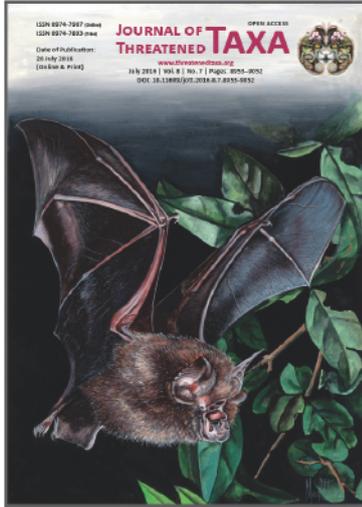


OPEN ACCESS



All articles published in the Journal of Threatened Taxa are registered under Creative Commons Attribution 4.0 International License unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.



Journal of Threatened Taxa

The international journal of conservation and taxonomy

www.threatenedtaxa.org

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

NOTE

NOTES ON THE OCCURRENCE OF *MORTONAGRION ABORENSE* LAIDLAW, 1914 (ODONATA: COENAGRIONIDAE) FROM LOWER WEST BENGAL, INDIA

Arajush Payra & Ashish D. Tiple

26 July 2016 | Vol. 8 | No. 7 | Pp. 9038–9041
10.11609/jott.1992.8.7.9038-9041



For Focus, Scope, Aims, Policies and Guidelines visit http://threatenedtaxa.org/About_JoTT.asp

For Article Submission Guidelines visit http://threatenedtaxa.org/Submission_Guidelines.asp

For Policies against Scientific Misconduct visit http://threatenedtaxa.org/JoTT_Policy_against_Scientific_Misconduct.asp

For reprints contact <info@threatenedtaxa.org>

Partner



Publisher/Host





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

OPEN ACCESS



The order Odonata (dragonflies and damselflies) comprising three suborders Anisoptera, Anisozygoptera and Zygoptera is one of the fascinating groups of insects. These conspicuous and brightly colored insects have a long, slender abdomen and are known as aerial predators, hunting by sight. These prominent freshwater insects (larvae and adults) are predaceous in nature and as well as good indicators of water quality and ecosystem health (Andrew et al. 2008; Tiple et al. 2013).

Globally 5,952 species in 652 genera of odonates have been reported, of which 475 species, 50 subspecies in 142 genera and 18 families are known from India (Subramanian 2014; Nair & Subramanian 2015). The genus *Mortonagrion* Fraser, 1920 consists of 13 species (van Tol 2005), most of which are mainly found in Asia. One species *Mortonagrion stygia* (Fraser, 1954), Belgian Congo) is known from Africa and another from the New Guinea region. Out of 11 Asian species of *Mortonagrion*, Seven are known from Sundaland. However, India harbours two species *Mortonagrion aborense* (Laidlaw, 1914) and *M. varralli* Fraser, 1920. Hämäläinen (1989) transferred *Argiocnemis aborense* to the genus *Mortonagrion*. He also described that *Argiocnemis binocellata* Fraser, 1922, *Indagrion gautama* Fraser, 1922 and *Mortonagrion simile* Ris, 1930, *Argiocnemis aborensis* Fraser, 1933, are all conspecific with *Mortonagrion aborense*, however this publication appears to have been widely overlooked and the name *Mortonagrion aborense* has had priority. The present findings of *Mortonagrion aborense* (Images 1–5) add an additional record for lower West Bengal from Purba Medinipur District with photographic details of male anal

NOTES ON THE OCCURRENCE OF *MORTONAGRION ABORENSE* LAIDLAW, 1914 (ODONATA: COENAGRIONIDAE) FROM LOWER WEST BENGAL, INDIA

Arajush Payra¹ & Ashish D. Tiple²

¹P.G. Dept of Wildlife and Biodiversity Conservation, North Orissa University, Sri Ram Chandra Vihar, Takatpur, Odisha 757003, India

²Department of Zoology, Vidyabharti College, Seloo, Wardha, Maharashtra 442104, India

¹arajushpayra@gmail.com (corresponding author),

²ashishtiple@yahoo.co.in

appendages. Specimens were deposited in Department of Zoology, Vidyabharati College, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

Materials and Methods: Material examined: VBCS,DZ/27, 18.i.2015, 2 males and 1 female specimens of *Mortonagrion aborense* Laidlaw, 1914 were collected from Purba Medinipur District, lower West Bengal, 87°34'33.18"E & 21°40'25.3"N, coll. Arajush Payra.

