

1-17-2017

# The Mayfly Newsletter

Donna J. Giberson

*The Permanent Committee of the International Conferences on Ephemeroptera*, giberson@upei.ca

Follow this and additional works at: <https://dc.swosu.edu/mayfly>

 Part of the [Biology Commons](#), [Entomology Commons](#), [Systems Biology Commons](#), and the [Zoology Commons](#)

---

## Recommended Citation

Giberson, Donna J. (2017) "The Mayfly Newsletter," *The Mayfly Newsletter*: Vol. 19 : Iss. 2 , Article 1.

Available at: <https://dc.swosu.edu/mayfly/vol19/iss2/1>

This Article is brought to you for free and open access by the Newsletters at SWOSU Digital Commons. It has been accepted for inclusion in The Mayfly Newsletter by an authorized editor of SWOSU Digital Commons. An ADA compliant document is available upon request. For more information, please contact [phillip.fitzsimmons@swosu.edu](mailto:phillip.fitzsimmons@swosu.edu).



# The Mayfly Newsletter

Vol. 20(1)  
Summer 2017

The Mayfly Newsletter is the official newsletter of the Permanent Committee of the International Conferences on Ephemeroptera

## In this issue

- Requests for Collaboration...1
- New Publication: *Larvae of the Southeastern USA Mayfly, Stonefly, and Caddisfly Species*.....2
- Zootaxa Ephemeroptera Editors' Annual Summary and Acknowledgments (2016) ..3
- Aberdeen Conference Proceedings Published.....4
- How to donate to the International Permanent Committee on Ephemeroptera Conferences.....4
- Articles for the silent auction for the Aracruz meeting (to support the scholarship fund) .....4
- 2018 Joint International Conference - Aracruz, Brazil - Second Notice .....5
- Call for Applications: Conference Scholarships (for Aracruz meeting).....7
- Call for Nominations for Lifetime Achievement Awards.....7
- Book Review: *Mayfly larvae of Wisconsin*.....8
- Announcements and News .....9
- Submissions to the Mayfly Newsletter.....10

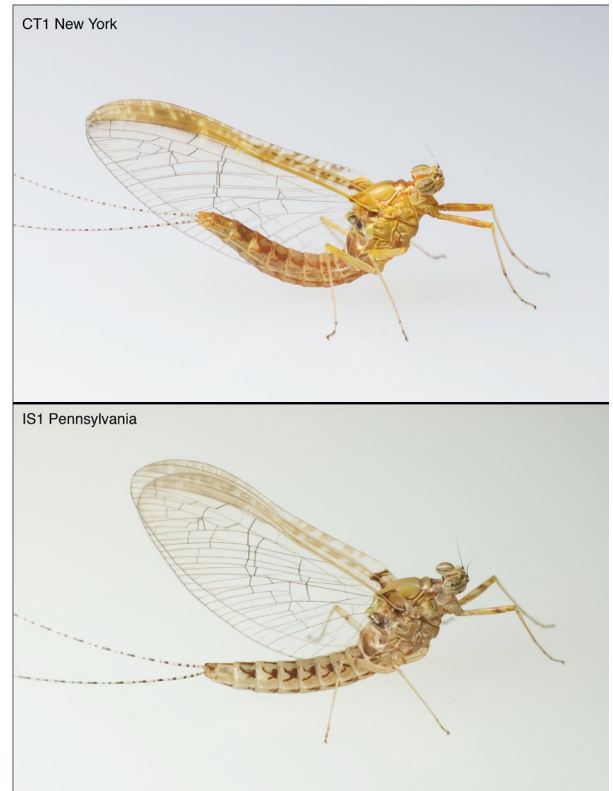
## Request for Collaboration:

### The *Cloeon dipterum* complex in North America

David Funk, Stroud Water Research Center, Avondale, PA USA dfunk@stroudcenter.org

