

# PERLA

Annual Newsletter and Bibliography of  
The International Society of Plecopterologists



*Brachyptera seticornis* (Klapálek), Slovenia  
Photograph by Bill P. Stark

## PERLA NO. 27, 2009

Department of Bioagricultural Sciences  
and Pest Management  
Colorado State University  
Fort Collins, Colorado 80523 USA

**PERLA**  
**Annual Newsletter and Bibliography of the**  
**International Society of Plecopterologists**  
**Available on Request to the Managing Editor**

MANAGING EDITOR:

**Boris C. Kondratieff**  
Department of Bioagricultural Sciences  
And Pest Management  
Colorado State University  
Fort Collins, Colorado 80523 USA  
Fax: 970-491-3862  
E-mail: [Boris.Kondratieff@Colostate.edu](mailto:Boris.Kondratieff@Colostate.edu)

EDITORIAL BOARD:

**Richard W. Baumann**  
Department of Biology and  
Monte L. Bean Life Science Museum  
Brigham Young University  
Provo, Utah 84602, USA

**Peter P. Harper**  
Département de Sciences biologiques  
Université de Montréal  
C.P. 6128, Succ. "Centre-Ville"  
Montréal, Québec, H3C 3J7, CANADA

**Kenneth W. Stewart**  
Department of Biological Sciences  
University of North Texas  
Denton, Texas 76203, USA

**Shigekazu Uchida**  
Aichi Institute of Technology  
1247 Yagusa  
Toyota 470-0392, JAPAN

**Peter Zwick**  
Schwarzer Stock 9  
D-36110 Schlitz, GERMANY

## TABLE OF CONTENTS

|   |    |
|---|----|
| Subscription policy.....  | 4  |
| Overview of <b>The XII International Conference on Ephemeroptera and the XVI International Symposium on Plecoptera</b> .....  | 5  |
| 2008 Lifetime Achievement Awards.....   | 20 |
| Announcements   |    |
| Proceedings of <b>XI International Conference on Ephemeroptera, XV International Symposium on Plecoptera</b> .....            | 30 |
| <b>Ninth North American Plecoptera Symposium</b> .....  | 31 |
| <b>XIII International Conference on Ephemeroptera and the XVII International Symposium on Plecoptera, Japan in 2011</b> ..... | 32 |
| Electronic availability of <i>Perla</i> .....   | 33 |
| New Member for Standing Committee.....  | 34 |
| <b>Obituary</b> , I. D. McLellan.....   | 34 |
| Member News.....  | 39 |
| Short Articles  |    |
| Modeling of Stonefly Historical Distributions Using Museum Specimens.....   | 41 |
| Stonefly Collecting During the XVI International Symposium on Plecoptera.....   | 46 |
| Poem.....   | 48 |
| Recent Plecoptera Literature.....   | 48 |

## **PERLA SUBSCRIPTION POLICY**

**Dues for membership in the International Society of Plecopterologists are \$15 U.S. per year. Members will automatically receive PERLA. Libraries or other institutions may receive PERLA by making a \$10 annual donation, or through an exchange of publications agreement approved by the Managing Editor and Editorial Board. Five dollars (\$5) of the dues will become part of the Scholarship Fund of the Society, to be used for helping active and deserving workers or students participate in future symposia.**

**Persons or institutions who have no support or are financially unable to pay dues may continue to receive PERLA by writing a brief note to the Managing Editor requesting a waiver of dues and to be retained on the mailing list.**

**It is therefore important that you respond to this receipt of PERLA 27 (2009) in one of the following ways, in order to be kept on the mailing list for PERLA 28 (2010): (1) pay your annual dues, (2) make a \$10 donation (institutions), or (3) request a waiver. A form and self-addressed envelope are included with this issue, (PERLA 26) for your convenience in responding. NO CREDIT CARD CHARGES CAN BE ACCEPTED.**

**You may send your dues or donation in the form of a personal check, bank note, cashier's check, or postal money order designated in U.S. funds to the Managing Editor. Because of high bank costs for exchange in some countries, you may send cash, in which case the Managing Editor will respond with a personal acknowledgment when it is received.**

**Dues and donations are used to help pay the costs of publishing and mailing PERLA, for Lifetime Achievement Award plaques presented by the Society at International Symposia and for the Scholarship Fund. The Managing Editor will make a financial report to the International Committee at each International Symposium Business Meeting or at any other time when requested.**

**Members or institutions whose dues remain unpaid for two consecutive years, or have not been granted exchange, waiver or emeritus status, will be dropped from the PERLA mailing list.**

# The International Joint Meeting on Ephemeroptera and Plecoptera 2008



The XII International Conference on Ephemeroptera and the XVI International Symposium on Plecoptera was held 8-14 June 2008 at the Staatliches Museum für Naturkunde in Stuttgart (SMNS), Germany. The SMNS is dedicated to the scientific study of the Earth. It was established in 1791 through a decree by Carl Eugen, Duke of Württemberg, and is one of the oldest and most prominent natural history museums in Europe. **Willi Hennig**, founder of phylogenetic systematics was on the staff of SMNS from 1963 until his death in 1976.

More than 120 participants (including 20 accompanying persons) from 36 countries registered for the meeting. See map below.



Overall, the meeting was a magnificent success, bringing together well-established scientists of international note, students, enthusiasts of the two taxonomic groups, and others from throughout the world. All aspects of the meeting from the efficient registration, the highly informative paper and poster sessions, the “snack breaks”, the grand banquet at Schloss Rosenstein, and the productive field trips were exceptional. **Dr. Arnold Staniczek**, his staff, and colleagues made this meeting an experience to remember. They are heartily thanked.

Stuttgart was a hub of action during the meeting, especially with the European Soccer Cup championship games creating additional excitement. The program for accompanying persons included remarkable enjoyable events that were, however, intense! These activities included guided tours of museums, famous nearby cities, castles, zoos and botanical gardens, options of attending operas, symphony orchestras, ballets, etc!

The Conference dinner at Schloss Rosenstein was a feast to behold. Schloss Rosenstein was built in 1822-1830 by Giovanni Salucci and served as a manor house for King Wilhelm I. It currently houses biological exhibitions. At the dinner special recognition and awards from the Standing Committee of the International Society on Plecoptera were presented:



**The grand banquet at Schloss Rosenstein.**

**Dr. Arnold Staniczek** was honored by the Standing Committee with a certificate of appreciation for his “hard work and dedication in organizing the successful” meeting.

We again thank **Dr. Staniczek**. In fact Arnold has **already** accomplished the publication of sixty-five manuscripts produced from the meeting. It will be available in early 2009.

***International Perspectives in Mayfly and Stonefly Research. Proceedings of the 12th International Conference on Ephemeroptera and the 16th International Symposium on Plecoptera, Stuttgart 2008, ed. A.H. Staniczek, Aquatic Insects, 31 (2009), Supplement 1.***



**Dr. Arnold Staniczek with his classic smile is heartily thanked for his hard work by Dr. John Brittain on behalf of the Standing Committee of the International Society of Plecopterologists.**

Drs. **Richard W. Baumann, Kenneth W. Stewart, and Peter Zwick** were presented awards in appreciation from the Standing Committee of the International Symposium on Plecoptera for their hard work and dedication in serving as editors of *Perla* for many years.



**Drs. Richard W. Baumann and Peter Zwick accepting their awards.**



**Dr. Kenneth W. Stewart accepting his award.**

The Standing Committee of the International Society of Plecopterologists awarded Lifetime Achievement Awards in 2008 to professors **Peter Harper** and **Ignac Sivec** (see following details). These two scientists of international reputation joined thirteen other colleagues to receive this honor. **Dr. Stan Szczytko** arranged the production of the plaques.





**Dr. Ignac Sivec with his award.**

The two conference trips included a tour of one the best Cistercian monasteries in Germany, the Bebenhausen Monastery and the university city of Tübingen, where enjoyable boat trips on the Neckar occurred. Tübingen has the highest quality of life of all cities in Germany. The Post-Conference field trip into the southern Black Forest (Schwarzwald) included the Wutach Gorge and Lake Titisee. Collecting was outstanding and so was the lunch.



**The beautiful scenery of the Wutach Gorge, Germany.**

The International Society of Plecopterologists awarded more than US \$3,400 to Tomas Ruginis, Lithuania, Maribet Gamboa, Venezuela, Olga Loskutova, Russia, and Giovany Guevara Cardona, Chile to attend the meeting in Stuttgart. **Dr. John Brittain** directed this process.

At the meeting, the stonefly community greatly missed Dr. **Lidija Zhiltzova**, who could not attend the meeting because of injuries suffered during a criminal attack. We all wish her continued recovery and most healthy and successful coming years.

Below are the papers or posters on Plecoptera that were presented at **XVI International Symposium on Plecoptera from 8-14 June 2008 at the Staatliches Museum für Naturkunde in Stuttgart, Germany:**

### **Oral presentations III: Biogeography, Distribution & Faunistics**

LORENZ, AW; TIERNO DE FIGUEROA, JM; LOPEZ RODRIGUEZ, MJ; MURPHY, J; & GRAF, W.

Biogeographical and autecological pattern of European Plecoptera

KOESE, B

Stoneflies of the Netherlands

POPIJAC, A & SIVEC, I.

Diversity and distribution of stoneflies in the area of Plitvice Lakes National Park and along Mediterranean river Cetina (Croatia)

#### **IV: Phylogeny, Systematics & Taxonomy**

##### **Invited Lecture**

ZWICK, P.

The Plecoptera - who are they?

Other papers:

BAUMANN, RW & KONDRATIEFF, BC.

The Holarctic genus *Oemopteryx* Klapalek (Plecoptera: Taeniopterygidae), with a new species from California and Oregon

STRADNER, D; WEISS S & GRAF, W.

Molecular phylogeny of the stonefly genus *Siphonoperla* Zwick, 1967 (Chloroperlidae)

SZCZYTKO, SW & KONDRATIEFF, BC.

The Eastern Nearctic *Isoperla bellona* complex

#### **Oral presentations V: Morphology, Ultrastructure & Physiology**

NELSON, CH.

Surface ultrastructure of the tarsus and pretarsus of Plecoptera (Arthropoda: Hexapoda)

#### **Oral presentations VI: Biogeography, Distribution & Faunistics**

DeWALT, RE; CAO, Y; & TWEDDALE, T.

Reconstruction of historical distributions of stoneflies (Plecoptera) using museum records

#### **Oral presentations VII: Ecology, Life History & Reproduction**

RUPPRECHT, R.

Attempts to re-colonize water insects in some German streams

#### **Oral presentations VIII: Phylogeny, Systematics & Taxonomy**

##### **Invited lecture**

KRELL, Frank-Thorsten

ZooBank and the next edition of the Code - new developments in zoological nomenclature

DeWALT, RE; EADES, D; & MAEHR, MD.

Plecoptera Species File: a research resource for the future

BAUMANN, RW & KONDRATIEFF, BC.

Studies on the Holarctic Subfamily Brachypterainae (Plecoptera: Taeniopterygidae) using the Scanning Electron Microscope

### **Oral presentations IX: Ecology, Life History & Reproduction**

KAZANCI, N & DÜGEL, M.

Use of optimum and tolerance values to predict impacts of climate change on aquatic insect distribution

KRNO, I & HOLUBEC, M.

Effects of land use on the stonefly bioassessment metrics

YOSHIMURA, M.

Comparison of stream benthic invertebrate particularly stonefly assemblages in the temperate forest in Japan in relation to forest types

### **Oral presentations X: Biogeography, Distribution & Faunistics**

RUGINIS, T.

A review of Plecoptera species distribution in Lithuania

### **Oral presentations XI: Morphology, Ultrastructure & Physiology**

WILLKOMMEN, J.

The morphology of the pterothorax of Ephemeroptera, Odonata and Plecoptera, and the homology of wing base sclerites and flight muscles

AMORE, V; CABRERA HURTADO, J; TERUEL ARTACHO, M; TIERNO DE FIGUEROA, JM; & FOCETTI, R.

Do really all stoneflies have hemocyanin?

### **Oral presentations XII: Biogeography, Distribution & Faunistics**

SURENKHORLOO, P.

Stoneflies of Mongolia (updated species list)

TESLENKO, VA.

A review of Plecoptera species distribution in the Far East of Russia

ZHILTZOVA, LA. (given by N. KLUGE).

Zoogeographic features of the Systellognatha (Plecoptera) fauna of Russia and adjacent countries

**Poster Session I**  
**Phylogeny, Systematics & Taxonomy**

ISOBE, Y & UCHID, AS.

Japanese species of the genus *Oyamia* (Plecoptera: Perlidae) and *O. nigribasis* from Korea

SIVÉC, I & STARK, BP.

Open access policy in stonefly research

TURCSANYI, I; JACKSON, S; BAGLEY, M; FRIEDMAN, E; SWENSON, S; ROTH, A; DRISKELL, A. & WEIGHT, L.

Integration of DNA barcoding approaches into aquatic bioassessments: case of mayflies and stoneflies

VINÇON, G & MURANYI, D.

Revision of the *Rhabdiopteryx neglecta* species group (Plecoptera: Taeniopterygidae)

ROSCISZEWSKA, E & RZONCA, R.

Ultrastructure of Antartoperlarian stoneflies reproductive systems with special reference to the organization of the larval ovarioles

TAMURA, F; ISOBE, Y; & OISHI, T.

A comparative SEM study on the setae of larval legs in four families of Plecoptera

BOJKOVA, J.

Collections of the Czech Republic stoneflies by E. Křelinová and J. Raušer

CHERCHESOVA, SK; SHIOLOSHVILI, MN; & HAZEEVA, LA.

Zoogeographic characteristics of the stonefly fauna of North Ossetia (the River Terek Basin)

FOCHETTI, R & TIerno DE FIGUEROA, JM.

The Italian stonefly fauna

OGDEN, J & GIBERSON, DJ.

Plecoptera diversity and emergence phenology in boreal forest streams of the Cape Breton Highlands, Nova Scotia, Canada

SPACEK, J.

Notes on the distribution of some interesting Ephemeroptera and Plecoptera species from the Czech Republic

ZUÑIGA DE CARDOSO, MC; DIAS, LG; MARTINEZ, D; ZABALA, G; & BACCA, T.

The first record of *Claudioperla* Illies (Plecoptera: Gripopterygidae) from Colombia

ZUÑIGA DE CARDOSO, MC & STARK, BP.  
The status of the order Plecoptera (Insecta) from Colombia

**Poster Session II**  
**Ecology, Life History & Reproduction**

BEKETOV, MA & LIESS, M.  
Potential of 11 pesticides to initiate downstream drift of stream macroinvertebrates

BOJKOVA, J & HELESIC, J.  
Spring fens as a unique biotope of stonefly larvae

FENOGLIO, S; BO, T; LOPEZ RODRIGUEZ, MJ; TIerno DE FIGUEROA, JM; & MALACARNE, G.  
Preimaginal feeding habitus of *Isoperla carbonaria* Aubert, 1953 (Plecoptera, Perlodidae) in Val Po, North-Western Italian Alps

GAMBOA, MA; CHACON, MM; & SEGNINI, SE.  
Composition of the diet of four species of *Anacroneuria* (Plecoptera: Perlidae) in the Venezuelan Andes

GUEVARA, G; BOHORQUEZ, HF; REINOSO, G. & VILLA, FA.  
Plecoptera size distributions in a tropical river (Tolima, Colombia) during two contrasting seasons

GUEVARA, G; GODOY, R & JARA, C.  
Stonefly shredders associated with litter breakdown in first-order streams of southern Chile

HROVAT, M; URBANIC, G & SIVEC, I.  
Community structure and distribution of Ephemeroptera and Plecoptera larvae in selected karst rivers in southeast Slovenia

KOZACEKOVA, Z; TIerno DE FIGUEROA, JM; LOPEZ RODRIGUEZ, MJ; & DERKA, T.  
Life history of a population of *Protonemura intricata* (Ris, 1902) (Insecta, Plecoptera) in a constant temperature stream in Central Europe

LOPEZ-RODRIGUEZ, MJ; TIerno DE FIGUEROA, JM; FENOGLIO, S; BO, T & ALBA-TERCEDOR, J.  
The role of three Perloidea species in a temporary stream in southern Spain: are they secondary or primary consumers?

LOSKUTOVA, OA.  
Drift of stoneflies in the rivers of the European northeast of Russia

MANK, P & PEKARIK, L.

The most important microhabitat variables affecting the stonefly and mayfly communities in the East Carpathian Stream

SILVERI, L; TIerno DE FIGUEROA, JM & MAIOLINI, B.

Life cycle of three species of Plecoptera in high altitude streams (Trentino, NE Italy)

STEWART, KW & ANDERSON, NH

The life history and nymphal generic character development of *Malenka bifurcata* (Claassen) (Plecoptera: Nemouridae) in an Oregon summer-dry stream

TÜRKMEN, G & KAZANCI, N

A research on assessment of habitat quality of streams in a national park by using Ephemeroptera, Plecoptera, Odonata and Trichoptera species

YOSHIMURA, AM.