The surveys were undertaken from December 2013 to February 2015 during the monsoon and post monsoon period. GPS (Garmin) was used for location record. The specimens were identified with the help of identification keys provided by Fraser (1933). The photographs were taken by the Digital camera (Nikon D3200) and Carl Zeiss Stereozoom Microscope (for male anal appendages).

Result and Discussions:

Mortonagrion aborense Laidlaw, 1914

Measurements: Male: Hindwing: 14mm; Abdomen: 23mm.

Description: Male: Head (Image 6): Labium is pale yellow. Greater part of labrum black; anteclypeus, bases of mandibles, genae and postclypeus greenish-yellow,

DOI: <http://dx.doi.org/10.11609/jott.1992.8.7.9038-9041> | ZooBank: urn:lsid:zoobank.org:pub:C4DBA009-9BFF-450D-B7DD-1F715FF011EA

Editor: K.A. Subramanian, Zoological Survey of India, Kolkata, India.

Date of publication: 26 July 2016 (online & print)

Manuscript details: Ms # 1992 | Received 06 May 2015 | Final received 05 July 2016 | Finally accepted 10 July 2016

Citation: Payra, A. & A.D. Tiple (2016). Notes on the occurrence of *Mortonagrion aborense* Laidlaw, 1914 (Odonata: Coenagrionidae) from lower West Bengal, India. *Journal of Threatened Taxa* 8(7): 9038–9041; <http://dx.doi.org/10.11609/jott.1992.8.7.9038-9041>

Copyright: © Payra & Tiple 2016. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use of this article in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.

Funding: None.

Conflict of Interest: The authors declare no competing interests.

forns also greenish-yellow outwardly, vertex and occiput black, the latter with rounded postocular spots; eyes black above and pale green at the sides and below. *Legs*: Legs look like pruinose, extensor surface of femur and flexor of tibiae is blackish, 3–4 black spine on hind tibiae. *Wing* (Images 8 & 9): Wings are hyaline. Pterostigma is dark brown and framed in pale yellow and thick black nervures and covering about one cell. Nine postnodal nervures in fore wing and six postnodal nervures in hind wing. Two antenodal nervures on both wings. *Prothorax and Thorax*: (Image 6) except the anterior lobe, prothorax is black on the dorsum. Thorax black on the dorsum, marked with a narrow pale blue or greenish-yellow antehumeral stripe on each side; laterally azure blue, with black stripe on the postero-lateral structure. *Abdomen* (Images 10 & 11): The dorsum of the S1 is black; S2 with a pair of small oval spots on the dorsum; S3–6 is black; S7 with a pair of basal dorsal spots only; S8 pale bluish ventrolaterally; S9 entirely blue save for an apical row of black spines; S10 is azure blue, with its apical border and the mid-dorsal line narrowly black. *Anal appendages* (Images 10 & 11): Black, superior anal appendages longer than the S10, from the side view appendages look like curved a little downwards, the apex of the superiors hooked inwards as seen from the above view; inferiors are shorter than the superiors and with two pair of spines as seen from above.

Description: Female (Image 5): Morphologically female is also similar to the male, but the markings on the abdomen are slightly different. We also observed that, the antehumeral stripe is light yellow in female while it is pale blue or greenish-yellow in male. Abdomen is greenish-yellow; S1 with a dorsal sub-triangular spot, which is separated from the apical border by a narrow yellowish apical ring; S2 with a broad thistle shaped marking on the dorsum; S3–S7 with broad black mark on dorsum; S8–S10 also black on dorsum and pale blue at the lateral side, a narrow blue apical ring present on the S8. Anal appendages are small, conical and black.

