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The Mayfly Newsletter

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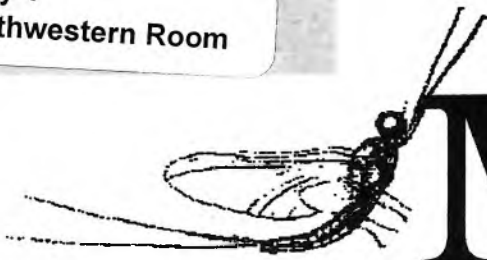
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THE MAYFLY NEWSLETTER

Vol. 4 No. 2

Southwestern Oklahoma State University, Weatherford, Oklahoma 73096-3098 USA

July 1994

Current Research on Mayflies

Cassie Gibbs
USA

We have three projects involving mayflies underway. The first involves *Siphonisca aerodromia* and is being carried out in association with Marcia Siebenmann, a graduate student, although this is not her thesis project. This mayfly is so fascinating and its habitat so beautiful that people don't seem to mind giving up their free time to work with it. For the past two years we studied the sex ratios of late instar nymphs and subimagos, determined seasonal and diel emergence patterns, and compared development in eggs from mated and unmated females. This year we are attempting to analyze the genetic relationships between and within Maine populations, effect on eggs of passage through the digestive tract of fish, and a search for new collection sites. Marcia's official project is a study of long-term (1974-1991, 1992) changes in abundance and diversity of macroinvertebrates in the Narraguagus, a Maine salmon river. She hopes to complete her thesis this summer and has seen some interesting changes in the mayflies with an increase in the number of genera at some of her sites. The other project that involves mayflies is that of graduate student Lewis Boobar and is a comparison of macroinvertebrates in ponds used by black ducks in forested and agricultural landscapes. This field season will be the second of three planned for the project.

Eduardo Dominguez
Argentina

I have received a fellowship from the Argentine National Council of Scientific Research (CONICET) to work on a revision of the *Farrodes* group and the phylogenetic systematics and biogeography of the South American leptophlebiids at the generic level. This work is currently being conducted at Cornell University (please note temporary change of address: Department of Entomology, Comstock Hall, Cornell University, Ithaca, New York 14853-0999 USA). If someone has material to contribute, I will be more than happy to study it!

Michel Sartori
Switzerland

The following is a list of research and collaborations with which our team in Lausanne is involved: (1) Faunistic survey of Swiss mayflies (1992-1996): a distribution atlas including maps and biological and ecological data for each species is now in preparation with Peter Landolt. (2) Flight energetics of mayflies in relation to their reproductive behavior (1992-1997): led by Laurence Ruffieux, involving collaboration with the Department of Physiology at Zurich University (Prof. H. Briegel). Species of interest at the moment are *Siphonurus aestivalis*, *Palingenia longicauda* and *Dolania americana* (with Jan and Bill Peters). (3) Ecological requirements of *Palingenia longicauda* (1993-1995): based on our 1990-1993 field trips in Hungary (with Peter Landolt), a program has begun on the selectivity of *P. longicauda* larvae with regard to the substrata. This work is led by Istvan Turcsanyi, a student at Debrecen University, for his Masters degree. (4) Heptageniidae and Palingeniidae of Madagascar (1994-1996): within the framework of the mayfly survey undertaken by Jean-Marc Elouard, these two families will be studied by us. (5) Mayflies of Slovenia (1994-1995): a Slovenian graduate student, Dasa Zabrc, is working in our lab on a one year scholarship to complete her knowledge on Ephemeroptera from this former Yugoslavian republic.

Tomáš Soldán and
Vladimir Landa
Czech Republic

Our current research can be characterized as follows: (1) study of global, regional and/or local long-term changes of aquatic biotopes in the Elbe basin, Central Europe, at ten localities on the basis of mayfly population fluctuation; (2) study of Southeast Asian mayfly fauna (taxonomy, distribution, origin); (3) comparative anatomy of internal organs (global scale).



