



1-1-2000

The Mayfly Newsletter

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Recommended Citation

Grant, Peter M. (2000) "The Mayfly Newsletter," *The Mayfly Newsletter*. Vol. 10: Iss. 1, Article 1.
Available at: <https://dc.swosu.edu/mayfly/vol10/iss1/1>

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WEATHERFORD, OK JAN 19 2000 10/11

THE MAYFLY NEWSLETTER

Vol. 10 No. 1

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

January 2000

ISSN: 1091-4935

They're Back! Mayflies Return to Lake Erie

The demise of the mayfly population in Lake Erie (Canada, USA) back in the 1950s is a well-known story among ecologists about the effects of organic pollution on benthic organisms. Prior to that time, mayflies occurred in abundance; afterwards they became quite rare.

However, an ongoing study by Ed Masteller indicates that mayflies are recolonizing the lake. Over the past several years they have returned to the shallower areas of western Lake Erie. They now appear to be inhabiting the much deeper water of eastern Lake Erie.

Ed has received support from the Pennsylvania Sea Grant Project for the Mayfly Watch Project along the Pennsylvania shores of Lake Erie. He is using citizen volunteers to collect specimens, make observations, and measure environmental conditions. The Pennsylvania program is a modified extension of the Mayfly Watch Program developed by Ken Krieger (Heidelberg College) along the Ohio shoreline.

The number of specimens he is collecting is truly amazing. Using a hula hoop (0.58m²) as a sampling device, Ed has measured densities of adults on land of over 1500/hoop! Most of the specimens are *Hexagenia rigida* with significant numbers of *Ephemera simulans*.

The swarms of subimagos coming off of Lake Erie during summer 1999 were so large and dense, that a local television station could pick them up on their Doppler weather radar. These densities have been large enough to appear on the radar as storm images. At times these "storm clouds" of mayflies were 3 miles wide, 10 miles long and as high as 800 feet above the lake's surface.

Ed showed me some videos of these radar reports when I visited him last summer. In the evening,

the radar clouds would move from the lake to land (subimagos that have just emerged), and later the clouds would move back to the lake (imagos on their way to oviposit).

The meteorologists at the television station cooperated with Ed and even incorporated the radar display of emergence into their nightly weather reports. Ed plans to show these videos at the 2000 North American Benthological Society meeting.

While the information collected so far indicates large, healthy populations of mayflies, the exact location of the nymphal habitat remains a mystery. Flyers have been distributed along the Pennsylvania shore of Lake Erie in an attempt to recruit boaters and fishermen into participating. Fish guts are also being collected to determine which fish are eating the mayflies and where in the lake the fish were collected.

Ed's research has received a lot of media interest with two articles being published in the local *Erie Times News* and a full page report in the *Pittsburgh Post Gazette*.

Ed is in the process of publishing his results. If you have any questions about his study, contact him at Penn State Erie, Station Road, Erie, Pennsylvania 16563-6420 USA, phone (814) 898-6404, fax (814) 898-6462, email e11@psu.edu, www.pserie.psu.edu/seagrants/seagindex.htm.

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Xth International Conference on Ephemeroptera XIVth International Symposium on Plecoptera

2001

International Joint Meeting

5-11 August 2001, Perugia, Italy

2001

FIRST ANNOUNCEMENT

This meeting is being organized by Prof. Elda Gaino with the help of numerous collaborators. The International Joint Meeting on Ephemeroptera and Plecoptera intends to update the current knowledge of these two insect groups in the fields of biodiversity and environment, biogeography, ultrastructure, physiology, systematics and taxonomy, phylogeny, reproduction, life histories and behavior.

Registration Fee

The estimated fee is 200 Euro. For an accompanying person the fee is 100 Euro. The registration fee will cover: (a) the conference rooms costs; (b) coffee breaks; (c) field trip (one-day excursion); (d) conference dinner; (e) program, abstract book and a copy of the proceedings; and (f) souvenirs.

