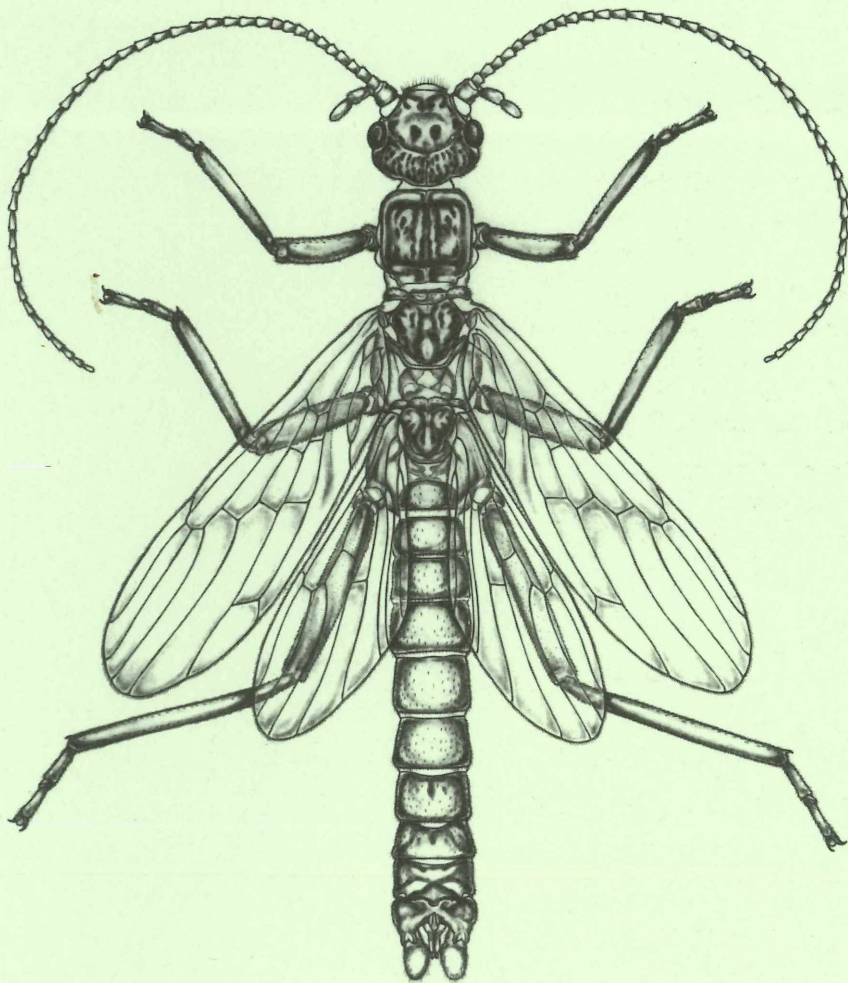


P E R L A

**Newsletter and Bibliography of the International
Association of Plecopterologists**



No. 13 1995

**Aquatic Entomology Laboratory
Department of Biological Sciences**

**University of North Texas
Denton, Texas 76203**

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

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PERLA 13 - 1995

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PERLA SUBSCRIPTION POLICY

In PERLA 12, we announced the change in subscription policy decided at the XI International Symposium in Treehaven, Wisconsin. Subscribers are to make a \$5 or \$10 per year contribution to help pay the costs of publishing and mailing of PERLA, or request a waiver if sufficient institutional or personal funds are not available. There was a good response of donations for PERLA 12; the Managing Editor will make a report on this response to the International Committee at the XII International Symposium in Lausanne in August, 1995.

Included with this mailing of PERLA 13 is your subscription form and self addressed envelope, for your convenience in sending your donation or requesting a waiver. All persons or institutions that respond with this form will be retained on the mailing list to receive the next issue of PERLA 14 in 1996. It is important that you respond by on of the following: (1) a contribution, (2) request to waive the contribution or (3) request to be removed from the mailing list.

Because of high bank costs for exchanges in some countries, it is best to send your contribution designated in U.S. dollars in the form of a Bank Note, Cashier's Check or Postal Money Order. You may send cash if absolutely necessary, in which case the Managing Editor will send you a personal note of acknowledgement if it is received.

