10.11609/jott.2026.18.1.28151-28262
www.threatenedtaxa.org

26 January 2026 (Online & Print)
18(1): 28151–28262
ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

40 zoOreach
Zoo Outreach Organisation
Years

Building evidence for conservation globally

Journal of Threatened Taxa

Open Access

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

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: Golden-headed Lion Tamarin *Leontopithecus chrysomelas*. Watercolor and acrylics by P. Kritika.

Journal of Threatened Taxa | www.threatenedtaxa.org | 26 January 2026 | 18(1): 28194–28200

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

https://doi.org/10.11609/jott.9733.18.1.28194-28200

#9733 | Received 05 March 2025 | Final received 09 December 2025 | Finally accepted 30 December 2025

COMMUNICATION

OPEN ACCESS

Habitat associations and feeding ecology of adult Tamdil Leaf-litter Frog *Leptobrachella tamdil* (Amphibia: Megophryidae) from the type locality – the Tamdil wetland, Mizoram, India

Malsawmdawngliana [1], Esther Lalhmingliani [2], Samuel Lalronunga [3], Lalrinmawia [4] & Lalnuntluanga [5]

[1,5] Department of Environmental Science, Mizoram University, Aizawl, Mizoram 796004, India.
[2] Systematic and Toxicology Laboratory, Department of Zoology, Mizoram University, Aizawl, Mizoram 796004, India.
[3] House No. B-10/B, YMA Road, Chawnpui, Aizawl, Mizoram 796009, India.
[4] Department of Zoology, Govt. Zirtiri Residential Science College, Durtlang Leitan, Mizoram 796025, India.
[1] valpuia17@gmail.com, [2] es_ralte@yahoo.in (corresponding author), [3] samuellrna@gmail.com, [4] lrmawia@gmail.com, [5] tluanga_249@rediffmail.com

Abstract: We conducted a study on the habitat use, food, and feeding ecology of the lesser known Tamdil Leaf-litter Frog *Leptobrachella tamdil* at its type locality. The places occupied by *L. tamdil* in the wild are characterised by 13–25 °C night temperature, 10–20 °C water temperature, 54–86% humidity, 6.84–7.15 pH, and 5–7 mg/L dissolved oxygen. We observed eight orders of prey in the gut contents of *L. tamdil*, examined by stomach-flushing live frogs among which the order Diptera was the most abundant, followed by Hymenoptera, while Hemiptera and Coleoptera were the least abundant.

Keywords: Anuran, biodiversity hotspot, Chhawl-chang, food, gut contents, Indo-Burma, microhabitat, natural history.

Mizo: Tamdil Chhawl-chang (*L. tamdil*) khawsak phung leh an chaw ei zirchianna Tamdil-ah neih a ni a. Kan zir hun chhung hian zan lam boruak chu 13-25° C, tui vawh zawng 10-20° C, boruak uap zawng 54-86% a ni. Heng uchang kawchhung atanga rannung chi hrang hrang order chi 8 hmuh a ni a, chung zingah chuan Diptera (tho/thosi lam chi) an tam ber a, Hymenoptera (fanghmir lam chi) ten an dawt a, chutih lain Hemiptera (khuangbai lam chi) leh Coleoptera (Rawmung lam chi) te an tlem ber a ni.

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

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

Citation: Malsawmdawngliana, E. Lalhmingliani, S. Lalronunga, Lalrinmawia & Lalnuntluanga (2026). Habitat associations and feeding ecology of adult Tamdil Leaf-litter Frog *Leptobrachella tamdil* (Amphibia: Megophryidae) from the type locality – the Tamdil wetland, Mizoram, India. *Journal of Threatened Taxa* 18(1): 28194–28200. https://doi.org/10.11609/jott.9733.18.1.28194-28200

Funding: The study is a part of PhD thesis and there is no real funding agency apart from UGC's Non-Net Fellowship for PhD scholars and no logos for the funding.

Competing interests: The authors declare no competing interests.