As currently recognized, *Cloeon dipterum* consists an unresolved complex of Old World species. A recent paper by Rutschmann et al. (2017) documents the existence of three species in Europe, therein referred to as CT1, CT2 and IS1, all genetically distinct and easily identified by barcoding (COI). The first North American record from this complex was a specimen collected in Champaign, IL in 1939 (Burkes 1953) and in the years since the "species" has become common throughout northeastern North America. They can turn up in almost any aquatic environment (my first encounters with larvae were in flooded tire tracks and small water containers put out by a colleague to study mosquito oviposition) but reach their greatest abundance in small, fishless ponds. Adults are attracted to light and this is perhaps where members of this complex are most commonly encountered. Like their native North American analog *Callibaetis*, members of the *Cloeon dipterum* complex are ovoviviparous. A video of oviposition and hatching posted about 3 years ago on YouTube (Mayfly Eggs Hatching a Minute After Being Laid) has had over 89,000 views—practically "viral" by mayfly standards!

Ten years ago I began culturing one member of this complex (species IS1 of Rutschmann et al.), sourced from a local pond in southeastern Pennsylvania. Copulation is easily induced in the lab, females oviposit after ~18d at 20°, and larvae perform quite well when reared in 1/2-gallon jars with an airstone and a periphyton food source. We have been using them to investigate thermal and photoperiod effects on life history parameters (one paper now in review for *Freshwater Science*). More recently I have cultured a second species (species CT1 of Rutschmann et al.) collected from New York and Vermont. COI sequences of our IS1 and CT1 differ by 10.5% and the two share no alleles at 8 of 22 allozyme loci surveyed. 95% of the over 400 conspecific lab-induced copulations with CT1 and IS1 have produced viable progeny, but none of the 33

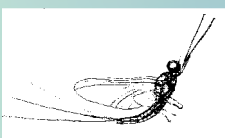


*Cloeon dipterum* complex adult females, species CT1 from New York (top) and IS1 from Pennsylvania (bottom).

The Mayfly Newsletter is published (on-line) on Ephemeroptera Galactica: <http://www.ephemeroptera-galactica.com/>

contact: Donna J. Giberson, Editor  
email [giberson@upei.ca](mailto:giberson@upei.ca)

Masthead image: *Hexagenia* sp. Andy Usher (Indiana University, Purdue University, Indianapolis)



heterospecific copulations induced to date have yielded any offspring. Thus, it appears the two are reproductively isolated.

Though very similar morphologically, based on our North American material CT1 and IS1 larvae may be distinguished by the extent of spination on the lateral margin of abdominal segment 7 (that of IS1 being mostly confined to the postero-lateral margin while that of CT1 extending anteriorly to about midway on the segment). Adult female IS1 have strongly contrasting dark liver-colored maculae against a pale creamy background coloration, whereas CT1 females have more weakly contrasting reddish maculae against a yellowish background (see accompanying photo).

Based on a very limited number of available COI sequences, IS1 is known from Michigan and southern Pennsylvania in North America, and from Italy and Bulgaria in Europe. CT1 is known from Ontario, Prince Edward Island, New York, Vermont, and northern Pennsylvania in North America, and from Germany, Netherlands, Lithuania, Latvia, Switzerland, and Slovakia in Europe. Thus, it seems CT1 may have a somewhat more northerly distribution on both continents.

In order to better document the distribution of these species in North America, I would appreciate receiving small numbers of specimens for barcoding (preferably preserved in  $\geq 95\%$  ethanol) from any colleagues interested in providing them.

#### Literature Cited:

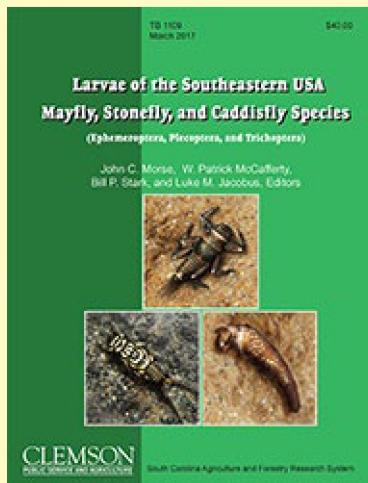
Burks, B.D. 1953. The mayflies, or Ephemeroptera, of Illinois. Ill. Nat. Hist. Surv., Bull., **26**: 1–216.