Distribution and habitats: Mortonagrion aborensis occurs from eastern India to Thailand and Lao PDR, and south to Borneo and Sumatra (Subramanian 2010). It may occur in Myanmar, but has not yet been recorded there. In India *M. aborensis* is found in several locations of northeastern India, from Mizoram and western Assam. It is also reported from Intaki National park of Nagaland (Subramanian 2010; Joshi & Kunte 2014).

In West Bengal *M. aborensis* has been previously reported from Hasimara, Duars (89°14'26.61"E & 26°37'50.51"N) and Huldibari Tea Estate (89°1'42.1"E & 28°45'9.65"N), Duars, (Fraser 1933) (Fig. 1). But,



© Arajush Payra



© Arajush Payra

Images 1 & 2. *Mortonagrion aborensis* laidlaw, 1914 - male

© Arajush Payra



© Arajush Payra

Images 3 & 4. *Mortonagrion aborensis* laidlaw, 1914 - in copula

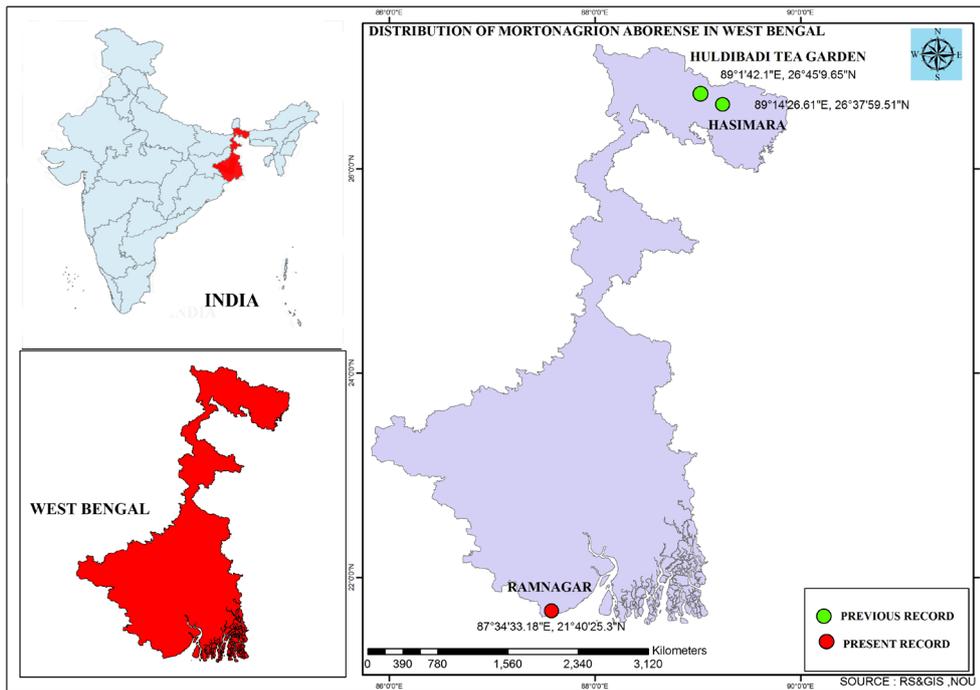


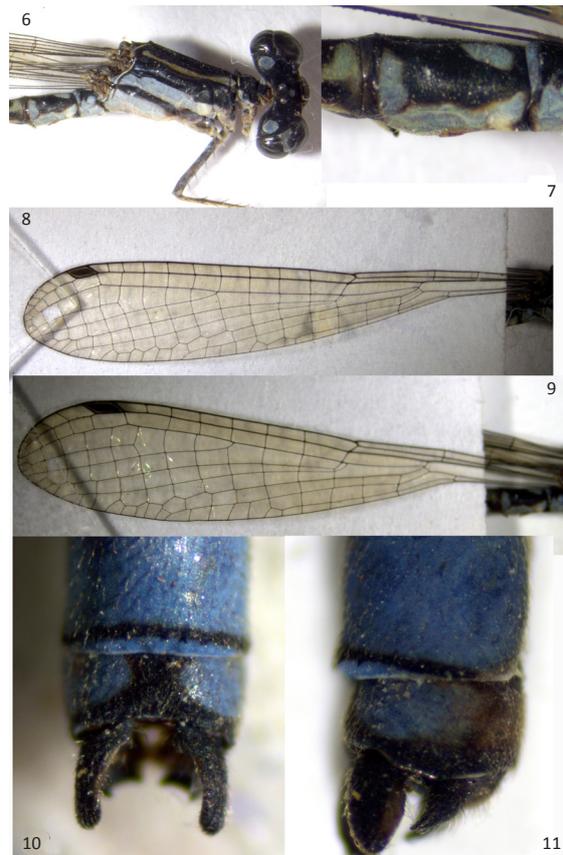
Figure 1. Distribution of *Mortonagrion aborensis* in West Bengal.



Image 5. *Mortonagrion aborensis* laidlaw, 1914 - female

recently it has been recorded from Ramnagar Village (87°34'33.18"E & 21°40'25.3"N) of Purba Medinipur District on 18 January 2014, afterwards continuous sighting occurred from this region. Purba Medinipur is one of the southernmost districts of West Bengal at its north-west border situated at Paschim Medinipur, the Hoogly River and South 24 Parganas to the east and Howrah to the north-east. The state Odisha is at the southwest border whereas the Bay of Bengal lies to the south. It comprises 60km of the coastal tract of Purba Medinipur District, representing 27% coastal environment of West Bengal (87°5'–88°5'E & 21°30'–22°2'N) (Chakraborty 2010).

A small population was observed from a small pond of Ramnagar Village. This pond is mainly situated in a



Images 6–11. *Mortonagrion aborensis* laidlaw, 1914