Author details: Malsawmdawngliana: He is currently enrolled as a Phd scholar in the department of Environmental Science, Mizoram University. His interest lies in the ecology of lesser known herpetofauna with special reference to northeastern India. Esther Lalhmingliani: She currently works as a professor in the Department of Zoology, Mizoram University. Her main works lies in the systematics and toxicology of insects and herpetofauna. Samuel Lalronunga: Former research associate and DBT-National Post-doctoral fellow, his main interest lies in the systematics and ecology of Herpetofauna and Ichthyofauna with special preference to northeastern India. Lalrinmawia: He currently works as associate professor in the Department of Zoology, Govt. Zirtiri Residential Science College, Aizawl. He specialise in parasitic helminthology & soil bio-engineering. Lalnuntluanga: He currently works as professor in the Department of Environmental Science, Mizoram University. His specialize in social and agroforestry and biodiversity.

Author contributions: Malsawmdawngliana did field work and data collection, laboratory works and wrote the manuscript. Esther Lalhmingliani co-supervised the work and provided the financial support, laboratory support and manuscript writing. Samuel Lalronunga helps in designing the work, data collection and editing the manuscripts. Lalrinmawia helps in manuscript writing and editing. Lalnuntluanga supervised the work, preparation and editing manuscript.

Acknowledgements: We thank the CWW, Department of Environment, Forest and Climate Change, Government of Mizoram for issuing research permit (No. B. 19060/1/2020-CWLW/12) to study frogs in Tamdil Wetland. We also thank Mr Isaac Zosangliana for his assistance in field work and Mr R. Lalruatdika for helping in preparation of the study map.

INTRODUCTION

Understanding the habitat selection of an organism is essential in determining its distribution and behaviour. For this, we need to understand the behavioural interaction with its surrounding environments and quality of habitats (Figuera & Crowder 2006). Amphibians begin their lives in water, and terrestrial dwellers later transition to moist terrestrial habitats (Wells 2007). They remain closely linked to specific microhabitats and their precincts. Amphibians are endothermic animals, and are sensitive to rising temperatures. They depend on an external source to raise body temperature by absorbing solar radiation (Carey 1978). Climate change is one factor threatening amphibian populations, driving them into decline (Stuart et al. 2004). Amphibian assemblages in natural forests are always higher than in areas disturbed by anthropogenic activities, viz., jhum (slash-&-burn) cultivation land, plantation, and logging (Pawar 1999; Krishnamurthy 2003), and the presence of leaf litter and canopy cover are predictors for their assemblage (Balaji et al. 2013).

Leaf litter presence and depth are essential for the occurrence of amphibians (Fauth et al. 1989; Allmon 1991). Vegetation, sunlight, temperature, and other environmental factors strongly influence the distribution and activities of amphibians (Halverson et al. 2003). The ecological organisation of a community and its assemblage, the phylogenetic relationship among species, their behaviour, and their physiology can all be used to understand to a large extent the species' feeding ecology (Lima & Magnuson 1998; Grant et al. 2006; Arroyo et al. 2008). The diet of amphibians may depend on seasonal availability of prey, presence of competitors, and other relevant factors (Isaach & Barg 2002). Amphibians also play an important role in the biological control of mosquitoes to control diseases like malaria and dengue (Raghavendra et al. 2008; Bowatte et al. 2013).

The megophryiid frog genus *Leptobrachella* Smith, 1925 consists of 104 species, out of which four species, viz., *L. khasiorum* (Das, Tron, Rangad & Hooroo, 2010), *L. lateralis* (Anderson, 1971), *L. nokrekensis* (Matthew & Sen, 2010), and *L. tamdil* (Sengupta, Sailo, Lalremsanga, Das & Das, 2010), are found in India, all restricted to the northeast of the country (Frost 2025). The Tamdil Leaf-litter Frog (*L. tamdil*) was described from Tamdil wetland, Saitual District, Mizoram, in 2010 (Sengupta et al. 2010). Later on, additional records were made from Dampa Tiger Reserve, Hmuifang Community Reserve Forest, Sihzau Lake from Zotlang, Champhai District (Vanlalsiammawii et al. 2020; Muansanga et al. 2021) and also from Manipur (Decemson et al. 2021). However, the natural history of the frog is still largely unknown (Vanlalsiammawii et al. 2020). Muansanga et al. (2021) partially reported the diet of *L. tamdil* to be insects of four orders based on the study of three individuals of *L. tamdil*. Herein, we present the habitat association and diet of *L. tamdil* studied at the type locality, based on in-situ field observations of wild frogs.