COVER ILLUSTRATION

The cover illustration for this year's PERLA 13 was provided by Dr. Richard W. Baumann of Brigham Young University, Provo, Utah (with permission: Great Basin Naturalist 55(2):124-134). It is a habitus of a male *Calileuctra ephemera* Shepard and Baumann, drawn by Jean Stanger Leavitt. The Managing Editor solicits your submittal of any nymphal or adult stonefly drawing for use on the cover of PERLA 14 next year.

REPORT ON THE FOURTH NORTH AMERICAN PLECOPTERA SYMPOSIUM

As announced in PERLA 12, the fourth North American Plecoptera Symposium was held in Chattanooga, Tennessee, May 20-22, 1994. The meeting was planned and hosted by Dr. Charles H. Nelson of the University of Tennessee, Chattanooga.

The symposium was attended by 25 registrants and numerous accompanying spouses and scientists. Fifteen papers were presented (listed below), and the group toured the Tennessee Aquarium and enjoyed a field collecting trip in the Ocoee River basin, Cherokee National Forest.

1. **Inventory of the Plecoptera Collection at the United States National Museum, Smithsonian Institution.**

N. E. Adams, National Museum of Natural History, Smithsonian Institution, Entomology MRC-105, Washington, D.C., 20560, USA.

2. **Winter Stoneflies of Illinois.**

M. A. Harris and D. W. Webb, Center for Biodiversity, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, IL, 61820, USA.

3. **The Little Yellow Beasts from the East.**

S. W. Szczytko, College of Natural Resources, University of Wisconsin, Stevens Point, WI, 54481, USA.

4. **A Review of the Acroneurini Genus *Hansonoperla* Nelson (Plecoptera: Perlidae).**

R. F. Kirchner, U.S. Army Corps of Engineers, Water Quality Section (Ed-HW), 502 8th Street, Huntington, WV, 25701, USA; and B. C. Kondratieff, Department of Entomology, Colorado State University, Fort Collins, CO, 80523, USA.

5. ***Callileuctra*, a New Stonefly Genus from California (Plecoptera: Leuctridae).**

R. W. Baumann, Department of Zoology, Brigham Young University, Provo, UT, 84602, USA; and W. D. Shepard, Department of Entomology, California Academy of Sciences, Golden Gate Park, San Francisco, CA, 94118, USA.

6. **Phylogeny and Zoogeography of the Roach-like Stonefly Genus *Yoraperla* Ricker (Plecoptera: Peltoperlidae): Wonderful Disjunctions.**

C. R. Nelson, Division of Biological Sciences and Brackenridge Field Laboratory, University of Texas, Austin, Tx, 78712, USA; and B. P. Stark, Biology Department, Mississippi College, Clinton, MS, 39058, USA.

7. **Two New Species of *Anacroneuria* (Plecoptera: Perlidae) from Colombia.**
M. L. Baena, A. M. R. de Hernandez, M. C. Zuniga de Cardoso,
Universidad del Valle, Biology Department A. A., 25360, Cali,
COLOMBIA.
8. **The Amazing *Anacroneuria* Story: Biodiversity of the Genus in Lower Mesoamerica and Northern South America (Plecoptera: Perlidae).**
B. P. Stark, Biology Department, Mississippi College, Clinton, MS, 39058,
USA.
9. ***Hansonoperla appalachia*, an Enigma Among Perlid Stoneflies? (Plecoptera: Perlidae).**
J. Earle, Pennsylvania Department of Environmental Resources, Bureau
of Mining and Reclamation, 213 Executive House, Harrisburg, PA,
17065-8461, USA.
10. **Trout Predation on Plecoptera in the Headwaters of the Middle Fork of the South Platte River, Colorado.**
C. H. Nelson, Department of Biological and Environmental Sciences,
University of Tennessee at Chattanooga, Chattanooga, TN, 37403, USA;
and R. M. Duffield, Department of Biology, Howard University,
Washington, D.C., 20059, USA.
11. **Food Quality Selection in *Paragnetina media*. Is This Optimal Foraging?**
C. J. Duvall and D. D. Williams, Division of Sciences, Scarborough
Campus, University of Toronto, 1265 Military Trail, Scarborough, Ontario,
M1C-1A4, CANADA. (cancelled)
12. **Life Cycles of *Isoperla lata* Frison, *I. slossonae* (Banks) and *I. cotta* Ricker in Two Central Wisconsin Streams.**
J. B. Sandburg and S. W. Szczytko, College of Natural Resources,
University of Wisconsin, Stevens Point, WI, 54481, USA.
13. **Mate Finding and Adult Behaviors in a Colorado Population of *Claassenia sabulosa* Wu (Plecoptera: Perlidae).**
K. D. Alexander and K. W. Stewart, Department of Biological Sciences,
University of North Texas, Denton, TX, 76203, USA.
14. **New Descriptions of the Drumming Signals of Four Euholognathan Stonefly Species (Plecoptera).**
J. C. Abbott and K. W. Stewart, Department of Biological Sciences,
University of North Texas, Denton, TX, 76203, USA.

