



Open Access



W. J. J. J.

Building evidence for conservation globally
Journal of
Threatened
TAXA

10.11609/jott.2026.18.4.28607-28738
www.threatenedtaxa.org

26 April 2026 (Online & Print)
18(4): 28607-28738
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. Karthigeeyan, 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

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: Long-tailed Shrike *Lanius schach* resting on a dry branch after courtship. Digital illustration on Procreate. © Aakanksha Komanduri.



First record of Wall's Krait *Bungarus walli* Wall, 1907 (Reptilia: Squamata: Elapidae) from Assam, and diagnostic keys to the kraits of India

Bijay Basfore¹ , Abhi Medhi² , Nazrul Islam³ , Rathin Barman⁴ , Madhurima Das⁵ ,
Anjana Singha Naorem⁶ & Jayaditya Purkayastha⁷

^{1,6}Department of Zoology, Cotton University, Panbazar, Guwahati 781001, Assam, India.

²Ozapara, Azara, Near- Sabhaghar, Guwahati, Assam 781015, India.

^{3,4}Wildlife Trust of India, F-13, Sector-8, Noida (National Capital Region), Uttar Pradesh 201301, India.

^{5,7}Help Earth, 16 Raghunath Choudhury Path, Lachitnagar, Guwahati, Assam 781007, India.

⁵Department of Zoology, Assam Don Bosco University, Sonapur, Assam 782402, India.

¹zoo2491005_bijay@cottonuniversity.ac.in, ²medhiabhijit328@gmail.com, ³nazrul@wti.org.in, ⁴rathin@wti.org.in,

⁵madhurima.das@dbuniversity.ac.in, ⁶anjanasingha@cottonuniversity.ac.in (corresponding author),

⁷mail.jayaditya@gmail.com (corresponding author)

Kraits of the genus *Bungarus* Daudin, 1803 are highly venomous ophiophagous snakes belonging to the family Elapidae found in southern and south-eastern Asia across Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, India, Indonesia, Iran, Laos, Malaysia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, Taiwan, Thailand, and Vietnam (Wallach et al. 2014; Midtgaard 2022; Uetz et al. 2026). The genus currently comprises 18 recognised species, nine of which are known to occur in India: *Bungarus andamanensis* Biswas & Sanyal, 1978; *B. bungaroides* (Cantor, 1839); *B. caeruleus* (Schneider, 1801); *B. fasciatus* (Schneider, 1801); *B. lividus* Cantor, 1839; *B. niger* Wall, 1908; *B. sindanus* Boulenger, 1897; *B. suzhenae* Chen, Shi, Vogel, Ding & Shi, 2021, and *B. walli* Wall, 1907 (Uetz et al. 2026).

Among these, *Bungarus walli*, commonly referred to as Wall's Krait, was originally described from Fyzabad (at present Faizabad), Uttar Pradesh, India (Wall 1907).

The species is known from the Indian subcontinent, with confirmed occurrences in India, Bangladesh, Nepal, and Bhutan (Smith 1943; Lenz 2012; Wallach et al. 2014; Ahsan & Rahman 2017; Ghosh et al. 2021). Within India, *B. walli* exhibits a fragmented distribution and has been reported from a limited number of states, including Bihar, Odisha, Uttar Pradesh, and West Bengal (Figure 1) (Whitaker & Captain 2004; Bhattacharjee & Sarkar 2021). Recently, *B. walli* has been reported from Tripura, marking the first-ever record of the species from northeastern India (Deb et al. in press). In addition to distributional records, existing studies have reported aspects of the species' natural history, including habitat preference and venom effects (Sharma et al. 2013), leucism (Devkota et al. 2020), reproductive biology (Ray et al. 2020; Ray et al. 2023), and scavenging behaviour (Banik & Ray 2023).

While a few reports of *Bungarus sindanus walli*

Editor: S.R. Ganesh, Kalinga Foundation, Agumbe, India.

