

**\*TORRENTICOLE INSECTS OF THE HIMALAYA****III. DESCRIPTIONS OF TWO NEW SPECIES OF EPHEMERIDA  
FROM THE NORTHWEST HIMALAYA****By O. P. Dubey***CSIR Research Fellow, School of Entomology,  
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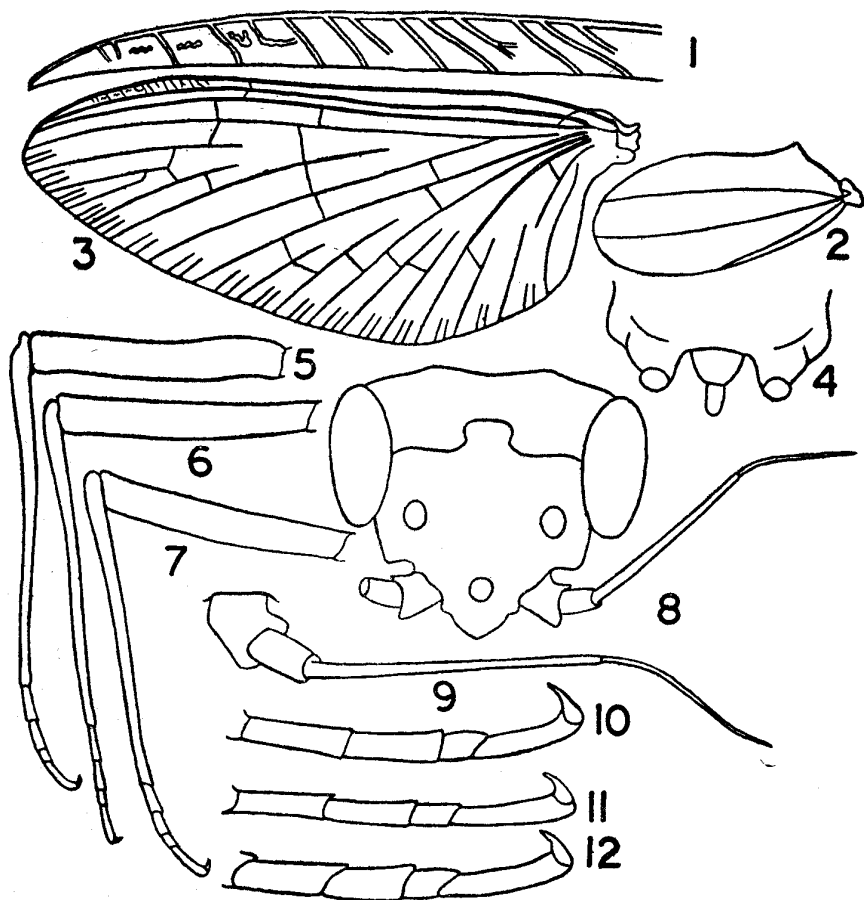
ABSTRACT. *Baetis seragrui* and *Thraulodes marhieu* are described as new from N.W. Himalaya.

**FAMILY BAETIDAE****I. *Baetis seragrui*, sp. nov. (Figs. 1-12)**

*Female imago*: Length excluding terminal filament 12 mm. General colour of the body dark brown. Head and thorax dark brown. Head (Fig. 8) viewed in front broadly oval, height to width 6:7, turban eyes absent. Ocelli white. Antennae (Fig. 9), yellowish-brown, antennae to head length 8:5; four-segmented; first segment stout, as long as thick; second segment stout, as long as thick; second segment cylindrical, subequal to first and about one and half as long as thick; third segment more slender, about 5.7 times the second; terminal segment two-thirds the preceding. Thorax dark brown, without any markings on it. Legs (Figs. 5,6,7) yellow, slender, elongate, all femora subequal; all tibiae one and half times the femur; tarsus one-third the tibia. Claws similar. Ratio of fore (Fig. 10) and mid tarsal (Fig. 11) segments 5:4:2:6. Ratio of hind tarsal (Fig. 12) segments 4:3:2:6; Fore wing  $12 \times 5$  mm, hyaline, veins brown, venation as in (Fig. 3), stigmatic area (Fig. 1) with eight complete and six incomplete cross-veins; intercalary veins paired. Hind wing (Fig. 2)  $3 \times 1$  mm, hyaline, costal process acute, veins brown, three longitudinal veins; first and second parallel, third vein reaching margin nearly in the middle of wing; cross-veins absent. Abdomen yellowish-brown, 6 mm long. Cerci 30 mm, nearly 2.5 times the body and five times the abdomen. Ovipositor (Fig. 4) yellowish-brown, two-segmented, first segment wider basally than apically, width one and half times its length, second oval, nearly equal to first.