Comparison of attracted time for light in Plecoptera



XVIth International Symposium on Plecoptera, 8-14 June, 2008, Stuttgart, Germany



**Participants of both the XII International Conference on Ephemeroptera and the XVI International Symposium on Plecoptera.**



**Drs. Arnold H. Staniczek and Jana Willkommen making sure registration was perfect.**





**The Brittain's and others enjoying the boat trip on the Neckar, Tübingen.**



**The remarkable publishing and Lifetime Achievement awardee tag team, Drs. Bill P. Stark and Ignac Sivec.**



**The Sczcytko's, Stewart's and Bill Stark enjoying the meeting.**



**Drs. Arnold Staniczek, Thomáš Soldán and Purevdorj Surenkhorloo. Purevdorj provided photographs for this issue.**



**The happy family of the convener of XII International Conference on Ephemeroptera and the XVI International Symposium on Plecoptera, Stuttgart, Germany.**



**Dr. Richard W. Baumann with his well-known beating sheet during the field trips.**

## 2008 LIFETIME ACHIEVEMENT AWARDS

The Standing Committee of the International Society of Plecopterologists continued the practice begun at the XI Symposium in Treehaven, Wisconsin, USA, of presenting Lifetime Achievement Awards to Plecopterologists who have made exemplary contributions to our field over their professional lifetimes. Previous awards have been made to **Noel Hynes**, **Bill Ricker** (announced in Perla 11), **Jacques Aubert**, **Teizi Kawai**, **Ian McLellan** (announced in Perla 14), **Claudio Froehlich**, **Lidija Zhiltzova**, **Peter Zwick** (announced in Perla 17), **Kenneth Stewart**, **Elisabetta Ravizza Dematteis**, and **Carlaberto Ravizza** (announced in Perla 20). **Richard W. Baumann** and **Bill P. Stark** (announced in Perla 23). Adding to this distinguished list of scientists, the International Committee awarded Lifetime Achievement Awards in 2008 to professors **Peter Harper** and **Ignac Sivec**. Presenter of the award to Ignac Sivec was Bill Stark. Unfortunately, Peter Harper could not attend the meeting and his award was delivered to him in Quebec, Canada after the meeting.



*Photograph provided by Dr. Bill Stark.*

### **Pierre-Paul (Peter) Harper**

Professor **Peter Harper** studied under the guidance of the distinguished scientist and also a Lifetime Achievement Awardee, **H. B. N. Hynes** for his Ph.D at the University of

Waterloo. Currently, he is “Professeur Honoraire” at the Université de Montréal. He has served this institution with great distinction for over 34 years.

#### **LIST OF SCIENTIFIC PUBLICATIONS OF DR. PETER HARPER**

- Sivec, I., Harper P. P. and Shimizu, T. 2008. Contribution to the study of the Oriental genus *Rhopalopsale* (Plecoptera: Leuctridae). *Scopolia* 64:1-122.
- Harper, P. P. Leuctridae. Chapter 5 in Stark, B. P. The stoneflies of Eastern North America.(in préparation).
- Harper, P. P. and F. Harper. 2003. Comparison of Nearctic and Palaearctic species groups of *Leuctra*: Affinities and Origin of the North American Fauna (Plecoptera: Leuctridae). pp. 219-223 in Gaino, E. (editors) Research Update on Ephemeroptera and Plecoptera, University of Perugia, Perugia, Italy.
- Harper, P. P. and F. Harper. 1997. The genus *Leuctra* Stephens in North America: a preliminary report. pp. 467-472 in Landolt, P. and M. Sartori (editors) Ephemeroptera & Plecoptera: Biology – Ecology-Systematics. MTL, Fribourg
- Harper, P. P. and F. Harper. 1997. Mayflies (Ephemeroptera) of the Yukon. pp. 151-167 in Danks, H.V. and J.A. Downes (editors) Insects of the Yukon. Biological Survey of Canada (Terrestrial Arthropods), Ottawa, 1034 pp.
- Stewart, K. W. & P. P. Harper, 1996. Plecoptera. p. 217-266 in R. W. Merritt & K. W. Cummins (editors) An introduction to the aquatic insects of North America. 3rd edition. Kendall-Hunt Publishing Company, Dubuque, Iowa. 862 p.
- Harper, P. P. 1995. Croissance et dynamique des populations d'invertébrés benthiques. in R. Pourriot et M. Meybeck (editors) Collection Écologie #25, Limnologie générale, Paris: Masson, pp. 368-388.
- Harper, P. P. 1994. Plecoptera. in Morse, J. C. (editor) Aquatic Insects of China useful for detecting water pollution. Hohai University Press, Nanjing, pp. 176-209.
- Harper, P. P. 1992. La Grande Rivière, a subarctic river and a hydroelectric megaproject. In P. W. Calow (editor) The River Handbook, Blackwell, London. Volume 1., pp. 411-425.
- Harper, P. P. 1992. The stoneflies of Panama (Plecoptera). p. 114-121 in: D. Quintero and E. Aiello (editors), Insects of Panama and Mesoamerica, Selected studies. Oxford University Press.
- Harper, P. P. and K. W. Stewart. 1984. Plecoptera. p. 182-230 in R. W. Merritt and K. W. Cummins (editors) An introduction to the aquatic insects of North America. 2nd edition. Kendall-Hunt. 722 pp.
- Harper, P. P. 1981. Ecology of streams at high latitudes. in M. A. Lock and D. D. Williams (editors) Perspectives in running water ecology. Plenum Publishing, p. 313-337.
- Harper, P. P. 1978. Plecoptera. p. 105-118 In R. W. Merritt and K. W. Cummins (editors) An introduction to the aquatic insects of North America. 1st edition. Kendall-Hunt Publishing Company, Dubuque, Iowa. 441 p.
- Harper, F., N. H. Anderson and P. P. Harper. 1995. Emergence of lotic mayflies (Ephemeroptera) in the Cascade Range of Oregon. Proc. VIIth Internat. Conf. Ephemeroptera. Current Directions in Research in Ephemeroptera. Toronto: Canadian Scholars' Press, pp. 207-222.
- Harper, P. P. and M. Lauzon. 1994. The life cycle of *Serratella deficiens* (Morgan)

- (Ephemeroptera: Ephemerellidae) in Oakville Creek in southern Ontario. Proc. Entomol. Soc. Ontario 125:13-17.
- Harper, P. P. and W. E. Ricker. 1994. Distribution of Ontario stoneflies (Plecoptera). Proc. Entomol. Soc. Ontario 125: 43-66.
- Harper, P. P. and M. Lauzon. 1994 (1991). Life cycles of sundry stoneflies (Plecoptera) from Québec. Rev. Entomol. Québec 36: 28-42.
- Harper, P. P. and L. Cloutier. 1993. Systematics and the synecology of aquatic insects: phenology and temporal structure of temperate lake assemblages. Mem. Entomol. Soc. Can. 165:243-256.
- Harper, P. P., L. LeSage and M. Lauzon. 1993. The life cycle of *Podmosta macdunnoughi* (Ricker) in the Lower Laurentians, Québec (Plecoptera: Nemouridae), with a discussion on embryonic diapause. Can. J. Zool. 71: 2136-2139.
- Lauzon, M. and P. P. Harper. 1993. The life cycle of the aquatic snipefly *Atherix lantha* Webb (Diptera Brachycera: Athericidae) in Québec. Can. J. Zool. 71: 1530-1533.
- Harper, P. P., M. Lauzon and F. Harper. 1991. Life cycles of twelve species of winter stoneflies from Québec (Plecoptera: Capniidae and Taeniopterygidae). Can. J. Zool. 69: 787-796.
- Harper, P. P. and L. Cloutier. 1991. Les effets de travaux de curage sur la faune benthique d'un cours d'eau agricole. Rev. Sci. Eau 4: 143-168.
- Alarie, Y., P. P. Harper and R. E. Roughley. 1990. Larvae of *Hygrotus* Stephens 1828 (Coleoptera: Dytiscidae: Hydroporinae), with phylogenetic comments. Can. Entomol. 122: 985-1035.
- Harper, P. P. 1990. Life cycles of *Leuctra duplicata* Claassen and *Ostrocerca prolongata* (Claassen) in an intermittent streamlet in Québec (Plecoptera: Leuctridae and Nemouridae). Great Lakes Entomol. 23: 211-216.
- Harper, P. P. 1990. Associations of aquatic insects in a network of subarctic lakes and streams in Québec. Hydrobiologia 199: 43-64.
- Alarie, Y., P. P. Harper and A. Maire. 1990. Primary setae and pores on legs of larvae of Nearctic Hydroporinae (Coleoptera; Dytiscidae). Quaest. Entomol. 26: 199-210.
- Alarie, Y. and P. P. Harper. 1990. Primary setae and pores on last abdominal segment and urogomphi of larval Hydroporinae (Coleoptera: Dytiscidae) with notes on other dytiscid larvae. Can. J. Zool. 68: 368-374.
- Alarie, Y., P. P. Harper and A. Maire. 1989. Rearing dytiscid beetles. Entomol. Basil. 13: 147-149.
- Harper, P. P. 1989. Zoogeographical relationships of aquatic insects from the Eastern James Bay drainage. Can. Field Natural. 103: 535-546.
- Harper, P. P. and M. Lauzon. 1988. Life cycle of the nymph fly *Palaeodipteron walkeri* Ide 1965 (Diptera: Nymphomyiidae) in the White Mountains of southern Québec. Can. Entomol. 121: 603-607.
- Power, M. E., C. E. Cushing, P. P. Harper, F. R. Hauer, W. J. Matthews, P. B. Moyle, B. Statzner, R. J. Stout and I. R. Wais de Badgen. 1988. Biotic and abiotic controls in river and stream communities. J. North Amer. Benthol. Soc. 7: 456-479.
- Lauzon, M. and P. P. Harper. 1988. Seasonal dynamics of a mayfly (Ephemeroptera; Insecta) community in a Laurentian stream. Holarct. Ecol. 11: 220-234.

- Harper, P. P. and L. Cloutier. 1986. Spatial structure of the insect community of a small dimictic lake in the Laurentians. Intern. Revue Ges. Hydrobiol. 71: 655-685.
- Lauzon, M. and P. P. Harper. 1986. Life history and production of the stream-dwelling mayfly *Habrophlebia vibrans* (Ephemeroptera; Leptophlebiidae). Can. J. Zool. 64: 2038-2045.
- Harper, P. P. 1986. Relations entre les macrophytes et les insectes dans les milieux d'eau douce. Rev. Entomol. Québec 31: 76-86.
- Morin, A. and P. P. Harper. 1986. Phénologie et microdistribution des adultes et des larves de trichoptères filtreurs dans un ruisseau des Basses Laurentides (Québec). Arch. Hydrobiol. 108: 167-183.
- Harper, F. and P. P. Harper. 1986. An annotated key to the northwestern Nearctic species of *Paraleptophlebia* Lestage (Ephemeroptera: Leptophlebiidae) with the description of a new species. Can. J. Zool. 64: 1460-1468.
- Morin, A., P. P. Harper and R. H. Peters. 1986. Microhabitat preference curves of black fly larvae (Diptera; Simuliidae): a comparison of three estimation methods. Can. J. Fish. Aquat. Sci. 43: 1235-241.
- Cloutier, L. and P. P. Harper. 1986. A new species of *Rheotanytarsus* from subarctic Québec. Entomol. News 97: 1-6.
- Harper, P. P. and P. Turcotte. 1985. New Ecuadorian Trichoptera. Aquat. Insects 7: 133-140.
- Harper, P. P. and L. Cloutier. 1985. Composition et phénologie de communautés d'insectes du lac Geai, un lac dystrophe des Laurentides (Québec). Natur. Can. 112: 405-415.
- Landry, B. and P. P. Harper. 1985. The aquatic dance fly fauna of a subarctic river system in Québec, with the description of a new species of *Hemerodromia* (Diptera; Empididae). Can. Entomol. 117: 1379-1386.
- Harper, P. P. and M. Lauzon. 1985. The crane fly fauna of a Laurentian woodland, with special reference to the aquatic species. Rev. Entomol. Québec 30: 3-22.
- Harper, P. P. and R. C. Wildman. 1985. A new *Paraleuctra* from the Cascade and Coast ranges. Can. J. Zool. 63: 982-983.
- Harper, P. P. 1984. *Alloperla acadiana* n. sp. (Plecoptera; Chloroperlidae) du Nouveau-Brunswick. Rev. Entomol. Qué. 29: 83-85.
- Harper, F. and P. P. Harper. 1984. Phenology and distribution of mayflies in a southern Ontario lowland stream. Proc. IVth International Conf. Ephemeroptera. pp. 243-251.
- Harper, P. P. and F. Harper. 1983. Biogéographie et associations des Plécoptères d'hiver du Québec méridional. Can. Entomol. 115: 1465-1476.
- Kirchner, R. F. and P. P. Harper. 1983. The nymph of *Bolotoperla rossi* (Frison). J. Kans. Entomol. Soc. 56: 411-414.
- Harper, F., E. Magnin, and P. P. Harper. 1983. Diel periodicity of emerging mayflies in a Laurentian stream. Aquat. Ins. 5: 21-31.
- Thibault, J. and P. P. Harper. 1983. Les peuplements de taons d'une forêt des Basses-Laurentide: inventaire, phénologie, activité et habitats. Natur. Can. 110: 27-36.
- Harper, P. P. and F. Harper. 1982. Mayfly communities in a Laurentian watershed. Can. J. Zool. 60: 2828-2840.

- Turcotte, P. and P. P. Harper. 1982. The macro-invertebrate fauna of a small Andean stream. *Freshwater Biol.* 12: 411-419.
- Turcotte, P. and P. P. Harper. 1982. Drift patterns in a high Andean stream. *Hydrobiologia* 89: 141-151.
- Harper, F. and P. P. Harper. 1981. Northern Canadian mayflies, records and descriptions. *Can. J. Zool.* 59: 1784-1789.
- Roy, D. and P. P. Harper. 1981. An analysis of an adult Trichoptera community in the Laurentian highlands of Québec. *Holarct. Ecol.* 4: 102-115.
- André, P., P. Legendre, and P. P. Harper. 1981. La sélectivité de trois engins d'échantillonnage du benthos lacustre. *Ann. Limnol.* 17: 24-40.
- Roy, D. and P. P. Harper. 1980. *Oxyethira roberti* n. sp., trichoptère nouveau du sud du Québec. *Natur. Can.* 107: 117-119.
- Harper, P.P. 1980. Phenology and distribution of aquatic dance flies (Diptera; Empididae) in a Laurentian watershed. *Amer. Midl. Nat.* 104: 110-117.
- Roy, D., H. Décamps and P. P. Harper. 1980. Taxonomy of male and female *Plectrocnemia* (Trichoptera; Polycentropodidae) from the French Pyrenees. *Aquat. Insects* 2: 19-31.
- Roy, D. and P. P. Harper. 1980. Females of the Nearctic *Molanna* (Trichoptera; Molannidae). *Proc. Entomol. Soc. Wash.* 82: 229-236.
- Harper, P. P. and L. Cloutier. 1979. Chironomini and Pseudochironomini of a Québec highland stream (Diptera; Chironominae). *Entomol. Scand., Suppl.* 10: 81-94.
- Harper, P. P. 1979. Plecoptera. in H. V. Danks (ed.) *Canada and its insect fauna*. Mem. Entomol. Soc. Can. 108: 311-313.
- Back, C. and P. P. Harper. 1979. Succession saisonnière, émergence, voltinisme et répartition de mouches noires des Laurentides (Diptera; Simuliidae). *Can. J. Zool.* 57: 627-639.
- Roy, D. and P. P. Harper. 1979. Liste préliminaire des Trichoptères (insectes) du Québec. *Ann. Soc. Entomol. Qué.* 24: 148-172.
- Cloutier, L. and P. P. Harper. 1978. Les Chironomides Tanypodinae (Diptères) de ruisseaux des Laurentides. *Natur. Can.* 105: 125-135.
- Harper, P. P. 1978. Variations in the production of emerging insects from a Québec stream. *Verh. Internat. Verein. Limnol.* 20: 1317-1323.
- Harper, P. P. 1978. Observations on the early instars of stoneflies (Plecoptera). *Gewässer Abwässer*
- Harper, P. P. and R. F. Kirchner. 1978. A new stonefly from West Virginia (Plecoptera: Chloroperlidae). *Proc. Entomol. Soc. Wash.* 80: 403-406.
- Cloutier, L. and P. P. Harper. 1978. Phénologie de Tanypodinae de ruisseaux des Laurentides (Diptera; Chironomidae). *Can. J. Zool.* 56: 1129-1139.
- Back, C. and P. P. Harper. 1978. Les mouches noires (Diptera: Simuliidae) de deux ruisseaux des Laurentides, Québec. *Ann. Soc. Entomol. Qué.* 23: 55-66.
- LeSage, L. and P. P. Harper. 1977. Description de cinq espèces de larves d'Elmidae néarctiques (Coléoptères). *Ann. Soc. Entomol. Qué.* 22: 18-32.
- Harper, P. P. 1977. Capniidae, Leuctridae, and Perlidae (Plecoptera) from Nepal. *Orient. Insects* 11: 53-62.
- LeSage, L. and P. P. Harper. 1976. Cycles biologiques d'Elmidae (Coléoptères) de ruisseaux des Laurentides, Québec. *Ann. Limnol.* 12: 139-174.