METHODS

Study area

Tamdil wetland was enlisted as a National Wetland in 2006–2007 by the National Wetland Conservation Programme, Government of India. It is located in the Saitual District of Mizoram (23.71° E & 92.95° N), about 100 km from the capital district, Aizawl and it covers about 13.7 km^2 with a mean elevation of 760 m (Image 1). The area falls under the Indo-Burma biodiversity hotspot and the vegetation type falls under Cachar Tropical Semi-evergreen Forest (2B/2C) category of Champion & Seth (1968).

Data Collection

Studies were conducted from February 2023 to May 2024 along the streams in Tamdil Wetland. The species were found to be active during the pre-monsoon months before the onset of peak monsoon. Visual encounter survey (Crump & Scott 1994), audio encounter survey, and opportunistic search were deployed to assess the diet during the survey period. Microhabitats in which the individuals were found are recorded along with relative humidity and temperature. The ecological parameters were recorded in the field using portable devices. We photographed the targeted species in its natural habitat with minimal disturbances.

Species confirmation

Genomic DNA was extracted from the collected tissue samples of one tadpole and one adult using Qiagen DNeasy Blood & Tissue Kit (Qiagen, Valencia, CA, USA) following the manufacturer's protocol. A partial fragment (~570 base pairs) of the 16S rRNA was amplified and sequenced using previously published primers in Simon et al. (1994). Polymerase chain reaction (PCR) conditions were as follows: initial denaturation at 95 °C for 3 minutes, followed by 39 cycles of denaturation at 94 °C for 45 seconds, annealing at 52 °C for 45 seconds, and extension at 72 °C for 2 minutes. Final extension was at 72 °C for 10 minutes. Amplified PCR products were run on a 2% agarose gel and viewed under UV transilluminator. Purified PCR product was sequenced