15. **Variations in the Life History of *Leuctra tenuis* (Pictet) in Southern Québec (Plecoptera; Leuctridae).**

P. P. Harper and M. Lauzou, Département de Sciences biologiques,
Université de Montréal, C. P. 6128, Succ. A, Montréal, QC, H3C 3J7,
Canada.

Plans are being made by P. P. Harper and B. C. Kondratieff to hold the Fifth North American Plecoptera Symposium in Montreal, CANADA. A further announcement will be made in PERLA 14.

XII INTERNATIONAL SYMPOSIUM ON PLECOPTERA

As first announced in PERLA 12, the XII International Symposium on Plecoptera will be held in conjunction with the VIII International Conference on Ephemeroptera in Lausanne, Switzerland, August 14-20, 1995. The International Stonefly Committee has decided to continue the practice begun in Treehaven, of honoring lifetime workers on Plecoptera with a "Lifetime Achievement Award." One or more such awards will be presented during the XII Symposium.

Registration and paper submittal requests for the meeting have already occurred. The tentative preprogram is as follows:

Sunday, August 13th, p.m.	Arrival of the participants, registration, welcome party
Monday, August 14th, a.m.	Registration, welcome address, two invited speakers
Monday, August 14th, p.m.	Mayfly conference
Tuesday, August 15th, a.m.	Mayfly conference
Tuesday, August 15th, p.m.	Mayfly conference and social event
Wednesday, August 16th	Excursion tour, conference dinner in the evening
Thursday, August 17th, a.m.	Mayfly conference
Thursday, August 17th, p.m.	End of the mayfly conference, welcome party for the new participants
Friday, August 18th	Mayfly-stonefly joint symposium
Saturday, August 19th	Excursion tour, symposium dinner in the evening
Sunday, August 20th	Stonefly symposium, farewell party
Monday, August 21st	Beginning of the post-congress tours

If you would like further information on the Symposium you may contact the organizers: Michel Sartori and Peter Landolt, Musée Zoologique, Place Rippone 6, Case postale 448, CH-1000, Lausanne 17, SWITZERLAND.

As announced in PERLA 12, Dr. Peter Zwick, Limnologische Flußstation, des Max-Lanck-Instituts für Limnologie, D-36105 Schlitz, Postfach 260, GERMANY, would still be happy to accept any donations from you to be used for scholarships to help bring scientists to the XII Symposium. A report on donations will be made in PERLA 14.

CLAUDE BERTHÉLEMY'S COLLECTION

Prof. Claude Berthélemy died unexpectedly in 1987, at the age of 53. For thirty years he had worked on Euromediterranean Plecoptera, and on Coleoptera: Hydraenidae and Coleoptera: Elmidae.

During his last years, his main activity in aquatic entomology was dedicated to the Hydraenidae. In particular, a thesis dealing with the North African species was defended in 1986, by his student Hakim Kaddouri, presently a teacher at the University of El Jadida, Morocco. In order to allow completion of the important paper the two had planned to publish, I lent the whole *Hydraena* collection to Dr. Philippe Richoux, Université Claude Bernard, Lyon, France, in 1990, for supervision and cosignature. I also asked P. Richoux: i) to solve, as far as possible, problems arising from outstanding loans between C. Berthélemy and several institutions, which would have been difficult to do for a non-specialist; ii) to subsequently deposit (with the consent of Prof. E. Angelier, the Head of the Institute) the collection in the Musée Zoologique, Lausanne, Switzerland, except a few specimens of every species to be deposited, wherever possible, in the Paris Museum.

The collection of Elmidae is much larger; it is presently still housed in the Laboratoire d'Hydrobiologie, Université Paul Sabatier, Toulouse, France. It will, in the future, be deposited at the Laboratoire d'Entomologie, Muséum National d'Histoire Naturelle, Paris.

