

## Current Research on Plecoptera

### Dr. Richard W. Baumann

1. Revision of the genus *Malenka* with Boris Kondratieff
2. Studies on the stoneflies of Ohio with Fred Kirchner, Ed Dewalt and Brian Armitage.
3. Review of the Nearctic species of *Kogotus* with Boris Kondratieff.
4. *Alloperla severa* complex with Boris Kondratieff

### Dr. R. Edward DeWalt

R. E. DeWalt, D. W. Webb, S. A. Grubbs, and R. W. Baumann. Assessing Changes in the Stonefly Fauna of the Till and Drift Plains of the Middle Midwest. The Illinois stonefly assemblage has experienced drastic changes in the 20th Century (DeWalt et al. 2005, *Annals ESA* 98: 941-950, Webb 2002 *Bull INHS* 36: 195-274). Two endemics are feared extinguished and 19 more are likely extirpated from the state. The worst losses occurred in the till and drift plains of the north 1/2 of Illinois. We hypothesize that a similar fate has befallen the stoneflies of adjacent states with similar glacial and cultural histories. We have begun assessing the contemporary fauna of northern Indiana, southern Michigan, southern Wisconsin, northern Ohio, northwestern Pennsylvania and New York, and southern Ontario, Canada. To determine the original fauna, we are re-evaluating historical specimens from the Illinois Natural History Survey, Canadian National Collection, the National Museum of Natural History, and other sources. Ultimately, we hope to determine how the fauna has changed over this large area and provide states with imperilment rankings (using NatureServe.org categories) for all species possible. A subset of the authors submitted an NSF BS&I proposal in January 2006 to help fund this work. Indiana Department of Natural Resources has provided some small funds to help defray travel expenses.

R. E. DeWalt and J. Heilveil. Conservation Genetics of *Acroneuria frisoni*, Establishing Haplotype Variation Prior to Reintroduction to Illinois. Reintroductions of extirpated fauna is fraught with difficulty. Knowing what populations are appropriate to use as colonization sources is often the most difficult to answer. Replacement with a population that is not locally adapted may result in failure. *Acroneuria frisoni* Stark & Brown was widespread in Illinois historically, but its range has been reduced to the uplifted area in the extreme southern tip of Illinois. Recent discovery in the

INHS collection of 11 pinned specimens (1938-1943) from a single, central Illinois location presents the possibility of determining the original genetic variation of the species here. MtDNA has been extracted from these specimens. We are in the process of identifying several extant populations to find a close match in haplotype variation. The species is still common in south central Indiana, central Kentucky, parts of Ohio, and in Missouri. These are likely sources to recolonize Illinois. We hope to identify potential sources of recolonization for this once most common of Illinois *Acroneuria* by fall 2006.

### Dr. Scott A Grubbs

1. In collaboration with Andy Sheldon, we are working on the distribution of stoneflies from the Mount Cheaha/Talladega Mountain region of east-central Alabama. Andy is collecting both nymphs and adults, with particular emphasis on altitudinal zonation patterns.
2. In collaboration with R. Edward DeWalt, we have initiated a region-wide assessment of the biogeography and conservation status of the stoneflies of the central Till Plain region. This area encompasses portions of several states, namely Illinois, Indiana, Michigan, Ohio, and Wisconsin.
3. Description of a new species of *Allocaenia* from Alabama, with several new state records.
4. Review of the North American *Soyedina*, including a new species description from Kentucky.
5. I also have several current research projects that are not limited solely to stonefly research, namely (a) constancy of riverine macroinvertebrate assemblages at Mammoth Cave National Park, (b) influence of watershed- and reach scale parameters on macroinvertebrate assemblages in the Upper Green River Basin, Kentucky, and (c) influence of alternative forestry practices on headwater stream structure and function

### Ian McLellan

I am currently working on a number of projects. I am currently identifying stoneflies for various institutions throughout New

Zealand, and at present I'm dealing with material from Canterbury Museum (Christchurch, New Zealand), Otago Museum (Dunedin, NZ), Department of Conservation (Invercargill, NZ). Projects in preparation involve the descriptions of new species of New Zealand notonemourids, gripopterygids and a single eustheniid. In between I work on South American gripopterygids and at present I am concentrating on *Notoperla*.

**Dr. Ken W. Stewart, University of North Texas.**

1. Just finished, with co-author Bill P. Stark, the Plecoptera chapter for the upcoming 4th edition of the Merritt, Cummins & Berg textbook "An Introduction to the Aquatic Insects of North America".
2. Ken is a Plecoptera consultant for the North American Benthological Societies Taxonomic Certification Program (TCP).
3. The book "Stoneflies of Alaska and Western Canada" with co-author Mark W. Oswood, will be published by Caddis Press by June, 2006. The book includes the history of stonefly studies and records for this northwestern corner of North America, illustrated adult keys to all 153 species, and generic keys to regional nymphs. Ken and Mark have been working on the project since 1980.
4. Ken is working with Eugene Drake for the 3rd year to rear and describe nymphs of rare southern California *Calileuctra*, *Taenionema*, *Haploperla*, *Capnia*, and *Sweltsa*.
5. Bill Stark and Ken are engaged in an ambitious project to attempt rearing of all western *Sweltsa* species, and description of the nymphs. Eugene Drake is helping with California species, and Boris Kondratieff with Colorado species. If any of you have correlated nymphs, please contact Ken or Bill.
6. Kens 15-year project to rear and describe *Taenionema* species nymphs, with collaboration of several colleagues, is nearing completion.

**Bob Zuellig, Barry Poulton**, and Boris Kondratieff are working on the stoneflies of Missouri. If anyone has specimens from Missouri, especially from areas north of the Missouri River, please send them to the address below so they can be included in our manuscript. All specimens will be well cared for and returned.

Bob Zuellig, Dept of Fishery, Wildlife, and Conservation Biology, Colorado State University, Fort Collins, CO 80523, U.S.A.

**Luke Myers**

I am working on a survey of the stoneflies of New York State particularly the Adirondack Park with Boris Kondratieff. If anyone has specimens please send them to Dr. Kondratieff

## Obituaries

### FRANCOISE HARPER

Françoise Harper died June 24, 2005 after a long bout of MSA, a Parkinson-type neurodegenerative disease; she was 63. Françoise was drawn to zoology by a passion for reptiles which she later transferred to mayflies on which she completed her Master's thesis under Abbé Étienne Magnin, a priest-scientist of the old French school. Her initiation to entomology came during summer work as a student on the Montreal Expo Shadfly Project in 1965 under the supervision of Dr. Philip S. Corbet (of dragonfly fame) and Mr. Hartley Fredeen (a black fly man).

She worked part-time all her life mainly as a scientific translator (English to French) for the Canadian National Research Council. She did also free-lance work and, among others, translated into French the Peterson Field Guides to the Insects and the Mammals. She often found time to spend a few days a week in my lab and she authored or co-authored some 15 scientific papers on aquatic insects and described 5 new species of mayflies. Her first species, *Ameletus walleyi*, was dedicated to G. Stuart Walley, an assistant to Dr. James McDunnough, who introduced her to the world of mayflies (incidentally, Mr. Walley is now 101 years old and Canada's oldest living professional entomologist). She had a keen eye for taxonomy and



was quite knowledgeable of the Northeastern fauna of mayflies, stoneflies, and caddisflies. She loved fieldwork and was for a time field and lab assistant for Dr. H.B.N. Hynes. She always remembered with great fondness a summer spent in Oregon in 1980 in the lab of Dr. Norm H. Anderson and the many months at Schlitz (Germany) in 1992-1993 with Dr. Peter Zwick.