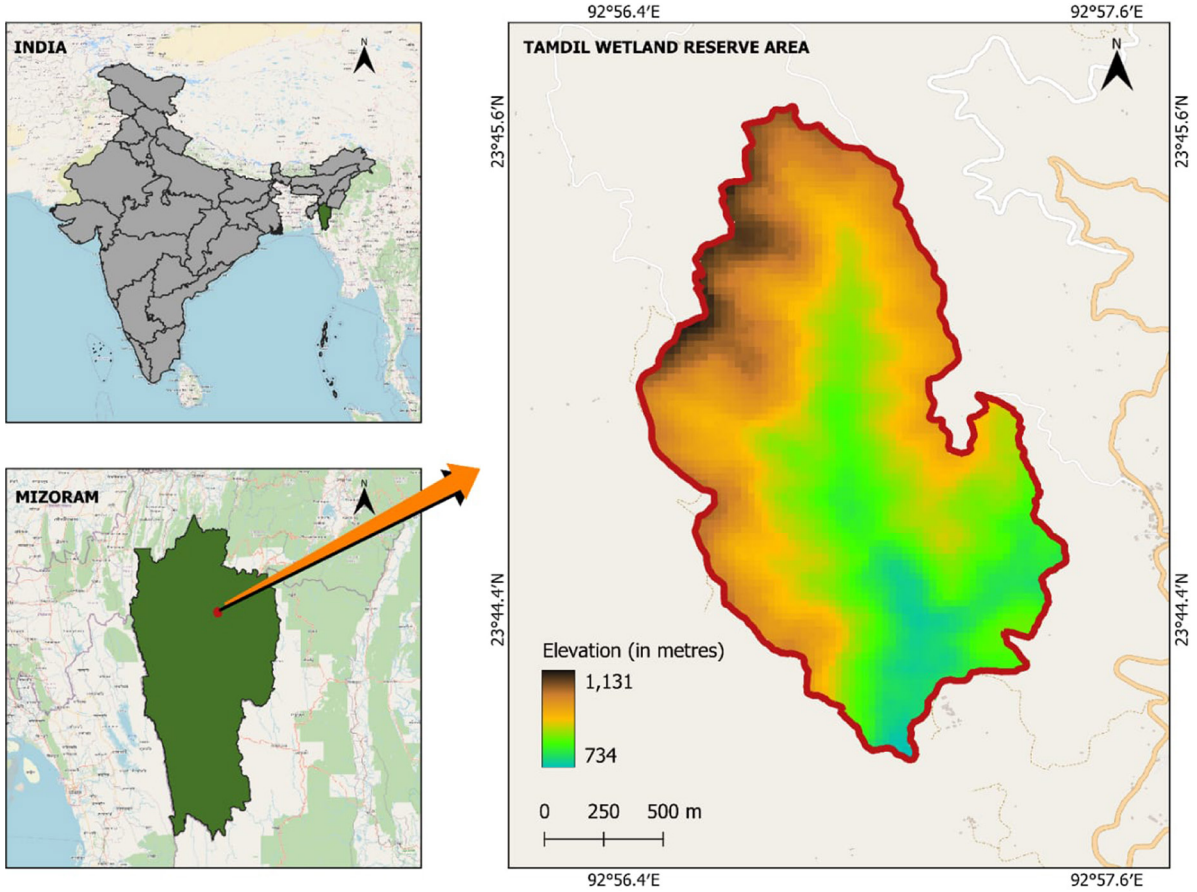

Image 1. Map of Tamdil Wetland (Inset: Elevation map), in Mizoram, northeastern India.

directly in an Applied Biosystems Genetic Analyzer 3500 XL in both directions using BigDye v3.1. The tadpole we studied was identified as *Leptobrachella tamdil* based on genetic congruence (0.11% in 16S rRNA) of our sample's sequence with published (also see Vanlalsiammawil et al. 2020; Decemson et al. 2021; Muansanga et al. 2021) sequences of *L. tamdil* in GenBank (NCBI # ON500517.1, generated from MZMU 2675; ncbi.nlm.nih.gov/nuccore/ON500517.1).

Gut content analysis

Specimens were collected by hand and gut contents of the collected specimens were obtained by flushing the stomach using standardised protocol (Solé et al. 2005). The flushed contents are fixed in 10% formalin solution for laboratory analysis. The snout-vent length (SVL) of the specimens were taken using a calliper to the nearest 0.1 mm and they were released on the spot. The flushed gut contents obtained from the field were analysed in the laboratory using a Motic SMZ - 161 microscope and identified to the level of order. The abundance of various prey was estimated from the stomach contents (percentage of the total number of individual prey/total number of all prey). Frequency of occurrence was determined by dividing the number of stomachs that contained a particular prey by the total number of stomachs with prey (Hyslops 1980). The rate of feeding activity was estimated as the percentage of stomach containing food with respect to the total number of stomachs examined (Sala & Ballesteros 1997). Rate of feeding activity = 100 n/N (where n is the number of stomachs with food, N is the total number of stomachs examined). Diet diversity was estimated using the Shanon-Weiner diversity Index (H), where H= -å $P_i(\ln P_i)$ and P_i = proportion of each taxa in the sample.

Food availability of the study area

The habitat where the species were most frequently encountered was selected for food availability estimation. Prey availability was estimated by making 10 plots of 1 x 1 m in the stream bank and inside the stream. The different types of potential prey (such as insects, spiders) were identified to the level of order and are left in the habitat. The potential preys were then compared with the actual

food items obtained from the gut of adult frogs.

RESULTS

We encountered different stages of *Leptobrachella tamdil* during the dry months when there is little precipitation and low stream flow (Image 2). Adults of *L. tamdil* were encountered under rocks, above rocks, in water-logged puddles, and on fallen leaves and twigs in and around the streambed. Encounters of tadpoles were usually in small water puddles, but upon approach, they bury themselves in mud quickly. The surrounding vegetation includes *Melocanna baccifera*, *Laurocerasus jenkinsii*, *Ficus fistulosa*, *Terminalia myriocarpa*, *Duabanga grandiflora*, *Macropanax* sp., *Pilea symmeria*, *Leea compactiflora*, *Drypetes indica*, *Aglaia spectabillis*, *Homalium ceylanicum*, *Phrynium capitatum*, and *Ensete* sp. (Image 3).