Date of publication: 26 April 2026 (online & print)

Citation: Basfore, B., A. Medhi, N. Islam, R. Barman, M. Das, A.S. Naorem & J. Purkayastha (2026). First record of Wall's Krait *Bungarus walli* Wall, 1907 (Reptilia: Squamata: Elapidae) from Assam, and diagnostic keys to the kraits of India. *Journal of Threatened Taxa* 18(4): 28729–28733. <https://doi.org/10.11609/jott.10206.18.4.28729-28733>

Copyright: © Basfore et al. 2026. 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: The study was funded by the Wildlife Trust of India (WTI) and conducted in collaboration with Help Earth.

Competing interests: The authors declare no competing interests.



Acknowledgements: We express our sincere gratitude to Maheshwar Basumatary, Saurav Mardi, Bishal Basumatary and Keshav Pathak for their valuable support and guidance during the fieldwork. We also extend our appreciation to the Divisional Forest Officer of Kachugaon Division, as well as to all the Range Forest Officers and the frontline forest staff of Raimona National Park, for their assistance in the field and dedication to conservation of the landscape. The authors further acknowledge the Bodoland Territorial Council (BTC), Assam Forest Department and the International Fund for Animal Welfare (IFAW) for its long-term collaboration and partnership with the Wildlife Trust of India (WTI) in the recovery and conservation of the Greater Manas Landscape.

are present from Maharashtra State in western India (Nande & Deshmukh 2007; Deshmukh et al. 2016), they have now come to be identified as *Bungarus sindanus* complex based on a smaller number and extent of bands, yellowish supralabials among other variations, distinct from *B. walli*, which is more of an eastern Indian species. In northeastern India, six species of *Bungarus* are currently known: *B. bungaroides*, *B. fasciatus*, *B. lividus*, *B. niger*, *B. suzhenae*, and *B. walli*, of which all except *B. suzhenae* and *B. walli* have been reported from Assam (Basfore et al. 2024; Gerard et al. 2024; Deb et al. in press). The present study confirms the occurrence of the fifth species of *Bungarus* recorded from Assam, based on data of a live uncollected subadult encountered in the Raimona National Park.

The Raimona National Park is located on the northern bank of the Brahmaputra River and falls under the Kachugaon Forest Division of the Kokrajhar District in Assam, India. It lies along the Indo–Bhutan international border, with the Sonkosh River forming the western boundary and the Saralbhanga River marking

the eastern extent. To the northern side, Raimona shares a contiguous landscape with the Phipsoo Wildlife Sanctuary of Bhutan, while the Buxa Tiger Reserve of West Bengal borders it to the western side. The occurrence of *B. walli* in Assam is likely attributable to its close proximity to West Bengal, a region where the species is already known to occur.

On 17 July 2025, at 2030 h, during a herpetofaunal survey, a juvenile *Bungarus walli* (Image 1), approximately 460 mm in total length, was encountered in the Western Range (26.673° N, 89.972° E; elevation: 117 m) of the Raimona National Park. The specimen was found actively foraging across a moist, semi-shaded habitat along a shallow forest stream surrounded by dense vegetation. The area is characterised by thick undergrowth dominated by climbers, shrubs, ferns, and grasses along the margins of the narrow stream. The adjoining forest is composed of tall evergreen and semi-evergreen trees with a dense canopy, creating a humid and shaded environment.

