ZEALEUCTRA TALLADEGA, A NEW SPECIES OF LEUCTRIDAE (PLECOPTERA) FROM ALABAMA, U.S.A.

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ABSTRACT
A new species of Zealeuctra Ricker is proposed from the southwestern Appalachian Mountain region of east-central Alabama, U.S.A. Zealeuctra talladega, sp. n., is described from the adult male and female and distinguished from closely-related Z. claasseni and Z. hitei by the short, blunt epiproct spine that bears an angular shelf-like anterior projection and a narrow U-shaped cleft along the ninth tergum. The type locality represents a substantial southeastern range extension for the genus.

Keywords: Plecoptera, Leuctridae, Zealeuctra, Alabama

INTRODUCTION
Ricker & Ross (1969) provided the first comprehensive study of the central United States genus Zealeuctra (Ricker 1952), including a redefinition of Z. claasseni (Frison) and descriptions of six new species. Two new species have since been added by Stark & Stewart (1973) and Kondratieff & Zuellig (2004), and Poulton & Stewart (1991) described the adult male of Z. wachita Ricker & Ross. Three species are distributed only in central Texas (Z. arnoldi Ricker & Ross, Z. hitei Ricker & Ross, Z. stewarti Kondratieff & Zuellig), three species are regional endemics within the Interior Plateau region (Z. cherokee Stark & Stewart, Z. wachita, Z. warreni Ricker & Ross), and three species exhibit a broader distribution in the central United States (Z. claasseni, Z. fraxina Ricker & Ross, Z. narfi Ricker & Ross).

A recent collecting trip to the Talladega Mountain and Cheaha Mountain area of east-central Alabama yielded a new species of Zealeuctra. The type material is deposited in the Illinois Natural History Survey (INHS) and the S. A. Grubbs collection at Western Kentucky University (WKU).

Zealeuctra talladega, sp. n. (Figs. 1-4)


Male. Forewing length 8.0 mm; body length 7.5-8.0 mm. General body color brown. Cleft of ninth tergum sclerotized along margin with a tooth-like medial projection in posterior half of narrow U-shaped anterior margin (Fig. 1). Cerci sclerotized mainly along outer margin and bearing both a small dorsomedial hump and a subapical sclerotized tooth (Fig. 1). Epiproct with a single, short, curved spine that terminates in a blunt tip (Fig. 2, 3). Epiproct tip covered in spines noticable only at higher magnification (>200x). Epiproct bears a raised shelf-like projection anterior to the spine whose angle is set at approximately 90°. Length of vesicle 1.1-1.2X width.

Female. Forewing length 9.0-9.5 mm; body length 8.0-9.5 mm. Sternum 7 produced and sclerotized along posterior margin except for middle third which has a broad shallow notch, is lightly pigmented, and bears a rounded lightly-pigmented lobe (Fig. 4).

Larva. Unknown.

Diagnosis. Zealeuctra talladega most closely resembles the two species, Z. claasseni and Z. hitei, that each bear a single epiproct spine and a raised step-like projection anterior to the spine. However, the epiproct tips of Z. claasseni and Z. hitei are more
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The projection of Z. claasseni is faint, crenulate, and slightly raised from the inner, anterior surface of the epiproct, in Z. hitei the projection angle is similarly faint and obtuse, while in Z. talladega the projection angle is approximately 90°. The short robust epiproct spine of Z. talladega is easily distinguished from the long, slender epiproct spine of Z. stewarti. Zealeuctra talladega is distinguished from Z. arnoldi, Z. fraxina and Z. warreni by the presence of a single epiproct spine. Zealeuctra arnoldi and Z. fraxina possess a small cusp-like spine posterior to the main spine and Z. warreni bears two well-defined spines. In addition, the inner, anterior margin of the epiproct spines of Z. cherokee, Z. narfi and Z. wachita each lack projections.

The narrow cleft on the ninth abdominal tergum is similar only to Z. claasseni and Z. hitei. Both Z. claasseni and Z. hitei also have a tooth-like projection in the posterior half yet the anterior portion of the cleft is more V-shaped than in Z. talladega. The 7th sternum of the female of Z. talladega is also similar to Z. claasseni and Z. hitei. The lightly-pigmented posteriomedial region of the 7th sternum
distinguishes Z. talladega from the latter two species.

**Remarks.** Zealeuctra talladega is documented only from the type locality. Similar habitats along Talladega Mountain likely will yield additional populations. This region of east-central Alabama includes the type localities of Beloneuria jamesae (Stark & Szczytko 1976) and Hansonoperla cheaha (Kondratieff & Kirchner, 1996), each with limited geographic distributions.

**Etymology.** The specific name is in reference to Talladega Mountain. The unnamed stream at the type locality drains the eastern flank of this mountain ridge.

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**REFERENCES**


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