CURRENT RESEARCH ON PLECOPTERA

This section is intended to keep society members current on research in progress by other members, workers and students. Please use Editor Stewart's e-mail address (inside front cover) or conventional mail to submit a brief, informative description of your current work, for the next PERLA (19).

~~~~~~~~~~~~~~~~~~~~

Research in Dr. Boris C. Kondratieff's Lab., Colorado State University.

1. With R. F. Kirchner, description of two new species of *Allocapnia* in the *recta* group from Tennessee and Mississippi.
2. With Bill P. Stark and a Colorado State University undergraduate, Brian J. VanWierner, reviewing the North American species of *Megarcys*. The adults and eggs of the five species are redescribed.
3. With Richard Lechleitner, Mount Rainier National Park a survey of the stoneflies of Mount Rainier National Park, Washington. Approximately 70 species have been collected as adults, including several rare taxa and one new species. Any material from the Park would be greatly appreciated.

~~~~~~~~~~~~~~~~~~~~

Ian McLellan of Westport, New Zealand has completed a revision of *Cristaperla* (Plecoptera: Notonemouridae) and handed to the editor of the New Zealand Journal of Zoology late in 1999. Two ongoing projects are work on South American Gripopterygidae with Peter Zwick and distribution maps of various New Zealand notonemourid genera. Recently Bob McDowall (National Institute of Water and Atmosphere, Christchurch, New Zealand) completed a survey of Falkland Islands freshwater fishes and collected aquatic insects. A number of nymphs and the first adults of one species of stonefly (Species A of McLellan, Wais and Cabo, 1990) were collected. Ian is now working on them.

~~~~~~~~~~~~~~~~~~~~

Michelle Dobrin, graduate student of Donna Giberson, University of Prince Edward Island, Charlottetown, PEI, Canada, has been actively collecting stoneflies and other aquatic insects since 1997 when the project started out as a baseline survey of the aquatic insects in streams at Prince Edward Island National Park. In 1998, the study became focused on land use and comparison of stoneflies and other aquatic insects between a stream outside PEI park and Balsam Hollow Brook inside the park. The objective has been to determine if a golf course and tourism have had any effect on the Balsam Hollow Brook aquatic insect diversity, since the number of tourists has dramatically increased to up to 5000 a day.
~~~~~~~~~~~~~~~~~~~~

~~~~~~~~~~~~~~~~~~~~~~~~

Drs. Mike D. Picker and Duncan Stevens, Zoology Department, University of Cape Town, South Africa have for a while been working on South African Notonemouridae. They have completed the alpha taxonomy of the group (see Picker & Stevens [1997] in Bibliography), and are using mate-choice trials to distinguish sibling species complexes. Their honours student, Cecily Roos is examining the mechanics of mating, as well as determination of possible cues used in mate recognition. They contacted your managing Editor because of interest in looking at possible use of drumming. They had never witnessed drumming or males vibrating their abdomen and wondered if they were missing it. Ken Stewart informed them that his and Ian McLellan's observations in New Zealand and those of several investigators in the southern hemisphere, including J. Illies, Noel Hynes, Guenther Theischinger and others have never observed drumming for any species of Antarctoperlaria. Picker and Stevens feel they have covered most of the commoner species of notonemourids, but expect to uncover some cryptic species within the widespread *Aphanicerca capensis* using mating trials. A PhD student at UCT Zoology is studying the genetics of that species, so they hope to collaborate with him. They are also in the process of working out a phylogeny for the Notonemouridae.

~~~~~~~~~~~~~~~~~~~~~~~~

Dr. Andy Sheldon of the University of Montana continues working with Dr. Dick Baumann on the biogeography of Great Basin Plecoptera and life history studies of *Setvena*, *Doroneuria* and some *Isoperla* species. He is spending the next year on sabbatical working with the Forest Service in Oxford, Mississippi on ecosystem research in catchments on the Ouchita National Forest. Emphasis will be on a thorough adult-based faunistic study on the half dozen small watersheds; nymphs will also be worked into the study and some time will be spent on comparative ecology of perlids. Andy will also be working with fishes.

~~~~~~~~~~~~~~~~~~~~~~~~

Dr. Richard Baumann of Brigham Young University continues to work with several colleagues on zoogeographic studies of Ohio, Atlantic Canada and the Great Basin, and with graduate student Ron Call on stoneflies of Southern Utah. He is also nearing completion of a manuscript on revision of the capniid genus *Isocapnia*, a previous master's project of his student J. T. Zenger.