6 - head and thorax portion; 7 - lateral view of secondary genitalia; 8 - fore wing; 9 - hind wing; 10 - male anal appendages (dorsal view); 11 - male anal appendages (lateral view) (© Ashish D. Tiple)

dark area, shaded by surrounding trees. Adults were found on the edges of pond with aquatic vegetation; and their flying is generally close to the ground. Males are easy to spot due to their bright blue markings, but females are cryptic in colour and difficult to spot. Some of the adults were seen in tandem and mating (Images 3 & 4).

Studies on the odonate fauna of lower West Bengal were mainly carried out by Selys (1891), Laidlaw (1914), Fraser (1933, 1934, 1936), Ram et al. (1982), Srivastava & Das (1987), Mitra (1976, 1983, 2002), Srivastava & Sinha (1993), Gupta et al. (1995), Dawn (2014). The above-mentioned literature shows that *M. aborensis* has not been reported from southern West Bengal. Previous reports of *M. aborensis* in India shows that it is mainly restricted to northeastern India. It also indicates that *M. aborensis* may be found in other eastern Indian regions in the future. Hence detailed field studies are required to document biology, ecology and distribution of this species.

Odonata vary in their sensitivity to environmental change, and while some individual species can indicate change; it is recommended that changes in odonate assemblages as a whole be considered as indicators of environmental disturbance. Hence, surveys of Odonata diversity, particularly within ecologically important areas such as Purba Medinipur is important aesthetically because, its presence makes the urban site beautiful. Therefore, the protective environmental management aspects for the restoration and conservation of lake or pond are important. This species is placed in Least Concern category of the IUCN Red List (Subramanian 2010).