Location

Perugia is the most important town of Umbria. It is located in Central Italy, about 200 km north-east of Rome and 150 km south of Florence, and stands on a hill at about 500 m a.s.l.

Transportation

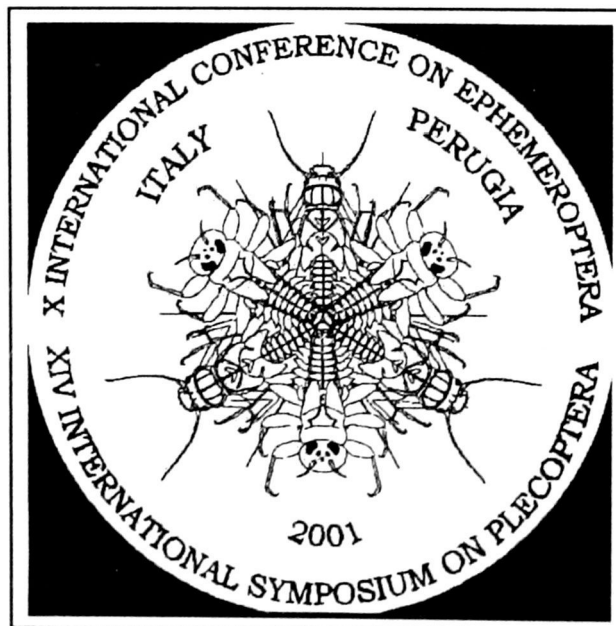
Perugia has good road and rail connections. People flying to the conference should arrive either (a) in Rome or Florence and go on to

Perugia by train or by bus or (b) in Milan and fly to Perugia (Sant'Egidio Regional Airport).

There are also rail and road connections from Milan. At present, there is no direct connection between the Rome and Perugia airports.

Accommodations

Perugia is a tourist town and offers various kinds of accommodations:



there are hotels, pensions, camping sites (10 km from Perugia), youth hostels and a lodge reserved for University researchers (only a few rooms available).

Guests

For accompanying persons, Perugia offers many sightseeing opportunities: museums, palaces, churches, medieval and archaeological sites, etc. Guided tours will

be arranged.

Post Conference Tours

A form will be sent to the participants with some options on visits to the main Italian towns (e.g. Rome, Florence, Venice).

Proceedings

The Proceedings will be published in a special volume of the *Rivista di Idrobiologia*, University of Perugia.

Field trip

The field trip will be organized to allow people to collect specimens along one of the many streams of the region.

Preregistration

A preregistration form is available online at <http://olympus.unipg.it/maystone>. People who have no email address will receive the first announcement by mail.

Preregistration forms must be returned by February, to

the following address: 2001 International Joint Meeting, Dipartimento di Biologia Animale ed Ecologia, via Elce di Sotto, 06123, Perugia (Italy). Or you may fax it to ++39 075 5855733 or email it to maystone@unipg.it.

Second Announcement

The second announcement and call for abstracts will be sent by September 2000.

Mayflies

Jeffrey Harrison

Every day for a week we watch them,
appearing, as if out of nowhere,
on the lake's surface, each one
having risen as a nymph from the bottom
and hatched into a creature lovely enough
to make us stop rowing for a moment,
our raised oars dripping quietly.
Something about the graceful curve
of its abdomen, and its tail
of two fine filaments, like a paintbrush
for depicting the minutest details.
Something about its plight,
its life span of a single day, the way
it hardly stands a chance.
Born on that perilous interface, it must
sit there, trembling, exposed from both sides
to annihilation, gather its tiny wits,
and wait for its delicate wings
to become firm enough for flight.
Those first flickering attempts
only serve to send out
rippled signals to the trout below,
one of which will suddenly
break the surface with a splash.
Or the blurred swerve of a swallow
will skim the lake and snatch the fly.
Sometimes the mayfly will escape
the surface tension, fluttering up
—only to be picked off in midair.
Yet some of them must make it through.
By week's end there are thousands, millions,
and the flocks of blackbirds and waxwings
that have moved in from who knows where
madly lurch and dive but can't
get them all, so that a few
can dodge the birds and take the risk
of mating in flight, floating up in tandem
over the treetops at the lake's edge....
Every year it happens like this,
the confetti of summer's arrival
swirling over the lake, this storm
of insects that is not a plague
but a sign as sure and startling
as winter's first snow, whose flakes
vanish one by one as they touch the lake.

