

## A new species and new records of the genus *Eubasilissa* from Asia (Trichoptera: Phryganeidae)

Ottó Kiss

**Abstract.** A new species of the *Eubasilissa asiatica* Group (Trichoptera: Phryganeidae), namely *Eubasilissa ayubiaensis* sp. n. from Pakistan is described and illustrated with drawings of the genitalia and a habitus photo. Also, new records of 2 *Eubasilissa* species from Asia: *E. malacblani* White, 1862 and *E. rabtkirani* Schmid, 1965 are reported. These 3 species belong to the Oriental Biogeographic Region.

**Keywords.** Trichoptera, caddisflies, new species, distribution, Pakistan, Nepal, Thailand

**Author's address.** Ottó Kiss | Bajcsy - Zs. u. 4 | 3014 Hort, Hungary |  
E-mail: otto\_kiss@freemail.hu

### Introduction

The genus *Eubasilissa* in the family Phryganeidae was established and described by Martynov (1930) from India, Eastern Himalaya and Assam. Schmid described 5 groups of this genus from India in 1962. The most important monograph on the family Phryganeidae was written by Wiggins (1998). The name *Eubasilissa* is derived from two Greek roots: eu; 'true' and basilissa; 'queen'; presumably this is an allusion to the fact that these are the largest Trichoptera (Wiggins, 1998). The species of this genus occur in habitats ranging from small, cool forest streams to depositional pools and marginal embayments at the higher altitudes of the globe's north temperate zones: in Northern Afghanistan, Northern Pakistan, Chi-na, Tibet, Mongolia, Nepal, Burma, Bhutan, Thailand, Vietnam, Laos, Korea and Japan [Kiss & Malicky (2003), Malicky (2007, 2010), Martynov (1930), Mattern (2015), Nimmo (1996), Nozaki, Tanida & Ito (1999), Oláh (2013), Parey & Saini (2012), Schmid (1962), Wiggins (1998)]. The total number of species of the genus *Eubasilissa* is 20 and an additional 2 subspecies (Morse 2016).

### Material and methods

The specimen in this study was captured with a light trap and is stored in 75% ethanol. The posterior of the abdomen of the holotype male was cleared in 20% lactic acid and the phallic apparatus everted (Blahnik & Holzenthal 2004). Then it was placed in ethanol for examination under a stereomicroscope (Nikon, SMZ-10-2x) and sketched. For the identification of the species the works by Martynov (1930), Schmid (1962), Wiggins (1998), Kiss & Malicky (2003), Malicky (2010) and Parey & Saini (2012) were used.

### Species description

***Eubasilissa ayubiaensis*** new species (Figs 1–6).

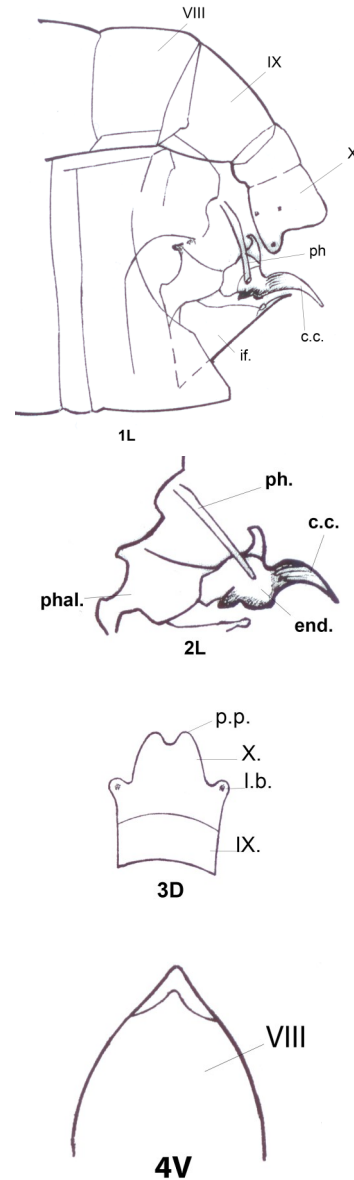
Type material – Holotype: ♂, Pakistan, NW-Frontier, 35 km N of Murre, Ayubia National Park, 2300 m elevation, by light trapping, 14 July 1998, leg. Tibor Csóvári and László Mikus (gen. prep. No. 135, Ottó Kiss, in coll. Mátra Museum, H-Gyöngyös).