References

- Andrew, R.J., K.A. Subramanian & A.D. Tiple (2009). *A Handbook on Common Odonates of Central India*. South Asian Council of Odonatology, 65pp.
- Chakraborty, S. (2010). Coastal environment of Midnapore, West Bengal: Potential threats and Management. *Journal of Coastal Environment* 1(1): 27–40.
- Dawn, P (2014). Taxonomic study of Odonata [Insecta] in Kolkata and surroundings, West Bengal, India. *Journal of Entomology and Zoology Studies* 2(3): 147–152.
- Fraser, F.C. (1933). *Fauna of British India Odonata* 1. Taylor and Francis Ltd., London, 423pp.
- Fraser, F.C. (1934). *Fauna of British India Odonata* 2. Taylor and Francis Ltd., London, 398pp.
- Fraser, F.C. (1936). *Fauna of British India Odonata* 3. Taylor and Francis Ltd., London, 461pp.
- Gupta, I.J., M.L. De & T.R. Mitra (1995). Conspectus of Odonata fauna of Calcutta, India. *Records of Zoological Survey of India* 95(1–2): 107–121.
- Hamalainen, M. (1989). Synonymic notes on some species of the genus *Mortonagrion* (Zygoptera: Coenagrionidae). *Indian Odonatology* 2: 1–4
- Joshi, S. & K. Kunte (2014). Dragonflies and damselflies (Insecta: Odonata) of Nagaland, with an addition to the Indian odonate fauna. *Journal of Threatened Taxa* 6(11): 6458–6472; <http://dx.doi.org/10.11609/JoTT.o3911.6458-72>
- Mitra, T. R. (1983). A List of the Odonata of Calcutta. *Entomologist's Monthly Magazine* 119: 29–31.
- Mitra, T. R. (2002). Geographical distribution of Odonata (Insecta) of Eastern India. *Memoirs of the Zoological Survey of India* 19(1): 1–208.
- Mitra, T.R., A.R. Lahiri & D.N. Raychaudhury (1976). *Remarks on Dragonflies (Odonata: Anisoptera) of Calcutta*. Third All India Congress of Zoology, 64pp.
- Nair, M.V. & K.A. Subramanian (2014). A new species of *Agriocnemis* selys, 1869 (Zygoptera: Coenagrionidae) from eastern India with redescription of *Agriocnemis keralensis* peter, 1981. *Records of Zoological Survey of India* 114(4): 669–679.
- Ram, R., V.D. Srivastava & M. Prasad (1982). Odonata (Insecta) Fauna of Calcutta and surroundings. *Records of Zoological Survey of India* 80: 169–196.
- Selys, L. (1891). Odonates in 'Viaggio Di Leonardo Fea in Birmania e Regionali Vicine. *Annali del Museo civico di storia naturale Giacomo Doria* 2(10): 433–518.
- Srivastava, V.K. & C. Sinha (1993). Insecta: Odonata fauna of West Bengal, State Fauna Series. *Zoological Survey of India, Kolkata* 4: 51–168.
- Srivastava, V.K. & S. Das (1987). *Insecta: Odonata, fauna of Orissa*. State Fauna Series. Zoological Survey of India, Kolkata 1: 135–159.
- Subramanian, K.A. (2010). *Mortonagrion aborensis*. The IUCN Red List of Threatened Species. Version 2014.3. <www.iucnredlist.org>. Downloaded on 28 March 2015
- Subramanian, K.A. (2014). *A Checklist of Odonata of India*. Zoological Survey of India, Kolkata, 31pp.
- Tiple A.D., R.J. Andrew, K.A. Subramanian & S.S. Talmale (2013). Odonata of Vidarbha region, Maharashtra state, Central India. *Odonatologica* 42(3): 237–245.





OPEN ACCESS



All articles published in the Journal of Threatened Taxa are registered under Creative Commons Attribution 4.0 International License unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.

