Building evidence for conservation globally

Journal of Threatened Taxa

10.11609/jott.2022.14.6.21127-21330
www.threatenedtaxa.org

26 June 2022 (Online & Print)
14(6): 21127–21330
ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

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

No. 12, Thiruvannamalai Nagar, Saravanampatti - Kalapatti Road, Saravanampatti,
Coimbatore, Tamil Nadu 641035, 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: *Euphaea pseudodispar* shot at Kalindi River, Thirunelly, Wayanad district, Kerala. © Muneer P.K.

Journal of Threatened Taxa | www.threatenedtaxa.org | 26 June 2022 | 14(6): 21327–21330
ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)
https://doi.org/10.11609/jott.7662.14.6.21327-21330
#7662 | Received 16 September 2021 | Final received 19 May 2022 | Finally accepted 01 June 2022
OPEN ACCESS
NOTE

Report of *Euphaea pseudodispar* Sadasivan & Bhakare, 2021 (Insecta: Odonata) from Kerala, India

P.K. Muneer [1], M. Madhavan [2] & A. Vivek Chandran [3]

[1,2] Ferns Nature Conservation Society, PB No. 28, Mananthavady, Wayanad, Kerala 670645, India.
[2] Tholpetty eco-development committee, Wayanad Wildlife Sanctuary, Kerala 670646, India.
[3] Society for Odonate Studies, Velloorparampil, Kuzhimattom PO, Kottayam, Kerala 686533, India.
[3] Department of Geology and Environmental Science, Christ College, Irinjalakuda, Thrissur, Kerala 680125, India.
[1] muneerputhukudy@gmail.com, [2] madhavantholpetty@gmail.com, [3] avivekchandran2@gmail.com

Euphaea pseudodispar Sadasivan & Bhakare, 2021 is a newly described damselfly in the family Euphaeidae. It was described along with *E. thosegharensis* Sadasivan & Bhakare, 2021 based on specimens collected from Thoseghar, Satara district, Maharashtra, northern Western Ghats, India (Bhakare et al. 2021). The genus *Euphaea* Selys, 1840 currently has 35 species distributed in the Indo-Malaya (Paulson et al. 2021). India has seven known species of *Euphaea*, five of them distributed in the Western Ghats and two in the northeastern region. The two newly described species, *E. pseudodispar* and *E. thosegharensis* were considered to be confined to the northern Western Ghats of Maharashtra (Bhakare et al. 2021). We report *E. pseudodispar* from Thirunelly, Wayanad district, Kerala, at a distance of more than 650 km from the type locality (Image 1).

Thirunelly (11.9117°N 75.9933°E, 850 m) is a small temple town adjoining the forests of North Wayanad Forest Division in Kerala, southern India. River Kalindi originates in the Brahmagiri hills, flows through the temple town briefly and re-enters the forest. Odonate species commonly encountered in this stretch of the river include *Neurobasis chinensis* (Linnaeus, 1758), *Vestalis apicalis* Selys, 1873, *Heliocypha bisignata* (Hagen in Selys, 1853), *Euphaea fraseri* (Laidlaw, 1920), *Copera vittata* (Selys, 1863), *Prodasineura verticalis* (Selys, 1860), *Pseudagrion rubriceps* Selys, 1876, *Anax immaculifrons* Rambur, 1842, *Gomphidia kodaguensis* Fraser, 1923, *Hylaeothemis apicalis* Fraser, 1924, and *Neurothemis fulvia* (Drury, 1773).

On 22 August 2021, during a walk along the river Kalindi, we encountered three species of *Euphaea,* viz., *fraseri*, *dispar*, and *pseudodispar* (Image 2). The river was in full spate and the authors recorded 40 individuals of *E. pseudodispar*, 35 individuals of *E. fraseri*, and four individuals of *E. dispar* in traversing 1 km along its bank (Image 3). Later, one male *E. pseudodispar* was collected for the detailed study of morphology and structure of secondary genitalia. The specimen was deposited at the insect collections of the Department of Geology and Environmental Science, Christ College, Thrissur district, Kerala. Photographs of live specimen were taken with a Nikon D850 camera and Nikkor 105 mm macro lens (Image 3). Secondary genitalia was studied under a Labomed Luxeo 6Z stereomicroscope (Images 5, Figure 1).