The air temperature during the study ranged from 13–25 °C at night; the water temperature ranged from 10–20 °C; the relative humidity ranged 54–86 %; the pH of the water ranged 6.84–7.15; the dissolved oxygen ranged 5–7 mg/L. The species emerges mainly during the dry pre-monsoon months (January–May) when the water level is low, and pockets of small, waterlogged pools are formed in the depressions of the streambanks.

A total of 50 adult individuals of *L. tamdil* (SVL 25.2–35.9 mm) were examined for diet content. We obtained

Table 1. Prey availability of the Tamdil Leaf-litter Frog in the study area.

Hymenoptera	Ants
Orthoptera	Grasshoppers & crickets
Lepidoptera	Moths & butterflies
Hemiptera	Water striders, water bugs, & leafhopper
Isoptera	Termites
Diptera	Flies
Araneae	Spiders
Coleoptera	Beetles
Odonata (larvae)	Dragonflies & damselflies

81 prey items from 44 frogs, belonging to eight orders, viz., Hymenoptera (ants), Orthoptera (grasshoppers, crickets), Lepidoptera (moths), Hemiptera (leafhoppers), Isoptera (termites), Araneae (spiders), Diptera (flies), Coleoptera (beetles), and unidentified objects (Image 4). The remaining six individuals had empty stomachs. The rate of feeding was found to be 88% and the diversity of prey, measured with Shanon-Weiner diversity Index, is 1.90.

The order Diptera (28.40%) was the most abundant food item followed by Hymenoptera (20.99%). The least consumed food items were Coleoptera and Hemiptera (both at 2.47%) (Image 4). The frequency of occurrence was also calculated and it shows that Diptera (52.27%) and Hymenoptera (38.64%) were the most frequent

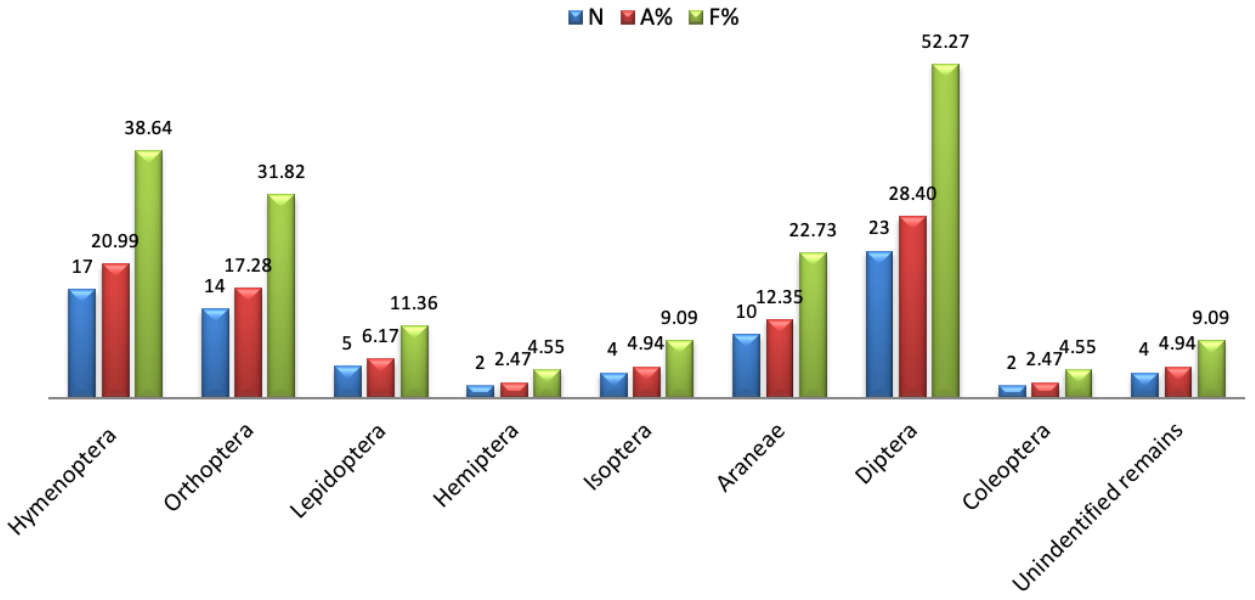

Figure 1. Frequency of occurrence and abundance of prey (%) in gut contents of *Leptobrachella tamdil*.

