

HAPLOHYPHES, A NEW GENUS OF LEPTOHYPHINAE (Ephemeroptera: Tricorythidae)

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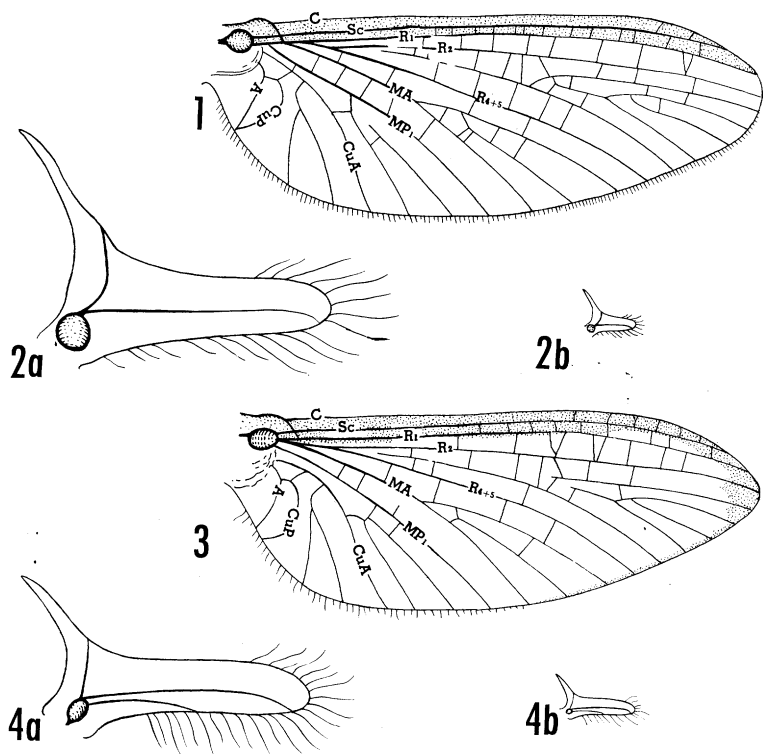
ABSTRACT

A new genus is established for *Haplohyphes huallaga* n. sp. and *Leptohyphes mithras* Traver. The genus is characterized, and the species are keyed and illustrated.

A collection of mayflies made by W. L. Peters during an expedition to Peru² included male and female imagoes of an undescribed species

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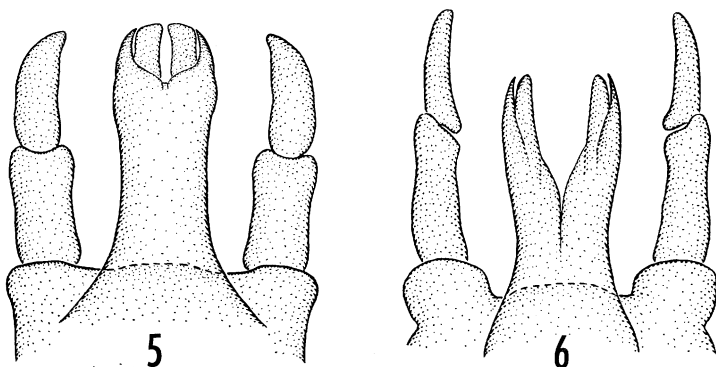


FIGS. 1-4. Genus *Haplohyphes*, wings. FIG. 1, *H. huallaga*, forewing; FIG. 2a-b, *H. huallaga*, hind wings: a, enlarged; b, actual size in relation to forewing; FIG. 3, *H. mithras*, forewing; FIG. 4a-b, *H. mithras*, hind wings; a, enlarged; b, actual size in relation to forewing.

related to *Leptohyphes mithras* Traver. This new species and *L. mithras* are herein considered to constitute a new genus as they possess hind wings in both sexes, and the genital forceps of the male imago are only two-segmented.