Editor: Ashish D. Tiple, Vidyabharati College, Wardha, India. **Date of publication:** 26 June 2022 (online & print)

Citation: Muneer, P.K., M. Madhavan & A.V. Chandran (2022). Report of *Euphaea pseudodispar* Sadasivan & Bhakare, 2021 (Insecta: Odonata) from Kerala, India. *Journal of Threatened Taxa* 14(6): 21327–21330. https://doi.org/10.11609/jott.7662.14.6.21327-21330

Funding: None.

Competing interests: The authors declare no competing interests.

Acknowledgements: The authors thank Society for Odonate Studies (SOS), Kerala for the encouragement to undertake field studies on odonates. The corresponding author would like to thank Suryanarayanan T.B. for his help in the laboratory.

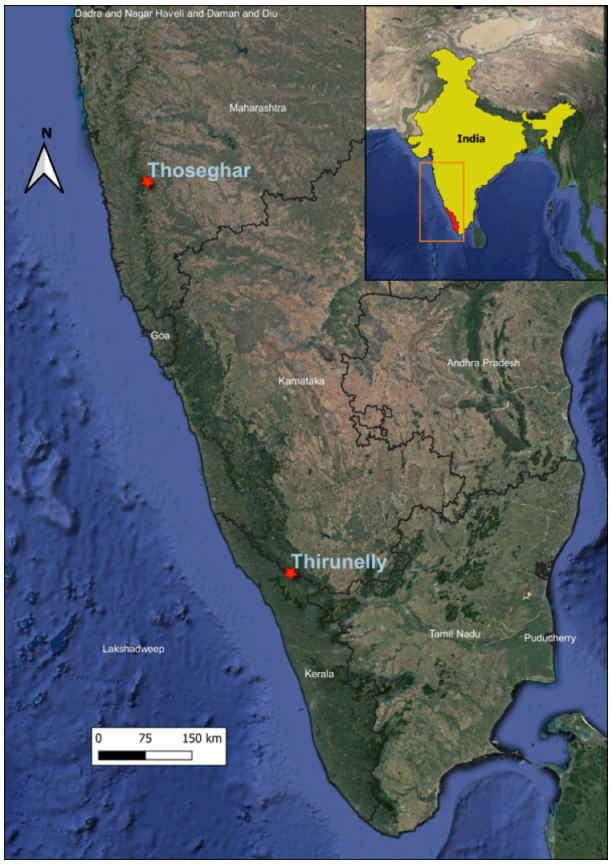

Image 1. Map showing the site of current observation (Thirunelly) and type locality (Thoseghar) of *Euphaea pseudodispar*.

Image 2. The three *Euphaea* species seen in Thirunelly (males): A—*E. fraseri* | B—*E. dispar* | C—*E. pseudodispar*. © Muneer P.K.

Material examined: CC.G & ES.O12, 1 male, Thirunelly (11.911°N 75.993°E, 850 m), 31.x.2021, coll. Muneer P.K.

Description: Total length: 48 mm, abdomen: 38 mm, forewing: 34 mm, hindwing: 33 mm.

Head: Labium black; labrum pale bluish-white with a median black 'tongue' like mark; Mandible pale bluish-white with an upper transverse black streak; anteclypeus, postclypeus, antefrons, & postfrons black and genae pale yellowish-white. Eyes, antennae, and vertex black.

Thorax: Prothorax matte black with two yellowish spots. Ground colour of thorax orange-red; dorsal carina black; mesepisternum matte black; humeral stripe yellowish-orange; antehumeral stripe pale yellow and thin; mesepimeron yellow superiorly and orange inferiorly, and encloses a central broad black band. Legs: extensor surface of foreleg femora smoky black; hind and middle legs red; all joints black. Wings: hyaline, veins black; cubital space with three cross veins in all wings; distal fourth of hindwings coloured black.

Abdomen: Proximal segments reddish-orange and distal ones black, the transition happening on S6. S2 with black, rounded genital vesicle; penis with a single seta on each side. Hair tufts present on central part of sternite and lateral aspects of tergite on S8 and lateral tufts on proximal aspect of tergite of S9. On S9, the gonopore margin is oval; gonocoxae with blunt apices, no spine. In lateral view, the sternite of S9 extends mid-ventrally like a beak. Anal appendages: General structure as in the genus; cerci and paraprocts fully black.