*Holotype* ♀, dissected on slide, Coll. No. 953/56, N. W. Himalaya : Seragru Icefall: Kultinal, 3600 m, Great Himalayan Range, Sta. No. 49, Coll.

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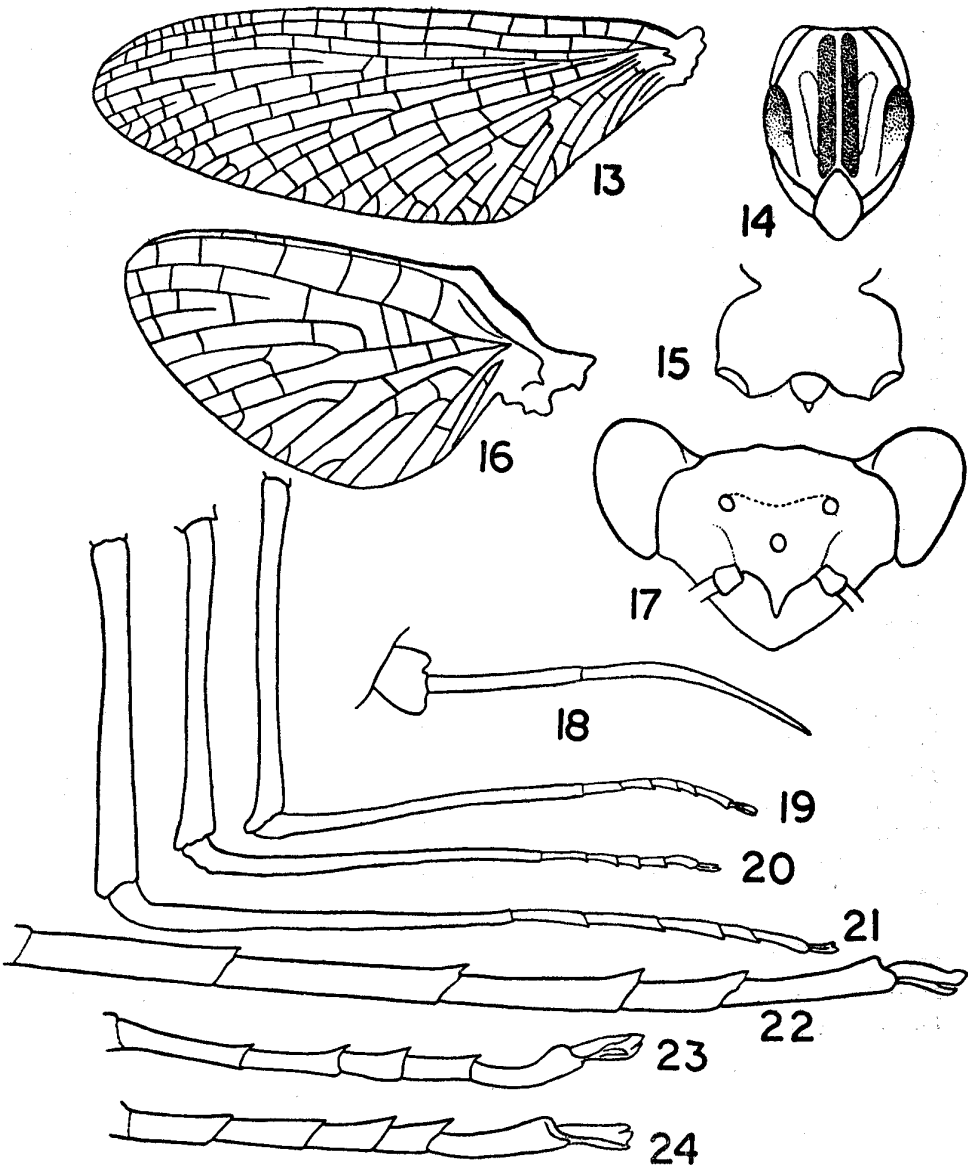