The Plecoptera collection fills an entire cupboard. Thanks mainly to the competence of Dr. Gilles Vinçon the last student of C. Berthélemy, it is in fairly good order, in spite of Berthélemy's sudden death. It is intended to deposit the stonefly collection in the Paris Museum, like the Elmidae, once presently ongoing ecological studies in the Pyrenean mountains will be complete, in four or five years. C. Berthélemy had frequent exchanges and friendly relations with his colleagues at Schlitz, the late J. Illies and later also P. Zwick; some specimens of every species of which sufficient material is available will also be placed in the stonefly collection at the Limnologische Flussstation, Schlitz, Germany.

Finally, C. Berthélemy, who worked in Tunisia from 1967-1971, brought back an important series of samples of lotic fauna. Beetles and adult stoneflies were separated from the rest already in Tunisia; all other macroinvertebrates remain together in the same vials, unsorted and unstudied. After the thesis of M. Bourmaiza another student of C. Berthélemy and a teacher at the University of Tunis, was defended in 1994, Mrs. Nicole Thomas has kindly offered to complete sorting, so that the numerous larvae of Plecoptera will also become available. C. Berthélemy's handwritten collection notes were only recently deciphered by Gilles Vinçon and the data will later be available on diskette. Gilles and Mrs. Isabel Pardo have already started work on part of the adults. For further information on these stoneflies, please contact Gilles (38 bis, rue du Drac, 38000 Grenoble, France).

March 1995

Dr. Alain Thomas
Université Paul Sabatier
Laboratoire d'Hydrobiologie
118, route de Narbonne
F - 31062 Toulouse Cedex
FRANCE

CORRECTIVE NOTE ON *DOMINIPERLA ANTIGUA* ORIGINS

The statement ". . . unsorted amber specimens . . ." in the second sentence of Stark and Lentz (1992) paper describing *Dominiperla antigua* is misleading. This statement suggests the specimen was found by Dr. Rasnitsyn when, in fact, J. Brodzinsky discovered the specimen and labelled it as a plecopteran much earlier. After the specimen was acquired by the National Museum of Natural History, its importance was once again recognized by Dr. Rasnitsyn and at that point Dr. Flint sent it to me for study. I regret any confusion that has arisen over this point and personally thank Mr. Brodzinsky, Dr. Rasnitsyn and Dr. Flint for their role in bringing this unique specimen to my attention.

Bill P. Stark

A SUGGESTED NAME CHANGE IN TAENIOPTERYGIDAE

In my days as a schoolboy, when I was an avid beetle collector, I was familiar with little creatures of the genus *Brachypterus* (Nitidulidae, Kateretinae) abounding in the flowers of stinging nettles. However, I did not expect that I would, much later, "be in the nettles", because of these beetles.

When I proposed a new subfamily of Taeniopterygidae, Brachypterinae (1973), derived from the stem Brachypter- of the generic name *Brachyptera*, I did not think of the tiny beetles. Had I remembered them, I would nevertheless have been unsuspecting because they were then known under the beforementioned family-group names. In the meantime, however, during taxonomic work on Coleoptera, Dr. Audisio (Rome) found that already Erichson (1845) proposed a family group-name based on the beetle genus *Brachypterus*. The name is now in use (Coleoptera: Kateretidae: Brachypterinae), and valid; the unexpected homonymy needs to be removed.

There is no synonym which could replace the junior homonym among the Plecoptera. Therefore, P. A. Audisio, R. Fochetti and I have applied to the International Commission for Zoological Nomenclature (Case 2865, Bull. Zool. Nomencl. 51(4): 309-311, 1994), requesting that the homonymy be removed by regarding the complete stonefly name, *Brachyptera*, as the stem from which the stonefly subfamily name is formed, i.e. Brachypterinae. This appears to be the simplest solution, and although a decision of the commission is still pending, I suggest that stonefly students start using the new name, Brachypterinae, now.

Peter Zwick

LOCATION OF THE J. RAÜSER COLLECTION REMAINS UNKNOWN

Everybody who worked taxonomically and borrowed types knows how vitally important it is that collections are well kept and remain accessible. I am grateful to Alain Thomas of Toulouse for his kind help with loans from the collection of the late C. Berthélemy, and am pleased that he provides information on that collection. I wish I could do the same regarding the collection of my late friend, Jaroslav Raüser. When I prepared the obituary (PERLA 12) I did not mention this point, hoping to fill the gap in the present issue of PERLA. Unfortunately, where Jarek's collection now is remains uncertain.