Image 2. Larvae, subadults, and adult *Leptobrachella tamdil* in its microhabitat. © Malsawmdawngliana.

Image 3. Habitat of *Leptobrachella tamdil* at the type locality – Tamdil wetland (Images A–D indicate different parts of the stream banks in the study area). © Malsawmdawngliana.

Image 4. Diet of *Leptobrachella tamdil*: A—Hymenoptera | B—Orthoptera | C—Lepidoptera | D—Hemiptera | E—Isoptera | F—Araneae | G—Diptera | H—Coleoptera | I—Unidentified objects. © Malsawmdawngliana.

contents (Figure 1). We recorded nine orders of potential prey species during the study (Table 1).

DISCUSSION

After the description of *L. tamdil* based on two individuals by Sengupta et al. (2010), there were no reports of this species for almost a decade. Vanlalsiammawii et al. (2020) recorded the third individual from Dampa Tiger Reserve (~54 km from type locality) and subsequent records were made from Hmuifang Community Reserve Forest (~39 km from type locality), Zotlang (~52 km from type locality), and Chakpi stream (~122 km from type locality) (Decemson et al. 2021; Muansanga et al. 2021). These, however, are inventory studies that were at the alpha taxonomic level, and the information on the natural history and its ecology is still at its infant stage. This study found that *Leptobrachella tamdil* inhabits forest floors and hill streams with rocks, similar to reports made in other studies on its congeners, viz., Lathrop et al. (1997) (*L. ailaonicum, L. sungi*), Matsui (2006) (*L. fuliginosa*), Jiang et al. (2013) (*L. zhangyapingi*), Rowley et al. (2013) (*L. botsfordi*), and Tron et al. (2015) (*L. khasiorum*).

This study found eight orders of prey in the gut of *L. tamdil* of which the most abundant prey were Diptera and Hymenoptera, and also the most frequent food items obtained. Muansanga et al. (2021) reported four orders of insects, i.e., Orthoptera, Hemiptera, Hymenoptera, and Coleoptera from the gut contents of three individuals of *L. tamdil*. The gut contents observed by Muansanga et al. (2021) were also found in our studies with the addition of Lepidoptera, Isoptera, Araneae, and Diptera. Although studies have recorded that body size and prey size have a positive relation in amphibians (Quigora et al. 2009), *L. tamdil* is a medium-sized frog species, and the size of male and female individuals do not vary much, as deduced during our study.

Available prey of *L. tamdil* is represented in Table 1, and most of the available food items (except for Odonata) were found in the gut of the examined frogs. We cannot rule out the possibility that *L. tamdil* feeds on odonates, as

most amphibians are opportunistic feeders. The present study demonstrated that the diet of *L. tamdil* is largely composed of the available food items in their habitat. The peak active season of the frog was before the onset of the monsoon (Sengupta et al. 2010; Vanlalsiammawii et al. 2020; Decemson et al. 2021; Muansanga et al. 2021) when insect activity is low, which may influence the availability of potential food in the area. Additionally, plants, vegetation remains, sand, rocks, and other particles may be accidentally ingested and are therefore not counted as part of the diet. We have a few caveats in our study as this is the first attempt to study the ecology and natural history of *L. tamdil*. This study will, nevertheless, further help in the conservation of this endemic species and documenting its natural history.

REFERENCES

Allmon, W.D. (1991). A plot study of forest floor litter frogs, Central Amazon, Brazil. *Journal of Tropical Ecology* 7: 503–522.

Arroyo, S.B., V.H. Cardozo & M.P. Pinilla (2008). Diet, microhabitat and time of activity in a *Pristimantis* (Anura, Strabomantidae) assemblage. *Phyllomedusa* 7(2): 109–119.