- LeSage, L. and P. P. Harper. 1976. Notes on the life history of the toed-winged beetle *Anchytarsus bicolor* (Melsheimer) (Coleoptera: Ptilodactylidae). *Coleopt. Bull.* 30: 233-238.
- Harper, F. and P. P. Harper. 1976. Inventaire et phénologie des Ephéméroptères du lac Saint-Louis, Québec. *Ann. Soc. Entomol. Qué.* 21: 136-143.
- Harper, P. P. 1976. *Oxyethira barnstoni* n. sp. un nouveau trichoptère de Radissonie, Québec (Hydroptilidés). *Ann. Soc. Entomol. Qué.* 21: 35-38.
- Harper, P. P. 1976. Plecoptera collected by the Hokkaido University expedition to the Himalaya, 1968. *Mushi.* 49: 25-33.
- LeSage, L. and P. P. Harper. 1976. Description de nymphes d'Elmidae néarctiques (Coléoptères). *Can. J. Zool.* 54: 65-73.
- LeSage, L. and P. P. Harper. 1975. Les Dryopoïdes aquatiques du Québec (Coléoptères). *Ann. Soc. Entomol. Québec.* 20: 157-168.
- Harper, P. P. and G. Méthot. 1975. *Goera radissonica* n. sp., nouveau trichoptère de la région de la Baie James. *Natur. Can.* 102: 593-595.
- Harper, P. P. and D. Roy. 1975. *Utaperla gaspesiana* sp. nov., le premier Plécoptère Paraperliné de l'Est canadien. *Can. J. Zool.* 53: 1185-1187.
- Roy, D. and P. P. Harper. 1975. Nouvelles mentions de trichoptères du Québec et description de *Limnephilus nimmoi* sp. nov. (Limnephilidae). *Can. J. Zool.* 53: 1080-1088.
- Harper, P. P., J. G. Pilon, and J. M. Perron. 1975. Insectes aquatiques du Nord du Québec (Ephéméroptères, Odonates, Plécoptères, Trichoptères). *Ann. Soc. Entomol. Qué.* 20: 33-43.
- Harper, P. P. 1975. Quelques *Amphinemura* et *Nemoura* nouvelles du Népal (Plécoptères: Némouridés). *Nouv. Rev. Entomol.* 2: 119-127.
- Harper, P. P. 1974. New *Protonemura* (s.l.) from Nepal (Plecoptera; Nemouridae). *Psyche* 81: 367-376.
- Harper, P. P. 1974. A new eastern nearctic *Hemerodromia* (Diptera: Empididae). *Entomol. News* 85: 295-297.
- Harper, P. P. 1973. *Hydroptila eramosa* a new caddis fly from Southern Ontario (Trichoptera, Hydroptilidae). *Can. J. Zool.* 51: 393-394.
- Harper, P. P. 1973. Emergence, reproduction, and growth of setipalpiian Plecoptera in southern Ontario. *Oikos* 24: 94-107.
- Harper, P. P. 1973. Life histories of Nemouridae and Leuctridae in Southern Ontario (Plecoptera). *Hydrobiologia* 41: 309-356.
- Harper, P. P. and H. B. N. Hynes. 1972. Life histories of Capniidae and Taeniopterygidae (Plecoptera) in Southern Ontario. *Arch. Hydrobiol., Suppl.* 40: 274-314.
- Harper, P. P. and H. B. N. Hynes. 1971. The nymphs of the Nemouridae of Eastern Canada (Insecta: Plecoptera). *Can. J. Zool.* 49: 1129-1142.
- Harper, P. P. and H. B. N. Hynes. 1971. The nymphs of the Taeniopterygidae of Eastern Canada (Insecta; Plecoptera). *Can. J. Zool.* 49: 941-947.
- Harper, P. P. and H. B. N. Hynes. 1971. The Capniidae of Eastern Canada (Insecta; Plecoptera). *Can. J. Zool.* 49: 921-940.
- Harper, P. P. and H. B. N. Hynes. 1971. The Leuctridae of Eastern Canada (Insecta; Plecoptera). *Can. J. Zool.* 49: 915-920.

- Harper, P. P. 1971. Plécoptères nouveaux du Québec (Insectes). *Can. J. Zool.* 49: 685-690.
- Magnin, E. and P. P. Harper. 1970. La nourriture des esturgeons *Acipenser fulvescens* de la rivière Nottaway, tributaire de la Baie James. *Natur. Can.* 97: 73-85.
- Harper, P. P. and H. B. N. Hynes. 1970. Diapause in the nymphs of Canadian winter stoneflies. *Ecology* 51: 925-927.
- Harper, P. P. and J. G. Pilon. 1970. Annual patterns of emergence of some Quebec stoneflies (Insecta: Plecoptera). *Can. J. Zool.* 48: 681-694.
- Harper, P. P. and E. Magnin. 1969. Cycles vitaux de quelques Plécoptères des Laurentides (insectes). *Can. J. Zool.* 47: 483-494.
- Ricker, W. E., R. Malouin, P. P. Harper and H. H. Ross. 1968. Distribution of Québec stoneflies (Plecoptera). *Natur. Can.* 95: 1085-1123.



*Photograph provided by Dr. Bill Stark.*

### **Dr. Ignac Sivec**

**Dr. Ignac Sivec** completed his Ph.D at the University of Sarajevo, Bosnia. His dissertation was the “Taxonomic, zoogeographic and phylogenetic generic relationships

within subfamily Perlinae (Insecta: Plecoptera) of the World.” He served in the capacity as Curator, Director, and Vice Director of the Slovenian Museum of Natural History from 1979-2002.

The following information was modified from Dr. Sivec’s web site (<http://www2.pms-lj.si/staff/entomology/sivec.html>). Please consult this source for a complete listing of Dr. Sivec’s many scientific contributions.

#### **LIST OF SELECTED SCIENTIFIC PUBLICATIONS OF DR. IGNAC SIVEC**

- NOVAK, T. and I. SIVEC. 1977. Biološke raziskave v pegmatitnih jamah pri Ravnah. Naše jame.19: 39-45.
- NOVAK, T., V. KUŠTOR, A. KRANJC, and I. SIVEC. 1981. Prispevek k poznavanju razporeditve favne v velikih rovih. Acta Carsol. 9: 149-179.
- GOGALA, M., I. SIVEC, and J. CARNELUTTI. 1982. Kartierung der slowenischen Entomofauna. Acta Entomol. Jugosl. 18: 27-34.
- SIVEC, I. 1984. Study of genus *Neoperla* (Plecoptera: Perlidae) from the Philippines. Scopolia. 7: 1-44.
- SIVEC, I., B. STARK and S. UCHIDA. 1988. Synopsis of the world genera of perlinae (Plecoptera: Perlidae). Scopolia. 16: 1-66.
- SIMOVA-TOŠIĆ, D., M. VUKOVIĆ and I. SIVEC. Addendum to the Fauna Tipulidae (Diptera) of Yugoslavia (IV). Biol. Vestn. 38: 69-72.
- SIVEC, I. and B. HORVAT. 1994. Vrbnice (Plecoptera) in vodne muhe poplesovalke (Diptera, Empididae) reke Dragonje. Varst. Narave. 19: 1-6.
- SIVEC, I. 1995. *Cryptoperla fujianica* spec. nov., and *Cryptoperla stilifera* spec. nov., two new Peltoperlidae species from Fujian, China (Plecoptera). Opusc. Zool. Fluminensia, 132: 1-5, ilustr.
- NOVAK, T., I. SIVEC, V. KUŠTOR and M. ŠTANGELJ. 1995. Zur Kenntnis terrestrischer Eingangsfavna der Höhlen in der Süd-Herzegowina = Contribution to the knowledge of threshold fauna of caves in South Herzegovina. Znan. Rev., Naravosl. Mat. 7: 41-45.
- SIVEC, I. and L. A. ZHILTZOVA. 1996. A. Description of *Neoperla ussurica* sp.n. from the Russian Far East (Plecoptera: Perlidae). Acta Entomol. Slov. (Ljubl.). 4: 13-18, ilustr.
- SIVEC, I. and L. A. ZHILTZOVA. 1997. *Agnetina kryzhanovskii*, a new stonefly from Yunnan, China (Plecoptera: Perlidae). Acta Entomol. Slov. (Ljubl.). 5: 109-112, ilustr.
- STARK, B. P. and I. SIVEC. 1998. Anacroneuria of Peru and Bolivia : (Plecoptera: Perlidae). Scopolia. 40: 1-64. graf. prikazi.
- PODGORNIK, S., U. MAVRI and I. SIVEC. 1999. Stonefly fauna (Insecta, Plecoptera) of the Lipnica Valley, NW Slovenia = Vrbnice (Insecta, Plecoptera) Lipniške doline. Acta Biol. Slov. [Tiskana izd.]. 42: 31-41.
- STARK, B. P. and I. SIVEC. 1999. *Peltoperlopsis malickyi*, a new species of oriental peltoperlidae (Plecoptera). Aquat. Insects. 21: 235-240, ilustr.

- STARK, B. P. and I. SIVĚC. 2000 Redescription of *Microperla geei* Chu (Plecoptera: Peltoperlidae) = Ponovni opis vrbnice *Microperla geei* Chu (Plecoptera: Peltoperlidae). Acta Entomol. Slov. (Ljublj.). 8: 101-106.
- STARK, B. P., M. del C. ZÚÑIGA and I. SIVĚC. 2001. Descriptions of *Anacroneuria* spp. (Plecoptera: Perlidae) from the upper Rio Amazonas drainage, Colombia and Peru. Acta Entomol. Slov. (Ljublj.). 9: 119-122.
- VINÇON, G. and I. SIVĚC. 2001. Contribution to the knowledge of Turkish Leuctridae (Plecoptera). Nouv. Rev. Entomol. (Toulouse). 18: 259-285.
- STARK, B. P. and I. SIVĚC. 2001. Records and description of *Anacroneuria* from Ecuador (Plecoptera: Perlidae). Scopolia. 46: 1-42, graf. prikazi.
- SIVĚC, I. and W. GRAF. 2002. *Perla carantana* - a new species of the genus *Perla* (Plecoptera: Perlidae) from Austria and Slovenia, *Perla carantana* - nova vrsta iz rodu *Perla* (Plecoptera: Perlidae) iz Avstrije in Slovenije. Nat. Slov. [Tiskana izd.]. 4: 31-38.
- SIVĚC, I. and B. P. STARK. 2002. The species of *Perla* (Plecoptera: Perlidae): Evidence from egg morphology. Scopolia. 49: 1-33.
- SIVĚC, I. and A. DIA. 2003. *Isoperla berthelemyi* and *Protonemura phoenicia* spp. n., two new species of stoneflies from Lebanon (Insecta: Plecoptera). Ephemera. 3: 43-51.
- GRAF, W., I. SIVĚC and T. KOVÁCS. 2003. *Perla pallida* Guérin, 1838, in Österreich, Slowenien und Ungarn. Lauterbornia. 47: 33-39.
- STARK, B. P. and I. SIVĚC. 2005. New species of *Tyloperla* (Plecoptera: Perlidae) from Vietnam and Thailand. Illiesia: 1: 1-7.
- SIVĚC, I., L. ZHILTOVA and B. P. STARK. 2005. The eastern Palearctic species of *Agnetina* (Plecoptera: Perlidae). Scopolia 56: 1-21.
- SIVĚC, I. and STARK, B. P. 2008. New species of *Kamimuria* Klapálek (Plecoptera: Perlidae) from Thailand and Vietnam, with notes on Chinese species. Illiesia 4: 110-138.
- LI, W., D. YANG and I. SIVĚC. 2005. Two new species of *Indonemoura* (Plecoptera: Nemouridae) from China. Zootaxa 893: 1-5.
- WANG, Zhi-Jie, Yu-Zhou DU, I. SIVĚC, Ignac, and Zi-Zhong LI. 2006. Records and descriptions of some Nemouride species (Order: Plecoptera) from Leigong Mountain, Guizhou province, China. Illiesia: 2: 50-56.
- STARK, B. P. and I. SIVĚC. 2007. A Synopsis of Styloperlidae (Insecta, Plecoptera) with description of *Cerconychia sapa*, a new stonefly from Vietnam. Illiesia 3: 10-16.
- STARK, B. P. and I. SIVĚC. 2007. Studies of Indonesian Perlidae (Plecoptera), with descriptions of three new species. Illiesia 3: 53-64.
- STARK, B. P. and I. SIVĚC. 2007. New species and records of Asian Peltoperlidae (Insecta: Plecoptera). Illiesia 3: 104-126.
- STARK, B. P. and I. SIVĚC. 2007. Taiwanese species of *Cryptoperla* (Plecoptera: Peltoperlidae). Illiesia 3: 150-156.
- NOVAK, T., F. JANŽEKOVIČ, I. SIVĚC, I. and E. CHRISTIAN. 2007. *Chionea austriaca* in caves and artificial galleries of Slovenia (Diptera, Limoniidae). Revue Suisse de Zoologie 114: 49-57.

- SIVEC, I., HARPER P.P. and T. SHIMIZU. 2008. Contribution to the study of the Oriental genus *Rhopalopsale* (Plecoptera: Leuctridae). *Scopolia*. 64:1-122.
- STARK B. P. and I. SIVEC. 2008. New stoneflies (Plecoptera) from Asia. *Illiesia* 4: 1-10.
- STARK B. P. and I. SIVEC. 2008. New Vietnamese species of the genus *Flavoperla* Chu (Plecoptera: Perlidae). *Illiesia* 4: 59-65.
- STARK B. P. and I. SIVEC. 2008. New species and records of *Neoperla* (Plecoptera: Perlidae) from Vietnam. *Illiesia* 4: 19-24.
- STARK B. P. and I. SIVEC. 2008. Descriptions of male and larval stages for *Neoperlops obscuripennis* Banks (Plecoptera: Perlidae). *Illiesia* 4: 94-98.
- STARK B. P. and I. SIVEC. 2008. *Rhopalopsale mataikan* (Plecoptera: Leuctridae), a new stonefly from Brunei Darussalam. *Illiesia* 4: 139-142.
- STARK B. P. and I. SIVEC. 2008. Studies on *Sinacroneuria* Yang & Yang (Plecoptera: Perlidae) with description of new species from China and Vietnam. *Illiesia* 4: 150-153.
- STARK B. P. and I. SIVEC. 2008. New Vietnamese species of genus *Acroneuria* (Plecoptera: Perlidae). *Illiesia* 4: 154-160.
- STARK B. P. and I. SIVEC. 2008. Systematic notes on *Kiotina* Klapálek and *Hemacroneuria* Enderlein (Plecoptera: Perlidae), with description of four new species. *Illiesia* 4: 161-175.
- STARK B. P. and I. SIVEC. 2008. The genus *Togoperla* Klapálek (Plecoptera: Perlidae). *Illiesia* 4: 208-225.

#### **Review Articles**

- DU, Y., I. SIVEC and J. HE. 1999. A checklist of the Chinese species of the family Perlidae (Plecoptera: Perloidea). *Acta Entomol. Slov.* 7: 59-67.
- SIVEC, I. and B. HORVAT. 2002. Vrhnice (Plecoptera) in vodne muhe poplesovalke (Diptera, Empididae) reke Dragonje. *Varst. Narave.* 19: 53-58.

#### **Short Scientific Articles**

- STARK, B. P. and I. SIVEC. 2001. Systematic notes on Plecoptera: *Anacroneuria proxima* Klapálek (Plecoptera: Perlidae). *Acta Entomol. Slov.* 9: 35-37.
- SIVEC, I. 2005. *Cryptoperla dui*, sp. n., a new stonefly from South China (Plecoptera: Peltoperlidae). *Illiesia*. 1:1-2.
- YANG, D., W. LI, and I. SIVEC. 2005. A new species of *Amphinemura* from south China (Plecoptera: Nemouridae). *Zootaxa* 805: 1-4

#### **Published Scientific Conference Contribution (invited lectures)**

- SHIMIZU, T. and I. SIVEC. 2001. *Sphaeronemoura*, a new genus of the Amphinemurinae (Nemouridae, Plecoptera) from Asia. In V: DOMÍNGUEZ, Eduardo (editor.). Pp. 393-399. *Trends in research in Ephemeroptera and Plecoptera*. New York: Kluwer Academic/Plenum Publishers.
- SIVEC, I. and P-S YANG. 2001. Stoneflies of Taiwan within the Oriental stonefly fauna diversity. In V: DOMÍNGUEZ, Eduardo (editor.). Pp. 401-404. *Trends in research in Ephemeroptera and Plecoptera*. New York: Kluwer Academic/Plenum Publishers.

#### **Published Scientific Conference Contribution**

- NOVAK, T., and I. SIVEC. 1977. Biological researches of pegmatite caves in Slovenia. V: *Proceeding 7th ISC*. Sheffield: Biol. Res. 328-331.

- SIVĀEC, I. 1986. Some characteristics of the Plecoptera fauna in Slovenia. V: *Biogeografia delle Alpi Sud-Orientali: riassunti delle relazioni e delle comunicazioni*. Udine: Società Italiana di Biogeografia 13.
- SIVĀEC, I. 1997. *Helenoperla malickyi*, a new genus of European Perlidae (Plecoptera) from Greece. V: LANDOLT, P. and SARTORI, M. (editors). *Ephemeroptera and Plecoptera : biology - ecology – systematics*. Pp. 473-475. In *Proceedings of the eight International Conference on Ephemeroptera and the Twelfth International Symposium on Plecoptera*, Lausanne, Switzerland.
- MAVRI, U., S. PODGORNIK and I. SIVĀEC. 2001. The influence of some ecological factors on the distribution of Plecoptera in a small subalpine stream. *Verh. - Int. Ver. Theor. Angew. Limnol.* 27: 981-984.

