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SHORT COMMUNICATION

First Record of *Epophthalmia frontalis* from Central India (Insecta: Odonata: Macromiidae)

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Abstract

Epophthalmia frontalis, a new Macromiidae dragonfly for Central India, is recorded from Seoni of Madhya Pradesh based on a collection of a single male. In India, earlier, this species was only known from a few places of Western Ghats and Eastern India. Diagnostic characters with closely resemble species and field photographs are given.

Keywords

New Record, *Epophthalmia*, Madhya Pradesh

In the Indian fauna, family Macromiidae Needham, 1903 has 17 species represented by only two genera i.e. *Epophthalmia* Burmeister, 1839 and *Macromia* Rambur, 1842. Genus *Epophthalmia* was first proposed by Burmeister in his well know volume "Handbuch der Entomologie" in 1839 (Lieftinck 1931), with the type species *Epophthalmia vittata.* At present, genus *Epophthalmia* consists of six described species and confined only in the Asian countries (Schorr and Paulson 2020). In India, genus *Epophthalmia* is represented by three species (Subramanian and Babu 2017). *Epophthalmia vittata* Burmeister, 1839 is a frequently reported species in India and recorded from Andaman and Nicobar Islands, Andhra Pradesh, Goa, Jharkhand, Chhattisgarh, Kerala, Maharashtra, Odisha, Uttarakhand, Tamil Nadu, Tripura,

Uttar Pradesh and West Bengal (Tiple and Koparde 2015; Dawn and Chandra 2016; Subramanian et al. 2018). *E. vittigera* (Rambur, 1842) has only been recorded from Assam and West Bengal (Mitra 2002). In India, *E. frontalis* Selys, 1871 is known to occur in Western Ghats (Maharashtra, Kerala, Tamil Nadu) and Eastern India (Assam, Meghalaya, Odisha) (Lieftinck 1931; Mitra 2002; Subramanian et al. 2018). Outside India, *E. frontalis* is reported from Nepal, Myanmar, Thailand and Lao PDR (Sharma and Dow 2010; Subramanian et al. 2018). Until now, from the central Indian states only *E. vittata* was reported (Tiple et al. 2013; Tiple and Chandra 2013; Tiple and Koparde 2015 Dawn and Chandra 2016). In this present communication we report *Epophthalmia frontalis* for the first time from Madhya Pradesh of Central India, based on a single male collection.

During an entomological survey on 22.IX.2014, a single male was collected using insect collection net and photographed from Seoni city of Madhya Pradesh (22.05724 N, 79.548397 E, 614 m a.s.l) (Fig. 1). The specimen was killed by gently

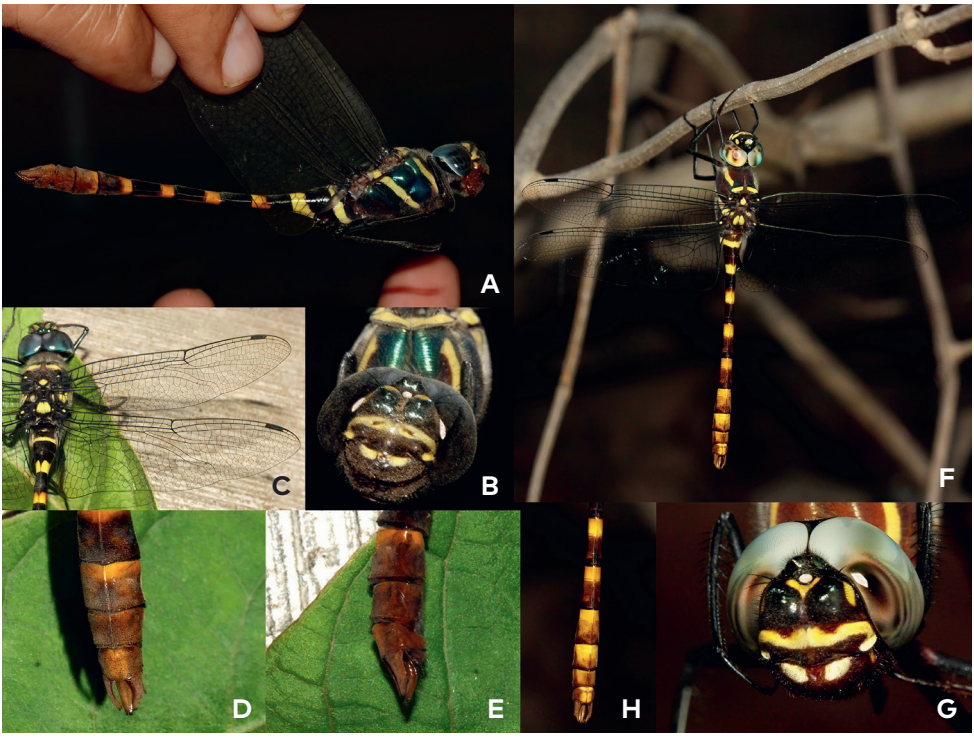

Figure 1. Morphological comparision of male *Epophthalmia frontalis* Selys (A-E) and *Epophthalmia vittata* Burmeister, 1839 (F-G). A - Habitus of *E. frontalis*; B - Face of *E. frontalis* in dorso frontal view); C - Right fore and hind wing of *E. frontalis*; D - Caudal appendages of *E. frontalis* in dorsal view; E - Caudal appendages of *E. frontalis* in lateral view; F - Habitus *E. vittata*; G - Face of *E. vittata* in dorso frontal view; H - S4-S10 and caudal appendages of *E. vittata* (Photos: Ashish D. Tiple).

pressing the thorax and kept in 70 % alcohol for preservation. The individual was perched on a tree branch about 1m above the ground. The habitat was characterized by a large water body amid of surrounding shrub vegetations and secondary forest.

Hitherto *E. frontalis* is only known from some places of Western Ghats and Eastern India (Subramanian et al. 2018). Thus our present report confirms the first occurrence record of this species from Central India. *E. frontalis* can be distinguished from closely allied species *E. vittata* by the presence of two widely separated triangular yellow spots on superior surface of the frons, where in *E. vittata* there is a heart shaped central yellow spot (Figs 1B, C & G). Also, in *E. frontalis,* the length of inferior caudal appendage is greater than the superior one (Lieftinck 1931 Fraser 1936). A few taxonomic ambiguities may arise from the description of Asahina (1987). In the description of *E. frontalis*, from Thailand, Asahina (1987) mentioned that, the yellow spots at the base of the labrum, on the postclypeus and the lateral and top of the antefrons, may vary between individuals and also in the same individual as he matures. In the drawn images mentioned in Asahina (1987), the yellow spots on the top of the frons are not separated, they look like a heart shaped single spot. But according to Lieftinck (1931) and Fraser (1936), the presence of two widely separated yellow spots on superior surface of the frons is one of the key characters to distinguish *E. frontalis* from *E. vittata*. Therefore, to clarify such taxonomic ambiguities, we think that further revision of the South and Southeast Asian *Epophthalmia* species is necessary, particularly in the case of *E. vittata* and *E. frontalis*. Our present report may prove to be a valuable citation record and surely will help to understand the distribution of this less known, large Macromiid dragonfly. The need for further distributional records for this species has already been indicated by Sharma and Dow (2010), in order to implement conservation strategies. Therefore, further sampling is required to discover new localities, to understand population status and distribution patterns of this species in Indian region as well as in other South and Southeast Asian countries.

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