The studied male specimen differed from the holotype in the following details: the extensor surface of the foreleg femora had only a smoky black colouration over the basal red and the distal fourth of the hindwings were coloured black instead of the distal fifth.

Three *Euphaea* species were known to occur in Kerala before the current observation. These include *E. cardinalis* (Fraser, 1924) seen in mountain streams south of the Palghat gap in the Anamalai, Palani, and Agasthyamalai hills; *E. dispar* Rambur, 1842 confined to the mountain

Image 3. Observation site: Kalindi River, Thirunelly, Wayanad district, Kerala. © Muneer P.K.

streams north of the Palghat gap from South Kanara and Coorg to the Nilgiris; and *E. fraseri* (Laidlaw, 1920) distributed throughout the foothills of the Western Ghats (Fraser 1934; Subramanian et al. 2018). This study adds a fourth *Euphaea* species, *E. pseudodispar* to the odonate fauna of Kerala state. In Thirunelly, where it co-occurred with two of its congenerics, *E. pseudodispar* stood out because of its thoracic colouration and intermediate size, *E. fraseri* being considerably smaller, and *E. dispar* slightly larger. This observation accentuates the need for undertaking more rigorous field surveys in the Western Ghats in order to have a better understanding of the distribution of its Odonata.

Image 4. Morphological details of *Euphaea pseudodispar*: A—face showing yellowish-white genae and bluish labrum with black 'tongue' | B—dorsal view of thorax | C—lateral view of thorax | D—ventral view of S9 showing the gonocoxae | E—lateral view of the abdominal tip showing the 'beaking' of S9 | F—abdominal tip showing the hair tufts on S8 & S9. © Muneer P.K.

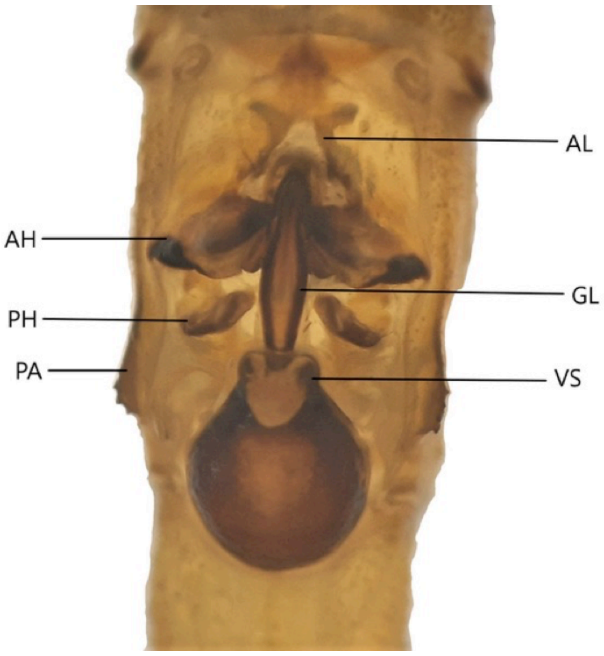

Image 5. Structure of secondary genitalia of *Euphaea pseudodispar* seen under the microscope: AL—anterior lamina | GL—genital ligula | VS—vesicaspermalis | AH—anterior hamule | PH—posterior hamule | PA—pseudoauricle. © A. Vivek Chandran.

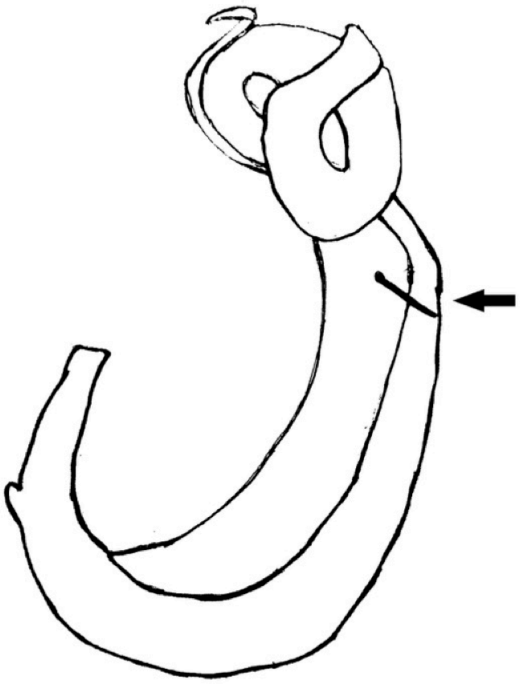

Figure 1. Genital ligula of *Euphaea pseudodispar* illustrated (arrow pointing to the seta on one side).