Upon encounter, the snake was photographed,

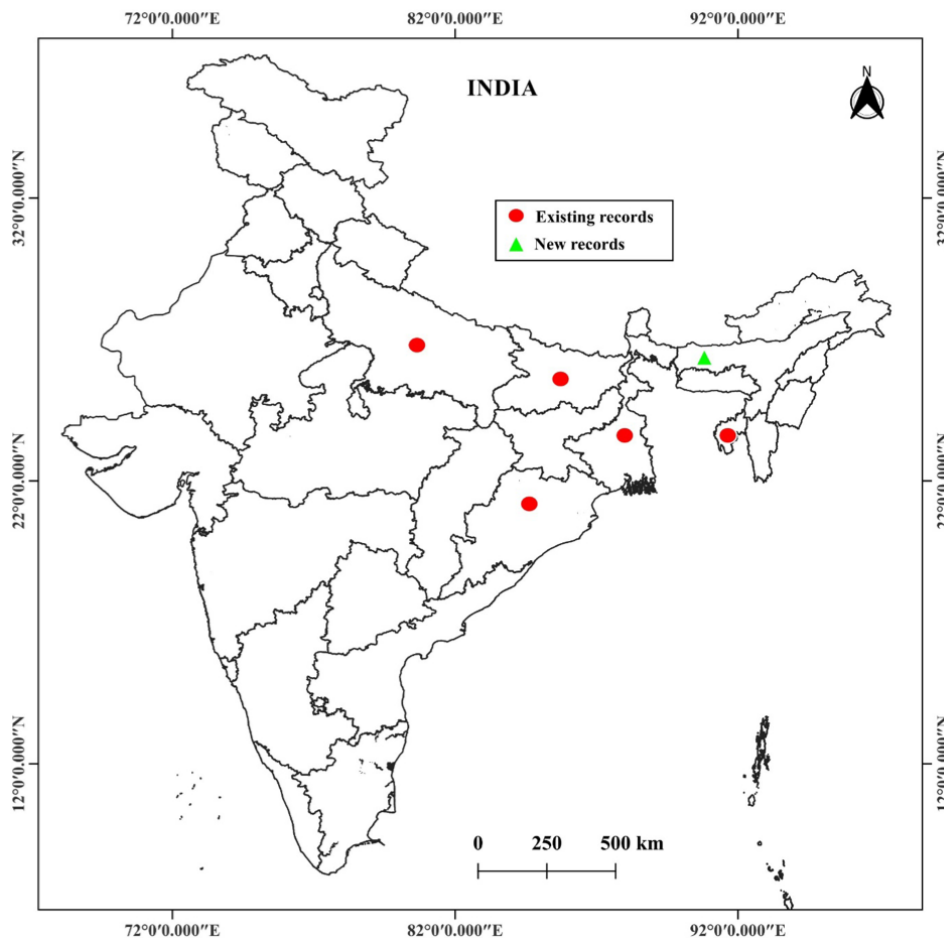


Figure 1. Updated geographical distribution of *Bungarus walli* in India.

and essential meristic and morphometric data were recorded. Identification was carried out based on the following diagnostic characters: (1) Dorsal scale rows: 19:17:17; (2) Ventrals: 207; (3) Supralabials: seven, with the 3rd and 4th touching the eye; (4) 2nd supralabial narrower than the 3rd; (5) Infralabials: four; (6) mid-body vertebral scales distinctly broader than long; (7) body distinctly compressed; and (8) glossy black colouration with 66 white, unpaired transverse bands, all consistent with existing published descriptions (Table 1).

A comparative account of the newly encountered specimen with published literature is provided in Table 1, while Table 2 presents diagnostic keys to the kraits of India. Other herpetofaunal species recorded at the site included Irawaddy Crested Lizard *Calotes* cf.

irawadi, Eastern Bronzeback *Dendrelaphis proarchos*, Bangladesh Skittering Frog *Euphlyctis adolfi*, Northern House Gecko *Hemidactylus aquilonius*, Common House Gecko *Hemidactylus frenatus*, Flat-tailed House Gecko *Hemidactylus platyurus*, Littoral Bullfrog *Hoplobatrachus litoralis*, Bhamo Frog *Hylarana humeralis*, Cope's Assam Frog *Hylarana leptoglossa*, Theobald's Ranid Frog *Hylarana tytleri*, Nepal Cricket Frog *Minervarya nepalensis*, Pierre's Cricket Frog *Minervarya pierrei*, and Bengal Monitor Lizard *Varanus bengalensis*.

The present record of *Bungarus walli* from Assam represents a significant extension of its known geographic range, approximately 778 km east of the type locality in Uttar Pradesh (Uetz et al. 2026), about 393 km from the recent confirmed record in Tripura



Image 1. *Bungarus walli* from Raimona National Park, Assam: top—entire view; bottom—head close-up view. © Bijay Basfore.

Table 1. Comparison of *Bungarus walli* from Raimona National Park, Assam with published descriptions.