## ANNOUNCEMENTS

The published proceedings from the **XI International Conference on Ephemeroptera, XV International Symposium on Plecoptera** held during August 2004 at Flathead Lake Biological Station, Montana, U.S.A. is now available:

**Hauer, F. R., J. A. Stanford, and R. L. Newell (editors). 2008. International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. University of California Publications in Entomology 128: 1-412.**

The volume is available from University of California Press:

[http://repositories.cdlib.org/ucpress/ucpe/vol\\_128\\_InternationalAdvances\\_MayfliesandStoneflies/](http://repositories.cdlib.org/ucpress/ucpe/vol_128_InternationalAdvances_MayfliesandStoneflies/)

and the volume ( 7.9 MB, PDF File) is available online at

<http://repositories.cdlib.org/ucpress/>

**Ninth North American Plecoptera Symposium at Sagehen Creek Field Station, California**

**NAPS-9  
Sagehen Creek Field Station  
22-25 June 2009**



The next meeting of the North American Plecoptera Symposium will be at the University of California, Berkeley Sagehen Creek Field Station. Information about Sagehen is available at their website (<http://sagehen.berkeley.edu>). The costs (cabin space, food and registration) for the 3 days will be \$245.00 per person, payable by check or cash at registration. We have reserved 36 places in the cabins so respond quickly (see below) for one of those. Some are already reserved. Bring linens or sleeping bag, pillow, towel and a flashlight. There will be separate cabins for ♂♂ and ♀♀. Anyone having particular food requirements should notify Bill Shepard so the caterer can be advised. Those wanting to camp will find campgrounds located about 10 miles southeast of Sagehen. We recommend Boca Reservoir or Prosser Creek Reservoir.

There is usually an extreme fire danger in the summer and the surrounding forests have a fire ecology. Thus, there is absolutely NO SMOKING at Sagehen, even in your own car. If you must smoke, you have to drive out to the highway. The weather is likely to be hot and dry during the day, but be prepared for freezes at night and the occasional summer rainstorm. There will be a risk form to be signed at registration. The risks can include exposure to hanta virus and Lyme disease, but the most common malady is a twisted ankle due to uneven terrain. No food can be kept in your cabin or car due to the high probability of attracting rodents or bears. For similar reasons, no pets are allowed.

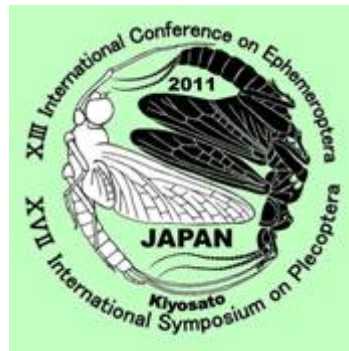
The schedule is listed below. An afternoon of collecting is planned for Wednesday 22 June. Due to the abundance of good collecting sites around Sagehen in all directions, there will be no organized trip involving everyone. However, there will be a list of locations that have been productive in the past. Additionally, Andy Sheldon has offered to guide anyone who wants to hit springs in the upper Sagehen Basin. Sagehen Creek at the station is also quite good for stoneflies and other aquatics.

Our plans now are for talks to be 20 minutes long, including time for questions. However, they might be cut to 15 minutes if there are sufficient submissions.

Those flying will want to consider arriving in Reno, Sacramento, Oakland or San Francisco. Flight costs vary greatly depending on departure and arrival points, so check all of these airports. There will be no shuttle to Sagehen. There are no recreation activities at the station except for hiking, birding, etc. However, numerous types of recreation are available before or after the meeting in surrounding areas such as Lake Tahoe, Reno, Sacramento and the San Francisco Bay area. These same areas offer outstanding collecting opportunities as well.

Please send Bill Shepard ([william.shepard@csus.edu](mailto:william.shepard@csus.edu)) notice of attending and Andy Sheldon ([andysheldon@comcast.net](mailto:andysheldon@comcast.net)) abstracts of talks by **15 February 2009**.

### **XIII International Conference on Ephemeroptera and the XVII International Symposium on Plecoptera in Japan in 2011**



The proposal to host the **XIII International Conference on Ephemeroptera and the XVII International Symposium on Plecoptera** in Japan in 2011 was accepted at the Stuttgart meeting. Drs. Yasuhiro Takemon and Koji Tojo will organize the meeting. It will be held at Kiyosato, a town at the base of Mt. Yatsugatake in the Yamanashi Prefecture, Japan. The Joint Symposium will be held at the Sei-sen-ryo Lodge. It is not too early to start planning your trip to Japan and your future scientific presentations. Additional information is now available on the website: <http://cse.ffpri.affrc.go.jp/yoshi887/jointconference2011.html> Please contact Drs. Yasuhiro Takemon and Koji Tojo for further information:

[takemon@wrcs.dpri.kyoto-u.ac.jp](mailto:takemon@wrcs.dpri.kyoto-u.ac.jp)  
[ktojo@shinshu-u.ac.jp](mailto:ktojo@shinshu-u.ac.jp)





**Dr. Yasuhiro Takemon, one of the conveners of the 2011 meeting in Japan.**

## **ELECTRONIC AVAILABILITY OF PERLA**

It has been brought to the attention of the **Standing Committee** on several occasions by members that *Perla* should become available only in electronic form. If the membership is interested in this approach, please contact any member of the **Standing Committee** and provide your opinion. Currently, on the website **PLECOPTERA SOCIETY OF NORTH AMERICA** hosted by **Dr. Edward DeWalt**, <http://plsa.inhs.uiuc.edu/plecoptera/Perla.aspx> the last four issues of *Perla* **2005-Perla 2008** are available as a pdf. *Perla* **2009** will also become available on this site.

**NEW MEMBER OF THE STANDING COMMITTEE INTERNATIONAL  
SOCIETY OF PLECOPTEROLOGISTS**

**Dr. J. Manuel Tierno de Figueroa** is a new member of the Committee.

Dear colleagues,

The aim of my message is to acknowledge again your invitation for being a member of the Plecoptera committee, this time to all the members of the committee. As I told to Drs. Stewart and Brittain, it is for me a great honour and pleasure, and I will be very happy to collaborate with all of you in any aspect related to the committee and its activities.

Yours sincerely,

Dr. J. Manuel Tierno de Figueroa  
Dpto. de Biología Animal  
Facultad de Ciencias  
Universidad de Granada  
18071 (Granada, España)  
Telf.: 958 241000 Ext: 20099  
Fax: 958 243238

**Obituary**

**Ian Dudley McLellan**  
22.2.1924 - 28.11.2008



**Ian D. McLellan** was born in the small coastal town of Westport, South Island, New Zealand. The fourth son in a family of seven boys, in childhood he led an outdoor rural life, heavily influenced by, and revelling in the rich natural environment of mountains, forests and sea of the West Coast. At Westport Technical High School his strengths were in mathematics and sciences. He initially began training as a teacher in 1942 but World War II intervened and he joined the Royal New Zealand Air Force, training for aircrew in Canada and England. In 1944 he joined 75 (NZ) Squadron RAF and saw service over Europe. His most gratifying memories were associated with the dropping of emergency food supplies into parts of the occupied Netherlands in April and May 1945.

In 1946 Ian returned to complete his training in Christchurch as a schoolteacher and the following year took up a teaching position in Westport. After further experience in several schools in northern Westland he became Head of the Science Department at Buller High School, Westport, from which he retired in 1981.

He married Nancy Herd, whom he had known since schooldays, in 1946. They had two children, Alister and Christine. Nancy died in 1982. In 1985 he married Ngaire Beattie, who predeceased him in 1992.

The pre-World War II West Coast of New Zealand retained something of its nineteenth century pioneering, colonial heritage. Gold rushes, timber milling and coal mining were the exploitative industries which dominated the area, as well as sheep and cattle farming. Hunting and fishing were important influences on his early life and he retained these interests as a schoolteacher. In particular the well-established brown trout fishing rivers of Westland attracted him. He quickly realised that knowledge of freshwater entomology would enhance his angling skills. A natural aptitude for careful observation soon led him to an appreciation for the taxonomic and ecological work which had already been done, largely by English biologists and visiting fly fishermen.

In the early 1960's he became particularly interested in stoneflies and soon discovered that entomologists working in New Zealand at that time were committed largely to ecological and conservation issues in which plecopteran taxonomy made up only a small part. The opportunity for an independent worker with a rich and largely undescribed stonefly fauna almost literally on his doorstep was there waiting for him.

In 1966, Joachim Illies during his Plecoptera collecting tour in the southern hemisphere visited and collected with Ian whom he invited to be a visiting scientist at Schlitz, Germany. During the year at Schlitz, Ian's revision laid the foundations of the taxonomy of Australian Gripopterygidae. The present subfamily classification follows Ian's 1977 paper. During his time in Germany, Ian also fished and hunted European fauna that has not been introduced to New Zealand, especially pike, carp, and roedeer, and collected hair and feather samples of exotic animals, for example squirrel and badger to

tie artificial trout flies. Ian and Nancy became close friends of staff and visitors of the Schlitz institute, especially Teizi Kawai (Japan) and W. D. Williams (Australia). Many Schlitz citizens missed the McLellans when they returned home in 1968.

From then on, Ian's scientific activities concerned the entire southern hemisphere, although the New Zealand stonefly fauna always remained at the core of his work. Ian attended the 4<sup>th</sup> International Symposium on Plecoptera at Abisko/Sweden in 1968 and several subsequent international symposia. At the 12<sup>th</sup> International Symposium on Plecoptera in Lausanne (1995) he was awarded the Plecoptera Lifetime Achievement Award. Ian's warm-hearted cheerful way, his knowledge and experience earned him many friends from all over the world. Whenever there was an opportunity, Ian visited Schlitz where he was always welcome, like a family member. His visits were always enjoyable and scientifically rewarding.

In his many publications, Ian proposed two new subfamilies of Plecoptera, named or co-authored 20 new stonefly genera and over 100 new species from the southern hemisphere. However, Ian's interest and activities were by no means restricted to Plecoptera. He was involved in conservation projects and collected and knew many aquatic insects other than stoneflies. For example, he discovered *Nothohoraia micrognathia* Craig, New Zealand's most unusual net-winged midge, and revised the Thaumaleidae, naming 9 new species and one new genus from New Zealand. *Podaena maclellani* (Zwick, 1975) (Col.: Hydraenidae), *Stenoperla maclellani* Zwick, 1979 (Plec.: Eustheniidae), and *Zelandopsyche maclellani* McFarlane, 1981 (Trich.: Oeconesidae) from New Zealand were named in Ian's honour.

Students of aquatic insects, especially stoneflies, lost and sincerely miss a most amiable colleague, close friend and very successful scientist whom they will always remember.

*Terry Hitchings (Christchurch), Peter Zwick (Schlitz)*

### **Bibliography of Ian D. McLellan**

The bibliography includes all of Ian's Plecoptera papers and, as an appendix, his publications on Diptera plus some general studies.

McLellan, I. D. 1965. Notes on some New Zealand Plecoptera. Transactions of the Royal Society of New Zealand, Zoology 6(22): 229-234.

McLellan, I. D. 1966. Genitalia and nymphs of some New Zealand Gripopterygidae (Plecoptera). Transactions of the Royal Society of New Zealand, Zoology 8(2): 5-22.

McLellan, I. D. 1967. New Gripopterygids (Plecoptera) of New Zealand. Transactions of the Royal Society of New Zealand, Zoology 9(1): 1-15.

- McLellan, I. D. 1968. A revision of the genus *Notonemoura* (Plecoptera: Notonemourinae). Transactions of the Royal Society of New Zealand, Zoology 10(14): 133 -140.
- McLellan, I. D. 1969. A revision of the genus *Zelandobius* (Plecoptera: Antartoperlinae). Transactions of the Royal Society of New Zealand, Biological Sciences 11(3): 25-41.
- McLellan, I. D. 1971. A revision of Australian Gripopterygidae (Insecta: Plecoptera). Australian Journal of Zoology, Suppl. 2: 1-79.
- McLellan, I. D. 1973. Biogeography of aquatic insects in New Zealand. New Zealand Entomologist 5(3/4): 247-249.
- McLellan, I. D. 1973. Revisions and new taxa in New Zealand Notonemouridae (Insecta: Plecoptera). New Zealand Journal of Marine and Freshwater Research 6 [1972] (4): 469-481.
- McLellan, I. D. 1975. XIV. The freshwater insects. Pp. 537-559 in Kuschel, G. (ed.), Biogeography and Ecology in New Zealand. Monographiae Biologicae 27.
- McLellan, I. D. 1977. New alpine and southern Plecoptera from New Zealand, and a new classification of the Gripopterygidae. New Zealand Journal of Zoology 4(2): 119-147.
- McLellan, I. D. 1979. New Zealand terrestrial stoneflies and some ideas on speciation. Gewässer und Abwässer 64: 56-59.
- McLellan, I. D. 1983. A wingless alpine stonefly from New Zealand and further information on genus *Holcoperla* (Plecoptera: Gripopterygidae). New Zealand Journal of Zoology 10: 263-266.
- McLellan, I. D. 1984. A revision of *Spaniocercoides* Kimmins (Plecoptera: Notonemouridae), and description of new species. New Zealand Journal of Zoology 11(2): 167-178.
- McLellan, I. D. 1987. A revision of *Spaniocerca* Tillyard (Plecoptera: Notonemouridae) and descriptions of new species. New Zealand Journal of Zoology 14: 257-268.
- McLellan, I. D. 1991. Notonemouridae (Insecta: Plecoptera). Fauna of New Zealand (22): 7-62.
- McLellan, I. D. 1993. Antartoperlinae: Insecta: Plecoptera. Fauna of New Zealand (27): 1-70.
- McLellan, I. D. 1996. A revision of *Stenoperla* (Plecoptera: Eustheniidae) and removal of Australian species to *Cosmioperla* new genus. New Zealand Journal of Zoology 23(2): 165-182.
- McLellan, I. D. 1997. *Austroperla cyrene* an adaptable and unpalatable New Zealand stonefly. Pp. 117-118 in Landolt, P. and M. Sartori (eds), Ephemeroptera & Plecoptera Biology-Ecology-Systematics, Fribourg: Mauron + Tinguely & Lachat SA.
- McLellan, I. D. 1997. *Austroperla cyrene* Newman (Plecoptera: Austroperlidae). Journal of the Royal Society of New Zealand 27: 271-278.
- McLellan, I. D. 1998. A revision of *Acroperla* (Plecoptera: Zelandoperlinae) and removal of species to *Taraperla* new genus. New Zealand Journal of Zoology 25: 185-203.
- McLellan, I. D. 1999. A revision of *Zelandoperla* Tillyard (Plecoptera: Gripopterygidae: Zelandoperlinae). New Zealand Journal of Zoology 26: 199-219.

- McLellan, I. D. 2000. Additions to New Zealand notonemourid stoneflies (Insecta: Plecoptera). *New Zealand Journal of Zoology* 27: 21-27.
- McLellan, I. D. 2000. A revision of *Cristaperla* (Plecoptera: Notonemouridae) and some comments on Notonemouridae and its generic groups. *New Zealand Journal of Zoology* 27: 233-244.
- McLellan, I. D. 2001. Plecoptera. In: Invertebrate survey of a modified native shrubland, Brookdale Covenant, Rock and Pillar Range, Otago, New Zealand, ed. J. G. B. Derraik *New Zealand Journal of Zoology* 28: 273-290.
- McLellan, I. D. 2001. *Falklandoperla kelper* new genus and species of Gripopterygidae (Plecoptera) from the Falkland Islands. *Aquatic Insects* 23: 153-160.
- McLellan, I. D. 2001. A Revision of South American Austroperlidae (Plecoptera). *Aquatic Insects* 23: 233-251.
- McLellan, I. D. 2003. Six new species and a new genus of stoneflies (Plecoptera) from New Zealand. *New Zealand Journal of Zoology* 30: 101-113.
- McLellan, I. D. 2003. Stewart Island stoneflies. Pp. 367-371 in Gaino, E. (ed.), *Research update on Ephemeroptera and Plecoptera*; University of Perugia.
- McLellan, I. D. 2005. The larva of *Spaniocercoides hudsoni* Kimmins (Plecoptera: Notonemouridae) from New Zealand. *Illiesia* 1(7): 43-46.
- McLellan, I. D. 2006. Endemism and biogeography of New Zealand Plecoptera. *Illiesia* 2(2): 15-23.
- McLellan, I. D. 2006. The nymph of *Holcoperla angularis* (Wisely) (Plecoptera: Gripopterygidae) from New Zealand. *Illiesia* 2(8): 57-60.
- McLellan, I. D. 2007. Additions to *Zelandobius* (Plecoptera: Gripopterygidae Antartoperlinae) from New Zealand. *Illiesia* 4(2):11-18.
- McLellan, I. D. and M. J. Winterbourn. 1968. A new genus of Notonemourinae (Plecoptera, Capniidae) from New Zealand. *Transactions of the Royal Society of New Zealand, Zoology* 10(13): 127-131.
- McLellan, I. D. and P. Zwick. 1996. *Austronemoura auberti* new species and other new Chilean Notonemouridae (Plecoptera). *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 69: 107-115.
- McLellan, I. D. and P. Zwick. 2007. New species of and keys to South American Gripopterygidae (Plecoptera). *Illiesia* 3(4): 20-42.
- McLellan, I. D., M. Mercado, and S. Elliott. 2005. A new species of *Notoperla* (Plecoptera: Gripopterygidae) from Chile. *Illiesia* 1(5): 33-39.
- McLellan, I. D., M. L. Miserendino, M. E. T. Hollmann. 2006. Two new species of *Notoperla* (Plecoptera: Gripopterygidae) and a redescription of *Notoperlopsis femina* Illies. *Zootaxa* 1140: 53-68.
- McLellan, I. D., I. R. Wais, and L. I. de Cabo. 1990. The first record of stoneflies from the Malvinas/Falkland Islands. *Aquatic Insects*. 12 (3): 177-180
- Patrick, B. H., B. I. P. Barratt, J. B. Ward, and I. D. McLellan 1993. *Insects of the Waipori Ecological District*. Department of Conservation, Dunedin, New Zealand, Miscellaneous Series No. 16.

