

***EPOPTHALMIA BANNAENSIS* SPEC. NOV.,  
A NEW DRAGONFLY FROM YUNNAN, CHINA  
(ANISOPTERA: CORDULIIDAE)**

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The new sp. is described and illustrated. Holotype ♂: China, Yunnan: Xishuangbanna Tropical Botanical Garden (21.55°N, 101.13°E), 500m, 4-VIII-2004; deposited at the Institute of Zoology, Shaanxi Normal University, Xi'an, China. It is related to *Epophthalmia frontalis* Selys, but is easily separated based on structural differences of the secondary and caudal genitalia and slight differences in colouration.

INTRODUCTION

The genus *Epophthalmia* was erected by Burmeister in 1839 to receive *Epophthalmia vittata*, the type species. To date, the genus includes 11 species and subspecies, which are distributed throughout Asia (VAN TOL, 2009; NEEDHAM, 1930; LIEFTINCK, 1931; FRASER, 1936; ASAHINA, 1987; WILSON, 1995, 2003; JIANG, 1998). *E. elegans* (Brauer, 1865), common in eastern and northern China, and *E. kuani* Jiang, 1998, from Jiangsu, have previously been recorded from China. This paper describes a new species of the genus from Yunnan.

***EPOPTHALMIA BANNAENSIS* SP. NOV.**

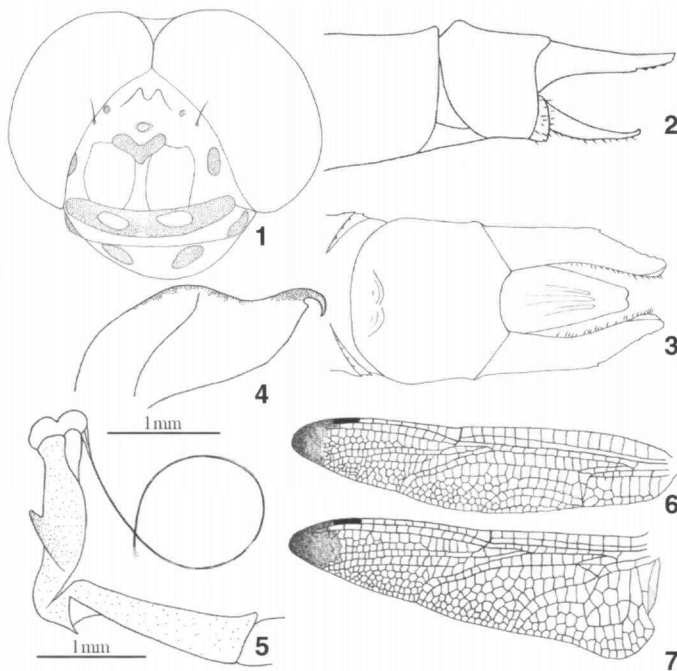
Figures 1-7

**Material.** – **Holotype** ♂: CHINA: Yunnan prov.: Xishuangbanna Tropical Botanical Garden (21.55°N, 101.13°E), 500m, 4-VIII-2004, L.-S. Zha leg., deposited at the Institute of Zoology, Shaanxi Normal University, Xi'an, China. – **Paratype**: 1 ♂, same locality and date, L.-S. Zha leg.

**Etymology.** – The new species is named after Xishuangbanna, Yunnan prov., its type locality.

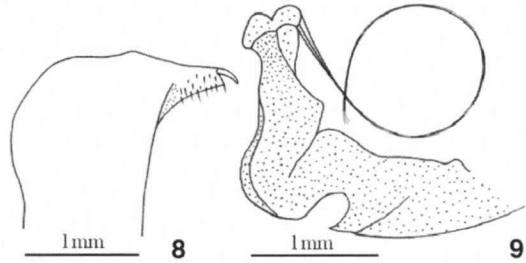
**MALE.** — **H e a d.** — Face with short black hairs. Labium, labrum, and anteclypeus reddish-brown, labrum with two small symmetrical citron-yellow spots which are located close to the anteclypeus. Base of mandible marked with a small yellow spot. Postclypeus citron-yellow, heavily margined below with reddish-brown and enclosing two median symmetrical spots of the same color, and with two small symmetrical quadrate spots of citron-yellow at basal sides. Frons and vesicle dark metallic green, marked on each side in front with a rounded yellow spot and above, on each side of the sulcus, with a rounded yellow spot which are connected together. Between the lateral ocelli there are two small prominences coloured metallic green. Antennae blackish-brown. Eyes reddish-brown. Occiput glossy black, a triangular carina-shaped with brown hairs.