Character	Present specimen	Wall (1907)	Smith (1943)	Whitaker & Captain (2004)	Bhattacharjee & Sarkar (2021)
Total length (in mm)	460	393–1517	1640 (Male) & 1500 (Female)	1518	-
Dorsal scale rows	19:17:17	19:17:17	19 or 21: 17 or 19:17	17 or 19:17 or 19:17	17 or 19:17 or 19:17
Ventrals	207	203	196–208	196–208	192–207
Subcaudals	55	55	50–55	50–55	48–55
Cloaca	Entire	Entire	-	Entire	-
Supralabials	7 (3 & 4 touching eye)	7 (3 & 4 touching eye)	-	7 (3 & 4 touching eye)	-
2 nd supralabial narrower than 3 rd	Yes	Yes	-	-	-
Infralabial	4	4	-	-	-
Preocular	1	-	-	1	-
Postocular	2	-	-	2	-
Loreal	Absent	-	-	Absent	-
Temporals	1+2	1 (anterior)	-	1+2	-
Preocular spot	Absent	Absent	Absent	-	-
Vertebrae broader than long	Yes	Yes	-	Yes	Yes
Number of bands	66	-	65–80	-	-

Table 2. Diagnostic key to the Kraits of India.

Species	DSR (midbody)	VEN	SC	Dorsal pattern	Body bands	Reference
<i>B. andamanensis</i>	15	193–197	45–47 (undivided)	Narrow white or yellowish-white bands	39–47	Biswas & Sanyal, (1978); Smith (1943)
<i>B. bungaroides</i>	15	220–237	44–51 (divided)	White or pale yellow bands	46–60	Smith (1943); Das (2018)
<i>B. caeruleus</i>	15	200–217 (234)	33–54 (undivided)	Narrow white bands (sometimes paired)	29–65	Biswas & Sanyal (1978); Slowinski (1994); Whitaker & Captain (2004)
<i>B. fasciatus sensu stricto</i>	15	222–228 (male) & 224–231 (female)	35–37 (male) & 32–36 (female) (undivided)	Black and yellow bands	22–27	Biakzuala et al. (2023)
<i>B. lividus</i>	15	209–221	35–43 (undivided)	Black or bluish-black	Absent	Smith (1943)
<i>B. niger</i>	15	216–231	47–57 (undivided)	Glossy black body	Absent	Wall (1908); Smith (1943)
<i>B. sindanus</i>	17 or 19	220–237	49–52 (undivided)	White bands	-	Boulenger (1897)
<i>B. suzhenae</i>	15	220–229	51–54 (undivided)	White bands	26–38	Chen et al. (2021)
<i>B. walli</i>	17 or 19	196–208	50–55 (undivided)	Narrow white unpaired bands	65–80	Wall (1907); Smith (1943)

(Deb et al. in press), and about 62 km from its nearest previously known record from West Bengal (Banik & Ray 2023). Thus, the present study highlights the significance of systematic herpetofaunal surveys in transboundary landscapes, having contiguous forests with countries like Bhutan, as these regions may harbour undocumented taxa. The finding also emphasises the role of Raimona National Park, a recently established protected area, as a valuable site for documenting poorly known or

range-extended herpetofaunal species. *Bungarus walli* is often misidentified as *B. caeruleus* or *B. sindanus*, and as a medically important venomous snake, such misidentifications are of concern, as existing polyvalent antivenoms may exhibit variable efficacy across different *Bungarus* species (Chippaux 2017). Therefore, accurate identification and targeted inventory of herpetofauna are essential not only for conserving biodiversity but also for enhancing public health preparedness in

snakebite-prone regions, such as western Assam, where agriculture is the primary livelihood activity and brings people into frequent contact with snakes.