Balaji, D., R. Sreekar & S. Rao (2014). Drivers of reptile and amphibian assemblages outside the protected areas of Western Ghats, India. *Journal of Nature Conservation* 22: 337–341. https://doi.org/10.1016/j.jnc.2014.03.004

Bowatte, G., P. Perera, G. Senevirathne, S. Meegaskumbura & M. Meegaskumbura (2013). Tadpoles as dengue mosquito (*Aedes aegypti*) egg predators. *Biological Control* 67(3): 469–474.

Carey, C. (1978). Factors affecting body temperatures of toads. *Oecologia* 35: 197–219. https://doi.org/10.1007/BF00344732

Champion, H.G. & S.K. Seth. (1968). *A Revised Survey of Forest Types of India.* Manager of Publications, Government of India, New Delhi, 404 pp.

Crump, M.L. & N.J. Scott (1994). Visual encounter survey pp 84–91. In: Heyer, W.R., M.A. Donnelly, R.W. McDiarmid, R.W. Donnelly, L.C. Heyek & M.S. Foster (eds.). *Measuring and Monitoring Biological Diversity: Standard Methods for Amphibians.* Smithsonian Institution Press, Washington D.C.

Das, I., R.K.L. Tron, D. Rangad & R.N.K. Hooroo (2010). A new species of *Leptolalax* (Anura: Megophryidae) from the sacred groves of Mawphlang, Meghalaya, north-eastern India. *Zootaxa* 2339: 44–56. https://doi.org/10.11646/zootaxa.2339.1.2

Decemson, H., Vanlalsiammawii, L. Biakzuala, M. Mathipi, F. Malsawmdawngliana & H.T. Lalremsanga (2021). Occurrence of Tamdil Leaf-litter Frog *Leptobrachella tamdil* (Sengupta et al., 2010) (Amphibia: Megophryidae) from Manipur, India and its phylogenetic position. *Journal of Threatened Taxa* 13: 18624–18630. https://doi.org/10.11609/jott.7250.13.6.18624-18630

Fauth, J.E, B.I. Crother & J.B. Slowinski (1989). Elevational patterns of species richness, evenness, and abundance of Costa Rican leaf-litter herpetofauna. *Biotropica* 21: 178–185. https://doi.org/10.2307/2388708

Figueira, W.F. & L.B. Crowder (2006). Defining patch contribution in source-sink metapopulations: the importance of including dispersal and its relevance to marine systems. *Population Ecology* 48: 215–224. https://doi.org/10.1007/s10144-006-0265-0

Frost, D.R. (2025). Amphibian Species of the World: An Online Reference. Version 6.2 (20.i.2025). AMNH, New York, USA. https://amphibiansoftheworld.amnh.org/index.php.

Grant, T., D.R. Frost, J.P. Caldwell, R. Gagliardo, C.F.B. Haddad, P.J.R Kok, B.D.B. Means, P. Noonan, W. Schargel & W.C. Wheeler (2006). Phylogenetic systematics of dart poison frogs and their relatives (Anura: Athesphatanura: Dendrobatidae). *Bulletin of the American Museum of Natural History* 299: 1–262. https://doi.org/10.5531/sd.sp.14

Halverson, M.A., D.K. Swelly, J.M. Kiesecker & L.K. Freidenburg. (2003). Forest mediated light regime linked to amphibian distribution and performance. *Oecologia* 134: 360–364. https://doi.org/10.1007/s00442-002-1136-9

Hyslop, E.J. (1980). Stomach contents analysis: a review of methods and their application. *Journal of Fish Biology*. 17: 411–429. https://doi.org/10.1111/j.1095-8649.1980.tb02775.x

Isacch, J.P. & M. Barg (2002). Are bufonid toads specialized antfeeders? A case test from the Argentinian flooding pampa. *Journal of Natural History* 36: 2005–2012. https://doi.org/10.1080/00222930110092153

Jiang, K., F. Yan, C. Swannapoom, S. Chomdej & J. Che (2013). A New Species of the Genus *Leptolalax* (Anura: Megophryidae) from Northern Thailand. *Asian Herpetological Research* 4(2): 100–108.