**Description** – Male (in ethanol, n = 1).

Body length 20 mm, length of each forewing 28.5–29.0 mm, width of each forewing 11.8–12.1 mm. Hind wings 26.5 mm long and 9.6 mm wide; length of each antenna 16 mm, yellowish brown, setae short and dark brown. Head, thorax, and abdomen brownish; legs yellowish brown. Colour pattern of male wings as in Figs 5, 6. Drawings of genitalia in Figs 1–4. Segment IX (Figs. 1, 3) subrectangular, ventrally shorter than dorsally in lateral view. Segment X (Figs 1, 3) subrectangular with lateral bump on either side, posterior margin extended into paired process in dorsal view. Praeanal appendages are lacking. Inferior appendages (Fig. 1) subtriangular membranes, tapered apically. Phallosome (Fig. 2) polygon, sclerotized; endotheca (Fig. 2) bears a small hook dorsally and terminates in caudal claw in lateral view. Phallicata (Figs. 1, 2) is a long, straight, thin tube.

**Female.** Unknown

**Diagnosis.** This new species is similar to *Eubasilissa asiatica* Betten, 1909 from India (Sibsagar, Assam), but differs from it in that: Segment X subrectangular, with lateral bump on either side, posterior margin extended into paired process (not subtriangular). Praeanal appendages are ab-



**Figures 1–4.** *Eubasilissa ayubiaensis* new species male holotype genitalia 1L, lateral view; 2L, phallic apparatus, lateral view; 3D, segment IX., X, dorsal view; 4V, segment VIII, ventral view; Abbreviations: end. = endotheca; c.c. = caudal claw; i.f. = inferior appendages; l.b. = lateral bump of segment X; ph. = phallicata; phal. = phallosome; p.p. = paired process of segment X; VIII, IX, X = segments VIII, IX, X.



**Figure 5.** *Eubasilissa ayubiaensis* new species male, holotype genitalia, lateral view, Pakistan.

**Figure 6.** *Eubasilissa ayubiaensis* new species male, holotype habitus.

**Figure 7.** *Eubasilissa maclachlani* White, 1862, male and female, habitus, Thailand.

**Figure 8.** *Eubasilissa rabtkirani* Schmid, 1965 male, habitus, Nepal.

sent (not a pair of basolateral protrusions of segment X). Inferior appendages subtriangular, tapered apically (not subrectangular or truncate apically). Endotheca with dorsal hook (hook is absent).

**Etymology.** Named for the place where the new species was collected.

#### **New records of species of the genus *Eubasilissa* from Asia**

##### ***Eubasilissa maclachlani* White, 1862**

**Material examined** (in ethanol, Fig. 7). **Nepal**, Mt. Kalinchok, 8 km NNE of Muldi (Murre), 3100 m elevation, by light trapping, 28 June 1997, 5 males, 1 female, leg. Márton Hreblay & Krisztina Csák. **Nepal**, Mt. Kalinchok, 4 km SW of Kalinchok peak, 3000 m elevation, by light trapping, 29 June 1997, 1 male, leg. Márton Hreblay & Krisztina Csák. **Nepal**, Mt. Kalinchok 5 km W of Bigu, 2300 m elevation, by light trapping, 03 July 1997, 1 male, leg. Márton Hreblay & Krisztina Csák. **Nepal**, Mt. Kalinchok, Tinsang Pass, 3300 m elevation, by light trapping, 04 July 1997, 1 male, 2 females, leg. Márton Hreblay & Krisztina Csák. **Thailand**, Changwat, Chiang Mai, Mt. Doi Phahompok, 16 km NW of Fang, 2000 m elevation, by light trapping, 14 August 1999, 1 male, 1 female, leg. Tibor Csővári & László Mikus. **Thailand**, Changwat, Chiang Mai, Mt. Doi Phahompok, 17 km NW of Fang, 2100 m elevation, by light trapping, 15 August 1999, 1 male, leg. Tibor Csővári & László Mikus (coll. Ottó Kiss).