## Appendix

- McLellan, I. D. 1974. Habitat: A mountain stream. *New Zealand Nature Heritage* 1(14): 378-382.
- McLellan, I. D. 1974. Habitat: A mountain tarn. *New Zealand Nature Heritage* 3(34): 946-949.
- McLellan, I. D. 1974. Aquatic Insects (1). *New Zealand Nature Heritage* 4(46): 1265-1272.
- McLellan, I. D. 1983. New diagnosis for genus *Austrothaumalea*, and redescription of *A. neozelandica* (Diptera: Thaumaleidae). *New Zealand Journal of Zoology* 10: 267-270.
- McLellan, I. D. 1988. A revision of New Zealand Thaumaleidae (Diptera: Nematocera) with descriptions of new species and a new genus. *New Zealand Journal of Zoology* 15: 563-575.
- Zwick, P. and I. D. McLellan. 1999. The first instar larva of *Nothohoraia* (Diptera: Blephariceridae). *Aquatic Insects* 21: 317-320.

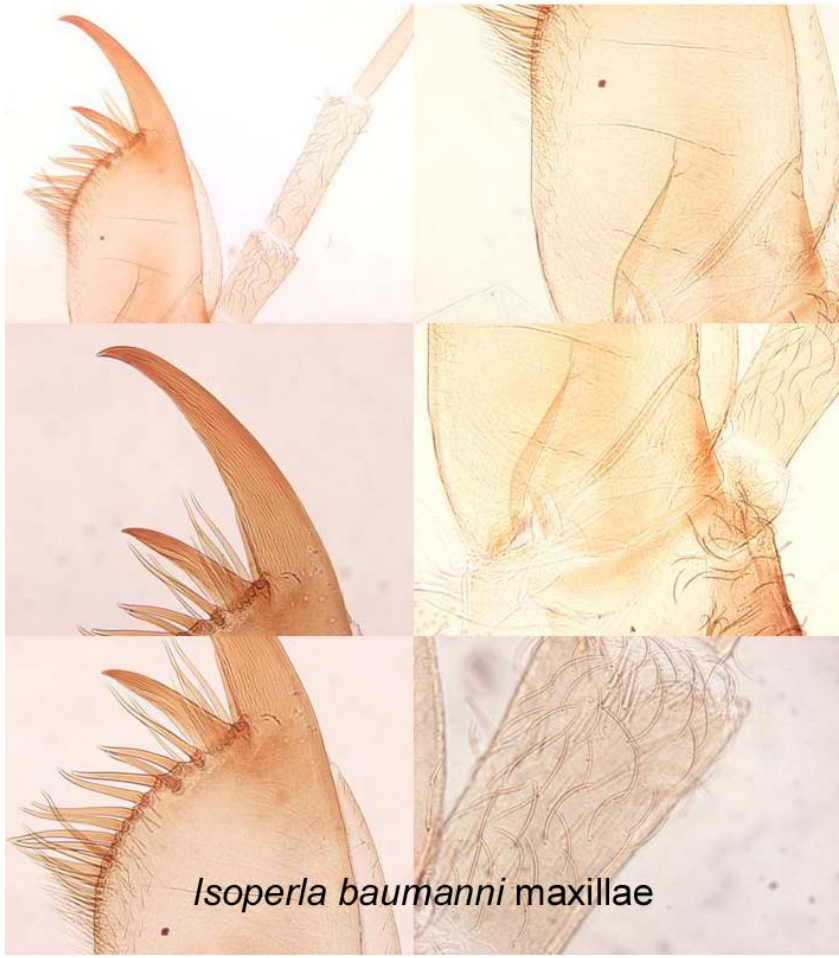
## MEMBER NEWS

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

I have been collecting and rearing stoneflies since arriving at Paradise, CA in May 2006. My research continues to focus on intersexual vibrational communication and as of August 2008, has recorded 2,697 signals from 18 species representing five California stonefly families. Production taxonomy duties take up much of my time; so anyone wishing to assist in the analysis is more than welcome (help!).

My interests in Perlodidae taxonomic questions have expanded. These include an interesting *Isoperla* larval morphological project to better understand the California species. I have been applying the methods of Wisconsin *Isoperla* specialists, Hilsenhoff & Billmyer (1973) using the maxillae with associated lacinia, galea and palps to aid in species determination (See *Isoperla baumanni* Figure below). To examine the maxillae, I suggest slide-mounting the structure using a clearing agent like CMC-10. Other nearby stream populations of potential interesting species-level larval morphological projects include: *Skwala americana* and *S. curvata*; *Kogotus nonus* and *Rickera sorpta*; *Cultus pilatus* and *C. tostonus*; *Isoperla adunca*, *I. baumanni*, *I. bifurcata*, *I. fulva*, *I. miwok*, *I. pinta* and *I. quinquepunctata*.

I continue to collect larval series for life history research but find these projects difficult to complete and so invite prospective students to take them over by visiting the ABL and possibly pursuing a Masters degree. The ABL has limited work space and one graduate student could work part-time in sample production to help with the costs of their education.



*Isoperla baumanni* maxillae



Jane Earle, Research Associate Academy of Natural Sciences of Philadelphia, 20 Red Fox Lane, Mechanicsburg, PA, 17050, [janeearle7@msn.com](mailto:janeearle7@msn.com)

Continuing studies of Pennsylvania stoneflies as of December 2009: an update of the Pennsylvania species list with additional records, locations and habitat information on rare species is ready for pre-publication review; GIS mapping of Pennsylvania A species; interpretation of distribution maps in relation to ancient and present day river flow directions; stonefly tolerance to acid deposition and coal mine drainage.

Also a publication in April 2009 issue of Entomological News on stoneflies of a small stream in New Jersey. I am requesting unpublished records for Pennsylvania stonefly species to add to my database, and maps for distribution studies.

From the Dr. Romolo Fochetti Laboratory:

“I and my PhD student Valentina Amore are studying hemocyanin in the Plecoptera. We have extended the search for hemocyanin to several species of European Plecoptera families, with the aim to verify how this ancient trait is still retained across the order and to investigate why stoneflies have retained it.”

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

In my "pseudoretirement" since 2000, I have continued to concentrate on increasing taxonomic resolution of stonefly nymphs of workable sized genera to species level, and life histories of species especially in Oregon temporary streams, with Norm Anderson. Genera or species recently published or in various stages of progress:

1. *Strophopteryx* nymphs with Jane Earle- published 2008.
2. *Malenka bifurcata*, *Ostrocerca dimicki* and *Soyedina producta* nymphs with Norm Anderson- published 2008.
3. *Sweltsa* nymphs with Bill Stark- in progress.
4. *Capnia* nymphs (California) and *Paracapnia disala* nymphs with Eugene Drake- in progress.
5. *Oemopteryx vanduzeeae* nymphs.
6. *Megarcys* nymphs with Boris Kondratieff- in progress.
7. Life history and nymphal generic character development of *Sweltsa adamantea* with Norm Anderson- In Press Trans. Amer. Ent. Soc.
8. Life history and nymphal generic character development of *Malenka bifurcata* with Norm Anderson- In Press, Proceedings of last summer's International stonefly symposium- Aquatic Insects.

Also, working with Dick Baumann on additional records of stoneflies from Alaska to supplement those in the 2006 book, and other projects.

## SHORT ARTICLES

### **Modeling of Stonefly Historical Distributions Using Museum Specimens**

R. E. DeWalt, Yong Cao, Leon Hinz, and Tari Tweddale. Illinois Natural History Survey

The stonefly fauna of Illinois is probably the best known of any large geographic area in the world. The state supported at least 77 species historically (DeWalt 2008), but 20 have been extirpated and two are extinct (*Alloperla roberti* Surdick and *Isoperla conspicua* Frison) (DeWalt et al. 2005). The reason these statements are possible is due to the vast number specimens that have been deposited over the years by the likes of C. A. Hart, Benjamin D. Walsh, Theodore H. Frison, Herbert H. Ross, William E. Ricker, Donald W. Webb, and others. The 5,770 Illinois specimen records (= specimens in vials or on a pin), representing 41,399 specimens, have been used in several analyses of assemblage change within the state. Still, we do not know what lived in every drainage, nor can we say with confidence what factors contributed to their natural distribution.

We are currently modeling historic (pre-1970) distributions to produce natural occurrence probabilities for watersheds across the state and examining which local and watershed scale factors might explain these distributions. The model used was Random Forests (Cutler et al. 2007), which builds many dendrograms (>5,000) using random subsets of predictors and then averages the predictions. It eliminates “over-fitting” common to other modeling techniques and the use of multiple correlated predictors is not problematic. The model requires both presence and absence data. This technique uses bootstrapping to create an average result for each species. Additionally, it uses only 67% of the records for any one of thousands of iterations, and as such, validates itself with unused or “out-of-bag” sites. Three accuracy measures express the model’s ability to effectively match prediction with observation. These include PCC = Overall Percentage Correctly Classified, Sensitivity = percentage of absences correctly classified, Kappa = measure of agreement between predicted presences and absences with observed presences and absences corrected for agreement that might be due to chance alone. Kappa values may be given the following qualitative ratings:  $\leq 0$  = agreement less than chance alone, 0.01-0.2 = slight agreement, 0.21-0.4 = fair agreement, 0.41-0.60 = moderate agreement, 0.61-0.80 = substantial agreement, and 0.81-0.99 = almost perfect agreement.

Modeling efforts utilized INHS Insect Collection and Frison (1935, 1942) records for which the taxonomy was certain. Only spring and summer emerging species were modeled, a guild that experienced the greatest decline in Illinois (DeWalt et al. 2005). The work utilized 1,500 specimen records, resulting in a species presence/absence-by-site data matrix with 53 taxa and 203 unique locations. Negative records for a given species were derived from the positive records of other species available at the same time, e.g. the presence of *Perlesta* sp. nymphs or adults, but no *Agnetina*, would be regarded as a negative record for species of *Agnetina*. This precluded use of a large number of winter stonefly records since most of them would have been adult collections and could not, therefore, have an equal probability of obtaining nymphs of summer-emerging species.

Fifty-seven stream reach- and watershed-level variables were accumulated from an Illinois Department of Natural Resources dataset at the 1:100,000 scale for stream arcs, e.g., a stream segment confluence to confluence (Holtrop et al. 2005). These variables include climate parameters, slope, geology, soil types, presettlement vegetation, drainage area, stream width, modeled stream temperature, and drainage basin affiliation. The values of these variables are largely independent of human disturbance, and as such, are useful for modeling historic distributions.

We limited model entry to those species with eight positive records, resulting in 14 species being modeled. These included five perlodids, most of which are relatively abundant in Illinois, but may be restricted to certain regions or to streams of a given size. Seven species of Perlidae were modeled, their habitat needs spanning the full range of stream sizes available in Illinois. Several have experienced dramatic range reduction, two have been extirpated (DeWalt et al. 2005).

The performance of the models was assessed using four parameters: Overall Percentage Correctly Classified (PCC); Sensitivity, the percentage of presences correctly classified; Specificity, the percentage of absences correctly classified; and Kappa, a measure of agreement between predicted presences and absences with actual presences and absences corrected for agreement that might be due to chance alone. The values of Kappa may be categorized in the following way:  $\leq 0$  = agreement less than chance alone, 0.01-0.2 = slight agreement, 0.21-0.40 = fair agreement, 0.41-0.60 = moderate agreement, 0.61-0.80 = substantial agreement, and 0.81-0.99 = almost perfect agreement (Citation).

Four reasonably good distribution models resulted from our research (Table 2). Sensitivity averaged 68% with *Clioperla clio* presences being predicted 100% of the time. The model predicted absences much better than it did presences (mean = 88%). Kappa values varied greatly, with three of four species having fair and substantial agreement of predicted with actual presences and absences.

We were also able to assess which variables were influential in the distribution of species (Fig. 1). *Acroneuria frisoni* was found to be eastern distributed, Ohio and Wabash rivers inhabiting, and a mostly glaciated landscape Illinois species. These predictors agree well with the distribution of the species in Illinois (Fig. 2). Other species were influenced by other combinations of variables, the specifics of which will be shared in the upcoming Proceedings of our latest mayfly & stonefly international meeting.

Of course, this modeling effort is focused on Illinois, so the results may not be reflective of the historical distributions across a wider geographic region. In this respect, it is a test case for expanding our efforts into all the Midwest of the USA and Canada. We have recently amassed all Midwest stonefly specimen records from regional museums, representing about 27,000 records. This is a rich source of distributional data that will undoubtedly improve our models for a number of species. Refinement of the models is possible through addition of more environmental variables and by use of models that require only positive data. The latter would allow us to use both historic and contemporary records simultaneously for all species, since we would not have to generate meaningful negative records that would force us to use only subsets of the data.

This work is significant in that it may allow for more accurate determination of loss of species from the region and states, help us determine what factors are important in species distribution, and help to inform a number of conservation related issues such as reintroduction efforts and the building of a “Red Book” for stoneflies for the region.

#### Reference Cited

Cutler, D.R., T.C. Edwards Jr., K.H. Beard, A. Cutler, K.T. Hess, J. Gibson, J. J. Lawler. 2007. Random Forests for classification in ecology. *Ecology* 88: 2783-2792.

- DeWalt, R. E. 2008. Checklist of Known Illinois Plecoptera (Stoneflies)  
[http://www.inhs.uiuc.edu/animals\\_plants/insect/ILplecoptera.html](http://www.inhs.uiuc.edu/animals_plants/insect/ILplecoptera.html).
- DeWalt, R. E., C. Favret, and D. W. Webb. 2005. Just how imperiled are aquatic insects? A case study of stoneflies (Plecoptera) in Illinois. *Ann. Entomol. Soc. Am.* 98: 941-950.
- Favret, C., and R. E. DeWalt. 2002. Comparing the Ephemeroptera and Plecoptera specimen databases at the Illinois Natural History Survey and using them to document changes in the Illinois fauna. *Ann. Entomol. Soc. Am.* 95: 35-40.

Table 1. Stonefly species modeled, the number of unique positive and negative sites, and the total number of museum specimen records from the INHS Insect Collection. Conservation status is from DeWalt et al. (2005), increasing number indicates lower imperilment, SX=extirpated.

| Taxon  | Status  | Records  |          |        |
|--|---------|----------|----------|--------|
|  |         | Positive | Negative | Museum |
| <b>Perlodidae</b>  |         |          |          |        |
| <i>Clioperla clio</i> (Newman, 1839)                     | S2      | 19       | 175      | 71     |
| <i>Hydroperla crosbyi</i> (Needham & Claassen, 1925)     | S2      | 17       | 177      | 48     |
| <i>Isoperla bilineata</i> (Say, 1823)                    | S5      | 64       | 130      | 273    |
| <i>Isoperla decepta</i> Frison, 1935                     | S5      | 19       | 175      | 57     |
| <i>Isoperla nana</i> (Walsh, 1862)                       | S5      | 9        | 185      | 33     |
| <b>Perlidae</b>  |         |          |          |        |
| <i>Acroneuria abnormis</i> (Newman, 1838)                | S2      | 30       | 164      | 260    |
| <i>Acroneuria frisoni</i> Stark & Brown, 1991            | S2      | 28       | 166      | 201    |
| <i>Agnentina capitata</i> (Pictet, 1841)                 | SX      | 17       | 177      | 114    |
| <i>Attaneuria ruralis</i> (Hagen, 1861)                  | SX      | 27       | 167      | 71     |
| <i>Perlesta decipiens</i> (Walsh, 1862)                  | S5      | 23       | 171      | 132    |
| <i>Perlesta lagoi</i> or <i>nitida</i> —or a new species | S5      | 18       | 176      | 31     |
| <i>Perlesta</i> Banks, 1906                              | Most S5 | 36       | 158      | 79     |
| <i>Perlinella drymo</i> Newman, 1839                     | S2      | 17       | 177      | 32     |
| <b>Pteronarcyidae</b>                                    |         |          |          |        |
| <i>Pteronarcys pictetii</i> Hagen, 1873                  | S3      | 16       | 178      | 98     |
|  |         |          |          | 1,500  |

Table 2. Results of Illinois stonefly distribution modeling, predicted and observed presence and absence and four measures of accuracy: Percentage Classified Correctly (PCC), Sensitivity, Specificity, and Kappa. See text for definition of measures of accuracy.

| Species                   | Predict Type | O_Pres | O_Abs | Total | PCC | Sensitivity | Specificity | Kappa | Agreemt     |
|---------------------------|--------------|--------|-------|-------|-----|-------------|-------------|-------|-------------|
|                           |              |        |       |       |     |             |             |       |             |
| <i>Agnentina capitata</i> | P_Pres       | 12     | 6     | 18    |     |             |             |       |             |
|                           | P_Abs        | 5      | 171   | 176   | 94  | 71          | 97          | 0.65  | Substantial |
| <i>Clioperla clio</i>     | P_Pres       | 17     | 177   |       |     |             |             |       |             |
|                           | P_Abs        | 5      | 15    | 20    |     |             |             |       |             |
| <i>Acroneuria frisoni</i> | P_Pres       | 0      | 175   | 175   | 92  | 100         | 92          | 0.37  | Fair        |
|                           | P_Abs        | 5      | 190   |       |     |             |             |       |             |
| <i>Isoperla bilineata</i> | P_Pres       | 6      | 22    | 28    |     |             |             |       |             |
|                           | P_Abs        | 9      | 157   | 166   | 84  | 40          | 88          | 0.20  | Slight      |
|                           | P_Pres       | 15     | 179   |       |     |             |             |       |             |
|                           | P_Abs        | 30     | 34    | 64    |     |             |             |       |             |
|                           | P_Pres       | 19     | 111   | 130   | 73  | 61          | 77          | 0.34  | Fair        |
|                           | P_Abs        | 49     | 145   |       |     |             |             |       |             |

Figure 1. Predictors for one *Acroneuria frisoni*. Y axis is the log of probabilities, X axis is the value for environmental variables.