References

Bhakare, S.D., V.P. Nair, P.A. Pawar, S.H. Bhoite & K. Sadasivan (2021). Two new species of *Euphaea* Selys, 1840 (Odonata: Zygoptera: Euphaeidae) from Northern Western Ghats, India. *Journal of Threatened Taxa* 13(5): 18200–18214. https://doi.org/10.11609/jott.6579.13.5.18200-18214

Fraser, F.C. (1934). *The Fauna of British- India, including Ceylon and Burma, Odonata, Vol. II*. Taylor and Francis Ltd., London, XXIV+398 pp.

Paulson, D., M. Schorr & C. Deliry (2021). World Odonata List, University of Puget Sound. https://www.pugetsound.edu/academics/academic-resources/slater-museum/biodiversity-resources/dragonflies/world-odonata-list2/ Accessed on 14 November 2021.

Subramanian, K.A., K.G. Emiliyamma, R. Babu, C. Radhakrishnan & S.S. Talmale (2018). *Atlas of Odonata (Insecta) of the Western Ghats.* Zoological Survey of India, Kolkata, 417 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,
No. 12, Thiruvannamalai Nagar, Saravanampatti - Kalapatti Road,
Saravanampatti, Coimbatore, Tamil Nadu 641035, India
ravi@threatenedtaxa.org

Journal of Threatened Taxa

www.threatenedtaxa.org

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

June 2022 | Vol. 14 | No. 6 | Pages: 21127–21330
Date of Publication: 26 June 2022 (Online & Print)
DOI: 10.11609/jott.2022.14.6.21127-21330

Article

Identification of confiscated pangolin for conservation purposes through molecular approach
– Wirdateti, R. Taufiq P. Nugraha, Yulianto & Gono Semiadi, Pp. 21127–21139

Communications

The trade of Saiga Antelope horn for traditional medicine in Thailand
– Lalita Gomez, Penthai Siriwat & Chris R. Shepherd, Pp. 21140–21148

The occurrence of Indochinese Serow *Capricornis sumatraensis* in Virachey National Park, northeastern Cambodia
– Gregory McCann, Keith Pawlowski & Thon Soukhon, Pp. 21149–21154

Attitudes and perceptions of people about the Capped Langur *Trachypithecus pileatus* (Mammalia: Primates: Cercopithecidae): a preliminary study in Barail Wildlife Sanctuary, India
– Rofik Ahmed Barbhuiya, Amir Sohail Choudhury, Nazimur Rahman Talukdar & Parthankar Choudhury, Pp. 21155–21160

Feather characteristics of Common Myna *Acridotheres tristis* (Passeriformes: Sturnidae) from India
– Swapna Devi Ray, Goldin Quadros, Prateek Dey, Padmanabhan Pramod & Ram Pratap Singh, Pp. 21161–21169

Population and distribution of Wattled Crane *Bugeranus carunculatus*, Gmelin, 1989 at lake Tana area, Ethiopia
– Shimelis Aynalem Zelelew & George William Archibald, Pp. 21170–21178

Waterbird assemblage along Punatsangchhu River, Punakha and Wangdue Phodrang, Bhutan
– Nima & Ugyen Dorji, Pp. 21179–21189

Freshwater fishes of the Chimmony Wildlife Sanctuary, Western Ghats, India
– P.S. Eldho & M.K. Sajeevan, Pp. 21190–21198

Butterflies of Eravikulam National Park and its environs in the Western Ghats of Kerala, India
– Kalesh Sadasivan, Toms Augustine, Edayillam Kunhikrishnan & Baiju Kochunarayanan, Pp. 21199–21212