During his long work on Plecoptera of Czechoslovakia, Jaroslav must have accumulated an important specimen collection from his country. Second, there should also be a considerable collection of Balkanian material, including a number of holotypes of species he named, mainly from Bulgaria. I have myself only seen some of the third component of the collection, which formed the basis for Jaroslav's important study of larval Plecoptera (1980). This paper was actually completed many years earlier: Jarek had the manuscript with him during a visit to Schlitz, in 1968. The collection consisted of boxes with numerous slide-mounted larvae and exuviae of reared larvae of many European species. Jaroslav showed me this unique collection in his home, in 1979.

The Institute of Geography of the Czechoslovak Academy of Sciences at Brno where Jaroslav worked was closed in 1992. Its material, library etc. were given to the archives of the Czech Academy of Sciences (Dr. J. Helesic in a letter). So far, I have been unable to find out whether all or part of Jarek's collection remained at home, or in the institute, and where they may now be, but I am pursuing this further.

Peter Zwick

REPORT FIRST PLECOPTERA MEETING OF JAPAN

The First Plecoptera Meeting of Japan was held at the Higashi-Yoshino Field Station, Nara Women's University, Nara Prefecture, Japan, May 14-15, 1994. The symposium was planned by Drs. Teizi Kawai, Yu Isobe and Shigehazu Uchida, and was kindly hosted by Y. Isobe. Eighteen workers and students participated, and all presented papers, information and/or photographs on stoneflies. A swarm of *Oyamia* and *Kamimuria* (Perlidae) welcomed us by an upstream flight over the field station at dusk on May 14th. A barbecue was held, where a variety of information was exchanged and hot discussion continued in the evening on the shore of the Takami River.

Japanese workers on stoneflies were associated in a loose society at this occasion and now have a newsletter, "Oyamia," in Japanese, which is edited by Dr. Tohru Kishimoto. The first number of "Oyamia" was issued in March, 1995.

The next Plecoptera Meeting of Japan will be held in Tokyo, 1997. For additional information on the meeting and the society, please contact Miss Satoko Hanada, Department of Biology, Nara Women's University, Kitaoyanishimachi, Nara 630, Japan.

S. Uchida

RESEARCH IN PROGRESS ON PLECOPTERA

This is a new section in PERLA, that we would like to expand in future years. We envision that it will include announcements of research in progress by both scientists and students, and requests for study specimens. Please submit a paragraph and any requests for study material or other information from fellow scientists, to the Managing Editor - to be published in PERLA 14.

1. Graduate research on the "*Stonellies of Nebraska*." Submitted by Dr. B. C. Kondratieff, Department of Entomology, Colorado State University, Fort Collins, CO, 80523, USA.

"Howard Rhodes, Colorado State University, is working on the stoneflies of Nebraska. Presently, twelve species have been collected or identified from borrowed material. Almost all of the river systems of western Nebraska (Republican, North Platte, Niobrara and White) have a *Taeniopteryx burksi*, *Pteronarcys pictetii*, *Isoperla marylnia*, *I. quinquepunctata* and *Perlenta decipiens* species composition."

2. Graduate doctoral research on "*Revision of World Suwalliinae (Chloroperlidae)*." Submitted by Dr. K. W. Stewart, Department of Biological Sciences, University of North Texas, Denton, TX, 76203, USA.

"Kevin D. Alexander is two years into a revision of the Chloroperlidae tribe Suwalliini of the world. All available types of North American *Suwallia* species have been obtained and are under study; collections of fresh topotypes, including males with field-extruded aedeagi, have been made during the past two summers along with extensive collections of fresh *Suwallia* material from every western state. *Suwallia* aedeagi are remarkably distinct and have revealed that material previously assigned to the type species *S. pallidula* actually belong to a complex of several cryptic species."

"Study of North American species will continue, but the greatest need, beginning in 1995, is to obtain the types of the nine described old world species and material from private and institutional collections for study. If you can supply any of the following *Suwallia* material, please contact Kevin D. Alexander and/or Dr. K. W. Stewart, at the above address at the University of North Texas:

- (1) any North American *Suwallia* material, including particularly males with extruded aedeagi;
- (2) any of the nine described old world species, hopefully including males having extruded aedeagi."