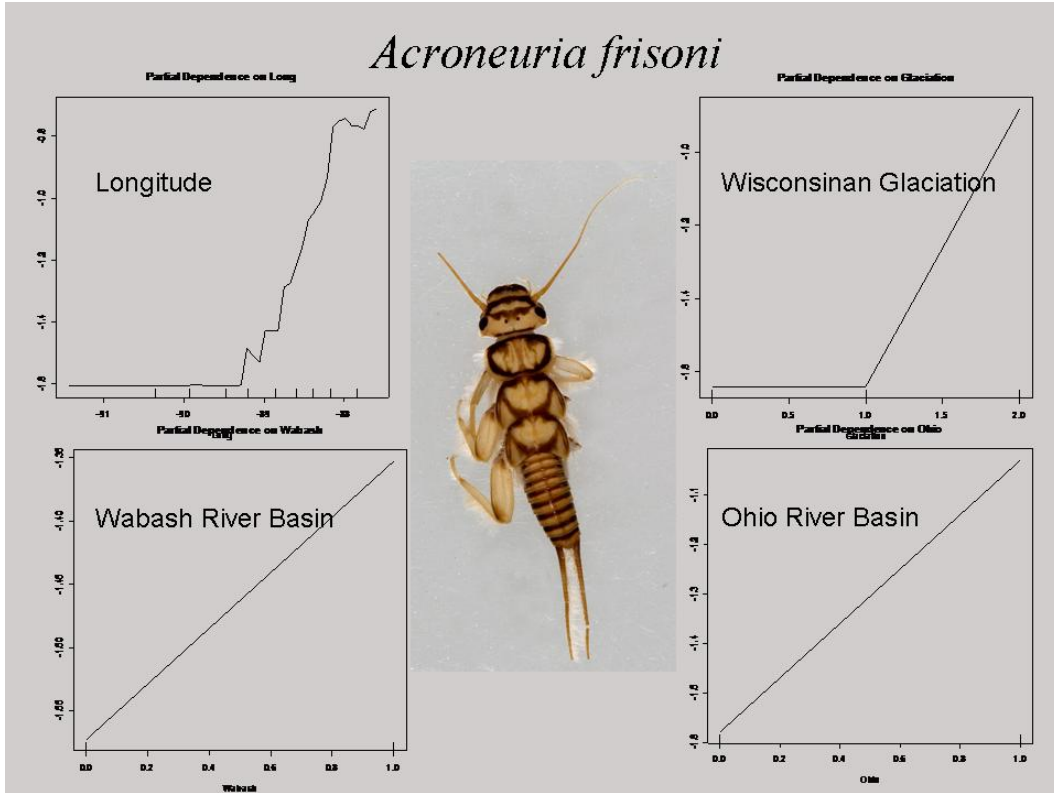
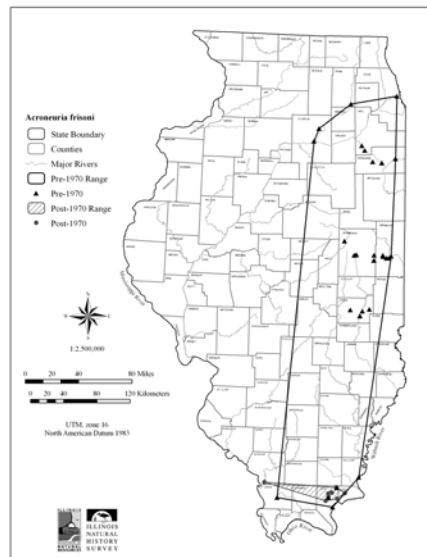


Figure 2. Historical and contemporary range for Frison's Stonefly.



## Stonefly Collecting During the XVI International Symposium on Plecoptera, 2008

B. C. Kondratieff and R. W. Baumann, Colorado State University; Brigham Young University.

Traditionally, the participants of the Conference are taken on field trips to nearby representative aquatic habitats. Dr. Arnold Staniczek and his staff did not disappoint us. On Wednesday 11 June, Arnold led us on a wonderful mid-conference field trip to one of the best Cistercian monasteries in Germany, the Bebenhausen Monastery. A small nearby stream, the Goldersbach was sampled on 14 June. Additionally, Arnold and his family took us on a very productive Post-Conference field trip into the southern Black Forest (Schwarzwald) including the Wutach Gorge and Lake Titisee.

The authors collected the following 14 species of stonefly species during the two field trips, all typical regional species. Other collectors may have taken additional species. It is noted that this area received heavy rainfall in preceding weeks, possibly reducing diversity and abundances.

### Bebenhausen Monastery field trip

Goldersbach  
Tübingen-Bebenhausen

*Amphinemura sulcicollis* (Stephens), 6 ♂, 2 ♀.

*Protonemura intricata* (Ris), 1 ♀.

*Leuctra albida* Kempny, 6 ♂.

*Isoperla oxylepis* Despax, 1 ♀.

### Post-conference field trip

Lotenbach  
Lotenbachklamm  
Bonndorf im Schwarzwald

*Nemoura marginata* (Pictet), 5 ♂, 5 ♀.

*Protonemura intricata* (Ris), 1 ♂.

*Protonemura risi* (Jacobson and Bianchi), 17 ♂, 5 ♀.

*Amphinemura sulcicollis* (Stephens), 4 ♂, 7 ♀.

*Leuctra cingulata* Kempny, 14 ♂, 5 ♀.

*Siphonoperla torrentium* (Pictet), 3 ♂.

Wutach River  
at Gauchach River  
Schattenmühle  
Bonndorf im Schwarzwald

*Nemoura marginata* (Pictet), 1 ♂.  
*Amphinemura sulcicollis* (Stephens), 9 ♂, 6 ♀.  
*Leuctra albida* Kempny, 5 ♂, 1 ♀.  
*Leuctra cingulata* Kempny, 1 ♂, 2 ♀.  
*Isoperla rivulorum* (Pictet), 1 ♂, 4 ♀.  
*Perla marginata* (Panzer), 9 ♂, 13 ♀.  
*Siphonoperla torrentium* (Pictet), 3 ♂, 8 ♀.

Wutach River  
Wutachmühle  
Bonndorf im Schwarzwald

*Amphinemura sulcicollis* (Stephens), 9 ♂, 9 ♀.  
*Nemoura* sp. 1 ♀.  
*Protonemura intricata* (Ris), 2 ♂, 1 ♀.  
*Protonemura risi* (Jacobson and Bianchi), 3 ♂, 2 ♀.  
*Leuctra albida* Kempny, 5 ♂, 3 ♀.  
*Leuctra cingulata* Kempny, 17 ♂, 13 ♀.  
*Leuctra inermis* Kempny, 3 ♂, 2 ♀.  
*Isoperla grammatica* (Poda), 8 ♂, 19 ♀.  
*Dinocras cephalotes* (Curtis), 4 ♂.  
*Perla marginata* (Panzer), 7 ♂, 10 ♀.  
*Chloroperla tripunctata* (Scopoli), 1 ♂.  
*Siphonoperla torrentium* (Pictet), 2 ♂.

We thank Peter Zwick for helping with some of the identifications. The above material is deposited in the collections of the Monte L. Bean Life Science Museum, Brigham Young University, Provo, Utah and C. P. Gillette Museum of Arthropod Diversity, Colorado State University, Fort Collins, Colorado.

## Poem

### Ode to *Bolshecapnia*

I beat over the sheet, and over the snow,  
O *Bolshecapnia*, where do you go?

I beat up high and way down low,  
O *Bolshecapnia*, where do you go?

I search in the trees, and look on the ground,  
O *Bolshecapnia*, you're not to be found

I scan the snow, as I slip and slide,  
O *Bolshecapnia*, where do you hide?

Through the stream and brush I stumble,  
O *Bolshecapnia*, you make me so humble

Am I too early, or am I too late?  
O *Bolshecapnia*, you are so great

I try once more under rocks and leaves,  
but alas, only *Zapada cinctipes*

I leave this place in great despair,  
never to collect again, I swear.

Then suddenly I feel alive  
for the great *Isocapnia* will soon arrive.

R. Durfee, 2008

#### **RECENT PLECOPTERA LITERATURE (CALENDAR YEAR 2008 AND**

**EARLIER)**. Papers made available after 1 February 2009 will be included in the next issue. **If papers were missed, please bring these to the attention of the Managing Editor.** Dr. Peter Zwick is thanked for providing additions to this present list.

Albariño R, Villanueva VD, and Canhoto, C. 2008. The effect of sunlight on leaf litter quality reduces growth of the shredder *Klapopteryx kuscheli*. Freshwat. Biol. 53: 1881-1889.

Alibozek J and Ganger, M. 2008. Temporal changes in stream insect abundances in northwestern Massachusetts. J Freshwat. Ecol. 23: 673-676.



- Angelibert S, Indermuehle N, Luchier D, Oertli B and Perfetta, J. Where hides the aquatic biodiversity of macroinvertebrates in the Canton of Geneva (Switzerland)? Arch Sci. 59: 225-234.
- Antons C, Kaschek N and Meyer, EI. 2008. Effizienzkontrolle erfolgter Maßnahmen an einem renaturierten Bach im Nordostdeutschen Tiefland unter Berücksichtigung der benthischen Besiedlung und der Belange von ausgewählten FFH-Arten / Efficiency control of measures taken on a renaturated stream in the north-east German lowland, considering benthic colonization and requirements of selected FFH [= Fauna, Flora, Habitat] -species. Deutsche Gesellschaft für Limnologie (DGL), Erweiterte Zusammenfassungen der Jahrestagung 2007 (Münster), Werder 2008: 368-372.
- Banks JL, Li J, and Herlihy, AT. 2007. Influence of clearcut logging, flow duration, and season on emergent aquatic insects in headwater streams of the central Oregon Coast Range. J. N. Am Benthol Soc. 26: 620-632.
- Baumann RW and Kondratieff, BC. 2008. A review of the western North American genus *Triznaka* (Plecoptera: Chloroperlidae) with a new species from the Great Basin, U.S.A. Proc Entomol Soc Wash 110: 345-362.
- Baumann RW and Kondratieff, BC. 2008. The *Alloperla severa* complex (Plecoptera: Chloroperlidae) of western North America. Illiesia 4: 66-75.
- Biggs J, Williams P, Whitfield M, Nicolet P, Brown C, Hollis J, Arnold D, and Pepper T. 2007. The freshwater biota of British agricultural landscapes and their sensitivity to pesticides. Agric Ecosyst Environ 122: 137-148.
- Bilton DT, McAbendroth L, Bedford A and Ramsay, PM. 2006. How wide to cast the net? Cross-taxon congruence of species richness, community similarity and indicator taxa in ponds. Freshwat Biol 51: 578-590.
- Bispo PC and Froehlich CG. 2008. Description of the larva and redescription of the adult of *Kempnyia neotropica* Jacobsen and Bianchi (Plecoptera: Perlidae) with biological notes. Aquat Insects 30: 61-67.
- Blocksom KA, Autrey BC, Passmore M, Reynolds, L. 2008. A comparison of single and multiple habitat protocols for collecting macroinvertebrates in wadeable streams. J. Amer Wat Res Assoc 44: 577-593.
- Blocksom KA and Flotemersch JE. 2008. Field and laboratory performance characteristics of a new protocol for sampling riverine macroinvertebrate assemblages, River Res Appl 24: 373-387.
- Bo T, Fenoglio S, López-Rodríguez MJ, and Tierno De Figueroa, JM. 2008. Trophic behavior of two Perlidae species (Insecta, Plecoptera) in a river in southern Spain. Intern. Rev. Hydrobiol. 93: 167-174.
- Bona F, Falasco E, Fenoglio S, Iorio, L. and Badino, G. 2008. Response of macroinvertebrate and diatom communities to human-induced physical alteration in mountain streams. River Res. Appl. 24: 1068-1081.
- Buchwalter DB, Cain, DJ, Martin, CA, Xie L, Luoma, SN, and Garland T, Jr. 2008. Aquatic insect ecophysiological traits reveal phylogenetically based differences in dissolved cadmium susceptibility. Proc Natl Acad Sci USA 105:8321-8326.
- Burles DW, Brigham M, Ring RA, and Reimchen TE. 2008. Diet of two insectivorous bats, *Myotis lucifugus* and *Myotis keenii*, in relation to arthropd abundance in a temperate Pacific Northwest rainforest environment. Can J Zool 86: 1367-1375.

- Callanan M, Baars J, and Kelly-Quinn, M. 2008. Critical influence of seasonal sampling on the ecological quality assessment of small headwater streams. *Hydrobiol.* 610: 245-55.
- Cammarata M, Fenoglio, S, López-Rodríguez MJ, Bo T and Tierno de Figueroa, JM. 2007. Prey selection of *Perla grandis* (Rambur, 1841) nymphs (Plecoptera: Perlidae) in Borbera stream (NW, Italy). *Bol Soc Entomol Aragonesa* 41: 271-274.
- Cao TKT and Bae, YJ. 2007. *Chinoperla rhododendrona*, a new species of Perlidae (Insecta: Plecoptera) from Vietnam. *Integrat Biosci* 11: 125-128.
- Chakona A and Marshall, B. 2008. A preliminary assessment of the impact of forest conversion from natural to pine plantation on macroinvertebrate communities in two mountain streams in Zimbabwe. *African J Aquat Sci.* 33: 115-124.
- Cary SJ and Jacobi, GZ. 2008. Zoogeographic affinities of southwestern USA Plecoptera. Pp. 133-157. *In* International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp
- Chaves ML, Rieradevall M, Chainho P, Costa JL, Costa MJ, and Prat, N. 2008. Macroinvertebrate communities of non-glacial high altitude intermittent streams. *Freshwat Biol* 53: 55-76.
- Cherchesova SK. And Zhiltzova, LA. 2006. [Identification tables of the stoneflies (Plecoptera) of the Caucasus]. Russian State Agrarian University named after K. A. Chetagurov (ed.), Moscow; in Russian.
- Cifuentes-Ruiz P, Vega FJ, Cevallos-Ferriz SRS, González-Soriano E, and Zaragoza-Garibay-Romero, L. 2007. Oligocene scorpion and insects (Plecoptera and Coleoptera) from the Los Ahuehuetes locality, Puebla, Mexico. *Ameghiniana* 44: 673-679.
- Clayton JA and Westbrook, CJ. 2008. The effect of the grand ditch on the abundance of benthic invertebrates in the Colorado River, Rocky Mountain National Park. *River Res Appl* 24: 975-987.
- Clements WH, Brook ML, Kashian D and Zuellig RE. 2008. Changes in dissolved organic material determine exposure of stream benthic communities to UV-B radiation and heavy metals: implications for climate change. *Global Change Biol* 14: 2201-2214.
- Collier KJ. 2008. Temporal patterns in the stability, persistence and condition of stream macroinvertebrate communities: Relationships with catchment land-use and regional climate. *Freshwat Biol* 53: 603-616.
- Cressa C, Maldonado V, Segnini S, and Chacon, MM. 2008. Size variation with elevation in adults and larvae of some Venezuelan stoneflies (Insecta: Plecoptera: Perlidae). *Aquat Insects* 30: 127-134.
- Cucherousset J, Santoula, F, Fiquerola, J, and Cereghino, R. 2008. How do biodiversity patterns of river animals emerge from the distributions of common and rare species? *Biol Conserv.* 141: 2984-2992.
- Dallas H. 2008 Water temperature and riverine ecosystems: An overview of knowledge and approaches of assessing biotic responses, with special reference to South Africa. *Water S Africa* 34: 393-404.