References

- Ahsan, M.F. & M.M. Rahman (2017). Status, distribution and threats of kraits (Squamata: Elapidae: *Bungarus*) in Bangladesh. *Journal of Threatened Taxa* 9(3): 9903–9910. <http://doi.org/10.11609/jott.2929.9.3.9903-9910>
- Banik, A. & P. Ray (2023). Natural History Notes: *Bungarus walli* (Wall's Krait). Scavenging. *Herpetological Review* 54(2): 308 pp.
- Basfore, B., M.J. Kalita, N. Sharma & A.R. Boro (2024). An updated checklist of snakes (Reptilia: Squamata) in northeastern India derived from a review of recent literature. *Journal of Threatened Taxa* 16(11): 26131–26149. <https://doi.org/10.11609/jott.8741.16.11.26131-26149>
- Bhattacharjee, P. & S. Sarkar (2021). A comparative study of Kraits (Squamata: Elapidae: *Bungarus*) found in West Bengal, India. *International Journal of Scientific Research in Biological Sciences* 8(1): 55–59.
- Biakzuala, L., H.T. Lalremsanga, V. Santra, A. Dhara, M.T. Ahmed, Z.B. Mallick, S. Kuttalam, A.A.T. Amarasinghe & A. Malhotra (2023). Molecular phylogeny reveals distinct evolutionary lineages of the Banded krait, *Bungarus fasciatus* (Squamata, Elapidae) in Asia. *Scientific Reports* 13(1): 2061. <https://doi.org/10.1038/s41598-023-28241-8>
- Biswas, S. & D.P. Sanyal (1978). A new species of Krait of the genus *Bungarus* Daudin, 1803 (Serpentes: Elapidae) from the Andaman Island. *Journal of Bombay Natural History Society* 75(1): 179–183.
- Boulenger, G.A. (1897). A new krait from Sind (*Bungarus sindanus*). *Journal of Bombay Natural History Society* 11: 73–74.
- Chen, Z., S. Shi, G. Vogel, L. Ding & J. Shi (2021). Multiple lines of evidence reveal a new species of Krait (Squamata, Elapidae, *Bungarus*) from southwestern China and northern Myanmar. *ZooKeys* 1025: 35–71. <https://doi.org/10.3897/zookeys.1025.62305>
- Chippaux, J.P. (2017). Snakebite envenomation turns again into a neglected tropical disease. *Journal of Venomous Animals and Toxins including Tropical Diseases* 23(38): 1–2. <https://doi.org/10.1186/s40409-017-0127-6>
- Das, A. (2018). Notes on snakes of the genus *Bungarus* (Serpentes: Elapidae) from northeast India, pp. 23–35. In: Sivaperuman, C. & Venkataraman, K. (eds.). *Indian Hotspots - Volume 2*. Springer, Singapore, 343 pp.
- Deb, A., D. Debnath, B. Basfore, K. Das, T. Das, R. Deb, T. Basak, U.S. Sarkar, G. Mallik, A. Majumder, A. Sarkar, D. Chakraborty, A.S. Naorem, G. Vogel & J. Purkayastha (in press). An updated checklist of snakes of Tripura, India, with eight new state records and the first record of *Bungarus walli* Wall, 1907, from northeast India. *Taprobanica*.
- Deshmukh, R.V., S.A. Deshmukh & S.A. Badhekar (2016). First records of *Oligodon taeniolatus* and *Bungarus sindanus walli* from Nagpur District, Maharashtra, India. *Newsletter of the South Asian Reptile Network* 18: 40–42.
- Devkota, K., D.N. Mandal, G. Sah, M. O'Shea & H. Kaiser (2013). First report of leucism for the kraits *Bungarus walli* Wall, 1907 and *B. niger* Wall, 1908, with updates on their geographic distribution in Nepal (Serpentes, Elapidae). *Herpetology Notes* 13: 817–825.
- Gerard, J.D., B. Boruah, V. Deepak & A. Das (2024). First record of two species of venomous snakes *Bungarus suzhenae* and *Ovophis zayuensis* (Serpentes: Elapidae, Viperidae) from India. *Journal of Threatened Taxa* 16(6): 25385–25399. <https://doi.org/10.11609/jott.2024.16.6.25283-25494>
- Ghosh, A., V. Giri, K. Limbu, M.K. Hasan & J. Wangyal (2021). *Bungarus walli*. The IUCN Red List of Threatened Species. <https://doi.org/10.2305/IUCN.UK.2021-3.RLTS.T127914642A127914645.en>. Accessed on 23.iv.2026.
- Lenz, N. (2012). *Von Schmetterlingen und Donnerdrachen: Natur und Kultur in Bhutan*. Karlsruhe Naturhefte 4, Naturkundemuseum Karlsruhe, 124 pp.
- Midtgaard, R. (2022). Repfocus, a survey of the Reptiles of the World. <https://repfocus.dk/Bungarus.html>. Accessed on 03.ii.2026.
- Nande, R. & S. Deshmukh (2007). Snakes of Amravati District including Melghat, Maharashtra, with important records of the Indian Egg-Eater, Montane Trinket Snake and Indian Smooth Snake. *Zoo's Print Journal* 22(12): 2920–2924. <https://doi.org/10.11609/JOTT.ZPJ.1653.2920-4>
- Ray, P., S. Pandey & A. Aich (2020). Natural History Notes: *Bungarus cf. walli* (Wall's Krait). *Herpetological Review* 51(2): 343.
- Ray, P., S. Pandey & A. Aich (2023). Natural History Notes: *Bungarus cf. walli* (Wall's Krait). Reproduction/Clutch Size and Hatchling Morphology. *Herpetological Review* 54(2): 308.
- Sharma, S.K., D.P. Pandey, K.B. Shah, F. Tillack, F. Chappuis, C.L. Thapa, E. Alirol & U. Kuch (2013). *Venomous Snakes of Nepal: A Photographic Guide*. B.P. Koirala Institute of Health Sciences, Dharan, Nepal, 77 pp.
- Slowinski, J.B. (1994). A phylogenetic analysis of *Bungarus* (Elapidae) based on morphological characters. *Journal of Herpetology* 28(4): 440–446.
- Smith, M.A. (1943). *The Fauna of British India, Ceylon and Burma, Including the Whole of the Indo-Chinese Sub-region, Vol. 3. Serpentes*, Taylor & Francis, London.
- Uetz, P., P. Freed, R. Aguilar, F. Reyes & J. Hosek (2026). The Reptile Database. <http://www.reptile-database.org>. Accessed on 23.ii.2026.
- Wall, F. (1907). Notes on Snakes collected in Fyzabad. *Journal of the Bombay Natural History Society* 18: 101–129.
- Wall, F. (1908). A popular treatise of the common Indian snakes. Part VIII. *Journal of the Bombay Natural History Society* 18: 711–735.
- Wallach, V., K.L. Williams & J. Boundy (2014). *Snakes of the World: A Catalogue of Living and Extinct Species*. Taylor and Francis Ltd., CRC Press, New York, 1237 pp.
- Whitaker, R. & A. Captain (2004). *Snakes of India: The Field Guide*. Draco Books, Chennai, India, xiv + 481 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
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 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. Topiltzin Contreras MacBeath, Universidad Autónoma del estado de Morelos, México
Dr. Heok Hee Ng, National University of Singapore, Science Drive, Singapore
Dr. Rajeesh 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 Vyasa, 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, Kalinga Foundation, Agumbe, 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, 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, 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 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.

