantoy Key Biodiversity Area, Philippines**

– Raamah Rosales, Edgardo Lillo, Archiebald Baltazar Malaki, Steve Michael Alcazar, Bernardo Redoblado, John Lou Diaz, Inocencio Buot Jr., Richard Parilla & Jessica Rey, Pp. 26571–26586

### **Association analysis of *Castanopsis tungurut* and the neighboring vegetation community in Cibodas Biosphere Reserve, Indonesia**

– Dian Ridwan Nurdiana & Inocencio E. Buot, Jr., Pp. 26587–26598

### **Riparian flora of Haveri District, Karnataka, India**

– Ningaraj S. Makanur & K. Kotresha, Pp. 26599–26615

### **Conservation strategies for *Vatica lanceifolia* (Roxb.) Blume: habitat distribution modelling and reintroduction in northeastern India**

– Puranjoy Mipun, Amritee Bora, Piyush Kumar Mishra, Baby Doley & Rinku Moni Kalita, Pp. 26616–26626

### **Patterns and economic impact of livestock predation by large carnivores in protected areas of southern Kashmir, India**

– Lubna Rashid & Bilal A. Bhat, Pp. 26627–26635

### **People perception on use patterns and conservation of Chinese Pangolin**

#### **in and around Yangouopkpi Lokchao Wildlife Sanctuary, Manipur, India**

– Yengkham Roamer Zest, Awadhesh Kumar, Om Prakash Tripathi, Rakesh Basnett & Dipika Parbo, Pp. 26636–26647

## Communications

### **Population status, threats, and conservation of *Trachycarpus takil*: an endemic and threatened plant species in western Himalaya, India**

– Himani Tiwari, Dhani Arya & K. Chandra Sekar, Pp. 26648–26654

### **A checklist of fishes of Haiderpur wetland, western Uttar Pradesh, India**

– Rahul Rana, Jeyaraj Antony Johnson & Syed Ainul Hussain, Pp. 26655–26668

### **An avifaunal checklist of the Zanskar Region, Ladakh Himalaya, India**

– Abid Hussain, Zakir Hussain & Mumtaz Ali, Pp. 26669–26679

### **Breeding tern colonies on the sandbars of Adam's Bridge, India: new records and significance**

– H. Byju, H. Maitreyi, N. Raveendran, D.A. Marshal & S. Ravichandran, Pp. 26680–26689

### **Assessment of nest and nesting activities of White-bellied Heron *Ardea insignis* Hume, 1878 (Aves: Ardeidae) in the broad-leaved forests of northeastern India**

– Himadri Sekhar Mondal & Gopinathan Maheswaran, Pp. 26690–26696

### **Preliminary checklist of avifauna from All India Institute of Medical Sciences, Guwahati, Assam, India**

– Nitul Ali, Vivek Chetry, Prem Kishan Singha & Maina Boro, Pp. 26697–26703

### **Implementation strategy and performance analysis of a novel ground vibration-based elephant deterrent system**

– Sanjoy Deb, Ramkumar Ravindran & Saravana Kumar Radhakrishnan, Pp. 26704–26714

## Short Communications

### ***Blackwellomyces pseudomilitaris* (Hywel-Jones & Sivichai) Spatafora & Luangsa-ard, 2017 (Sordariomycetes: Hypocreales: Cordycipitaceae): first report from Western Ghats of India**

– Anjali Rajendra Patil, Snehal Sudhir Biranje, Mahesh Yashwant Borde & Yogesh Sadashiv Patil, Pp. 26715–26720

*Calvatia craniiformis* (Schwein.) Fr. ex De Toni (Agaricomycetes: Lycoperdaceae): a new puffball mushroom record from eastern India  
– Asit Mahato, Pritish Mitra, Sabyasachi Chatterjee & Subrata Raha, Pp. 26721–26726

**Rediscovery of the gypsy moth *Lymantria kanara* Collenette, 1951 (Insecta: Lepidoptera: Erebidae) from Kerala, India, after 73 years and its taxonomic redescription**  
– P.K. Adarsh & Abhilash Peter, Pp. 26727–26730

**Nest predation by *Vespa tropica* (Linnaeus, 1758): observational insights into polistine wasp defense and hornet feeding behavior**  
– Shantan Ojha & Vartika Negi, Pp. 26731–26736

**The discovery of a male Malay Crestless Fireback *Lophura erythrophthalma* (Raffles, 1822) (Aves: Galliformes: Phasianidae) at Ulu Sat Forest Reserve, Machang, Kelantan, Peninsular Malaysia**  
– Ainun Hidayah Wahad, Wan Hafizin Idzni Wan Mohammad Hizam, Muhammad Hamirul Shah Ab Razak, Aainaa Amir, Kamarul Hambali, Hazizi Husain, Mohd Saupi Abdullah, Ehwan Ngadi, Mohamad Arif Iskandar Abdul Wahab & Asrulsani Jambari, Pp. 26737–26740

## Notes

### **New distribution record of *Korthalsia rogersii* Becc, a threatened endemic climbing palm of Andaman archipelago**

– Paremmal Sarath, Azhar Ali Ashraf, V.B. Sreekumar, Modhumita Ghosh Dasgupta & Suma Arun Dev, Pp. 26741–26743

**Clarifying the nomenclature of Roxburgh's pivotal name *Holigarna racemosa* Roxb. (Anacardiaceae)**  
– Shruti Kasana, Pp. 26744–26746

**First confirmed breeding of Brown Noddy *Anous stolidus* in southeastern India: a new record from Adam's Bridge**  
– H. Byju, H. Maitreyi, N. Raveendran & D.A. Marshal, Pp. 26747–26749

### **First record of Painted Stork *Mycteria leucocephala* in Indonesia**

– Hasri Abdillah, Iwan Febrianto, Cipto Dwi Handono, Fajar Shiddiq, Febryansah Abdillah Harahap & Muhammad Iqbal, Pp. 26750–26752

**New sighting and conservation implications of the endemic Sulu Boobook *Ninox reyi* Oustalet, 1880 at Bolobok Rock Shelter, a key archaeological site in the Sulu Archipelago, southern Philippines**  
– Fauriza J. Saddari, Yennyrriza T. Abduraup, Adzmer A. Juaini, Roger A. Irlis, Khalid D. Adam, Mary Joyce Z. Guinto-Sali & Richard N. Muallil, Pp. 26753–26756

**The occurrence of Glossy Ibis *Plegadis falcinellus* Linnaeus, 1766 (Pelecaniformes: Threskiornithidae) in southern Sumatra, Indonesia**  
– Muhammad Iqbal, Arum Setiawan, Putri Balqis, Exaudi Beatrice Simanullang, Pormansyah, Selamat Robinsa, Winda Indriati & Indra Yustian, Pp. 26757–26760

## Book Review

### **A whisper of silken wings**

– Aparna Sureshchandra Kalawate & Pooja Kumar Misal, Pp. 26761–26762

## Publisher & Host



## Threatened Taxa