

A new species of *Ameletus* (Ephemeroptera, Siphonuridae) from Southern Ontario

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Ameletus walleyi n. sp. is described and illustrated. It is akin to the western *A. oregonensis* McDunnough from which it can be distinguished by details of the male genitalia.

Ameletus walleyi n. sp., dont on donne ici la description, s'apparente à l'espèce *A. oregonensis* McDunnough de l'Ouest nord-américain; elle s'en distingue surtout par la configuration des pièces génitales du mâle.

Ameletus walleyi new species

Male imago (in alcohol)—Length of body 11–12 mm, of fore wing 10 mm. Head brownish, pale in some specimens; brown band around ocelli; opaque yellow blotches on face. Thorax generally deep brown; chalky white markings present on median area and posterolateral margins of prothoracic tergum, on premesoscutum, near base of fore wing and on posterior area of mesoscutum; mesoscutellum black; metatergum entirely brown without white markings; thoracic pleuron pale brown with extensive chalky white markings around bases of legs and wings; thoracic sterna brown, darker in posterior part of mesosternum; some white markings on anterior parts of meso- and meta-sterna; fore legs dark reddish brown; middle and hind legs yellow with reddish tinges on femora, medially; wing venation as in *A. inopinatus* Eaton (Schoenemund 1930); longitudinal veins of fore wing dark brown, crossveins brown; stigmatic crossveins of fore wing numerous, largely anastomosed; amber brown shading in stigmatic area and at base of fore wing, especially in anal area; hind wing shaded with amber at base, costal angulation very acute, posterolateral area largely hyaline. Abdominal tergites 1 evenly brown, 7–10 largely dark brown, 2–6 hyaline with red-brown shading on posterior margin, extending in triangular patches laterally and somewhat in a dome-shaped manner medially; tracheae very conspicuous; abdominal sternites without ganglionic markings; sternites 1 dark brown, 2–8 largely hyaline (whitish in some specimens) with a pair of submedian oblique dashes on subanterior margin, 7–8 largely covered with chalky white markings, 9 pale with dark lateral margins.

Genitalia (Figs. 1–2); forceps base pale with a pair of sublateral brown lines extending from the anterior to the posterior margin ventrally; tubercles on the apical margin of forceps base, between forceps, very well developed; forceps dark brown, basal and apical segments slightly lighter; each penis with two apical processes, both bearing spinules, and a well-developed lateral spine. Tails uniformly dark reddish brown.

Female imago (in alcohol)—Length of body 12 mm, of fore wing 11 mm. Head yellowish brown largely covered with chalky white; posterior margin of vertex dark brown. Color pattern of thorax similar to that of male but much lighter and with mesoscutellar hump yellowish; chalky markings in same areas as in male; fore legs yellow, middle and hind legs creamy white; pale brown median band on all femora; veins and crossveins pale brown in both wings; stigmatic area of fore wing hyaline; very faint pale amber suffusion at base of both wings. Abdominal tergites 1, 7–10 evenly light brown, 2–6 similar to those of male but semi-hyaline and with dark markings not so well defined; tracheae not as conspicuous as in male; sternites 1–6 semi-hyaline with markings as in male; on sternites 7–8, brown shading more extensive; sternite 9 entirely covered with chalky white. Subgenital plate hyaline.

Nymph unknown.

Holotype ♂ *imago*—Small stony stream, part of the headwaters of the Eramosa River, $\frac{3}{4}$ mi SW of Cedar Valley, Erin Township, Wellington Co., Ontario. Collected by P. P. Harper, May 3/69. Allotype ♀ *imago*, caught in copula, same locality and collector, May 1/69. Paratypes,

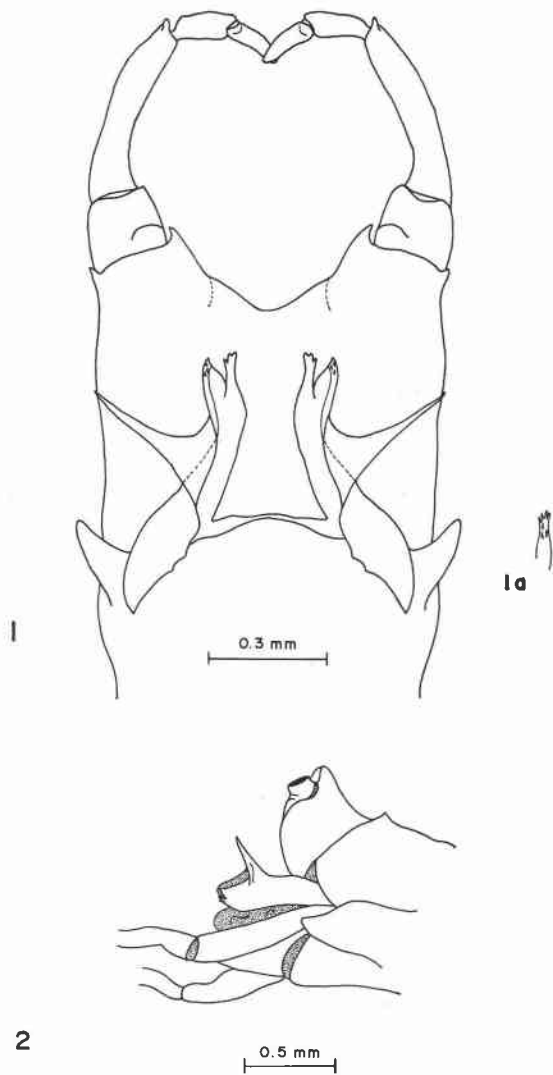


FIG. 1. *Ameletus walleyi* n. sp. Dorsal view of male genitalia. 1a. Ventral view of median process of penis.
 FIG. 2. Male terminal segments from the side; dotted areas represent unsclerotized structures.

1 ♂ imago, May 1/69, 5 ♂ imagos, May 3/69, same locality and collector. The holotype, the allotype, and two paratypes have been deposited in the Canadian National Collection of Insects. Others are in the author's collection. All specimens are in alcohol.

Remarks

In Traver's (1935) key to the North American species, *Ameletus walleyi* will key to *Ameletus oregonensis* McDunnough. Despite similar color patterns, both species can be readily distinguished by the male genitalia; they have genitalia of the same type but in *A. oregonensis* each penis has three apical processes instead of two, the median one not bearing spinules but assuming the shape of a spur; the lateral spine is also shorter (McDunnough 1933). These differences are best observed if the genitalia have been cleared and mounted.

The species is named in honor of Mr. G. S. Walley of the Entomological Research Institute, Canada Department of Agriculture, who by his extensive work as an assistant to Dr. J. McDunnough has contributed considerably to the knowledge of Canadian mayflies.

Acknowledgments

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