

Illiesia

Illiesia, International Journal of Stonefly Research has just completed its 5th year of on-line publications on topics dealing with any area of plecopteran research. During the first five years of existence, 76 articles, submitted by 35 different authors have been published. Articles continue to be subjected to rigorous peer review under direction of the Advisory Board and Editors. The Editors are Ignac Sivec, Slovenian Museum of Natural History and Bill P. Stark, Mississippi College Department of Biology. Boris Kondratieff, Richard Baumann, Kenneth Stewart, Stan Szczytko, C. Riley Nelson, Charles H. Nelson, John Brittain, Takao Shimizu, Claudio Froehlich, Wolfram Graf and Peter Harper serve on the Advisory Board, and journal formatting is under the direction of Mia Sivec and Mojmir Stangelj. Our first issue in 2005 contained nine articles and our latest in 2009 included 21. We are grateful for your support and we invite your submissions for consideration for Volume 6. Questions or submissions can be directed to isivec@mrc.pms-lj.si or stark@mc.edu. Articles may be viewed at the Illiesia website, <http://www2.pms-lj.si/illiesia/>

MEMBER NEWS

Dr. Carlalberto Ravizza has written an attractive popular guide to the “**Plecotteri in Italia**” for the naturalist and general enthusiasts of insects. This 44 page booklet provides an overview of the stoneflies of Italy including comments on nymphal and adult morphology and biological and biogeographical information for this group. Thirty-five wonderful color photographs of selected species are included. The booklet has been made available put on the website of the SEI (Società entomologica italiana) <www.socentomit.it>; click on ITALIANO, then SERVIZI, finally click Articoli in rete “Plecotteri in Italia”. Contact Dr. Ravizza at albertoravizza@libero.it for questions or for a copy.

Drs. Valentina A. Teslenko and **Lidija A. Zhiltzova** have made available a significant contribution to the Plecoptera “Keys to the stoneflies (Insecta, Plecoptera) of Russia and adjacent countries. Imagines and larvae.” as a down loadable pdf: <http://www.biosoil.ru/files/00008625.pdf>

Drs. J. Manuel Tierno de Figueroa and **Manuel J. López-Rodríguez**, University of Granada (Spain) are working on nymphal biology (life cycle, feeding and secondary production) in southern Spain and northern Italy, in collaboration with **Drs. Luzón-Ortega, Fenoglio and Bo**. With these researchers, they are collaborating in a study of leaf packs colonization by stoneflies. Moreover, a physiological study of stoneflies from permanent and temporary streams is being carried out in collaboration with **Dr. Sanz et al.** Both researchers are also studying the only known population of a cavernicolous stonefly species inhabiting at 60 meters deep in a cave, and they are collaborating with **Dr. Luzón-Ortega** in a study of the drumming of several species of stoneflies from southern Iberian Peninsula. They are preparing two chapters for a Spanish Red Book of Invertebrates on two threatened species, *Nemoura rifensis* and *Leuctra bidula*. **J. Manuel Tierno de Figueroa** is also collaborating with **Dr. Fochetti** in genetic approaches for the

resolution of taxonomical problems of stoneflies, and with **Dr. Derka** in some nymphal biology studies of species inhabiting streams with constant temperature in Slovakia. With the latter and with **Dr. Gamboa** also a punctual collaboration on stoneflies from the Tepuis from Venezuela is being made.

R. Edward DeWalt and graduate students Massimo Pessino and Ember Chabot.
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Ember (Master's student) and I are using sequence variation in the mtDNA Cytochrome Oxidase I (COI) gene to study the phylogeography of two stoneflies: *Acroneuria frisoni* (Perlidae) and *Allocapnia granulata* (Capniidae), both of eastern North America. The inspiration for this work is the as yet untested Ross & Ricker (1971) hypotheses of post-glacial dispersion and refugium usage for *Allocapnia*.