The dragonflies and damselflies (Insecta: Odonata) of Shendurney Wildlife Sanctuary, southern Western Ghats, India
– Kalesh Sadasivan, Vinayan P. Nair & K. Abraham Samuel, Pp. 21213–21226

A pioneering study on the spider fauna (Arachnida: Araneae) of Sagar District, Madhya Pradesh, India
– Tanmaya Rani Sethy & Janak Ahi, Pp. 21227–21238

Taxonomy and threat assessment of *Lagotis kunawurensis* Rupr (Plantaginaceae), an endemic medicinal plant species of the Himalaya, India
– Aijaz Hassan Ganie, Tariq Ahmad Butt, Anzar Ahmad Khuroo, Nazima Rasool, Rameez Ahmad, Syed Basharat & Zafar A. Reshi, Pp. 21239–21245

The study of algal diversity from fresh water bodies of Chimmony Wildlife Sanctuary, Kerala, India
– Joel Jose & Jobi Xavier, Pp. 21246–21265

Review

A checklist of herpetofauna of Telangana state, India
– Chelmala Srinivasulu & Gandla Chethan Kumar, Pp. 21266–21281

Viewpoint

Comments on "The Dragonflies and Damselflies (Odonata) of Kerala – Status and Distribution"
– A. Vivek Chandran & K. Muhamed Sherif, Pp. 21282–21284

Short Communications

Landings of IUCN Red Listed finfishes at Chetlat Island of Lakshadweep, southeastern Arabian Sea
– Davood Nihal, N.M. Naseem, N. Abhirami & M.P. Prabhakaran, Pp. 21285–21289

First report of the termite *Glyptotermes ceylonicus* (Blattodea: Isoptera: Kalotermitidae) from India: an example of discontinuous distribution
– Edwin Joseph, Chinnu Ipe, Nisha P. Aravind, Sherin Antony & Jobin Mathew, Pp. 21290–21295

Authentic report of the emesine bug *Gardena melinarthrum* Dohrn, 1860 (Hemiptera: Heteroptera: Reduviidae) from India
– Sangamesh R. Hiremath, Santana Saikia & Hemant V. Ghate, Pp. 21296–21301

Reappearance of stomatopod *Gonodactylus platysoma* (Wood-Mason, 1895) after an era from the intertidal region of Chota Balu, South Andaman, India
– N. Muthu Mohammed Naha, Limaangnen Pongener & G. Padmavati, Pp. 21302–21306

Range extension of earthworm *Drawida impertusa* Stephenson, 1920 (Clitellata: Moniligastridae) in Karnataka, India
– Vivek Hasyagar, S. Prasanth Narayanan & K.S. Sreepada, Pp. 21307–21310

***Pelatantheria insectifera* (Rchb.f.) Ridl. (Orchidaceae): a new generic record for Eastern Ghats of Andhra Pradesh, India**
– V. Ashok Kumar, P. Janaki Rao, J. Prakasa Rao, S.B. Padal & C. Sudhakar Reddy, Pp. 21311–21314

Notes

New breeding site record of Oriental White Ibis *Threskiornis melanocephalus* (Aves: Threskiornithidae) at Thirunavaya wetlands, Kerala, India
– Binu Chullakattil, Pp. 21315–21317

Rediscovery of *Gardena melinarthrum* Dohrn from Sri Lanka
– Tharindu Ranasinghe & Hemant V. Ghate, Pp. 21318–21320

A report on the occurrence of the cicada *Callogaeana festiva* (Fabricius, 1803) (Insecta: Cicadidae) from Mizoram, India
– Khawlhring Marova, Fanai Malsawmdawngliana, Lal Muansanga & Hmar Tlawmte Lalremsanga, Pp. 21321–21323

New distribution records of two species of metallic ground beetles of the genus *Chlaenius* (Coleoptera: Carabidae: Chlaeniini) from the Western Ghats, India
– Duraikannu Vasanthakumar & Erich Kirschenhofer, Pp. 21324–21326

Report of *Euphaea pseudodispar* Sadasivan & Bhakare, 2021 (Insecta: Odonata) from Kerala, India
– P.K. Muneer, M. Madhavan & A. Vivek Chandran, Pp. 21327–21330

Publisher & Host

WILD ZOOREACH
Threatened Taxa