

Riffle Beetles in Oklahoma

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The riffle beetles are a fascinating group, but have been widely neglected, as in Oklahoma—probably due to their small size and inconspicuous habits. As I employ the term, "riffle beetles" include several different families (*Psephenidae*, *Dryopidae*, *Limnichidae*, and *Elmidae*) which are closely related and which inhabit riffles. Despite the fact that Oklahoma has many favorable collecting sites (shallow, clear, fast-running streams), there seem to be no published records of these beetles in Oklahoma. This is not due to the absence of riffle beetles, but to our having overlooked them. Actually, I have sought them in only two areas: Pennington Creek, from Devil's Den to Reagan, Johnston County, and Honey Creek, both above and below Turner Falls, Murray County. I have found them in abundance in both areas, from July through September. I have not visited the areas at other seasons. The species collected are as follows:

Limnichidae (considered part of the family Dryopidae by Pennak)

Lutrochus luteus Leconte (Johnston and Murray Counties)

Elmidae

Stenelmis convexula Sanderson (Johnston Co.)

Stenelmis scutellata Sanderson (Johnston Co.)

Microcyllopus pusillus apta Musgrave (Johnston and Murray Counties)

Heterelmis sp. (Johnston Co.)

Hexacyllopus ferrugineus Horn (Johnston Co.)

Dubiraphia (formerly included in *Simsonia*) *quadrinotata* Say (Johnston Co.)

All of the specimens were identified by Dr. Milton W. Sanderson, Associate Taxonomist of the Section of Faunistic Surveys and Insect Identification, of the Illinois State Natural History Survey Division, who will describe the larva of *Hexacyllopus* from the material sent him. Larvae of this genus have never before been described.

Perhaps I should add *Psephenus* (probably *P. herricki* (De Kay) to the list, for I have found water pennies (larval *Psephenus* in the Mountain Fork River and one of its small tributaries in Beavers Bend State Park, McCurtain County, in early May. So far as I know, however, we have no museum specimens, whereas all the species listed above are represented in the collection of the University of Oklahoma Biological Station.

The elmids, of which *Microcyllopus* and *Hexacyllopus* are by far the most numerous in the areas studied, may be found chiefly on the under sides of rocks, in crevices, and beneath loose bark on submerged logs. They creep slowly, clinging tightly with their long claws, commonly spending their entire lives beneath the water without ever reaching the surface. Oxygen is obtained from a thin film of air which covers much of the body of the adult, or through protrusible anal gills in the larva. The limnichids and dryopids are less completely aquatic, the adults frequently taking flight when exposed to air.

LITERATURE CITED

1. Pennak, Robert W. 1963. Fresh-water invertebrates of the United States. Ronald Press Co., New York.