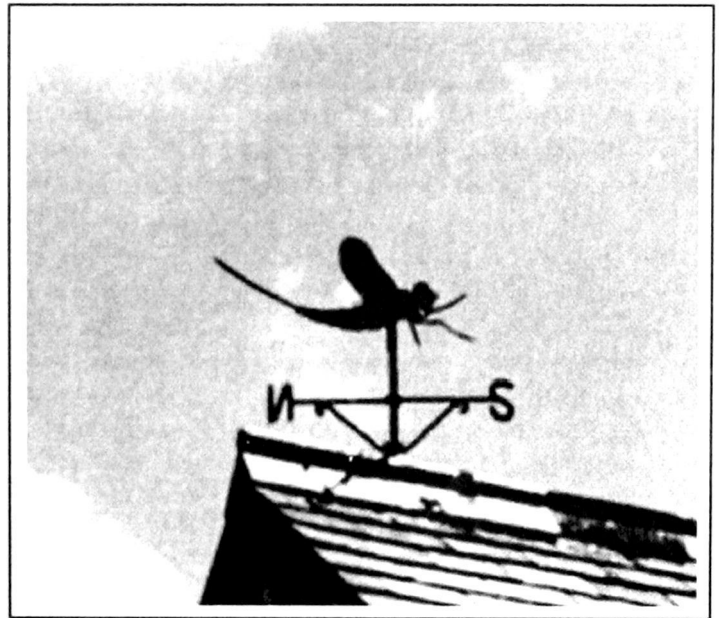
Reprinted with permission from *Signs of Arrival*
(Copper Beech Press, 1996)

Mayfly Toys

The inspiration for this article came from Eva Gillies, during breakfast one day, while attending the mayfly conference in Argentina. Eva, her husband Mick, John Flannagan and myself were seated at the breakfast table in our hotel discussing, what else, mayflies.

Somehow the topic turned to some of the unusual items that we ephemeropterists own that are in the form of or associated with mayflies. Eva thought it would be interesting to have an article in the newsletter entitled, "Mayfly Toys," in which an ephemeropterist could show and discuss such things.

To start off this first article, Mick and Eva have sent two photographs. One is the weather vane that adorns their home. (See first photo.) Undoubtedly this mayfly-shape works



much better than the more traditional arrow or rooster that we tend to use in the states. The second photo shows the form of a mayfly in a cover over their well.

I'd like to continue this feature in future newsletters. If you own something that is in the form of a mayfly or at least has some sort of reference to mayflies, please send me a photograph with a description. Digital photographs would work, too. My address is on page 4.



Mick Gillies

Many of us have probably already read the email from Javier Alba-Tercedor regarding Mick Gillies. Upon return from the Christmas holidays, Javier received a letter from Eva Gillies, Mick's wife, saying that Mick passed away on 11 December 1999.

This comes as a shock to all of us, I'm sure. One of the many reasons I had to attend a mayfly conference was to spend time with Mick and bask in that British wit. The conference in Argentina was doubly nice since I had the opportunity to spend time with Eva, too.

Mick has left us a rich history of work on Ephemeroptera. I hope to locate an obituary chronicling his work for the next newsletter.

You may send condolences to Eva at Whitfeld, Hamsey, Lewes, Sussex, BN8 5TD England.

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 (580) 774-3294, fax (580) 774-7140, email grantp@swosu.edu. This publication was authorized by the Dean of Arts and Sciences and was printed at a cost of \$160.00 for 500 copies.

