

ovipositing females, 2 of *sachalina*, the other of *reticulata*. From then on, we travelled with both a mayfly and a stonefly Kindergarten; the stoneflies survived to Schlitz. There are now data on temperature data of egg development, on increment of larvae at moults, and time spent in particular instars. The largest larvae in my breeding trays are now in instar 9 and well over 20 mm long.

Dr Teslenko and myself will merge our data on the animals and will meet at Schlitz in April/May, to work on Russian *Pteronarcys* life cycles and to produce a joint paper on the subject.

In Search of Rare *Allocapnia*
(Capniidae)

B. C. Kondratieff
Department of Bioagricultural Sciences
and Pest Management
Colorado State University
Fort Collins, CO 80523

R. F. Kirchner
Robert C. Byrd L/D, Resident OFC
U.S. Army Corps of Engineers
P.O. Box 9
Apple Grove, WV 25502-0009

Of the forty-one eastern North American species of the winter stonefly genus *Allocapnia*, numerous species are rather geographically widespread in distribution (Ross and Ricker 1971). Adults of this genus can often be collected abundantly from riparian vegetation by beating or searching trees, and from bridges (Ross and Ricker 1971, Poulton and Stewart 1991). However, there are several non-Ozark species that are considered geographically restricted and rare. Between February 21-26, 1999, we attempted to recollect *A. brooksi* Ross 1964, *A. cunninghami* Ross and Ricker

1971 and *A. perplexa* Ross and Ricker 1971. We visited the type localities in middle and eastern Tennessee. These species were originally collected over 30 years ago. Nonpoint source pollution, primarily from poor agricultural practices has been a historic impact on the watersheds of the lower relief regions of Tennessee. In addition, increased urbanization has also caused further deterioration of these remarkably diverse systems.

After considerable effort, we collected only three males of *A. brooksi* from the type locality, Gists Creek (incorrectly listed by Ross and Ricker 1971 as Guess Creek) just west of Sevierville on US 441. The Gists Creek watershed is currently impacted by heavy siltation and organic enrichment from agricultural activities and the expansion of city of Sevierville. *Allopnia rickeri* Frison and *A. recta* (Claassen) also occurred at this site, but more abundantly. *Allopnia rickeri* seems especially resilient to siltation and organic pollution. We collected three additional males of *A. brooksi* from two small streams of Holston River system in Sullivan County. This species is now recorded from four streams in Hawkins, Sevier, and Sullivan counties, Tennessee.

The rheocrene streams at the type locality of *A. cunninghami*, Turners Station and near Westmoreland have been extremely degraded by poor agricultural practices, especially siltation and organic enrichment. Some of the organic enrichment may be do to septic system leakage. We located one rheocrene, a tributary of Little Trammel Creek, that was still relatively pristine, and a small series of adults of *A. cunninghami* was collected along with *A. rickeri*, *A. recta* and *Zealeuctra fraxina* Ricker and Ross. As Ross and Ricker (1971) mentioned, this "local relict" appears to be restricted to the Karst country of the Tennessee-Kentucky border. This species is known only from three streams in Sumner County, Tennessee and one stream in Cumberland County, Kentucky.

We did not successfully recollect *A. perplexa*. All the streams in the vicinity of the type locality, near Bransford Tennessee are heavily impacted by agriculture and other poor land management practices. *Allopnia perplexa* is known from five specimens. *Allopnia rickeri* did occur at some of the above streams. These streams are also near the vicinity of the type locality of *Hydroperla rickeri* (Stark), another endemic of this area.

During our collecting trip, we also collected a large series of *A. smithi* Ross and Ricker from Edmonson County, Kentucky. This species is another rather geographically restricted species (Ross and Ricker 1971).

We strongly urge whatever agencies and organizations responsible for water quality management, make efforts to try to protect these unique watersheds of middle and eastern Tennessee.

Literature Cited

- Poulton, B. C. and K. W. Stewart. 1991. The stoneflies of the Ozark and Ouachita Mountains (Plecoptera). Memoirs of the American Entomological Society Number 38.
- Ross, H. H. and W. E. Ricker. 1971. The classification, evolution, and dispersal of the winter stonefly genus *Allocapnia*. Illinois Biological Monographs 45, University of Illinois Press, Urbana.

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Autor(en)/Author(s): Kondratieff Boris C., Kirchner Ralph F.

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