Rutschmann, S., Detering, H., Simon, S., Funk, D.H., Gattolliat, J.-L., Hughes, S.J., ... Monaghan, M.T. 2017. Colonization and diversification of aquatic insects on three Macaronesian archipelagos using 59 nuclear loci derived from a draft genome. *Molecular Phylogenetics and Evolution*, **107**: 27–38.

## Request for Collaboration:

I would like to collaborate with specialists or those who are passionate about Mayflies or any group of Macroinvertebrates in rivers or lakes. I have 12 years experience working with these groups in my lab in the north part of Romania, an area with a lot of mountain rivers.

Gabriela Margareta Lesanu, [gabrielad8@gmail.com](mailto:gabrielad8@gmail.com)  
Romanian Waters National Administration  
Siret Water Branch, Water Quality Laboratory Suceava  
48 Universitatii Street, 720228 Suceava RO



### New Publication:

## *Larvae of the Southeastern USA Mayfly, Stonefly, and Caddisfly Species (Ephemeroptera, Plecoptera, and Trichoptera)*

### *Volume 9 of the Biota of South Carolina Series*

Edited by John C. Morse, W. Patrick McCafferty, Bill P. Stark, and Luke M. Jacobus

Larvae of mayflies, stoneflies, and caddisflies thrive in clean surface waters throughout the world and are known to be generally intolerant of pollution. This book enables naturalists, sport fishers, freshwater ecologists, and biomonitoring workers to identify larvae for most species of these insects occurring in and around the southeastern US.

Color cover, 478 spiral bound pages  
Stock number: TB1109-SR7-CRP53B  
Price: \$40.00

Order from:

[https://secure.touchnet.net/C20569\\_ustores/web/product\\_detail.jsp?PRODUCTID=2682&SINGLESTORE=true](https://secure.touchnet.net/C20569_ustores/web/product_detail.jsp?PRODUCTID=2682&SINGLESTORE=true)

## Zootaxa Ephemeroptera Editors' Annual Summary and Acknowledgments (2016)

**Jacobus, Luke M. <sup>1</sup>, Sartori, M. <sup>2</sup>, Salles, F.F. <sup>3</sup> & Suter, P. <sup>4</sup>**

<sup>1</sup>Division of Science, Indiana University Purdue University Columbus, Indiana, USA. Email: luke.jacobus@gmail.com

<sup>2</sup>Musée cantonal de zoologie, Palais de Rumine, Place de la Riponne 6, CH-1014 Lausanne, Switzerland. Email: michel.sartori@vd.ch

<sup>3</sup>Departamento de Ciências Agrárias e Biológicas, Universidade Federal do Espírito Santo, Brazil. Email: ffsalles@gmail.com

<sup>4</sup>Emeritus Scholar, Department of Ecology, Environment and Evolution. La Trobe University, Albury-Wodonga, Wodonga, Victoria, 3689, Australia. Email: p.suter@latrobe.edu.au Australia.

A total of 189 papers with a primary focus on Ephemeroptera have been published in *Zootaxa*, from 2002–2016. Nineteen of those appeared in 2016; this is a slightly lower number than most recent years. Three of those 19 papers were published with open access.

Contributions for consideration for publication may be emailed directly to any one of the Ephemeroptera co-editors; however, we do have suggested areas of taxonomic specialization. Co-editor information and taxonomic specializations may be found at the Zootaxa Ephemeroptera Editors page <<http://www.mapress.com/j/zt/pages/view/Ephemeroptera>>.

