

Reprinted from ENTOMOLOGICAL NEWS, Vol. LIX, No. 1, January, 1948  
Printed in U. S. A.

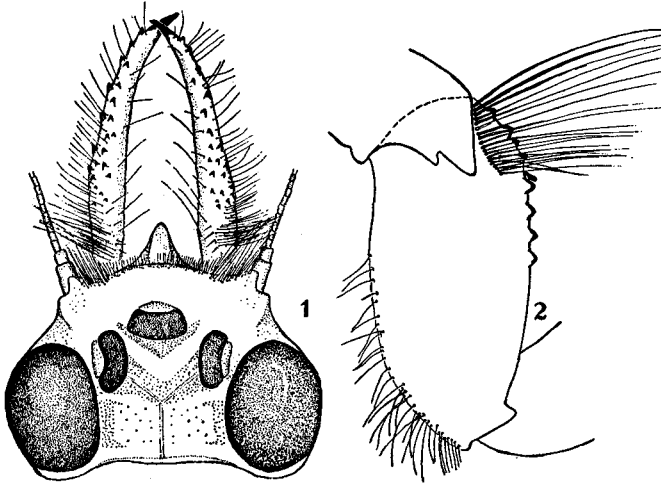
## The Nymph of *Ephoron album* (Ephemeroptera)

By GEORGE F. EDMUNDS, JR., University of Utah

Two species of the mayfly genus *Ephoron* have been reported from North America, *E. leukon* Williamson and *E. album* (Say). Needham and Christenson (1927: 16) briefly described the nymph of *album* but the description is inadequate and will not serve to distinguish *album* from *leukon*, the nymph of which was described in detail by Ide (1935: 114). On August 20, 1947 the author and A. R. Gaufin obtained a series of forty nymphs of *album* from Jordan Canal near Sandy, Utah, many of which were in the last instar. For purposes of comparison the writer has samples of *leukon* from which Ide described the nymphs (Credit River, near Erindale, Ontario) and many specimens from Maryland and Virginia which were borrowed from Cornell University. In view of the inadequacy of the previous

description of the nymph of *album*, a redescription is given below together with a diagnosis of the characters which distinguish nymphs of *album* and *leukon*.

*Nymph.*—Size: male, body 17 mm., lateral tails 11, median tail 6; female, body 17, lateral tails 5, median tail 6. General color dull milky white with light purplish gray markings.



EPHORON ALBUM (Say)

Fig. 1. Dorsal view of head of last instar male nymph.

Fig. 2. Posterior view of front left femur of same.

Frontal process of head conical, hind margin concave or sinuate (fig. 1). Eyes and ocelli black. Mandibular tusks slightly longer than head capsule with about 21–25 golden brown tubercles and numerous long hairs on the dorso-lateral surface. Mesothorax milky white with gray wing pads in the last instar. Forelegs stout with several distinct rows of long hairs. Femur with a row of tubercles along the basal 50 per cent or more of the ventral edge (fig. 2). Middle and hind legs small and weak. Abdomen milky white with a black dot at the base of each gill. First gill small and narrowly triangular. Main tracheal trunk in gills 2–7 purplish gray, all other branches pale and indistinct.

Outer tails purplish gray, median one pale. Other characters as in the genus.

*Diagnosis.*—The following characteristics distinguish the late instar nymphs of *album* from those of *leukon*. About 21–25 tubercles on the mandibular tusks of *album*, about 28–34 in *leukon*. Tubercles on the fore-femur extend along the basal 50 per cent of the ventral edge in *album*, but only along the basal 40 per cent in *leukon*. The gills of *album* have only the main tracheal trunks pigmented while in *leukon* the branches as well as the tracheal trunk are pigmented.

*Habitat.*—Ide (op. cit.: 113) found that nymphs of *leukon* live in burrows of fine silt associated with rocks in the rapids of streams. The nymphs are apparently nocturnal and remain in the burrows during the day and feed at night. Nymphs of *album* were found at a depth of three to four feet in water carrying silt and fine clay. In the center of the stream the current had removed the clay and left a coarse sand bottom but along the edge where there is little current a fine lightly compacted clay-sand mixture had been deposited. The burrows which were one and one-half to two inches deep were abundant in this sediment. No rocks were found associated with the burrows. Collections were made with an Ekman dredge about 5:30 P. M. at which time the nymphs were found in the bottoms of the burrows with their heads toward the opening.

#### LITERATURE CITED

- IDE, F. P. 1935. Life history notes on Ephoron, Potomanthus, Leptophlebia and Blasturus with descriptions (Ephemeroptera). *Canad. Ent.*, 67: 113–124, pls. 4–5.
- NEEDHAM, J. G., and R. O. CHRISTENSON. 1927. Economic insects in some streams of northern Utah. *Utah Agric. Exp. Sta. Bull.*, 201: 1–36, 44 text figs.