- DeWalt E, Cao Y, Tweddale T, and Hinz, L. 2008. Modeling of stonefly historical distributions using museum specimens. *Illinois Nat Hist Surv Rep* 397: 5.
- Doi H, Chang K, Ando T, Imai H, Nakano S, Kajimoto A, and Katano I. 2008. Drifting plankton from a reservoir subsidize downstream food webs and alter community structure. *Oecologia* 156: 363-371.
- Dorfer W. 2008. Erstnachweis von *Isoptena serricornis* (Plecoptera, Chloroperlidae) in Bayern /First record of *Isoptena serricornis* (Plecoptera, Chloroperlidae) in Bavaria/. *Lauterbornia* 62: 53-55.
- Du R, Wang Q, Zhang Z, and Wang M. 2008. The correlation between EPT community distribution and environmental factors. *Acta Entomol Sin* 51: 336-341.
- Du Y. 2007. A new species of the genus *Tyloperla* (Plecoptera: Perlidae) from China. *Entomotaxonomia* 29: 241-243.
- Du Y, Zhou P, and Wang Z. 2008. Four new species of the genus *Nemoura* (Plecoptera: Nemouridae) from China. *Entomol News* 119: 67-76.
- Earle JI and Stewart, KW. 2008. Description of the nymph of *Strophopteryx appalachia* Ross and Ricker (Plecoptera: Taeniopterygidae), and key to *Strophopteryx* nymphs. *Proc Entomol Soc Wash* 110: 551-555.
- Fenoglio S. 2007. Stoneflies (Plecoptera: Perlidae) of Nicaragua. *Caribbean J. Sci.* 43: 220-225.
- Fenoglio S, Bo T, Tierno de Figueroa, JM, López-Rodríguez MJ and Malacarne, G. 2008. A comparison between local emergence patterns of *Perla grandis* and *Perla marginata* (Plecoptera: Perlidae). *Hydrobiol.* 607: 11-16.
- Fettig CJ, Munson AS, McKelvey SR, Bush PB, and Borys, RR. 2008. Spray deposition from ground-based applications of carbaryl to protect individual trees from bark beetle attack. *J Environ Qual.* 37: 1170-1179.
- Finn DS and Poff, NL. 2008. Emergence and flight activity of alpine stream insects in two years with contrasting winter snowpack. *Arctic Antarctic Alpine Res.* 40: 638-646.
- Fjellheim A and Raddum, GG. 2008. Growth and voltinism in the aquatic insects of a regulated river subject to groundwater inflows. *River Res. and Appl.* 24: 710-719.
- Fochetti R and Argano, R. 2006. Pattern of benthic invertebrate assemblages in rivers of Central Italy. *Italian J Zool.* 73: 145-151.
- Fochetti R, Tierno de Figueroa, JM. 2006. Notes on diversity and conservation of the European fauna of Plecoptera. *J Nat Hist* 40: 2361-2369.
- Fochetti R and Tierno de Figueroa, JM. 2008. Global diversity of stoneflies (Plecoptera: Insecta) in freshwater. *Hydrobiol* 595: 365-377.
- Fochetti R, Argano, R and Tierno de Figueroa, JM. 2008. Feeding ecology of various age-classes of brown trout in River Nera, Central Italy. *Belgian J Zool* 138: 128-131.
- Fochetti R, Sezzi E, Tierno de Figueroa, JM, Modica M, and Oliverio M. 2008. Molecular systematics and biogeography of the western Mediterranean stonefly genus *Tyrrhenoleuctra* (Plecoptera, Insecta). *J Zool Syst Evol Res.* 46.
- Fontaine B., Bouchet, P, Van Achterberg, K,. 2007. The European Union's 2010 target: Putting rare species in focus. *Biol Conserv* 139: 167-185.

- Franken, RJM, Gardeniers JJP, Beijer JAJ and Peeters, ETHM. 2008. Variation in stonefly (*Nemoura cinerea* Retzius) growth and development in response to hydraulic and substrate conditions. *J. N Amer Benthol Soc.* 27: 176-185.
- Friedrich F and Beutel RG. 2008. The thorax of *Zorotypus* (Hexapoda, Zoraptera) and a new nomenclature for the musculature of Neoptera. *Arthropod Struct Devel* 37: 29-54.
- Froehlich CO. 2008. Old species of Neotropical Plecoptera. Pp. 125-132. *In* International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp
- Gilbert B, Dillion PJ, Somers KM, Reid, RA and Scott, L. 2008. Response of benthic macroinvertebrate communities to El Ni(n)over-tildeo related drought events in six upland streams in south-central Ontario. *Can J Fish Aquat Sci.* 65: 890-905.
- Giustini M, Miccoli FP, De Luca G, and Cicolani, B. 2008. Length-weight relationships for some Plecoptera and Ephemeroptera from a carbonate stream in central Apennine (Italy). *Hydrobiol.* 605: 183-191.
- Graf W, Stradner D. and Weiss, S. 2008. A new *Siphonoperla* species from the Eastern Alps (Plecoptera: Chloroperlidae), with comments on the genus. *Zootaxa* 1891: 31-38.
- Griffiths GJK, Wilby A, Crawley MJ, and Thomas MB. 2008. Density-dependent effects of predator species-richness in diversity-function studies. *Ecology* 89: 2986-2993.
- Grubbs SA. 2008. *Allocapnia tsalagi*, sp. n. and notes on *A. recta* (Claassen) from the Cumberland Plateau region of Northeastern Alabama, U.S.A. *Zootaxa* 1754: 63-68.
- Grubbs SA and DeWalt, E. 2008. Taxonomic and distributional notes on *Perlesta teaysia*, *P. golconda*, and *P. shawnee* (Plecoptera: Perlidae). *Illiesia* 4: 143-149.
- Grubbs SA and Sheldon, AL. 2008. *Allocapnia muskogee* and *A. menawa*, new species of snowflies (Plecoptera: Capniidae) from Talladega National Forest region of eastern Alabma, U.S.A., plus four new state records. *Illiesia* 4: 99-109.
- Guerrero P, Capdeville Y, and D'Amico, F. 2008. Feeding strategies in wintering dippers *Cinclus cinclus* in relation to variation in food abundance along regulated upland rivers. *Alauda* 76: 35-46.
- Haidekker A and Hering, D. 2008. The relationship between benthic insects (Ephemeroptera, Plecoptera, Coleoptera, Trichoptera) and temperature in small and medium-sized streams in Germany: a multivariate study. *Aquat Ecol.* 42: 463-481.
- Ham SA. 2008. Two species of Chloroperlidae (Insecta: Plecoptera) new to Korea, with adult keys to species of the family in Korea. *Korean J System Zool* 24: 185-189.
- Harrison AB and Stark, BP. 2008. *Rhopalopsale alobata* (Plecoptera: Leuctridae), A new stonefly species from Vietnam. *Illiesia* 4: 76-80.
- Harrison ET, Norris RH, and Wilkinson, SN. 2008. Can an indicator of river health be related to assessments from a catchment-scale sediment model? *Hydrobiol.* 600: 49-64.
- Heino J and Mykra, H. 2008. Control of stream insect assemblages: roles of spatial configuration and local environmental factors. *Ecol Entomol* 33: 614-622.

- Hohmann M. 2008. Eintags- und Steinfliegenfunde (Ephemeroptera et Plecoptera) aus der Dübener Heide, Sachsen-Anhalt. [Mayflies and stoneflies (Ephemeroptera et Plecoptera) found in the Düben Heath, Sachsen-Anhalt]. *Abhandlungen und Berichte für Naturkunde* 30 (2007): 189-200; Magdeburg.
- Hollmann MET and Miserendino, ML. 2008. Life history and emergence patterns of stonefly species in mountain streams of the Futaleufu Basin, Patagonia (Argentina). *Annal Limnol* 44: 135-144.
- Hrodey PJ, Kalb BJ, and Sutton, TM. 2008. Macroinvertebrate community response to large-woody debris additions in small warmwater streams. *Hydrobiol.* 605: 193-207.
- Isobe Y, Yoshimura, M and Oishi, T. 2008. Pp. 15-60. *In* International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp.
- Jin YH, Kishimoto, T and Bae YJ. 2008. Systematic review of the wingless stoneflies, Scopuridae. Pp. 395-412. *In* International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp.
- Johnson KR, Jepson PC, and Jenkins, JJ. 2008. Esfenvalerate-induced case-abandonment in the larvae of the caddisfly (*Brachycentrus americanus*). *Environmental Toxicology and Chemistry* 27: 397-403.
- Joshi PC, Negi RK, and Negi, T. 2007. Seasonal variation in benthic macro-invertebrates and their correlation with the environmental variables in a freshwater stream in Garhwal Region (India). *Life Sci J Acta Zengzhou Univ Overseas Ed.* 4: 85-89.
- Jung SW, Nguyen VV, Nguyen, QH, and Bae, YJ. 2008. Aquatic insect faunas and communities of a mountain stream in Sapa Highland, northern Vietnam. *Limnology* 9: 219-229.
- Kasangaki A, Chapman LJ, and Balirwa, J. 2008. Land use and the ecology of benthic macroinvertebrate assemblages of high-altitude rainforest streams in Uganda. *Freshwat Biol.* 53: 681-697.
- Keller S. 2008. The arthropod-pathogenic Entomophthorales from Switzerland - is central Europe the centre of their global species-richness? – *Mitteil schweizerischen entomol Gesellschaft* 81: 39-51.
- Kjer KM, Carle FM, Litman J and Ware, J. 2006. A molecular phylogeny of Hexapoda. *Arthropod Syst Phylogeny* 64: 35-44.
- Klug R. and Klass, K.-D. 2006. The potential value of the mid-abdominal musculature and nervous system in the reconstruction of interordinal relationships in Lower Neoptera. *Arthropod Syst Phylogeny* 65: 73–100.
- Koese B. 2008. De Nederlandse steenvliegen (Plecoptera). *Entomologische Tabellen* 1, Suppl. to *Nederlandse Faunistische Mededelingen*, 158 pp., Leiden.
- Kondratieff BC, Zuellig RE, Kirchner RF, and Lenat, DR. 2008. Two new species of *Perlesta* (Plecoptera: Perlidae) from Eastern North America. *Proc Entomol Soc Wash* 110: 668-673.
- Konrad CP, Brasher, AMD and May, JT. 2008. Assessing streamflow characteristics as limiting factors on benthic invertebrate assemblages in streams across the western United States. *Freshwat Biol.* 53: 1983-1998.

- Korte T, Hering D and Moog, O. 2008. Untersuchungen zu Habitatpräferenzen ausgewählter Makroinvertebraten der Hindu Kush – Himalaya Region. [Studies of habitat preferences of selected macroinvertebrates of the Hindu Kush – Himalaya region]. Deutsche Gesellschaft für Limnologie (DGL), Erweiterte Zusammenfassungen der Jahrestagung 2007 (Münster), Werder 2008: 146 -150.
- Kovács T. and Murányi. 2008. New data on genus *Besdolos* from Balkan Peninsula (Plecoptera: Perlodidae). *Illiesia* 4: 91-93.
- Kovács T and Zwick, P. 2008. Contribution to the knowledge of genus *Besdolos* (Plecoptera: Perlodidae). *Aquat Insects*. 30: 187-195.
- Kazanci, N. 2008. Türkiye Plecoptera (Insecta) Faunasi / Plecoptera (Insecta) fauna of Turkey. *Türkiye İç Suları Araştırmaları Dizisi* 9: I-VI, 1-56.
- Kreutzweiser DP, Good KP, Chartrand DT, Scarr TA, and Thompson, DG. 2008. Toxicity of the systemic insecticide, imidacloprid, to forest stream insects and microbial communities. *Bull Environ Contam Toxicol* 80: 211-214.
- Krolak E and Korycinska, M. 2008. Taxonomic composition of macroinvertebrates in the Liwiec River and its tributaries (Central and Eastern Poland) on the basis of chosen physical and chemical parameters of water and season. *Polish J Environ Stud* 17 2008: 39-50.
- Küttner R, Hohmann M, Plesky B and Voigt, H. 2008. Zur Kenntnis der Verbreitung und Ökologie von *Brachyptera braueri* (Klapálek, 1900) (Insecta: Plecoptera) in Mitteldeutschland unter Berücksichtigung weiterer Plecoptera-Arten des zeitigen Frühjahres / Distribution and ecology of *Brachyptera braueri* (Klapálek, 1900) (Insecta: Plecoptera) in Central Germany with consideration of other early spring Plecoptera species. *Lauterbornia* 63: 31-50.
- Le Doare, J. 2008. Ephemeroptera, Plecoptera and Trichoptera, little known insects, and yet essential to the life of water courses.. *Penn Ar Bed (Brest)* 203: 51-57.
- Li W and Yang, D. 2008. New species of *Nemoura* (Plecoptera: Nemouridae) from China. *Zootaxa* 1783: 61-68.
- Li W and Yang, D. 2008. A new species of *Amphinemura* (Plecoptera: Nemouridae) from China. *Zootaxa* 1892: 65-68.
- Li W and Yang, D. 2008. Two new species of *Amphinemura* (Plecoptera: Nemouridae) from Yunna, China, with the description of *A. triramia* (Wu, 1962). *Zootaxa* 1926: 61-67.
- Li W and Yang, D. 2008. Two new species of *Indonemoura* (Plecoptera: Nemouridae) from China, with redescription of *Indonemoura longiplatta* (Wu, 1949), comb. n. *Aquat Insects* 30: 97-103.
- Li W and Yang, D. New species of Nemouridae (Plecoptera) from China. *Aquat Insects* 30: 205-221.
- Li W and Yang, D. 2008. Species of *Amphinemura* (Plecoptera: Nemouridae) from Tibet, China. *Zootaxa* 1688: 54-60.
- Li W, G. Feng, and Yang, D. 2008. Redescription of *Nemoura cochleocercia* (Plecoptera: Nemouridae) from China. *Illiesia* 4: 205-207.
- Lieske R and Zwick, P. 2008. Effects of intraspecific competition on the life cycle of the stonefly, *Nemurella pictetii* (Plecoptera: Nemouridae). *BMC Ecology* 8: 1-8.
- Lietz L. 2008. Vergleichende Untersuchungen des Makrozoobenthos an einem kiesgeprägten Bach im norddeutschen Flachland (Farver Au, Schleswig Holstein) /

- Comperative [sic!] survey of macroinvertebrates in a small gravel-dominated lowland river (Farver Au, Schleswig Holstein). *Lauterbornia* 63: 113-125.
- Liu Y, Ren, D, Sinitshenkova ND, and Shih C. 2008. Three new stoneflies (Insecta: Plecoptera) from the Yixian formation of Liaoning, China. *Acta Geol Sinica English Edition* 82: 249-256.
- Liu YS and Ren, D. 2008. Two new Jurassic stoneflies (Insecta: Plecoptera) from Daohugou, Inner Mongolia, China. *Prog Nat Sci* 18: 1039-1042.
- Lock K and Goethals, PLM. 2008 Distribution and ecology of the stoneflies (Plecoptera) of Flanders, Belgium. *Annal Limnol-Internat J Limnol* 44: 203-213.
- López-Rodríguez MJ and Tierno de Figueroa, JM. 2008. Feeding habits of two Capniidae (Plecoptera) species from southern Iberian Peninsula. *J Entomol Sci* 43: 141-142.
- López-Rodríguez MJ, Tierno de Figueroa JM, and Alba-Tercedor J. 2008. Description of the nymph of *Isoperla curtata* Navás, 1924 (Insecta, Plecoptera). *Zool Baetica* 19: 85-88.
- Lopez-Rodriguez MJ, Tierno de Figueroa JM, and Alba-Tercedor, J. 2008. Life history and larval feeding of some species of Ephemeroptera and Plecoptera (Insecta) in the Sierra Nevada (southern Iberian Peninsula). *Hydrobiol* 610: 277-295.
- Lorenz A. and Graf, W. 2008. (Mögliche) Verlierer und Gewinner des Klimawandels innerhalb der Insektenordnung Plecoptera (Steinfliegen). [(Possible) losers and winners, respectively, of climate change among the insect order Plecoptera (stoneflies)]. *Deutsche Gesellschaft für Limnologie (DGL), Erweiterte Zusammenfassungen der Jahrestagung 2007 (Münster), Werder 2008*: 326-330.
- Loskutova OA. 2006. Plecoptera. Fauna of European North-East Russia 9; 222 pp., Russian Academy of Sciences, Ural Branch, Komi Scientific Centre, Institute of Biology, Nauka, St. Petersburg.
- Loskutova O. 2008. Life cycles, growth and production of stonefly populations. Pp. 61-77. *In International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies*. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp.
- MacDonald, EE, and Taylor, BR. 2008. Factors influencing litter decomposition rates in upstream and downstream reaches of river systems of eastern Canada. *Fund Appl. Limnol.* 172: 71-86.
- Malicky H, Vinçon G and Delmastro, GB. 2007. Nuovi dati sulla distribuzione di Plecotteri e Tricotteri sulle Alpe occidentali italiane (province di Cuneo e Torino) (Insecta: Plecoptera, Trichoptera). [New data on the distribution of Plecoptera and Trichoptera over the western Italian Alps (provinces of Cuneo and Torino) (Insecta: Plecoptera, Trichoptera)]. Pp 75-95 in: Delmastro, G. B., P. M. Giachino, A. Morisi, and M. Rastelli (eds): *Ricerca sugli ambienti acquatici del Po Cuneese. [Research on aquatic environments of the Po Cuneese]- Interr IIIA "Acqua". Memorie dell'Associazione Naturalistica Piemontese* 8, 154 pp.
- Maloney KO, Dodd HR, Butler SE, and Wahl, DH. 2008. Changes in macroinvertebrate and fish assemblages in a medium-sized river following a breach of a low-head dam. *Freshwat Biol* 53: 1055-1068.
- Martin, P, Rückert M and Brunke, M. 2008. Eine faunistisch begründete Quelltypologie für Schleswig-Holstein. [A faunistically founded typology of springs for Schleswig-

- Holstein] Deutsche Gesellschaft für Limnologie (DGL), Erweiterte Zusammenfassungen der Jahrestagung 2007 (Münster), Werder 2008: 74-78.
- McKie BG, Woodward G, Hladyz S, Nistorescu M, Preda E, Popescu, Giller PS, and Malmqvist, B. 2008. Ecosystem functioning in stream assemblage from different regions: contrasting responses to variation in detritivore richness, evenness and density. *J Animal Ecol.* 77: 495-504.
- McLellan, ID. 2008. Additions to *Zelandobius* (Plecoptera: Gripopterygidae Antartoperlinae) from New Zealand. *Illiesia* 4: 11-18.
- Mellado Diaz A., Suarez Alonso ML and Vidal-Abarca Gutierrez, MR. 2008. Biological traits of stream macroinvertebrates from a semi-arid catchment: patterns along complex environmental gradients. *Freshwat Biol* 53: 1–21.
- Miserendino, ML, Brand C, and DiPrinzio, CY. 2008. Assessing urban impacts on water quality, benthic communities and fish in streams of the Andes Mountains, Patagonia (Argentina). *Wat Air Soil Poll.* 194: 91-110.
- Misof B, Niehuis, O, Bischoff I, Rickert A, Erpenbeck D and Staniczek, A. 2007. Towards an 18S phylogeny of hexapods: Accounting for group-specific character covariance in optimized mixed nucleotide/doublet models. *Sci Direct, Zool* 110: 409–429.
- Monaghan KA and Milner, AM. 2008. Salmon carcasses as a marine-derived resource for benthic macroinvertebrates in a developing postglacial stream, Alaska. *Can J Fish Aquat Sci* 65: 1342-1351.
- Nelson, C. H. 2008. Hierarchical relationships of North American states and provinces: an area cladistic analysis based on the distribution of stoneflies (Insecta: Plecoptera). *Illiesia* 4: 176-204.
- Nessimian JL, Venticinque EM, Zuanon J, DeMarco P, Gordo M, Fedelis L, Batista JD, and Juen L. 2008. Land use, habitat integrity, and aquatic insect assemblages in Central Amazonian streams. *Hydrobiol.* 614: 117-131.
- New, TR. 2008. Legislative inconsistencies and species conservation status: Understanding or confusion? The case of *Riekoperla darlingtoni* (Plecoptera) in Australia. *J Insect Conserv* 12: 1-2.
- Newell RL, Baumann, RW and Standford, JA. 2008. Stoneflies of Glacier National Park and Flathead River Basin, Montana. Pp. 173-186. *In* International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp
- Otsuki A and Iwakuma, T. 2008. Life history, growth patterns and feeding habits of two predatory stoneflies, *Skwala pusilla* (Perlodidae) and *Kamimuria tibialis* (Perlidae) in northern Japan. *Aquat Insects* 30: 29-41.
- Ozdikmen H. 2008. A new name for the preoccupied stonefly genus *Aubertiana zhiltzo*, 1994 (Plecoptera). *Munis Entomol Zool* 3: 761-762.
- Palma A and Figueroa, R. 2008. Latitudinal diversity of Plecoptera (Insecta) on local and global scales. *Illiesia* 4: 81-90.
- Palmquist KR, Jenkins JJ, and Jepson, PC. 2008. Clutch morphology and the timing of exposure impact the susceptibility of aquatic insect eggs to esfenvalerate. *Environ Tox Chem.* 27: 1713-1720.