Aquatic Entomology Seminars at the Humboldt Field Research Institute

The Humboldt Field Research Institute is pleased to announce another series of professional seminars for aquatic entomologists at its facility on the coast of Maine, just east of Bar Harbor and Acadia National Park. The seminars include field studies in the pristine habitats of Maine's easternmost county.

These seminars are offered for aquatic entomologists who are keenly interested in systematics and biomonitoring issues. Lectures, labs, and reviews of the current literature make these unusually interesting and important seminars.

Additional information is available from Humboldt Field Research Institute, *Northeastern Naturalist*, P.O. Box 9, Dyer Bay Road, Steuben, Maine 04680 USA. Phone (207) 546-2821, fax (207) 546-3042, <http://maine.maine.edu/~eaghill>.

Dates, Topics, Instructors

- 28 May - 3 June. Larval dragonflies and damselflies. Paul Brunelle, Atlantic Dragonfly Inventory Program
- 4-10 June. Mayflies - systematics and biomonitoring. Steven Burian, Southern Connecticut State University
- 2-8 July. Adult dragonflies and damselflies. Paul Brunelle, Atlantic Dragonfly Inventory Program
- 16-22 July. Caddisflies - systematics and biomonitoring. Brian Armitage, Ohio Biological Survey
- 30 July - 5 Aug. Chironomids - systematics and biomonitoring. Leonard Ferrington, University of Minnesota (Kansas Biological Survey)

Mayfly Central

<http://www.entm.purdue.edu/entomology/research/mayfly/mayfly.html>

Ephemeroptera Galactica

<http://www.famu.org/mayfly>

The Electrogena Pages

<http://www.celleno.it/Electrogena>

Mayfly Korea

<http://myhome.shinbiro.com/~monka/index.html>

Nomina Insecta Nearctica (Ephemeroptera)

<http://www.nearctica.com/nomina/oddbugs/ephem.htm>

Web

Sites

Address Updates - New, Corrections, Changes

Changes or additions to the mailing list and email addresses since the last issue are listed below. Updated addresses will be published as they become available. Please inform the editor of any changes in postal or email addresses.

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1998 Mayfly Bibliography

[Editor's note: This bibliography was published as the Ephemeroptera portion of the 1998(1999) North American Benthological Society's (NABS) *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 1998 and have not appeared in previous NABS Bibliographies.

Please note that, unlike previous years, index names and abstract/item numbers are not included in this year's bibliography. If you would prefer that such items be included in future bibliographies, please let me know.

I would appreciate receiving a reprint of any article that deals with mayflies, especially if it contains 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, 100 Campus Drive, Weatherford, Oklahoma 73096-3098 USA, phone (580) 774-3294, fax (580) 774-7140, email grantp@swsu.edu.

If you would like an electronic copy of this year's mayfly bibliography, simply send me a request via email. I will send this file to you as an attachment.