Haplohyphes, new genus

Body and forewings small, 4.0-6.5 mm. Eyes of both sexes small. Fore femora 40 per cent as long as fore tibiae; fore tarsi 30 per cent as long as fore tibiae. Thorax without membranous processes on mesonotum. Forewing with 40-55 crossveins behind R₁; veins CuP and 1A converge at wing margin; hind wing present in both sexes; hind wing with a long costal projection. Genital forceps of male two-segmented; forceps segments subequal in length; each penis lobe with an acute lateral lobe and a blunt median lobe.



FIGS. 5-6. Genus *Haplohyphes*, male genitalia, dorsal view. Fig. 5, *H. huallaga*; Fig. 6, *H. mithras*.

Type Species. *Haplohyphes huallaga* Allen, n. sp., described below.

The genus *Haplohyphes* is closely related to *Leptohyphes* Eaton and *Leptohyphodes* Ulmer as the forewings are long and narrow and without a prominent cubito-anal lobe. *Haplohyphes* possesses a hind wing in both sexes, whereas in *Leptohyphes* the hind wings are present in only the males, and in *Leptohyphodes* they are absent in both sexes. *Haplohyphes* is further distinguished from these genera and all other Leptohyphinae in that the male genital forceps are only two-segmented.

Haplohyphes huallaga, new species

MALE IMAGO (in alcohol). Length: body 4.0–5.0 mm.; forewing 4.0–5.0 mm. Head brown; bases of ocelli black; bases of antennae pale. Pronotum light brown with irregular black markings, usually with a median triangle-shaped marking and numerous pale dots; mesonotum pale to light brown with irregular black markings; pre-scutum pale; scutum and scutellum light brown with black markings; pleura yellow with black markings; pterosterna yellow, suffused with black along mesal margin; forewings hyaline, opaque between C and R₁; venation brown; CuP and 1A converge and are usually fused at wing margin (Fig. 1); hind wings hyaline; costal projection long and with a single longitudinal vein (Figs. 2a–b); legs pale to light brown, suffused with black; middle and hind legs pale, suffused with black; tarsal claws similar on fore legs, dissimilar on middle and hind legs. Abdomen pale with brown to black bands and with numerous pale dots; abdominal terga with a pale median longitudinal line; abdominal sterna 1–9 often with paired submedian pale maculae. Penes as long as apex of forceps; median lobes more than twice as broad as lateral lobes; median cleft extends less than one-third the length of penes; genital

forceps broad, less than three times as long as broad (Fig. 5). Caudal filaments pale.

FEMALE IMAGO (in alcohol). Length: body 6.0–6.5 mm.; forewing 6.0 mm. Head black; vertex brown. Prothorax black with pale sublateral oblique markings and pale dots; mesonotum brown with black markings; hind wing present. Abdomen often with pale transverse streaks. Other characters as in male except for usual sexual differences.

Types: Holotype, male imago. Rio Huallaga, Tingo María, Huanuco Province, Peru, 29/30-VII-63, W. L. Peters, in collection of University of Utah, Salt Lake. Allotype, female imago, same data and deposition as holotype. Paratypes, 2 male and 1 female imagoes, same data and deposition as holotype.

Haplohyphes mithras Traver, new combination

Leptohyphes mithras Traver 1958:497.

Traver (1958) described this species from a long series of male and female imagoes collected at Rio Pedrogoso, Costa Rica, and the nymphal stage is still unknown. The author has examined male and female imagoes of this species with the same collection data as the types.

The following key will serve to distinguish the adults of *Haplohyphes huallaga* and *H. mithras*.

1. Forewing veins CuP and 1A fused or nearly fused at wing margin (Fig. 1); penis lobes of male fused more than two-thirds their length, and penes as long as apex of forceps (Fig. 5)
----- *huallaga*
- Forewing veins CuP and 1A widely separated at wing margin (Fig. 3); penis lobes of male fused less than one-half their length, and penes not as long as apex of forceps (Fig. 6)
----- *mithras*

LITERATURE CITED

- Traver, J. R. 1958. The subfamily Leptohyphinae (Ephemeroptera: Tricorythidae). Part 1. Ann. Entomol. Soc. Amer. 51:491–503.
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