The Mayfly Newsletter

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1998 International Conferences in Argentina: 
Ephemeroptera and Plecoptera

LOCATION
The IXth International Conference on Ephemeroptera and the XIIIth International Symposium on Plecoptera will be held jointly in the village of Taft del Valle. It is a small town of about 7,000 inhabitants, 2,000 m above sea level and 107 km from San Miguel de Tucumán (capital of the province). Surrounded by high mountains, Taft is a privileged site for its beauty, the mildness of its climate and the wealth of its cultural inheritance. The winter is the dry season in the region, with cold nights and mild, sunny days. The friendly environment of the town will permit relaxed interaction among the participants.

PROGRAM
Oral and poster presentations by participants are invited. Poster presentations are strongly encouraged. Only one paper per senior author will be accepted. It is intended that presentations will be published as conference proceedings. Manuscripts will be reviewed before acceptance for publication. Projection facilities for overhead transparencies and 35 mm slides will be provided. Planned topics of general interest include systematics, ecology, biogeography and conservation. Field trips, social events and visits to traditional places will be included in the activities.

SCHEDULE (preliminary) August 1998
17-21: IXth Conference on Ephemeroptera
20: Mayfly-Stonefly Joint Symposium
21: Joint Field Trip

POST-CONFERENCE TOURS
Several post-conference tours will be arranged to different places in Argentina after 23 August 1998. Among the choices will be tours to Bariloche (Patagonia), Iguazu falls (NE Argentina), and Humahuaca (NW Argentina).

ACCOMMODATIONS
Accommodations will be available in hotels and motels of different categories and prices. Meals can be taken individually in diverse restaurants.

FEES (provisional, in US dollars)
Ephemeroptera Conference: $150
Plecoptera Symposium: $125
Both Congresses: $220
Fees will include abstracts, program and proceedings, morning and afternoon coffee, conference field day, conference dinner, and souvenir.

DEADLINE
Further information about the scientific program, accommodations, and availability of conference scholarships will be provided in the second announcement. If you wish to receive more information and the registration forms, please reply no later than 30 May 1997, to

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This information and periodically updated information will be available at the following homepage: http://www.unt.edu.ar/congresos/EPHEMERO.HTM.

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Editor’s note: This book review was published in the Journal of the North American Benthological Society, 1996, 15(1):136-138. It is reprinted here with the permission of NABS and Chuck Hawkins. Chuck made several important points that I think we should consider regarding our published proceedings. I will make space available in future newsletters if anyone would like to continue discussing this matter. Thanks to Chuck, NABS, and Phil Collinson (Allen Press) who provided an electronic copy.


Every 3 or 4 years, mayfly biologists convene an International Conference on Ephemeroptera to disseminate new knowledge regarding mayfly biology. The conference proceedings have been published in book form since the 1st conference in 1970 (Peters and Peters 1973, Pasternek and Sowa 1979, Flannagan and Marshall 1980, Landa et al. 1984, Campbell 1990, Alba-Tercedor and Sanchez-Ortega 1991, Corkum and Ciborowski 1995). This latest volume contains the proceedings of the most recent conference (7th), which was held at the University of Maine, 3-6 August 1992.

Current Directions in Research on Ephemeroptera contains 35 chapters describing the work of mayfly biologists from 13 nations conducting research in 14 countries. Although the authors come from every continent but Antarctica, there is a strong North American bias with greater than 50% of the chapters describing work by researchers from the United States (17 chapters) or Canada (4 chapters).

The content and quality of papers published in proceedings of this type varies greatly and hence so does the value to potential readers. This volume is no exception and will therefore be of mixed value to both mayfly specialists and general aquatic biologists alike. The book consists of a dedication, a chapter based on the plenary address, and 33 contributed chapters organized into 6 thematic sections: water quality (4 chapters), distributional patterns (8), life histories (2), ecology (9), morphology (2), and phylogeny and systematics (8). These contributed chapters represent the heart and soul of the book and describe the diversity and quality of science presented at this conference.