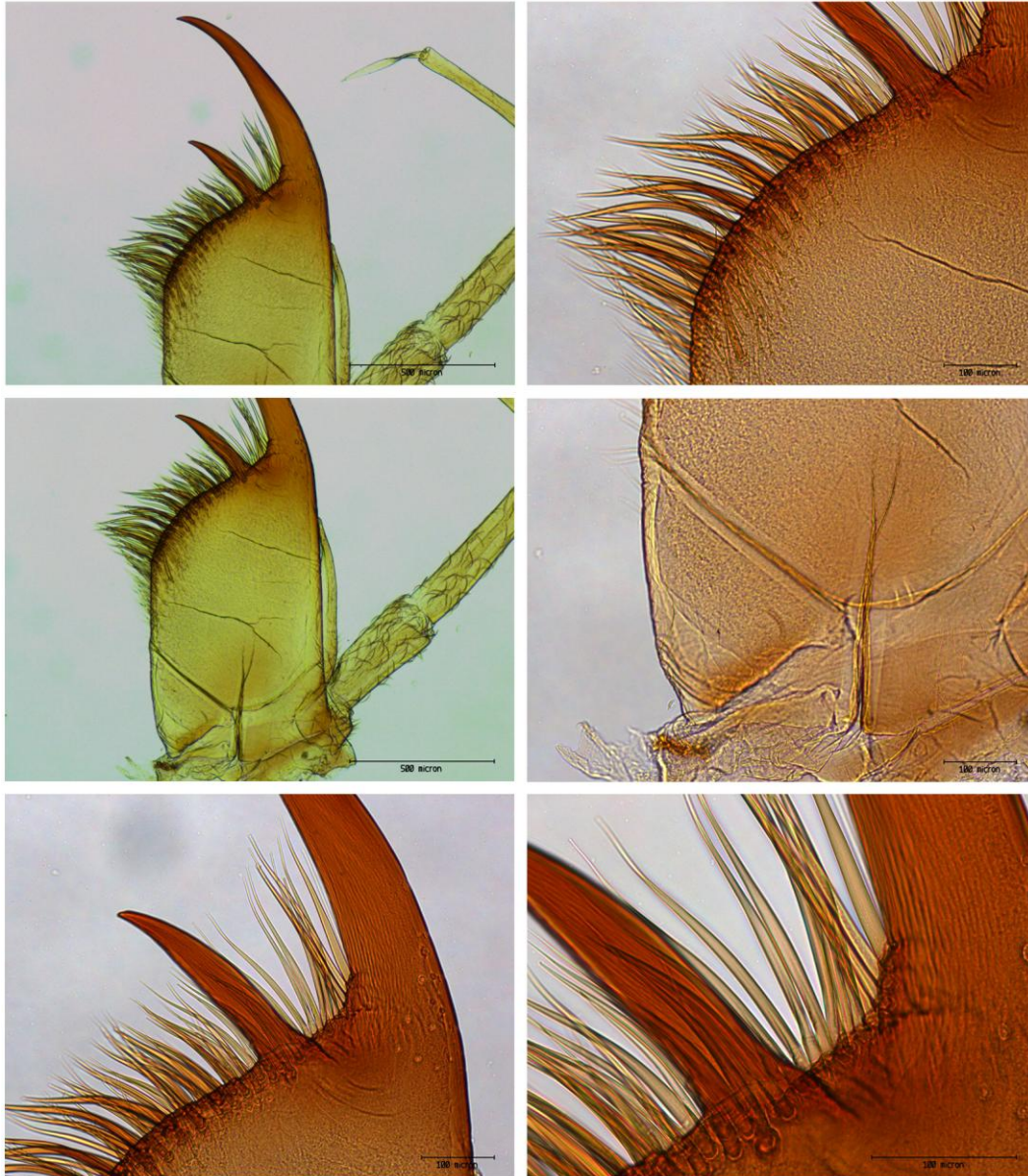
Both species have at least two refugia, including the western flank of the Appalachians through central Tennessee and the Interior Highlands of Missouri and Arkansas. *Allocapnia granulata* demonstrates much greater variation and a more complex glacial history than *A. frisoni*. The former has high nucleotide diversity in the Gulf South and in Pennsylvania and New York, suggesting the possibility of additional refugia. New samples from eastern seaboard drainages, tributaries of the Tennessee and Cumberland Rivers, and for *A. granulata* streams of the Wichita and Ouachita Mts. will help to flesh out the number of refugia and their relative contributions to repopulation of areas north of the Ohio River. To the avid collectors among you, we could use additional specimens of *A. granulata* from these areas. I currently have a proposal into the USA National Science Foundation (NSF) to assess the phylogeography of additional stoneflies (and some mayflies and caddisflies) and could use 10 or more specimens of *Allocapnia recta*, *A. rickeri*, *A. minima*, and *A. pygmaea* from throughout their range.

Massimo, recently translocated from Italy (former Stefano Fenoglio student), has just started his PhD and will be working on a combined molecular and morphological phylogeny of subfamily and tribe relationships within the Perlidae. He will expand on the fine work of Sivec, Stark, & Uchida (1988) (world Perlinae) to include Acroneuriinae. Molecular analysis will utilize the experience of Matthew Terry (2003 dissertation) to include genes that are appropriate for the long evolutionary time frames involved. Massimo will also work on a project to model the distribution of Midwest USA species using museum specimen data. This work, funded by NSF, will predict which moderately sized drainages species should be present in and what factors are important in their distribution. This project is a collaboration with several INHS colleagues (Yong Cao, Leon Hinz, Tari Tweddale) and Scott Grubbs of Western Kentucky University.

John Sandberg, Aquatic Bioassessment Lab (ABL)-CA Dept. Fish & Game, CSU Chico, California.

I continue to study stoneflies of California and Oregon. Two papers are in progress, one that focuses on the drumming of 12 western *Isoperla* species and a second describing the signals from 14 other California species. My work on revising the *Isoperla* nymphs of California and Oregon also continues. After a re-examination of nymphs collected in Oregon during the May 2001 sampling expedition led by K.W.

Stewart and B.P Stark, I believe I have found the elusive *I. gravitans* (Needham & Claassen 1925). The *I. gravitans* location will be visited several times this spring in hopes of rearing and associating the nymph to the adult stage for this exciting species. Additionally, I hope to do the same for *Isoperla rougensis* Szczytko & Stewart 1984. If anyone has any far western *Isoperla* species, especially reared *I. rougensis* adults with intact exuviae, I wish to borrow this material to slide-mount exuviae and larval maxillae. I will return specimens and permanent slide mounts within one month after arrival. Below are light micrographs of the female maxilla for the suspected *I. gravitans* nymph collected at Willis Creek, OR 17-V-2001. It is very unique among western species with a dense brush of setae covering the lacinia distal margin and submargin. All other western *Isoperla* species possess two distinct rows of setae along these margins.



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