Hyrtanella: A New Genus of Ephemerellidae from Malaysia
(Ephemeroptera)


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Hyrtanella: A New Genus of Ephemerellidae from Malaysia
(Ephemeroptera)¹

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Collections of mayflies from Malaysia by a party composed of G. F. and C. H. Edmunds (University of Utah), and W. L. and J. G. Peters, and W. M. Beck, Jr. (Florida A. & M. University) included nymphs and female imagoes of an undescribed genus and species.

Hyrtanella, new genus

Female Imago. General color brown. Body small to moderate in size. Eyes small, not divided. Claws dissimilar. Fore wings with short marginal intercalaries, crossveins moderate in number; one intercallary between IMP and MP, none between MP; and CuA, and only three between CuA and CuP (Fig. 2a). Hind wings proportionately small with small, sharp costal projection at wing mid-length; hind wings with few crossveins (Figs. 2b–3). Abdominal segments with irregular lateral margins; segments 1–5 broadly expanded laterally, segments 6–7 narrow, segment 8 broad, expanded posteriorly, and segment 9 conceave and narrow posteriorly; abdominal tergum 8 with sharp median posterior tubercle (Fig. 4). Caudal filaments pale, lateral cerci and median terminal filament subequal.

Nymph. Head with frontal and occipital tubercles (Fig. 1); labrum entire, with shallow median emargination and anterior surface with setae; mandibles with well developed incisors and molar surface, base produced into lateral tooth-like protuberance; maxillae with well developed apical incisors; maxillary palpi 1-segmented, with apical spine. Thoracic segments with dorsal and ventral tubercles (Figs. 5–6). Fore femora with tubercles on anterior surface; tarsal claws with palisade of subapical denticles. Abdominal segments with dorsal (Fig. 1) and ventral (Fig. 5) tubercles; lamellate tracheal gills on segments 3–6; gills operculate on segment 3, imbricated on segments 4–6; abdominal terga 4–8 depressed sublaterally with lateral margins forming distinct excavation (Fig. 6). Caudal filaments with setae, shorter than body.

Male Imago. Unknown. Eyes divided, as seen in nymph.

Type Species. Hyrtanella christineae Allen and Edmunds, new species.

The genus belongs in the subfamily Ephemerellinae and is closely related to Ephemerella Walsh, 1862. The taxon is distinguished from Ephemerella, and all other Ephemerellidae, in the adult stage by the reduced number of marginal intercalaries between CuA and IMP

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in the fore wings, the number of crossveins and the sharp, mid-length, costal projection in the hind wings, and the shape of the abdomen with enlarged 8th and 9th segments preceded by narrowed and shortened segments. Nymphs are distinguished by possessing operculate gills on segment 3, by the shape of the abdominal segments and the posses-
sion of a dorsal sublateral depression on segments 4–8, and by the mandibles bearing a lateral toothlike protuberance. 

_Hyrtanella_ is the sixth genus of Ephemerellidae to be reported from Asia. _Ephemerella_ is widely distributed from Russia to Southeast Asia and eight of the thirteen subgenera have been reported from this part of the world. The subgenera _Cincticostella_ Allen, 1971, _Drunella_ Needham, 1905, _Ephemerella s.s._, _Serratella_ Edmunds, 1959, _Teloganopsis_ Ulmer, 1939, and _Torleya_ Lestage, 1917, are known from the nymphal and adult stages, and _Acerella_ Allen, 1971, and _Crinitella_ Allen and Edmunds, 1963, are known only from nymphs. The genus _Ephemerellina_ Lestage, 1924, known from nymphs and adults, is reported from eastern China, and _Vietnamella_ Tshernova, 1972, was described from nymphs collected in Vietnam and is tentatively placed in the subfamily Teloganodinae. _Hyrtanella_ is known from female imagoes and male and female nymphs from Malaysia. _Hyrtanella christineae_ is described from Sabah, East Malaysia (6°03' N. and 116°32' E.), and an undescribed species was recently discovered in the John E. Bishop collection from Kuala Lumpur, Malaysia (3°08' N. and 101°42' E.). _Teloganodes_ Eaton, 1882, known from all developmental stages, has been reported from Ceylon, Java, the Philippines, and Sumatra, and specimens of an undescribed species were collected from the same stream as _Hyrtanella_ near Kuala Lumpur, Malaysia. The genus _Teloganella_ Ulmer, 1939, is known from a single female imago collected in Sumatra, and the placement of this taxon to family is provisional until the male imago and nymph are discovered.

_Etymology._ _Hyrtanella_ is from the Greek work _hyrtane_ meaning potlid, and the Latin diminutive _ella_ which conforms to generic names common in the family.

**Hyrtanella christineae,** new species

_Female Imago._ Length: body 3.5–4.5 mm; fore wing 6.0–7.0 mm; caudal filaments 3.0–4.0 mm. General color brown. Head brown. Pronotum brown; mesonotum brown with dark linear markings along sutures; fore wings hyaline, basal 40% brown, apical portion hyaline (Fig. 2a); longitudinal veins brown; hind wings hyaline, marked with brown except at apex (Fig. 3); longitudinal veins brown; legs light brown. Abdomen brown, without markings. Caudal filaments dark brown.

_Mature Nymph._ Length: body 6.5–7.5 mm; caudal filaments 2.5–3.5 mm. General color brown to dark brown. Head brown; head with paired occipital tubercles; genae produced anteriorly; clypeus with paired submedian projections (Fig. 6). Thorax brown; nota brown with irregular brown markings; prothoracic nota with paired anterior and posterior submedian tubercles; mesothoracic nota with median and paired submedian posterior protuberances, thoracic sternum brown;
prothoracic sterna with double sublateral sharp protuberances; meso- and meta-
thoracic sterna with single sublateral blunt protuberances; legs light brown, 
margined with setae; fore femora with median and basal anterior tubercle 
(Fig. 1); tarsal claws with palisade of 6–8 submarginal denticles. Abdominal
terga brown; terga 4–7 with paired submedian tubercles; terga 8–9 with median tubercle; abdominal segments 8–9 with posteralateral projections (Fig 1); abdominal sterna 2–7 with paired sublateral protuberances (Fig. 5). Caudal filaments brown with fine setae.