The dedication and plenary chapters introduce the reader to the book and partly set the stage for subsequent chapters. The 1st chapter (by W. P. McCafferty) is a dedication to George Edmunds for his life-time achievements as an ephemeropterist. McCafferty’s paper is fun reading for those interested in the history of aquatic biology and the genealogy of aquatic biologists. The 2nd chapter is the plenary address by Vladimir Landa and Tomas Soldan on the potential use of mayflies as bioindicators of water quality and environmental change. Although Landa and Soldan are accomplished and respected ephemeropterists, I doubt that those practicing and developing bioassessment procedures will find much new insight in their chapter. The general ideas that develop about bioassessment have been more thoroughly discussed elsewhere, and although mayflies may, in fact, vary greatly in species-specific responses to various types of pollution, few would now suggest that a single taxon should be used in bioassessment.

The contributed chapters are highly variable in quality, and thus I must question the usefulness and need for this type of book. The book clearly has value for the conference participants because it represents the collective efforts of the participants and is a tangible reminder of what probably was a stimulating and enjoyable conference. However, the most important value of such a book should be to provide nonparticipants an easily accessible source of new ideas and data on mayfly biology that would not be available otherwise.

Does the book provide this value? I learned interesting things about mayflies in a few chapters. The chapter by Dave McShaffrey on comparative functional morphology was well-written and dealt with an important yet neglected area of basic organismal biology that has profound implications for understanding both trophic and evolutionary relationships of aquatic insects. Gaino and Mazzini’s chapter on the organization of the fat body in mayflies also was informative and provided unique insights into the developmental biology of mayfly larvae and adults. I also learned a lot from Bae and McCafferty’s chapter on the evolution of tusks in mayflies. Other chapters contained data that could be useful in future syntheses (e.g., Lugo-Ortiz and McCafferty’s list of species from Texas, Harper et al.’s description of emergence patterns from three Oregon streams, and Brittain’s data on egg development in Australian mayflies), but I found that most chapters were based either on preliminary or incomplete data or were excessively speculative. These latter chapters would not have survived the peer review used by journals devoted to freshwater biology; thus their value is suspect.

Perhaps the ultimate test of any publication is whether it influences the development of knowledge in a discipline. What influence will this book have and whose ideas will these papers influence? To answer these questions, I conducted 2 bibliographic analyses. First, I determined how many times each paper published in Campbell (1990) had been cited between 1991 and 1994 as reported by the Institute for Scientific Information’s Science Citation Index (SCI). Second, I counted the number of papers published in previous mayfly proceedings that were cited in each of the chapters published in Corkum and Ciborowski’s book. In general I found that the papers published in these proceedings are largely ignored (Table 1). Over 50% of the papers in Campbell (1990) were never cited in the 4 years since publication, and the most frequently cited paper (Brittain’s review of life-history strategies in mayflies and stoneflies)
Table 1. Frequency of citations\(^a\) reported by Science Citation Index between 1991 and 1994 for the 44 papers published in Campbell (1990), and how frequently \(^b\) chapters in Corkum and Ciborowski (1995) cited papers published in the 6 previous Proceedings of the International Ephemeroptera Conference. Values in parentheses are % of papers cited 0-5 times between 1991 and 1994 (Campbell 1990) and % of papers citing 0-10 papers published in previous mayfly conferences (Corkum and Ciborowski 1995). Percentages exceed 100% because of rounding error.

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\(^a\) Self citations were not included in analyses
\(^b\) McCafferty’s dedication was not included in this analysis

was cited only 7 times (2 of these were self-citations). In combination, all of the papers published in Campbell (1990) were cited only 29 times by researchers other than the authors between 1991 and 1994 (there were only 4 self-citations), which resulted in the average paper in this book being cited 0.16 times a year. Brittain’s paper had an average yearly citation rate of 1.25. In all fairness, these results probably underestimate the influence of the papers in Campbell (1990) because of the lag time (2-4 y) between publication of one study and another that might cite it. Overall citation rates of papers in Campbell (1990) did increase between 1991 and 1994 (4, 7, 6, and 13 citations per year); nonetheless, the average citation rate of papers in this volume using only the 1994 data are still low (0.30 per paper).