Figs. 1-12. *Baetis seragrui*, sp. nov. ♀ : 1, stigmatic area; 2, hind wing; 3, fore wing; 4, ovipositor; 5, fore leg; 6, middle leg; 7, hind leg; 8, head; 9, antenna; 10, fore tarsus; 11, middle tarsus; 12, hind tarsus.

Santokh Singh, 6.vi.1956.

This new species differs from *Baetis longistylis* Kaul & Dubey<sup>1</sup> in the relatively longer cerci, smaller antenna to head ratio, the first and second antennal segments being subequal, and the terminal being two-thirds the third; and the relatively longer hind wing.

(1) Kaul, B. K. & O. P. Dubey *Oriental Ins.*, 4 (1) : 143



Figs. 13-24. *Thraulodes marhies*, sp. nov. ♀: 13, fore wing; 14, thorax; 15, ovipositor; 16, hind wing; 17, head; 18, antenna; 19, hind leg; 20, middle leg; 21, fore leg; 22, fore tarsus; 23, middle tarsus; 24, hind tarsus.

## FAMILY LEPTOPHLEBIIDAE

2. *Thraulodes marhicus*, sp. nov. (Figs. 13-24)

*Female imago* : Length, excluding cerci and terminal filaments, 9.5 mm; general colour yellowish-brown, head and thorax dark brown. Head (Fig. 17) viewed in front transverse, height to width 1:2, turban eyes absent. Ventral eyes black, oval, separated above by a distance about three times their own diameter. Ocelli brown. Antennae (Fig. 18) yellowish-brown, antennal length to head length 4 : 5; antenna three-segmented; first segment stout, about three-fourths as long as thick; second segment cylindrical, its length thrice the first; third segment one and half times the preceding. Thorax (Fig. 14) dark brown; with a pair of submedian longitudinal black stripes as in figure. Legs yellowish-brown, slender, elongate. Fore leg (Fig. 21) distinctly longer than the rest, with the first tarsal segment immovably articulated to the tibia; claws dissimilar. Fore tibia (Fig. 21) slightly longer than femur, tarsus about three-fourths the tibia, tarsal segments (Fig. 22) in the ratio 20 : 20 : 17 : 10 : 15. Middle tibia (Fig. 20) slightly longer than femur, tarsus about half the tibia, ratio of tarsal segments (Fig. 23) 12 : 9 : 6 : 7 : 9. Hind leg (Fig. 19) femur and tibia subequal, proportions of tarsal segments (Fig. 24) 10 : 10 : 7 : 5 : 11. Fore wing (Fig. 13) 12 × 4.5 mm, hyaline, veins dark brown;  $A_1$  separated from  $A_2$  at base,  $A_2$  close to  $A_3$ ,  $A_2$  is in the middle between  $A_1$  and  $A_3$ ; no free intercalaries between  $Cu_2$  and  $A_1$ , also none between the long intercalary and  $Cu_2$ , stigmatic area with ten complete cross-veins. Hind wing (Fig. 16) 4 × 3 mm, hyaline, costal process obtusely pointed. Veins brown, M forked. Abdomen yellowish-brown, 5 mm long, caudal cerci 16 mm, nearly one and half times the body and three times the abdomen. Ovipositor (Fig. 15) yellowish-brown, two-segmented, first segment wider basally than apically, length one and one-fourth times its width. Second oval, nearly one-third of the first.

*Holotype* ♀, mounted on slide, No. 986/56, N. W. Himalaya : Stream near Marhi, Pir Panjal Range 3880 m, Sta. No. 55, Coll. Santokh Singh, 17.vi.1956.

This is the first record of the genus *Thraulodes* Ulmer from India. The new species differs from the other Palaearctic species in the antenna to head ratio being 4 : 5, hind wing being three-fourths as long as wide, and the fore tarsus being three-fourths the tibia.