- Palmquist KR, Jenkins JJ, and Jepson, PC. 2008. Effects of dietary esfenvalerate exposures on three aquatic insect species representing different functional feeding groups. *Environ Toxi Chem.* 27: 1721-1727.
- Paradowski N, Riss HW and Meyer, EI. 2008. Analyse von biologischen Daten und Umweltparametern zur Erfassung von Biodiversitätsmustern in Karstgewässern. [Analysis of biological data and environmental parameters to capture patterns of biodiversity in karstic waters]. Deutsche Gesellschaft für Limnologie (DGL), Erweiterte Zusammenfassungen der Jahrestagung 2007 (Münster), Werder 2008:34-38.
- Paril P, Bojkova J, Spacek J, and Helesic, J. 2008. Ecology of *Leuctra geniculata* (Plecoptera: Leuctridae), an Atlantomediterranean species on the north-eastern border of its area. *Biologia (Bratislava)* 63: 574-581.
- Pastuchova, Z. 2008. Ephemeroptera, Plecoptera and Trichoptera communities of streams in Cerova Vrchovina Highland, Slovakia. *Lauterbornia* 62: 121-127.
- Pastuchova Z, Lehotsky, and Greskova, A. 2008. Influence of morphohydraulic habitat structure on invertebrate communities (Ephemeroptera, Plecoptera and Trichoptera). *Biol.* 63: 720-729.
- Peckarsky BL, Kerans BL, Taylor BW, and McIntosh, AR. 2008. Predator effects on prey population dynamics in open systems. *Oecologia* 156: 431-440.
- Pessaq P and Miserendino, ML. 2008. Ephemeroptera and Plecoptera biodiversity in central Patagonia, Chubut province, Argentina. *Zootaxa* 1817: 27-38.
- Phillips ID, Parker D, and McMaster, G. 2008. Aquatic invertebrate fauna of a northern prairie stream: Range extensions and water quality characteristics. *West N Am Nat* 68: 173-185.
- Ribeiro JMF and Rafael, JA. 2005. A key to adult Amazonian stonefly genera with new geographical records of *Enderleina* Jewett for Brazil and first description of the *E. froehlichii* Ribeiro-Ferreira female (Insecta: Plecoptera). *Zootaxa* 1096: 61-67.
- Rohasliney H and Jackson, DC. 2008. Lignite mining and stream channelization influences on aquatic macroinvertebrate assemblages along the Natchez Trace parkway, Mississippi, USA. *Hydrobiol* 598: 149-162.
- Ross RM, Long ES, and Dropkin, DS. 2008. Response of macroinvertebrate communities to remediation-simulating conditions in Pennsylvania streams influences by acid mine drainage. *Environ. Monit. Assess.* 145: 323-338.
- Sánchez-Fernandez D, Abella NP, Mellado A, Velasco J and Millán, A. 2006. Are water beetles good indicators of biodiversity in Mediterranean aquatic ecosystems? The case of the Segura river basin (SE Spain). *Biodiversity Conserv.* 15: 4507-4520.
- Scheibler EE and Debandi, GO. 2008. Spatial and temporal patterns in the aquatic insect community of a high altitude Andean stream (Mendoza, Argentina). *Aquat Insects* 30: 145-161.
- Schulthesis AS, Booth, JY, Vinson, MR, and Miller, MP. 2008. Genetic evidence for cohort splitting in the merovoltine stonefly *Pteronarcys californica* (Newport) in Blacksmith Fork, Utah. *Aquat Insects.* 30: 179-186.
- Sheldon AL. 2008. Scale and hierarchy in the ecology of stoneflies. Pp. 15-38. *In* International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp.

- Silveri L, Tierno de Figueroa JM , and Maiolini B. 2008. Notes on the nymphal biology of *Nemoura mortoni* Ris 1902 (Plecoptera, Nemouridae) in a high altitude stream (Trentino, Italian Alps). *Zool. Baetica* 19: 51-56.
- Silveri L, Tierno de Figueroa, JM and Maiolini, B. 2008. Feeding habits of Perlodidae (Plecoptera) in the hyporheic habitats of Alpine streams (Trentino-NE Italy). *Entomol Fennica*, 19: 176-183.
- Sivec I and Stark BP. 2008. New species of *Kamimuria* Klapálek (Plecoptera: Perlidae) from Thailand and Vietnam, with notes on Chinese species. *Illiesia* 4: 110-138.
- Sivec I., Harper PP and Shimizu, T. 2008. Contribution to the study of the Oriental genus *Rhopalopsale* (Plecoptera: Leuctridae). *Scopelia* 64:1-122.
- Smith, RF and Lamp, WO. 2008. Comparison of insect communities between adjacent headwater and mainstem streams in urban and rural watersheds. *J. N Amer Benthol Soc.* 27: 161-175.
- Stark, BP. 2007. *Anacroneuria marshalli* (Plecoptera: Perlidae), a new stonefly from Argentina, and two new records from Ecuador. *Illiesia* 3: 171-173.
- Stark, BP. 2008. *Diamphipnoa colberti*, a new stonefly species from Chile, and the possible female of *Diamphipnopsis beschi illies* (Plecoptera: Diamphipnoidae). *Illiesia* 4: 55-58.
- Stark BP, Kondratieff BC, and Baumann, RW. 2008. Modoc county, California stoneflies (Plecoptera). *Perla* 26: 12-16.
- Stark BP and Sivec, I. 2008. New stoneflies (Plecoptera) from Asia. *Illiesia* 4: 1-10.
- Stark BP and Sivec, I. 2008. New Vietnamese species of the genus *Flavoperla* Chu (Plecoptera: Perlidae). *Illiesia* 4: 59-65.
- Stark BP and Sivec, I. 2008. New species and records of *Neoperla* (Plecoptera: Perlidae) from Vietnam. *Illiesia* 4: 19-24.
- Stark BP and Sivec, I. 2008. Descriptions of male and larval stages for *Neoperlops obscuripennis* Banks (Plecoptera: Perlidae). *Illiesia* 4: 94-98.
- Stark BP and Sivec, I. 2008. *Rhopalopsale mataikan* (Plecoptera: Leuctridae), a new stonefly from Brunei Darussalam. *Illiesia* 4: 139-142.
- Stark BP and Sivec, I. 2008. Studies on *Sinacroneuria* Yang & Yang (Plecoptera: Perlidae) with description of new species from China and Vietnam. *Illiesia* 4: 150-153.
- Stark BP and Sivec, I. 2008. New Vietnamese species of genus *Acroneuria* (Plecoptera: Perlidae). *Illiesia*. 4: 154-160.
- Stark BP and Sivec, I. 2008. Systematic notes on *Kiotina* Klapálek and *Hemacroneuria* Enderlein (Plecoptera: Perlidae), with description of four new species. *Illiesia* 4: 161-175.
- Stark BP and Sivec, I. 2008. The genus *Togoperla* Klapálek (Plecoptera: Perlidae). *Illiesia*. 4: 208-225.
- Stepenuck, KF, Crunkilton RL, Bozek MA and Wang, LZ. 2008. Comparison of macroinvertebrate-derived stream quality metrics between snag and riffle habitats. *J Am Wat Res Assoc.* 44: 670-678.
- Stewart KW and Anderson, NH. 2008. The nymphs of three Nemouridae species (Plecoptera) from Oregon temporary headwater streams. *Trans Am Entomol Soc* 134:173-83.

- Storey RG and Quinn, JM. 2008. Composition and temporal changes in macroinvertebrate communities of intermittent streams in Hawke's Bay, New Zealand. *N Z J Mar Freshwat Res* 42: 109-125.
- Strongman DB. 2007. Trichomycetes in aquatic insects from Prince Edward island, Canada. *Can J Botany* 85: 949-963.
- Tamura F, Isobe, Y and Oishi, T. 2008. The types and distribution of setae on the larval legs of *Neoperla geniculata*. Pp. 355-368. *In* International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp
- Tierno de Figueroa, JM and López-Rodríguez, MJ. 2008. *Marthamea selysii* (Pictet, 1841) (Plecoptera: Perlidae). *in* Barea-Azcón JM, Ballesteros-Duperón, E. & Moreno, D (coords.). *Libro Rojo de los Invertebrados Amenazados de Andalucía*. Ed. Consejería de Medio Ambiente-Junta de Andalucía. 3: 1231-1233.
- Tierno de Figueroa, JM and López-Rodríguez, MJ. 2008. *Besdolus bicolor* (Navás, 1909) (Plecoptera: Perlodidae). *in* Barea-Azcón JM, Ballesteros-Duperón, E & Moreno, D. (coords.). *Libro Rojo de los Invertebrados Amenazados de Andalucía*. Ed. Consejería de Medio Ambiente-Junta de Andalucía. 3: 1234-1236.
- Tierno de Figueroa, JM. 2008. *Leuctra bidula* Aubert, 1962 (Plecoptera: Leuctridae). *in* Barea-Azcón, JM, Ballesteros-Duperón, E. & Moreno, D. (coords.). *Libro Rojo de los Invertebrados Amenazados de Andalucía*. Ed. Consejería de Medio Ambiente-Junta de Andalucía. 3: 1224-1227.
- Tierno de Figueroa, JM and López-Rodríguez, MJ. 2008. *Nemoura rifensis* Aubert, 1961 (Plecoptera: Nemouridae). *in* Barea-Azcón JM, Ballesteros-Duperón, E & Moreno, D. (coords.). *Libro Rojo de los Invertebrados Amenazados de Andalucía*. Ed. Consejería de Medio Ambiente-Junta de Andalucía. 3: 1228-1230.
- Tierno de Figueroa, JM and Sainz-Cantero, CE. 2008. First record of *Taeniopteryx hubaulti* Aubert, 1946 (Plecoptera, Taeniopterygidae) in Southern Iberian Peninsula. *Bol. Asoc. Española Entomol.* 32: 193-194.
- Teslenko, VA. 2008. Poorly known species of stoneflies *Isoperla pseudornata* and *Kaszabia nigricauda* (Plecoptera: Perlodidae) from eastern Palaearctic. *Zool Zhurnal* 87: 1019-1023.
- Thorpe RA, Kondratieff BC Thorp EC, Odenbeck PB, and Jarrett, MJ. 2008 The life cycles of *Claassenia sabulosa* and *Hesperoperla pacifica* (Plecoptera: Perlidae) in two Colorado streams. *West N Am Nat* 68: 311-318.
- Tiunov M and Tiunova, T. 2007. [Flying over the river]. Fotoalbum, Series Living Bureya River, 80 pp., Khabarovsk. *In* Russian (Plecoptera on pp. 46-59).
- Vera A. 2007. Descripción de la ninfa de *Araucanioperla bullocki* (Navás, 1933) (Plecoptera: Gripopterygidae) / Description of the nymph of *Araucanioperla bullocki* (Navás, 1933) (Plecoptera : Gripopterygidae ). *Acta Entomol Chilena* 31: 15-22.
- Von Ellenrieder, N. 2007. Composition and structure of aquatic insect assemblages of Yungas mountain cloud forest streams in NW Argentina. *Rev Soc Entomol Argentina* 66: 57-76.
- Walther DA and Whiles, MR. 2008. Macroinvertebrate responses to constructed riffles in the Cache River, Illinois, USA. *Environ Manag* 41: 516-527.

- Wang Z and Du, Y. 2008. A new species of the genus *Nemoura* (Plecoptera: Nemouridae) from Xinjiang, China. *Zootaxa* 1879: 18-20.
- Ware JL, Litman J, Klass K, Spearman, LA. 2008. Relationships among the major lineages of Dictyoptera: The effect of outgroup selection on dictyopteran tree topology. *Syst Entomol* 33: 429-450.
- Willkommen J. 2008. The morphology of the pterothorax of Ephemeroptera, Odonata and Plecoptera (Insecta) and the homology of wing base sclerites and flight muscles. *Stuttgarter Beit Nat A, Neue Series* 1: 203-300.
- Wolf B. 2008. Nachweise von Köcherfliegen (Trichoptera), Steinfliegen (Plecoptera) und Eintagsfliegen (Ephemeroptera) am Halberg bei Neumorschen (Hessen, Schwalm-Eder-Kreis) / Records of caddisflies (Trichoptera), stoneflies (Plecoptera), and mayflies (Ephemeroptera) at the Halberg near Neumorschen (Hesse, Schwalm-Eder county). *Philippia* 13: 245-248.
- Yoshimura M. 2008. Adult stonefly behavior before and after mating. Pp. 79-88. *In International advances in the ecology, zoogeography, and systematics of mayflies and stoneflies*. Hauer FR, Stanford, JA and Newell, RL (editors). Univ. California Publ. Entomol. 128. 412 pp
- Yoshimura M. 2008. Longitudinal patterns of benthic invertebrates along a stream in the temperate forest in Japan: in relation to humans and tributaries. *Insect Conser Diversity* 1: 95-107.
- Yoshimura M. 2008. Observation of spermatophore transfer in *Stavsolus japonicus* (Plecoptera: Perlodidae) in Japan. *Entomol News* 119: 123-129.
- Yoshimura, M. 2008. Relationship between stonefly assemblages and riparian environment: Case study in mountain stream in Japan. *Internat Vereinig Theoret Angewandte Limnol Verhand* 30: 537-540.
- Zaikowski L, McDonnell KT, Rockwell RF, Rispoli, F. 2008. Temporal and spatial variations in water quality on New York south shore estuary tributaries: Carmans, Patchogue, and Swan rivers. *Estuaries Coasts* 31: 85-100.
- Zhi-Jie W and Yu-Zhou D. 2008. A new species of the genus *Nemoura* (Plecoptera: Nemouridae) from Xinjiang, China. *Zootaxa* 1879: 18-20.

**Standing Committee**  
**International Society of Plecopterologists**

**John Brittain**

Natural History Museum  
University of Oslo  
P.O. Box 1172 Blindern  
NO-0318 Oslo, Norway.

**J. Manuel Tierno de Figueroa**

Dpto. de Biología Animal  
Facultad de Ciencias  
Universidad de Granada  
18071 Granada, Spain

**C. G. Froehlich**

Department of Biology, Philosophy Faculty  
University of Sao Paulo  
14049 Ribeirao Preto, SP, BRAZIL

**Peter P. Harper**

Département de Sciences biologiques  
Université de Montréal  
C.P. 6128, Succ. "Centre-Ville"  
Montréal, Québec, H3C 3J7, CANADA

**Boris Kondratieff**

Department of Bioagricultural Sciences  
and Pest Management  
Colorado State University  
Ft. Collins, Colorado 80523, USA

**Dr. Yu Isobe**

Nara Bunka Women's College  
127 Higashinaka, Yamato-takada, Nara Japan, 635-8530

**Ignac Sivec**

Prirodoslovni Muzej Slovenije  
Prešernova 20, POB 290  
YU- 61001 Ljubljana, SLOVENIA

**Kenneth W. Stewart**

Department of Biological Sciences  
University of North Texas  
Denton, Texas 76203, USA

**Stanley W. Szczytko**

University of Wisconsin  
College of Natural Resources  
Stevens Point, Wisconsin 54481, USA



*Perla illiesi* Braasch & Joost, Slovenia. Photograph by Bill P. Stark.