These low-to-nonexistent citation rates suggest that most of the papers published in these proceedings are not influencing the ideas of other scientists, at least those who publish in journals tracked by SCI. Not all journals are followed by SCI, however (Gibbs 1995), and SCI citation rates may not provide a realistic appraisal of a paper’s true influence. For example, North American journals represent the majority of journals followed by SCI (Gibbs 1995), and North American researchers also appear to cite papers published outside North America less frequently than those published in North America, even if these journals are tracked by SCI (Wardle 1995). Furthermore, low SCI citation rates may not reflect the real influence a paper has in a small, specialized area of research such as mayfly biology (Ware 1993).

Perhaps a better measure of the influence of a proceedings paper is the frequency such a paper is cited by the commu-
This Newsletter is Numbered!

Examine the upper right hand area of page 1. The Mayfly Newsletter now has its own unique International Standard Serial Number (ISSN): 1091-4935. This number was assigned, upon request, by the National Serials Data Program (NSDP) of the Library of Congress. According to the NSDP, the ISSN can be used for such processes as ordering, billing, inventory control, abstracting, indexing, acquisitions, claiming, binding, accessioning, shelving, cooperative cataloguing, circulation, interlibrary loans, and retrieval of requests. How did we ever get along without it?

Bejeweled Ephemeroptera

A colleague passed an interesting jewelry catalog to me recently. It contains a variety of animal-inspired pins, tacks, pendants and rings. Included in the catalog are mayfly, stonefly and mosquito pins; two mayfly tacks; and an exceptionally beautiful dragonfly pin. Prices for these items begin at US$75. Catalogs or further information may be obtained from Singleton-Moss, 10 South 5th Street, Suite 111, Minneapolis, Minnesota, 55402 USA, phone 1-800-474-0079.

Children's Book on Mayflies

I found an interesting little book in the juvenile section of the library the other day, The Mayfly, by Ross E. Hutchins (1970. Addison-Wesley Publishing Co., SBN 201-03100-0).

It basically follows the life cycle of a mayfly inhabiting a stream in the Great Smoky Mountains. Topics such as egg laying habits, egg attachment structures, nymphal and subimaginal molting, mating flights, and predation are all covered nicely. The illustrations are well done, too.

I checked with our local bookstore and, unfortunately, this book is now out of print. I suppose there is always a chance one may find a copy among some used books.
1995 Mayfly Bibliography

[Editor’s note: This bibliography was published as the Ephemeroptera portion of the 1995 (1996) North American Benthological Society’s Current and Selected Bibliographies on Benthic Biology.]

The following is a list of current publications dealing with Ephemeroptera that have been published up to and during 1995 and have not appeared in previous NABS Bibliographies. To facilitate locating abstracts and addresses of authors, the name of the index (abbreviated), volume, and abstract or item number follow each reference. Abbreviations are as follows: Biological Abstracts (BA); Biological Abstracts/Reports, Reviews, and Meetings (BA/RRM); Current Contents - Agriculture, Biology, and Environmental Sciences (CC); Dissertation Abstracts International (DAI); Entomological Abstracts (EA); Masters Abstracts (MA); and Zoological Record - General Insects and Small Orders (ZR). Citations for CC, DAI, and MA include the volume, issue number in parentheses, and page number on which the reference is found. References without an abstract number were obtained from the original reprint. I would appreciate receiving a reprint of any article that deals with mayflies, especially if it includes scientific names, so that it may be included in next year’s bibliography. Also, I would like to be informed of any corrections or omissions in this or past bibliographies. Suggestions are always welcome. Please send all correspondence to Peter M. Grant, Department of Biological Sciences, Southwestern Oklahoma State University, Weatherford, Oklahoma 73096-3098 USA, phone (405) 774-3294, FAX (405) 774-3795, E-mail grantp@swosu.edu.