"Since we both plan to attend the Symposium in Switzerland, we would like to talk personally with any other participants about these possibilities."

3. Undergraduate research on "Cladistic Relationships of the *Neoperla clymene* Complex in North America." Submitted by Dr. Bill P. Stark, Department of Biological Sciences, Mississippi College, Clinton, MS, 39058, USA.

"Angela Smith, Mississippi College undergraduate student, is looking at the cladistic relationships of the *Neoperla clymene* complex in North America. Her research is sponsored by the Howard Hughes Medical Institute as part of an award for undergraduate research to the Mississippi College Biology Department."

4. Graduate doctoral research on "The Stoneflies of the Black Hills." Submitted by Dr. R. W. Baumann, Department of Zoology, Brigham Young University, Provo, UT, 84602, USA.

"Bret Huntsman has worked one year on a survey of the Plecoptera fauna of the Black Hills in South Dakota and Wyoming. He will actually examine the zoogeographic affinities of stoneflies in the northern United States but will use the Black Hills as a focal point between the eastern and western continental drainages."

"Please send any information or specimens of stoneflies from the Black Hills to Bret Huntsman or Dr. R. W. Baumann at the above address at Brigham Young University."

RECENT PLECOPTERA LITERATURE (CALENDAR YEAR 1994 AND EARLIER)

AUDISIO, P. A., FOCHETTI, R. & P. ZWICK (1994): Brachypterinae Erichson, 1845 (Insecta, Coleoptera) and Brachypterinae Zwick, 1973 (Insecta, Plecoptera): proposed removal of homonymy. - Bull. of Zool. Nomen. 51(4): 309-311.

AZZOUZ, M. & A. SANCHEZ-ORTEGA (1992): *Capnopsis schilleri* (Rostock, 1892) (Plecoptera: Capniidae), a new species of the stonefly fauna of Morocco. - Zool. baetica 3: 201 (in Spanish).

- BAIER, B., KAPPUS, B., BÖHMER J. & H. RAHMANN (1994):** Auswirkungen von Deponiesickerwässern auf Bachbiozönosen [Effects of seeping water from garbage deposits on stream biocenoses]. - Dt. Ges. Limnol., Erweit. Zusfg. Jahrestag. 1993: 450-454.
- BAINES, D., SAGE, R.B. & M. M. BAINES (1994):** The implications of red deer grazing to ground vegetation and invertebrate communities of Scottish native pinewoods. - J. Appl. Ecol. 31(4): 776-783.
- BASAGUREN, A. & J. POZO (1994):** Leaf litter processing of alder and eucalyptus in the Aguëra stream system (Northern Spain) II. Macroinvertebrates associated. - Arch. Hydrobiol. 132(1): 57-68.
- BASAGUREN, A. & P. RIANO (1994):** Trophic structure variability of the macroinvertebrate communities in the Aguëra Stream (Northern Spain). - Verh. Internat. Verein. Limnol. 25 (3): 1727-1732.
- BATTEGAZZORE, M., GUZZINI, A. & R. PAGNOTTA (1994):** Compared use of macroinvertebrate samplers for the evaluation of water quality in rivers of different size. - Limnologica 24(1): 43-49.
- BAUMGARTNER, A. M. (1992):** Gesellschaftsstrukturen von Makrozoobenthos - Organismen in einem Bach niederer Ordnung [Structure of associations of macrozoobenthic organisms in a low order stream]. - Dt. Ges. Limnol., Erweit. Zusfg. Jahrestag. 1992: 417-421.
- BERHE, T., HARRISON, A. D. & H. B. N. HYNES (1989):** The degradation of a stream crossing the city of Addis Ababa, Ethiopia. - Trop. Freshwat. Biol. 2: 112-120.
- BLANKE, D. (1994):** Zur Eintags-, Stein- und Köcherfliegenfauna (Insecta: Ephemeroptera, Plecoptera, Trichoptera) des südniedersächsischen Baches Bremke (Nörten-Hardenberg/Kreis Northeim) [On the fauna of mayflies, stoneflies and caddisflies (Insecta: Ephemeroptera, Plecoptera, Trichoptera) of the stream Bremke in southern Lower Saxony (Nörten-Hardenberg/Northeim County)]. - Göttinger Naturkd. Schrft. 3: 97-104.
- BRANDT, S. (1994):** Untersuchungen zum Vorkommen und zur Synökologie von *Taeniopteryx nebulosa* (LINNAEUS, 1758) (Plecoptera: Taeniopterygidae) im Niedersächsischen Tiefland [Studies on occurrence and synecology of *Taeniopteryx nebulosa* (LINNAEUS, 1758) in the lowland of Lower Saxony]. - Unpublished diploma thesis of the Tierärztliche Hochschule Hannover, 100 pp. + 78 pp. in an appendix..