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

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



www.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. 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)

April 2026 | Vol. 18 | No. 4 | Pages: 28607–28738

Date of Publication: 26 April 2026 (Online & Print)

DOI: 10.11609/jott.2026.18.4.28607-28738

Articles

Altered nocturnal vocal activity patterns in Tropical Kingbird *Tyrannus melancholicus* (Passeriformes: Tyrannidae) at a site with artificial lighting

– David Ramírez-Adame, Claudia Cristina Valenzuela-Inzunza, Rosa Gabriela Beltrán-López, Eduardo Michael Acosta-Morán & José Antonio Guerrero, Pp. 28607–28614

Importance of integrating multiple criteria in breeding habitat management for urban frogs and toads (Amphibia: Anura) in Jakarta City, Indonesia

– Mohamad Isnin Noer, Ivan Hafidhuddin, Agung Sedayu, Ratna Komala & Alvira Salsabila, Pp. 28615–28622

Rediscovery of the endemic and threatened Jewel Damsel fly *Rhinocypha togeanensis* van Tol & Günther, 2018 (Insecta: Odonata: Chlorocyphidae) in Indonesia, with notes on its habitat loss and the urgent need for conservation action

– Muhammad Amiruddin, Diky Dwiyanto, Nuranisa Nuranisa, Jusriadi Jusriadi, Nur Khasanah & André Günther, Pp. 28623–28630

