TOMINEMOURA, A NEW STONEFLY GENUS FROM SABAH, EAST MALAYSIA
(PLECOPTERA: NEMOURIDAE)

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ABSTRACT
Tominemoura gen. nov., is proposed for a new nemourid species, T. trilari found at high elevations on Mt. Kinabalu, Sabah, Malaysia, and assigned to the subfamily Amphinemurinae. The new genus is readily distinguished from others by a unique gill arrangement and by male epiproct and paraproct structure.

Keywords: Tominemoura, Plecoptera, Nemouridae, New Genus, New Species, East Malaysia, Sabah

INTRODUCTION
Baumann (1975) revised the world Nemouridae and recognized 17 genera placed in two subfamilies, Amphinemurinae and Nemourinae. Recently, Shimizu and Sivec (2001) proposed Sphaeronemoura for a group of Asian nemourids with inflated nympha! cercal segments “...which increase in diameter from the base to the terminal segments”, and Baumann & Fiala (2001) recognized Nanonemoura as a new genus for an unusual micropterous species known from the Columbia River Gorge, Oregon (USA). The addition of Sphaeronemoura brings the number of Asian nemourid genera to seven. In this study we propose a new genus for another unusual nemourid species found in small streams above 3000 meters on Mt. Kinabalu, Sabah, East Malaysia. Specimens are deposited in the Slovenian Museum of Natural History, Ljubljana (PMSL).

RESULTS AND DISCUSSION

Tominemoura, gen. nov.

Type species. Tominemoura trilari, sp. nov., by monotypy.
spines. Hypoproct strongly tapered to a broadly triangular process (Fig. 4) which terminates in a slender upturned filament-like structure not shown in figures; vesicle very long and with parallel margins beyond base (Fig. 4). Cerci a single weakly sclerotized and somewhat barrel-shaped segment (Figs. 2-4).

**Female.** Known from two pharate larvae. Sternum 8 bears a deep mesal notch and sternum 7 has a mesal plate covering at least the base of sternum 8 (Fig. 15).

**Larva.** General color pale brown with irregular brown occipital maculations (Fig. 8); mesonotum and metanotum with pale mesobasal spots. Marginal pronotal bristles long around anterolateral angles, short laterally but with a few longer ones at posterior angles (Fig. 9); bristles becoming obsolete near median suture along both margins. Mouthparts of typical nemourid type but laciniae terminating in a vertical truncate blade like structure armed along ventroapical margin with several rounded teeth, subequal in size (Figs. 13-14). Apical maxillary palpal segment bearing a small nipple. Gills as described above (Fig. 6).

**Diagnosis.** Adults and larvae are distinguished from other Nemouridae by their unique gill structure.

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which is most similar to Nanonemoura among known genera (Baumann & Fiala 2001). However, in Tominemoura the respective inner and outer gill rami arise from a common trunk rather than from an elongate major ramus. The gill structure and the 3-lobed paraprocts of Tominemoura suggest it should be placed in subfamily Amphinemurinae (Baumann 1975) where its nearest relative may be Amphinemura.

**Distribution.** Known from Mt. Kinabalu at sites above 3000 meters.

**Etymology.** The prefix “Tomi” honors our colleague Dr. Tomi Trilar, from the Slovenian Museum of Natural History who provided the first specimens of this interesting stonefly.


*Tominemoura trilari*, sp. n.

(Figs. 1-15)


Other material: Malaysia, Sabah, Kinabalu National Park, Laban Rata, 3280 m, 15-16 April 1999, I. Sivec, 59 larvae including 2 pharate females and 1 pharate male.

**Adult habitus.** See generic description above.

**Male.** Forewing length 7-8 mm. Epiproct largely membranous dorsolaterally but with minute scale-like spines imbedded in membrane (Figs. 2-3); sclerites well developed around base and as a narrow pair of straps between bulbous epiproct dorsal sclerites, extending from midlength, and downturned around epiproct apex. Venter of epiproct armed with a patch of stout backward directed spines, visible in lateral aspect (Fig. 3). Paraprocts relatively bare but outer paraproct lobe appearing stout, curved forward and armed with a patch of short, stout spines on outer surface near apex (Figs. 2-4, 7).

**Female.** Known from pharate larvae. See generic description above.

**Larva.** Preemergent body length 7-10 mm. General color pale brown. Gills (Fig. 6) bracket cervical sclerite, three outer rami arising from a common short trunk, inner gill furcation near base of trunk; lacinial structures as described above (Figs. 13-14). Pronotal setal fringe as shown in Fig. 9; antennal setal pattern as shown in Fig. 10. Abdominal terga with sparse posterior marginal bristle row; intercalary surface with sparse patches of short bristles (Fig. 11). Cercal segments armed with apical whorls of bristles (Fig. 12); longest bristles in whorls generally one third to half as long as next segment;

![Fig. 15. *Tominemoura trilari* female terminalia prepared from pharate larval specimen.](image-url)
long apical segments with additional short fine bristles near midlength of segments. Fine fringe setae absent from legs and cerci.

**Etymology.** The patronym honors our colleague Dr. Tomi Trilar, collector of the type series.

**Diagnosis.** See generic diagnosis above.

**Comments.** The larval specimens, collected from the same stream and general elevation and only a short distance from the two sites where adult males were collected on Mt. Kinabalu, share the same unusual gill structure and very likely represent the same species as the male specimens. Fig. 15 shows the female terminalia prepared from pharate larval specimens which are not fully expanded.

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**REFERENCES**