Bagge, P. 1995. Emergence and upstream flight of lotic mayflies and caddisflies (Ephemeroptera and Trichoptera) in a lake outlet, central Finland. Entomol. Fenn. 6(2-3): 91-97. [BA101:93069]


Faunistic and biogeographical studies on the mayflies from Sicily (Insecta, Ephemeroptera). Animalia 18: 31-60. (In Italian, English summary)


and Deleatidium sp. (Leptophlebiidae). Pest. Sci. 44(3): 283-292. [BA100:98978]


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**Ephemeroptera Galactica**

A site on the World Wide Web has been set up to coordinate information about mayflies available over the Internet. "Ephemeroptera Galactica" contains hypertext links to many sources of information on mayflies, including taxonomic catalogs, bibliographies, how to contact mayfly people, figures, and pointers to other Internet sites of interest (including "Mayfly Central," the first Internet site dedicated to mayflies). You can visit "Ephemeroptera Galactica" on the World Wide Web at the URL "http://www.famu.edu/mayfly."

**ITIS/EPA/ASC**

The Interagency Taxonomy Information System (ITIS) plans to put all known species of North American flora and fauna on the World Wide Web. The Environmental Protection Agency (EPA) and the Association of Systematics Collections (ASC), among other agencies, are involved with this project.

ITIS will register a species under all of its synonyms, but when queried, will identify the most widely accepted scientific name. It will also provide references and a list of experts on that species.


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**Nomina Insecta Nearctica**

A Checklist of the Insects of North America

*Nomina Insecta Nearctica* will appear in four volumes. Volume 1 (now available) covers the orders Coleoptera and Strepsiptera. Volume 2 (to appear in summer 1996) covers the Hymenoptera, Raphidioptera, Megaloptera, Neuroptera, Mecoptera, and Trichoptera. Volume 3 contains the Diptera, Lepidoptera, and Siphonaptera (late Fall 1996), and volume 4 covers the Non-Holometabolous orders (Winter 1996/1997). At the conclusion of the publication of the four volumes, a CD-ROM will be released containing the databases for all four volumes as part of a database application.

Each order consists of a primary checklist covering all of the names applied to the species of that order with complete synonyms. Each name includes its original orthography and the original generic name. All names are arranged alphabetically, families within the order, genera within the family, and valid species within the genus. Synonyms, homonyms, emendations, misspellings, etc. are arranged chronologically under the valid species name. A separate section is provided listing the higher classification "phylogenetically" to subfamily with valid generic names listed alphabetically under subfamilies. The entire series is thoroughly indexed by species and genus group names.

Volume 1 covering the Coleoptera and Strepsiptera is now available for US$79.95. To get more information send an E-mail message asking for a brochure at eis@ix.netcom.com or write to Entomological Information Services, Box 4350, Rockville, Maryland 20849-4350 USA. The same information is available on a web page at http://www.idsoline.com/eis/nomina.htm. The book is 827 pages and 8 1/2 x 11 inches in format.

The series is being published by Entomological Information Services. [Poole, R. W. and P. Gentili. "Nomina Insecta Nearctica." ECOLOG-L@UMD.EDU (20 June 1996)]

The Mayfly Newsletter is the official newsletter of the International Conferences on Ephemeroptera and is published twice a year to facilitate communication among ephemeropterists. Subscriptions to the Newsletter are free. To place your name on the mailing list or to contribute information for the next issue, contact Peter M. Grant, editor, The Mayfly Newsletter, Department of Biological Sciences, Southwestern Oklahoma State University, Weatherford, Oklahoma 73096-3098 USA, phone (405) 774-3294, FAX (405) 774-3795, or send E-mail to grantp@swosu.edu. This publication was authorized by the Dean of Arts and Sciences and was printed at a cost of $150.00 for 500 copies.
Supraspecific Classification of Ephemeroptera

Nikita Kluge

At the present time I am working on a monograph on supraspecific classification of Ephemeroptera. It will include a critical revision of all mayfly taxa higher than species, as well as accounts of all known useful characters which allow determination of supraspecific taxa or are used in discussions about phylogeny and system.