John Flannagan and Javier Alba-Tercedor Canada/Spain

We are involved in a study of the emergence and food webs of the aquatic insects of the Assiniboine River, Manitoba. Javier has been analyzing the ratio of two stable isotopes of carbon ($^{14}\text{C}:^{13}\text{C}$) in mayflies, some of their predators, organic material in the drift, various organic materials on the substrate, vascular plants, etc., in an effort to sort out the carbon pathways. He also hopes to analyze for a stable isotope of nitrogen to give us an idea of the trophic levels of some of the insects.

In his spare time, Javier is describing two new species of *Tricorythodes* from the Assiniboine River.

Javier will be returning to Granada at the beginning of August. John will be starting a 14 month leave — hopefully revisiting Australia and New Zealand after that.

Ian Campbell Australia

Mike Hubbard and I have just submitted a manuscript describing the Australian species of *Prosopistoma*. The species had already been recorded as *P. sedlaceki*, a species designation which was known to be wrong, and an error which we are hoping to correct. I'm also doing some work on *Jappa* and am hoping to submit a manuscript describing several new species later this year. I have one graduate student working on Ephemeroptera. Supatra Parrnong is doing a PhD comparing the production of *Austrophlebioides* and *Baetis* species at farmland and forested sites on two streams. She has been supplementing field sampling with field and laboratory growth chamber experiments because the lack of synchrony of the life histories of the Australian species makes it difficult to determine production solely from field size frequency data.

Bill Morton Canada

Some associates and myself have been working on a coldwater intermittent stream in northern Ontario, Canada, that turned up some interesting mayflies. If anyone has information on this type of stream that they would like to share, or even specimens they need checked, I would be most interested in hearing from them: W. B. (Bill) Morton, 3 Woodridge Drive, Guelph, Ontario, N1H 7E3, CANADA.

Travel Scholarships for VIIIth International Conference

The Scholarship Subcommittee of the Permanent Committee of the International Conferences on Ephemeroptera will accept applications from all interested persons who wish to apply for a travel scholarship to attend the VIIIth International Conference on Ephemeroptera, 14-20 August 1995, in Château-d'Œx, Switzerland. Since the amount of money available for scholarships is limited (no more than \$Can 600), the purpose of this money is to defray some of the travel expenses, rather than to pay for them entirely.

Applicants should include the following information: (1) name and birth date, (2) mailing address (including telephone and fax numbers as well as e-mail), (3) affiliation and present position, (4) reason(s) for the application, (5) title and summary of proposed presentation, and (6) a resume and a list of publications as a separate document.

Selection criteria are (1) financial need, (2) significance of proposed presentation, (3) directions of previous research, and (4) geographical location of applicant.

Applications will be reviewed by the Subcommittee and should reach Dr. Javier Alba-Tercedor (Departamento de Biología Animal y Ecología, Facultad de Ciencias, Universidad de Granada, 18071-Granada, SPAIN) before 1 March 1995. Recipients of scholarships will be notified on or before 1 June 1995.

"KCARD" Database Javier Alba-Tercedor

I received a very nice database on mayflies. It included data from *Zoological Record* from 1970 to 1992. The copy that its author sent to me came in a self-extracting form on a 1.44 MB disk. It is installed simply by typing "install." The program is easily menu driven. Although different possibilities of making sophisticated searches is not possible, the general presentation is very neat and it works properly, being quite easy to print out the results of any search.

In conclusion, this is a very useful database and program (for PC computers) for all of us dealing with mayflies. I encourage the author to continue to update it.

If you are interested in a copy, please contact the author directly: Shih-Chang KANG, Department of Entomology, Chung Shing University, Taichung 402, TAIWAN, fax 886-4-2875024.

Availability of MFNL Mailing List


Two items have come up regarding the mailing list for *The Mayfly Newsletter*. One was a suggestion by Ruben Tejada Dapuetto to publish the mailing list in the *Newsletter*. I think this is a good idea and it is something I'll plan on for a future issue.

The other item has to do with making the mailing list available to individuals and organizations. For example, the Xerces Society, "an international, nonprofit organization dedicated to invertebrates and the preservation of critical biosystems worldwide," has asked for a copy of the mailing list to solicit new members.