~~~~~~~~~~~~~~~~~~~~~~~~

J. Manuel Tierno de Figueroa of Granada University, Spain, is working in Italy with Dr. Romolo Fochetti on a postdoctoral grant on stoneflies, and continues his work with Dr. A. Sanchez-Ortega and Dr. P. Membiela on a book of Iberian Plecoptera and other stonefly projects.

Jonathan Benstead and Pascal Rabeson of the Institute of Ecology, University of Georgia, are working with Plecoptera specimens from SE Madagascar.

Research in Dr. Ken Stewart's Lab, University of North Texas

1. Doctoral student John Sandberg is well into his study of the systematics, behavior and ecology of the stonefly genus *Isogenoides*. The revision will include illustration and description of all life stages of the currently recognized 9 species and problematical *I. Hudsonicus*, previously synonomized with *I. frontalis*. Eggs and nymphs will be correlated by rearing and drumming and search behaviors will be determined from reared, virgin adults. The life history of *I. zionensis* was studied in the San Miguel River, Colorado in 1999-2000, and drumming signals of *I. krumholzi* and *I. olivaceous* and *I. varians* have been successfully recorded. The *I. vanians* material was reared from 23 numphs collected with help of Bill Stark in Mississippi. *I. Colubrinus* and *I. elongatus* from March, 2000 collections are being rared, and a collecting trip with Stan Szczytko in Wisconsin, and Iowa is planned for April, 2000, for live nymphs of *I. frontalis* and *I. doratus*. If you have preserved *Isogenoides* materials, especially *I. hansoni*, or are working in the field with any of the species, please contact John at jbs001@students.cas.unt.edu. Boris Kondratieff and Stan Szczytko are members of John Sandberg's doctoral committee.
2. Ken Stewart and Stan Szczytko are working on a manuscript describing recently reared nymphs of several western North America *Isoperla* species, including *I. decolorata, I. katmaiensis, I. denningi, I. roguinses, I. baumanni, I. gravitaus* and *I. tilasqua*. The objective is to eventually produce an illustrated key to nymphs with notes to all western *Isoperla* species.
3. With Bill Stark, a project to describe the females and eggs of the 3 *Setvena* species is nearing completion.
4. With Bill Stark the manuscript for 2nd Edition of "Nymphs of North American Stonefly Genera (Plecoptera)" is scheduled for completion by fall, 2000.
5. With Mark Oswood, preparation of a book manuscript on "Stoneflies of Alaska and Northwestern Canada" is well underway.
6. With Eduardo Dominguez of Argentina and Maria Zuniga of Colombia, a project to rear-correlate *Anacroneuria* nymphs and study drumming of Argentinian and Columbian species has been initiated.

Life history studies of Texas caddisfly species have also been recently published, and a masters student is near completion of a project on the casemaking behavior and life history of *Phylloicus ornatus*.

Dr. Bill Stark of Mississippi College continues to work on several projects listed here under other colleagues names and on *Anacroneuria* with Maria Zuniga; several new species have been collected in Colombia by Maria, who visited Ken Stewart's lab in Texas and Bill's lab in Mississippi in the fall, 1999.

~~~~~~~~~~~~~~~~~~~~~~~~

Dr. Yu Isobe of Nara Women's University, Japan continues to supervise graduate research projects on stoneflies (see 3 recent theses her students have completed in this issue).
~~~~~~~~~~~~~~~~~~~~~~~~

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: Perla

Jahr/Year: 2000

Band/Volume: 18

Autor(en)/Author(s): Redaktion

Artikel/Article: Current research on Plecoptera 14-17