- BRANDT, S. & R. SCHMIDTKE (1994):** Vorkommen von *Taeniopteryx nebulosa* (LINNAEUS 1758) in der Lüneburger Heide (Niedersachsen) [Occurrence of *Taeniopteryx nebulosa* (LINNAEUS 1758) in the Lüneburg Heath (Lower Saxony)]. - *Lauterbornia* 17: 29-38.
- BREITENMOSER-WÜRSTEN, C. (1994):** Die Fliessgewässerfauna im System der Saane (Berner Oberland, Schweizer Nordalpen) als Grundlage der Nahrungsökologie der Wasserramsel (*Cinclus cinclus*). [Stream fauna in the Saane system (Upland of Bern, Swiss Northern Alps) as basis of the feeding ecology of the dipper (*Cinclus cinclus*)]. - *Mitt. Schweiz. Ent. Ges.* 67(1-2): 77-135.
- BRENNEMAN, D. H. & K. W. PONTASCH (1994):** Stream microcosm toxicity tests: predicting the effects of fenvalerate on riffle insect communities. - *Toxicol. and Chem.* 13(3): 381-387.
- BREWIN, P. A. & S. J. ORMEROD (1994):** Macroinvertebrate drift in streams of the Nepalese Himalaya. - *Freshw. Biol.* 32: 573-583.
- BROWN, M. W. (1994):** Flightless insect hints at origins of flight (augmented title, noting primitive species of stonefly, *Taeniopteryx burksi*, study of stoneflies by James H. Marden). - *New York Times* (Late New York Edition) October 25, 1994: 12.
- BRUNKE, M., SCHWOERBEL J. & K. WENDLING (1994):** Die Auswirkungen eines Flußtunnels auf die Fließgewässerbiozönose: Makrozoobenthon und Fischfauna [Effects of a river tunnel on the running water biocenosis: macrozoobenthos and fish fauna]. - *Limnologia* 24(4):297-322.
- BURTON, T. M. & S. L. EGGERT (1994):** A comparison of *Acroneuria lycorias* (Plecoptera) production and growth in northern Michigan hard- and soft-water streams. - *Freshw. Biol.* 32(1): 21.
- CAMPBELL, I. C. & L. FUCHSHUBER (1994):** Amount, composition and seasonality of terrestrial litter accession to an Australian cool temperate rainforest stream. - *Arch. Hydrobiol.* 130(4): 499-512.
- CAODURO, G., OSELLA, G. & S. RUFFO (1994):** La fauna cavemicola della Regione Veronese [The cave dwelling fauna of the Region of Verona]. - *Memorie Mus. Civ. Stor. nat. Verona (II Ser.)*, Sez. A: *Biologia*: 11: 1-144.
- CICOLANI, B. & A. DI SABATINO (1992):** Effetti biologici di attività antropiche in ambiente fluviale [Biological effects of human activity on the fluvial environment]. - *Soc. Ital. Entom.*, *Atti* 14: 43-51.

- CLEMENTS, W. H. (1994):** Benthic invertebrate community responses to heavy metals in the upper Arkansas River Basin, Colorado. - J. North Amer. Benth. Soc. 13(1): 30-44.
- CLOSS, G. P. & P. S. LAKE (1994):** Spatial and temporal variation in the structure of an intermittent-stream food web. - Ecol. Monog. 64(1): 1-21.
- DeWALT, R. E., STEWART, K. W., MOULTON, S. R. II & J. H. KENNEDY (1994):** Summer emergence of mayflies, stoneflies, and caddisflies from a Colorado mountain stream. - Southw. Natur. 39(3): 249- 256.
- DOBSON, M. (1994):** Microhabitat as a determinant of diversity: stream invertebrates colonizing leaf packs. - Freshw. Biol. 32: 565-572.
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