I have distributed the mailing list to a few ephemeropterists who were updating their own mailing lists (e.g., convenors of the international mayfly conferences) but not to any organization.

I'm going to make a recommendation and I would like your opinions on it: I will supply copies of the mailing list to an individual if that individual will be using it for his/her own research or for activities associated with the international conferences. I will supply copies of the mailing list to nonprofit, professional organizations whose interests are similar to ours. The Xerces Society, in my opinion, would be such an organization. These individuals or organizations will not be permitted to pass this mailing list on to other individuals or groups. The mailing list will not be made available to individuals or organizations that are interested in making a profit (e.g., selling a new type of aquatic net) or represent a group that has no relationship with mayflies (e.g., The Ronald Reagan Fan Club).

Please let me know how you feel about my recommendations. If you do not want your name passed to other individuals or organizations, just let me know as soon as possible, and I'll make sure that it doesn't happen.

Send news about your summer research
✉ to this address for the next issue. 

NSF: Biotic Surveys and Inventories Program

Proposals are being solicited for the National Science Foundation's Biotic Surveys and Inventories Program. "Proposals submitted to the Biotic Surveys and Inventories Program should involve collecting specimens of extant and extinct organisms as samples of taxa of geographic or oceanographic regions and/or geologic horizons; conducting inventories of existing collections; developing and disseminating electronic databases of the collected or inventoried specimens and taxa; and producing biotic treatments, authenticated species lists, catalogs, manuals, keys, expert identification systems, and/or other documents in electronic and printed form.

"The primary product of a biotic survey or inventory project is expected to be new collections and/or inventories of existing collections and taxa. These projects should result in the production of electronic and electronically accessible . . . specimen-based databases — to permit more efficient maintenance, dissemination, and revision of the products of the research — and other electronic and printed products such as keys, expert identification systems, checklists, descriptions, and other databases and authority files to assist in identification of included taxa."

This might be a good time for those of you who are working on mayfly databases to get together and write a group proposal.

For information, ask for the booklet, "Biotic Surveys and Inventories - Program Guidelines," (NSF 94-66) from NSF.

The Mayfly Newsletter 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. This publication was authorized by the Dean of Arts and Sciences and was printed at a cost of \$85.00 for 500 copies.

Carolina Mayflies

Dave Lenat sent in two news items. The North Carolina Division of Environmental Management does not conduct research on Ephemeroptera, but we are happy to cooperate with mayfly taxonomists. We have several thousand benthic macroinvertebrate samples (collected since 1985) stored in four ounce glass bottles. If you are interested in looking for mayflies in North Carolina streams, it's easier to dump out our bottles than to wade around in streams. Instead of sampling 5-10 sites per day, you can "sample" at hundreds of sites! By making use of our computer system, we can pick out sites according to date, county, stream size, ecoregion, etc. We can even ask for a printout of all those samples where a particular genus or species has been found. This arrangement has worked well for many taxonomists. [Contact Dave at the North Carolina Division of Environmental Management, Water Quality Section, 4401 Reedy Creek Road, Raleigh, North Carolina 27607 USA.]

The Carolina's Area Benthologists (CAB) is sponsoring updates of the species lists for freshwater invertebrates in North and South Carolina. Changes and additions to the mayfly species list are being coordinated by Manuel Pescador, Entomology, Division of Agricultural Sciences, Florida A&M University, Tallahassee, Florida 32307 USA, phone (904) 561-2214.

VIIIth International Conference Château-d'OEx, Switzerland 1995

The first announcement for the VIIIth International Conference on Ephemeroptera has been mailed. If you wish to receive further information, please write to the following address no later than 1 August 1994:

Mayfly-Stonefly Congress
Museum of Zoology
P.O. Box 448
CH-1000 Lausanne 17
SWITZERLAND
Phone: + 41 21 312 83 36
Fax: + 41 21 323 68 40

Indicate if you would like further information on the VIIIth International Conference on Ephemeroptera (14-18 August) or the XIIth International Symposium on Plecoptera (18-20 August) or both.