**T h o r a x.** — Prothorax wholly reddish-brown. Synthorax dark reddish-brown, with some yellowish thin coating of hairs, the upper part of dorsum with dark green metallic reflections, sides brown with a reduced metallic blue reflection marked with yellow as follows: narrow antehumeral stripe slightly tapered above and an oblique narrow stripe, at each side at the level of the spiracle, which is slightly broader above than below, and narrowly interrupted by a transverse protuberant line.



Figs 1-7. *Epophthalmia bannaensis* sp. n., holotype male: (1) head, oblique frontal view; — (2, 3) caudal appendages; — (4) posterior hamule, lateral view; — (5) penis, lateral view; — (6, 7) left wings.

Wings hyaline, venation black, with slightly smoky tint; membrane white, brownish at its junction with wing-membrane; nodal index of forewings 7:16 /15:7; hindwings 11:11 / 10:9; five cubital nerves in the forewings, three in the hind; anal loop of 9-10 cells, one of which is central; costal nerve with fine yellow line; pterostigma black, covering nearly two cells (see Figs 6-7). Legs black, except the reddish-brown of coxa and trochanter; membranous keels white.



Figs 8-9. *Epopththalmia elegans*: (8) posterior hamule, lateral view; – (9) penis, lateral view.

**A b d o m e n.** – Black with yellow marks. Segments 1-2 inflated, S1 dark reddish-brown, S2 with a narrow bright yellow ring, not meeting the base at the dorsum but expanding obliquely towards it laterally, upper and lower parts slightly narrower than lateral, completely occupying the auricle; S3-7 with a broad yellow ring, S3-4 at the sub-base, S3 lower part suddenly broader ventrally, S5-7 at the base; S8 with a narrow basal triangle of yellow on the dorsum; S7-9 with ventral dark reddish-brown spots, S10 wholly reddish-brown, with but a basal vestige of degeneration, and two basal tubercles.

Anterior hamule short, obtuse; posterior hamule robust, with a distal hook; tip of penile organ with three long flagella, each flagella with a length of 5 mm and curved apically. Caudal appendages reddish-brown, blackish distally, with short black hairs. Superior appendages slightly longer than segment 10, curved slightly toward inside, contracted at mid-point, outer margin with some black teeth on apical half; inferior appendage with long ventral hairs, decidedly shorter than superior appendages, triangular, compressed, narrow, curved slightly upwards, the apex truncate and finely emarginated.

**M e a s u r e m e n t s** (in mm). – Length of abdomen (including appendages): 55.5; appendage: 3.5; hindwing: 50.5; pterostigma: 3.5.

Table I  
Comparison between *Epopththalmia bannaensis* sp. n. and *E. f. frontalis* males

	<i>E. bannaensis</i> sp. nov.	<i>E. f. frontalis</i>
Segment 1	Dark reddish-brown without ring	Black with a narrow ring
Appendages	Inferior decidedly shorter than superior appendages	Inferior appendage decidedly longer than superior appendages
Pterostigma	Black	Blackish-brown
Legs	Black, except the reddish-brown of coxa and trochanter	Blackish-brown

FEMALE and LARVA. — Unknown.

REMARKS. — The new species is similar to *Epophthalmia f. frontalis* Selys, 1871, known from Assam, western Himalaya and northern Thailand (LIEFTINCK, 1931; FRASER, 1936; ASAHINA, 1987), but can be separated by the characters listed in Table I.

In addition the structure of the penile organ and the shape of posterior hamule (Figs 4, 5) of the new species are markedly different from that of *E. f. frontalis* as figured by ASAHINA (1987), *E. elegans* (see Figs 8-9) and *E. kuani* (Jiang, 1998).

DISCUSSION. — Thirteen specimens of *E. elegans* males from Yunnan, Shanxi, Jiangsu, Anhui and Shandong province, China were studied. All their penile organs possessed three long flagella. So we can surmise the description of two flagella for *E. elegans* in SUI & SUN (1984) is incorrect.

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