Krishnamurthy, S.V. (2003). Amphibian assemblages in undisturbed and disturbed areas of Kudremukh National Park, central Western Ghats, India. *Environmental Conservation* 30: 274–282.

Lima, A.P. & W.E. Magnusson (1998). Partitioning seasonal timeinteractions among size, foraging activity and diet in leaf litter frogs. *Oecologia* 116: 259–266.

Muansanga, L., V. Siammawii, G.Z. Hmar, F. Malsawmdawngliana, L. Biakzuala, H. Decemson, Z. Sangi, & H.T. Lalremsanga (2021). New elevational and locality records and notes on the natural history of the Tamdil Leaf-litter Frog, *Leptobrachella tamdil* (Sengupta, Sailo, Lalremsanga, Das, & Das 2010) (Megophryidae), in Mizoram, India. *Reptiles & Amphibians* 28: 295–297. https://doi.org/10.17161/RANDA.V28I2.15548

Pawar, S.S. (1999). Effect of habitat alteration on herpetofaunal assemblages of evergreen forest in Mizoram, North-East India. MSc Thesis. Wildlife Institute of India, Dehradun, 64 pp.

Quigora, L.B., E.A. Sanabria & J.C. Acosta (2009). Size- and sex dependent variation in diet of *Rhinella arenarum* (Anura: Bufonidae) in a wetland of San Juan, Argentina. *Journal of Herpetology* 43: 311–317. https://doi.org/10.1670/07-117R2.1

Raghavendra, K., P. Sharma & A.P. Dash (2008). Biological control of mosquito populations through frogs: opportunities & constrains. *Indian Journal of Medical Research* 128(1): 22. https://doi.org/10.25259/IJMR_20081281_22

Rowley, J.J., V.Q. Dau & T.T. Nguyen (2013). A new species of Leptolalax (Anura: Megophryidae) from the highest mountain in Indochina. *Zootaxa* 3737 (4): 415–428. https://doi.org/10.11646/zootaxa.3737.4.5

Sala, E. & E. Ballesteros (1997). Partitioning of space and food resources by three fish of the genus *Diplodus* (Sparidae) in a Mediterranean rocky infralittoral ecosystem. *Marine Ecolology Progress Series* 152(1–3): 273–283. https://doi.org/10.3354/meps152273

Solé, M., O. Beckmann, B. Pelz, A. Kwet & W. Engels (2005). Stomach-flushing for diet analysis in anurans: an improved protocol evaluated in a case study in Araucaria forests, southern Brazil. *Studies on Neotropical Fauna and Environment* 40(1): 23–28. https://doi.org/10.1080/01650520400025704

Stuart, S.N., J.S. Chanson, N.A. Cox, B.E. Young, A.S.L. Rodrigues, D.L. Fischman & R.W. Waller (2004). Status and trends of amphibian declines and extinctions worldwide. *Science* 306: 1783–1786. https://doi.org/10.1126/science.1103538

Vanlalsiammawil, R., V.L. Malsawmhriatzualli, Lalmuansanga, G.Z. Hmar, S. Sailo, Ht. Decemson, L. Biakzuala & H.T. Lalremsanga (2020). An additional record of the Tamdil Leaf-litter Frog *Leptobrachella tamdil* (Sengupta et al., 2010) (Amphibia: Megophryidae) from Dampa Tiger Reserve, Mizoram, India. *Journal of Threatened Taxa* 12(8): 15951–15954. https://doi.org/10.11609/jott.5999.12.8.15951-15954

Wells, K.D. (2007). *The Ecology and Behaviour of Amphibians*. University of Chicago Press, Chicago, Il, 1400 pp.

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

Journal of Threatened Taxa

www.threatenedtaxa.org

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

January 2026 | Vol. 18 | No. 1 | Pages: 28151–28262
Date of Publication: 26 January 2026 (Online & Print)
DOI: 10.11609/jott.2026.18.1.28151-28262

Publisher & Host

WILD zoo reach
Zoo Outreach Organisation

Threatened Taxa