



1-27-2005

A micropterous, crenon-dwelling population of *Megarcys subtruncata* Hanson (Plecoptera: Perlodidae)

Bill P. Stark
Mississippi College, Clinton, Mississippi

Richard W. Baumann
Brigham Young University

Follow this and additional works at: <https://scholarsarchive.byu.edu/wnan>

Recommended Citation

Stark, Bill P. and Baumann, Richard W. (2005) "A micropterous, crenon-dwelling population of *Megarcys subtruncata* Hanson (Plecoptera: Perlodidae)," *Western North American Naturalist*. Vol. 65 : No. 1 , Article 17.

Available at: <https://scholarsarchive.byu.edu/wnan/vol65/iss1/17>

This Note is brought to you for free and open access by the Western North American Naturalist Publications at BYU ScholarsArchive. It has been accepted for inclusion in Western North American Naturalist by an authorized editor of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

A MICROPTEROUS, CRENON-DWELLING POPULATION
OF *MEGARCYS SUBTRUNCATA* HANSON
(PLECOPTERA: PERLODIDAE)

Bill P. Stark¹ and Richard W. Baumann²

Brachyptery and microptery, the condition of having short wings, occur sporadically among perlodine stoneflies and are generally more common among males in high-altitude and high-latitude populations. Indeed, brachyptery is not uncommon in *Megarcys* species such as *M. signata* (Hagen) (e.g., Fig. 6.55 in Stark et al. 1998) and *M. watertoni* (Ricker), but this, to our knowledge, involves only males and the wings usually cover at least through abdominal tergum 7. It was, therefore, surprising to discover micropterous male and female specimens of *M. subtruncata* Hanson during recent fieldwork in the Pacific Northwest.

Adults were collected by beating vegetation around a large spring outflow in Quinn River Campground, Deschutes County, Oregon, and nymphs were clustered on large rocks and woody debris near the spring source. Although numerous specimens were present, our sample

includes 20 males, 13 females, and 23 nymphs.

Forewing lengths for males ranged from 2.5 mm to 3.0 mm and 4.0 mm to 4.5 mm for females. Among male specimens the forewings generally covered the base of the hindwings, and the hindwings extended to the midpoint of abdominal tergum 2. Females have slightly longer hindwings that reach the posterior margin of abdominal tergum 2. Figure 1 shows the modified venation found on the female right forewing.

Nymphs agree in most respects with the generic description in Stewart and Stark (2002), but in this population the “dorsal fringe of silky white hairs” is absent or reduced to a few obscure setae on the basal cercal segments and is absent from the head, thorax, and abdominal terga as shown for *M. signata*. These fringes are present on *M. subtruncata* nymphs in other populations we have examined.

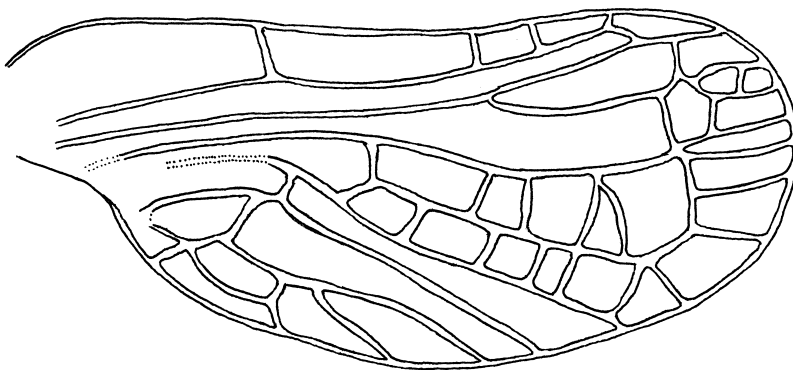


Fig. 1. *Megarcys subtruncata*, female right forewing, Oregon, Deschutes Co., Quinn River spring, Quinn River Campground, 10-VI-2004, B.P. Stark and R.W. Baumann. Actual forewing length = 4.5 mm.

¹Department of Biological Sciences, Mississippi College, Clinton, MS 39058.

²Department of Integrative Biology, M.L. Bean Life Science Museum, Brigham Young University, Provo, UT 84602.

The other oddity associated with this discovery is the habitat. We often find the perlid stonefly *Hesperoperla pacifica* (Banks) in large spring outflows such as the Head of the Metolius River, and we have also found healthy populations of the perlodid *Frisonia picticeps* (Hanson) in the Fall River spring. However, we have not previously found a species of *Megarcys* as the dominant carnivorous stonefly in a large crenon-influenced site. The Quinn River spring site is only a few miles from similar sites on the Fall River and Cultus River in Deschutes County, Oregon, but it may be more isolated by mountainous topography. Lillehammer (1985) suggests “profound shortwingedness” of the type seen in this *M.*

subtruncata population can be expected in such isolated populations.

LITERATURE CITED

- LILLEHAMMER, A. 1985. Studies of shortwingedness in stoneflies (Plecoptera). Fauna Norvegica Series B 32: 58–61.
- STARK, B.P., S.W. SZCZYTKO, AND C.R. NELSON. 1998. American stoneflies: a photographic guide to the Plecoptera. Caddis Press, Columbus, OH.
- STEWART, K.W., AND B.P. STARK. 2002. Nymphs of North American stonefly genera (Plecoptera). 2nd edition. Caddis Press, Columbus, OH.

Received 20 July 2004

Accepted 27 September 2004