##### ***Eubasilissa rahtkirani* Schmid, 1965**

**Material examined** (in ethanol, Fig. 8). **Nepal**, Mt. Kalichok, 8 km NNE of Muldi (Murre), 3100 m elevation, by light trapping, 28 June 1997, 2 males, 1 female, leg. Márton Hreblay & Krisztina Csák. **Nepal**, Mt. Kalinchok, Tinsang Pass, 3300 m elevation, by light trapping, 4 July 1997, 1 male, 2 females, leg. Márton Hreblay & Krisztina Csák (coll. Ottó Kiss).

**Acknowledgements.** I am grateful to Tibor Csővári, László Mikus, Márton Hreblay and Krisztina Csák for the light trap material as well as to Imre Fazekas (Editor) for his guidance and publishing this paper.

## References

- Blahnik J., Holzenthal R.W. 2004: Collection and curation of Trichoptera with an emphasis on pinned material. – *Nectopsyche*, Neotropical Trichoptera Newsletter (1): 8–20.
- Kiss O. & Malicky H. 2003: Data to the distribution of Trichoptera in Nepal. – In: Kiss O. (Ed.): *Trichoptera from Nepal*. Published by the author, Eger, Hungary, pp. 44–66.
- Malicky H. 2007: Köcherfliegen aus Bhutan (Insecta, Trichoptera). – *Linzer biologische Beiträge* 39 (1): 475–517.
- Malicky H. 2010: *Atlas of Southeast Asian Trichoptera*. – Biology Department, Faculty of Science, Chiang Mai University, Chiang Mai, 346 p.
- Martynov A.V. 1930: On the trichopterous fauna of China and eastern Tibet. – *Proceedings of the Zoological Society of London*, 5: 65–112.
- Mattern D. 2015: The fauna of caddisflies of Nepal (Insecta: Trichoptera). – In: Hartman, M. & Weipert, J. (Eds.): *Biodiversität und Naturlausstattung im Himalaya V*. Erfurt, Germany, 547 p.
- Morse J.C. 2016: Trichoptera World Checklist. Available from: <http://entweb.clemson.edu/database/trichopt/index.htm> (Accessed 30 January 2016).
- Nimmo A.P. 1996: *Bibliographia Trichopterorum*. A World Bibliography of Trichoptera. Vol. 1, 1961–1970. – Pensoft Publishers, Sofia, Moscow, St. Petersburg, 597 p.
- Nozaki T.T., Tanida K. & Ito T. 1996: Checklists of Trichoptera in Japan 3. Limnocoenopodidae, Phryganopsychidae, Phryganeidae, Brachycentridae and Apantaniidae. – *Japanese Journal of Limnology*, 60: 347–366.
- Oláh J. 2013: On the Trichoptera of Vietnam, with description of 52 new species. – *Annales Historico Naturales Musei Nationalis Hungarici*, Budapest, Vol. 105: 55–134.
- Parey S.H. & Saini M.L. 2012: Two new species of the genus *Eubasilissa* Martynov (Trichoptera: Phryganeidae) from the Indian Himalaya. – *Zootaxa*, 3403: 61–68.
- Schmid F. 1962: Le genre *Eubasilissa* Mart. en Inde (Phry. Trichopt.). – *Bulletin de la Société vaudoise des Sciences naturelles*, 68 (309): 153–168.
- Wiggins G.B. 1998: *The caddisfly family Phryganeidae (Trichoptera)*. – University of Toronto Press, Toronto, 306 p.