- Aanes, K. J.; Baekken, T. 1995. Use of macroinvertebrates to classify water quality. Report No. 2A. Acidification. Norwegian Institute for Water Research. (In English)
- Abbott, J. C.; Stewart, K. W.; Moulton, S. R. I. 1997. Aquatic insects of the Big Thicket region of East Texas. *Texas Journal of Science* 49(3 Suppl.): 35-50.
- Adamek, Z.; Horeck, M.; Fasaic, K. 1996. Food relationships among young tench (*Tinca tinca* L.), grass carp (*Ctenopharyngodon idella* Val.) and silver carp (*Hypophthalmichthys molitrix* Val.) in polycultures. *Ichthyos* 13(1): 50-61.
- Alba Tercedor, J. 1998. Description of the imagines of *Rhithrogena goeldini* Sartori and Sowa, 1988, and keys for the identification of imagines of the European species of the *R. diaphana*-subgroup (Ephemeroptera: Heptageniidae). *Aquatic Insects* 20(2): 125-130.
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- Bae, Y. J. 1997. *Ecdyonurus baekdu* n. sp., an ecdyonurid mayfly (Ephemeroptera: Heptageniidae) from Korea. *Korean J. Systematic Zool.* 13: 253-258.
- Bae, Y. J. 1998. Insects' life in Korea. I. Apterygota, Exopterygota (in part), and aquatic insects. *Korean Entomological Inst., Korea Univ.* 260 pp.
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- Bae, Y. J.; Park, S. Y. 1998. *Alainites*, *Baetis*, *Labiobaetis* and *Nigrobaetis* (Ephemeroptera: Baetidae) in Korea. *Korean J. Systematic Zool.* 14: 1-12.
- Bae, Y. J.; Park, S. Y.; Park, S. J.; Hwang, J. M.; Hur, J. M. 1998. Aquatic insect community in a mountain stream of Chiaksan. *J. Natural Science Inst.* 10: 7-20. (In Korean, English abstract)
- Bae, Y. J.; Park, S. Y.; Yoon, I. B.; Park, J. H.; Bae, K. S. 1996. Changes of benthic macroinvertebrate community from a dredged section in Wangsuk Creek. *Korean J. Limnol.* 29: 251-261.
- Bae, Y. J.; Soldan, T. 1997. Mayfly (Ephemeroptera) fauna of North Korea (1). *Insecta Koreana* 1997: 137-152.
- Bae, Y. J.; Yoon, I. B. 1997. A revised catalog of the Ephemeroptera of Korea. *Entomol. Res. Bull.* 23: 43-53.
- Baker, S. C.; Sharp, H. F., Jr. 1998. Evaluation of the recovery of a polluted urban stream using the Ephemeroptera-Plecoptera-Trichoptera index. *Journal of Freshwater Ecology* 13(2): 229-234.
- Bartsch, L. A.; Richardson, W. B.; Naimo, T. J. 1998. Sampling benthic macroinvertebrates in a large flood-plain river: Considerations of study design, sample size, and cost. *Environmental Monitoring and Assessment* 52(3): 425-439.
- Bathe, J. 1997. About the recolonization of the river Weser by *Ephoron virgo* (Olivier 1791) (Ephemeroptera, Polymitarcidae), *Anodonta anatina* (Linnaeus 1758) and *Unio pictorum* (Linnaeus 1758) (Lamellibranchiata, Unionidae). *Lauterbornia* 28: 45-50.
- Bauernfeind, E. 1996. Eintagsfliegen (Ephemeroptera) der Klosterneuburger und Korneuburger Augewasser. Pages 179-187. *IN: Moog, O. (ed.) Biozonotische Charakteristik der Klosterneuburger und Korneuburger Augewasser. (In Austrian).*
- Bauernfeind, E. 1998. Mayflies (Insecta: Ephemeroptera) of the River Lavant, Carinthia - additions and corrections. *Linzer. Biol. Beitr.* 30: 293-298. (In Austrian, English abstract)
- Bauernfeind, E. 1998. Taxonomy and distribution of *Choroterpes* Eaton in the Palearctic (Insecta: Ephemeroptera, Leptophlebiidae). *Stapfia* 55: 629-640 (In Austrian, English abstract)
- Belfiore, C.; Desio, F. 1995. *Choroterpes (Euthraulius) Balcanicus* (Ikonomov, 1961) in Italy (Ephemeroptera, Leptophlebiidae). *Gortania Atti del Museo Friulano di Storia Naturale* 17(0): 141-144.
- Berlin, A.; Dietrich, B. 1998. *Rhithrogena semicolorata* Curt.

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- Campbell, I. C.; Hubbard, M. D. 1998. A new species of *Prosopistoma* (Ephemeroptera: Prosopistomatidae) from Australia. *Aquatic Insects* 20(3): 141-148.
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YOU'RE GOING TO BE REINCARNATED AS A MAYFLY. HAVE A NICE DAY.