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

July 2016 | Vol. 8 | No. 7 | Pages: 8953–9052

Date of Publication: 26 July 2016 (Online & Print)

DOI: 10.11609/jott.2016.8.7.8953-9052

www.threatenedtaxa.org

Article

Bats (Mammalia: Chiroptera) of the southeastern Truong Son Mountains, Quang Ngai Province, Vietnam

-- Nguyen Truong Son, Thomas J. O'Shea, Jeffery A. Gore, Csorba Gabor, Vuong Tan Tu, Tatsuo Oshida, Hideki Endo & Masaharu Motokawa, pp. 8953–8969

Communication

An assessment of human-elephant conflict and associated ecological and demographic factors in Nilambur, Western Ghats of Kerala, southern India

-- C.K. Rohini, T. Aravindan, P.A. Vinayan, M. Ashokkumar & K.S. Anoop Das, Pp. 8970–8976

Review

An updated checklist of shrimps on the Indian coast

-- Vijay Kumar Deepak Samuel, Chemmencheri Ramakrishnan Sreeraj, Pandian Krishnan, Chermampandi Parthiban, Veeramuthu Sekar, Kanagaraj Chamundeeswari, Titus Immanuel, Patro Shesdev, Ramachandran Purvaja & Ramachandran Ramesh, Pp. 8977–8988

View Point

Can philately sensitise people to wildlife / conservation? An introduction to thematic philately and a visual treatise concerning the variety of philatelic material available on owls (Aves: Strigiformes)

-- M. Eric Ramanujam, Pp. 8989–9003

Short Communications

Noteworthy additions to the flora of Uttarakhand, western Himalaya, India

-- Ishwari D. Rai, Gajendra Singh & Gopal S. Rawat, Pp. 9004–9008

Seed germination studies on *Gymnacranthera canarica* (King) Warb. - a Vulnerable tree species of a highly threatened *Myristica* swamp ecosystem

-- K. Keshavachandra & G. Krishnakumar, Pp. 9009–9013

A first note on foliicolous lichens of Assam, India

-- Pooja Gupta & G.P. Sinha, Pp. 9014–9023

Notes

A recent record of the Indo-Pacific Humpback Dolphin *Sousa chinensis* (Osbeck, 1765), (Mammalia: Cetartiodactyla: Delphinidae) from the western shores of Kachchh, Gujarat, India

-- Devanshi Kukadia, Mayurdan K. Gadhavi, N. Gokulakannan, G.V. Gopi, Gautam Talukdar & K. Sivakumar, Pp. 9024–9026

A confirmation of the occurrence of *Euploea sylvester hopei* Felder & Felder, 1865 (Double-branded Blue Crow) from Kaptai National Park, Rangamati District, Bangladesh

-- Tahsinur Rahman Shihan, Pp. 9027–9029

A century later: Tricolored Pied Flat *Coladenia indrani uposathra* Fruhstorfer, 1911 (Hesperiidae: Pyrginae) and Crenulate Oakblue *Apporasa atkinsoni* Hewitson, 1869 (Lycaenidae: Theclinae) reported from Manipur, India

-- Baleshwar Singh Soibam, Harmenn Huidrom & Jatishwar Singh Irungbam, Pp. 9030–9033

On the distribution of *Aeshna petalura* Martin, 1908 (Odonata: Anisoptera: Aeshnidae) in the Indian subcontinent

-- R. Babu & G. Srinivasan, Pp. 9034–9037

Notes on the occurrence of *Mortonagrion aborense* Laidlaw, 1914 (Odonata: Coenagrionidae) from lower West Bengal, India

-- Arajush Payra & Ashish D. Tiple, Pp. 9038–9041

First record of *Speculitermes chadaensis* Chatterjee & Thapa, 1964 (Isoptera: Termitidae) from the Western Ghats, India

-- Poovoli Amina, K. Rajmohana & K.V. Bhavana, Pp. 9042–9044

A first report of egg parasitism in the Tropical Tasar Silkworm *Antheraea mylitta* (Drury) occurring on cashew

-- K. Vanitha & S. Santhosh, Pp. 9045–9047

***Gentiana saginoides* Burkill (Magnoliopsida: Gentianales: Gentianaceae) rediscovered from Sunderdhunga Valley in Uttarakhand 155 years after description: notes on its population status**

-- Dharmendra S. Rawat, Charan S. Rana, Harish Singh & Manish Karnatak, Pp. 9048–9052