The dragonfly (Odonata) community structure at Sukamade Resort, Meru Betiri National Park, Indonesia

– Abdu Rohman, Wachju Subchan & Dwi Artika Amalia, Pp. 28631–28643

Butterflies (Lepidoptera: Rhopalocera) of Mahananda Wildlife Sanctuary, West Bengal, India: a preliminary checklist

– Ratnadeep Sarkar & Priyanka Rai, Pp. 28644–28656

Communications

A preliminary study to investigate behavioural differences among elephants residing near the Buttala-Kataragama and Habarana roads in Sri Lanka, where they are regularly fed by passing motorists

– Tharindu Muthukumarana, Pp. 28657–28661

Impact analysis of SMS-triggered elephant activity alert lights

– Sanjoy Deb, Sannasi Chakravarthy Surulimani Ramaraj, Sharmila Arumugam & Saravana Kumar Radhakrishnan, Pp. 28662–28667

Report of phimosis in an Andean Bear *Tremarctos ornatus* (Mammalia: Carnivora: Ursidae) and ultrasonographic description of the male genitourinary system

– Aléxia Pimenta Bom-Conselho, Agatha Campinho Belsito, Arthur Carlos Trindade, Ciro Alexandre Teixeira Cruvinel, Pedro Nacib Jorge-Neto & Cristiane Schilbach Pizzutto, Pp. 28668–28672

Assessing avifaunal diversity and anthropogenic impacts on Ladhwaya Pond, Gwalior, India

– R.K. Lodhi, N.P. Gour, S. Shakya, A. Jain, R.K. Gurjwar & R.J. Rao, Pp. 28673–28680

New record of invasive moth *Phalera cf. bucephala* (Linnaeus, 1758) (Lepidoptera: Notodontidae) on *Salix alba* (Salicaceae) from Ladakh, India

– Mohd Hussain, Nassreen Fatima Kacho, Basharat Ali & Mohd Ali, Pp. 28681–28687

Diversity and distribution of wasps and bees (Insecta: Hymenoptera: Vespidae, Apidae) in the Gauhati University Campus, Kamrup Metro, Assam, India

– Briyanka Kashyap, Jinti Das, Malabika Kakati Saikia & Prasanta Kumar Saikia, Pp. 28688–28695

Unveiling genital specializations in *Megascolex travancorensis* (Oligochaeta: Megascolecidae) through scanning electron microscopy

– Jaya Manazhy, Sona Sajeev, Aja Manazhy, John Warren Reynolds & Santhosh Punnakattu Parambil, Pp. 28696–28702

Review

Diversity and distribution of climbers of Uttar Pradesh: a preliminary review

– Rameshwar Prasad, Muzeev Ahmad, Sushma Verma, K.M. Prabhukumar & T.S. Rana, Pp. 28703–28718

Short Communications

First record of leucism in Rock Hyrax *Procapra capensis* from Ibbex Reserve Protected Area, Saudi Arabia

– Zaffar R. Mir, Naif Alajmi, Ali Alahmari, Ahmad Alobaid, Khalid Almaliki, Farah Niaz, Naif Alqahtani & Ahmed Boug, Pp. 28719–28723

First national record of Yellow Owl Butterfly *Neorina hilda* Westwood, 1851 (Lepidoptera: Nymphalidae: Satyrinae) for Nepal

– Nishan Limbu, Pp. 28724–28728

Notes

First record of Wall's Krait *Bungarus walli* Wall, 1907 (Reptilia: Squamata: Elapidae) from Assam, and diagnostic keys to the kraits of India

– Bijay Basfore, Abhi Medhi, Nazrul Islam, Rathin Barman, Madhurima Das, Anjana Singha Naorem & Jayaditya Purkayastha, Pp. 28729–28733

Eastern range extension of the band-winged grasshopper *Pusana rugulosa* (Uvarov, 1921) (Insecta: Orthoptera: Acrididae) in India

– Amlanjyoti Gautam, Rajnish Ranjan & Jennifer Lyngdoh, Pp. 28734–28738

Publisher & Host



Threatened Taxa