Recent literature (as well as literature of any period) contains many disagreements concerning ranks of the taxa: a group of the same volume is regarded by some authors as a genus, by others as a subgenus, or as a subfamily, etc. I believe that discussions of such kind are useless and give nothing for our scientific knowledge, because the absolute ranks (such as genus, family, order and others) are not objectively determined. At the same time, the zoological nomenclature regulated by ICZN is based on ranks in such a manner that it is impossible to give a name for a taxon if a certain rank is not attributed for it.

In my monograph, I am using a new HIERARCHICAL nomenclature, which on one hand is completely based on the rules of ICZN about priority of generic and family group names (and thus, can be accepted by everybody who recognizes ICZN), but on the other hand this nomenclature is free from ranks (and even from such “saintly” ranks as genus). Usage of this nomenclature allows one to avoid useless discussions about ranks and about subjective synonyms (which are also absent in this nomenclature).

Being different from the ICZN-nomenclature, the new hierarchical nomenclature at the same time does not contradict the recommendations of the ICZN. The new nomenclature is made in such a manner, that everybody who does not want to use it, and wants to see traditional taxa names, can easily change hierarchical names to traditional rank names, if attribute to these taxa any ranks according to own taste.

Discussion on three alternative principles of taxonomic nomenclature - rank, volume and hierarchical ones - will be published in a separate paper, the computer text of which is available now by e-mail.

In the monograph on mayfly supraspecific taxa, I am using an original form of text arrangement, which helps to find information about characters and taxa in a long text.

Before the IXth International Conference on Ephemeroptera, I am going to finish the first draft of this monograph without the taxon corresponding to Atalophlebiinae sensu Peters. This draft will be available before its publication as a computer text for everybody who would like to study it in order to criticize or to use. At the present time, selected parts of the text are prepared and are available to specialists who would like to discuss them now.

A number of problems are connected with taxa which I am not able to study myself. Having no financial possibility to travel, I can’t collect mayflies of out-of-Palaearctic faunas.

One complex of these systematic problems is connected with baetids. Their systematic position can be determined with help of examination of pose of gonostyli buds in mature male nymphs which are ready to molt to subimago (Novikova & Kluge, 1994 et al.), but for many exotic baetid taxa, this character is still unknown. These are American taxa Baetodes, Camelobaetidius (incl. Dactylobaetis), Paracloeodes, Heterocloeon, Apobaetis; all Australian baetids; all baetid genera described last 20 years except for the groups described by Kluge and Novikova, and except for Afrotipulum sudanense of which I have received from Dr. Gillies; out-of-Palaearctic species, which are placed to artificial genera Baetis, Cloeon, Centrotipulum, Pseudocloeon, Acentrella and Procloeon, but actually do not belong to the natural groups with these names.

Another group of problems is connected with adult pterothorax structure, especially with subimaginal pterothorax structure. In many cases it gives very important characters for supraspecies classification and phylogenetic reconstruction, but it is very poorly investigated. It would be important to examine subimaginal thorax of Rallidens, Tricorythus, taxa recently placed to Teloganodinae, and probably some other exotic groups.

In order to understand systematic position of ephemerrellid taxa, it is necessary to do a very simple thing: to describe structure of tergalia (= “gills”). Unfortunately, for some taxa, only the external appearance of larvae is described; because of this, systematic position of Caurinella, Crinitella, Hytranella and Teloganopsis is still unclear. In order to be sure in the name “Ephemerrella,” it is necessary to examine larvae of its type species - E. excrucians.

I have a strange idea that Exeuthyplocia can be related to Behningiidae, but in order to verify this idea, examination of Exeuthyplocia nymphs is necessary.

I would be very thankful to everybody who would be able to provide me with material or suggest sources of finance for collecting trips.

At the present time I am in a deep financial hole (together with our University and all Russian science). I can’t promise to send letters or other correspondence, but I can send E-mail without problems, because somebody has paid for this at our University. The following E-mail address can be used now to contact me: vladi@vdi.usr.pu.ru

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