We emphasize that we will accept only papers with a sole or primary focus of mayfly taxonomy and classification. In order to accelerate the processing of papers by us, please check before you submit that your manuscript meets the subject matter criteria described above, and also consult Dubois et al. (2011) and the journal guidelines, available at <<http://www.mapress.com/j/zt/pages/view/forauthors>>. If you have many large figures, please check with an editor about the format of figures for review and for publication, if the manuscript is accepted. For the purpose of review, it will be easier and more efficient for the subject editors and reviewers to have the figures converted into one PDF file with medium or lower resolution images.

We also ask that you inform us if your manuscript has been reviewed formally by others prior to submission to *Zootaxa*.

*Zootaxa* aims to publish each paper within one month after the acceptance by us as editors. While no fees are required to submit and publish in *Zootaxa*, all authors are encouraged to purchase "open access" if funds are available.

The success of the Ephemeroptera section of *Zootaxa* would be impossible without the many manuscript reviewers who volunteer their time and expertise to ensure quality scientific publications, often many times per year. We extend our apologies to anyone who may have been excluded from this list inadvertently. We thank: Kamila Angeli, Helen Barber James, Ernst Bauernfeind, Rafael Boldrini, Boonsatien Boonsoong, Steven Burian, Eduardo Domínguez, Daniel Emmerich, Jaimie Gama Neto, Jean-Luc Gattolliat, Ines Goncalves, Luke Jacobus, Tom Klubertanz, Nikita Kluge, Boris Kondratieff, Lucas Lima, Paula Malaquias, Peter Malzacher, Rodolfo Mariano, Fabiana Massariol, Carlos Molineri, Carolina Nieto, Roberta Paresque, Manuel Pescador, Janice Peters, Fred Salles, Michel Sartori, Pavel Sroka, Arnold Staniczek, Nicolas Ubero-Pascal, Robert Waltz, Jeff Webb, Changfa Zhou, and Dagmara Zyla.

### Literature Cited

Dubois, A., A. Minelli, Z.Q. Zhang. 2011. Recommendations about nomenclature for papers submitted to *Zootaxa*. *Zootaxa* **2943**: 58–62.

### Editorial Structure for Zootaxa Ephemeroptera Submissions

**Jacobus:** Ephemeridae, Polymitarcyidae, Ephemerellidae, Tricorythidae

**Sartori:** Heptageniidae, Teloganodidae, Siphonuridae, smaller families

**Salles:** Baetidae, Oligoneuriidae, Isonychiidae, Leptohiphidae

**Suter:** Leptophlebiidae, Caenidae, Coloburiscidae, Oniscigastridae, Ameletopsidae, Nesameletidae

## Aberdeen Conference Proceedings Published

The Proceedings of the Joint Meeting of the XIV International Conference on Ephemeroptera and XVIII International Symposium on Plecoptera have been published on Zoosymposia:  
<http://www.mapress.com/j/zs/>.

## Do you have articles to donate for the auction in support of Ephemeroptera and Plecoptera meeting scholarships at the next International Joint Meeting?

If you are attending the meeting in Aracruz, Brazil, and can take your auction items with you to the meeting, just look for any of the organizers once you are there, to pass the items along for the auction.

If you can't attend the meeting, but would like to donate an item, please send it to Frederico Salles at the address below:

Prof. Frederico Salles  
 UFES / CEUNES / DCAB  
 Rodovia BR 101 Norte, Km. 60, Bairro Litorâneo  
 CEP 29932-900, São Mateus – ES, BRAZIL



D. Giberson

## How to Donate to the International Permanent Committee on Ephemeroptera Scholarship Fund

This fund (Canadian Tax Reg. No. BN 88915 1379 RR001) provides travel scholarships to assist upcoming scientists to attend our international conferences. You have several options to donate to the mayfly travel fund. The committee can accept a cheque, a wire transfer or you can use our PayPal account. More details are provided below.

- 1) Cheque.** Please make cheque payable to: "International Permanent Committee on Ephemeroptera" and mail to Alexa at the address below.
- 2) Wire transfer.** Wire transfer. By arrangement with the treasurer. Please email [alexa@ecobmi.com](mailto:alexa@ecobmi.com)
- 3) PayPal.** Business account: International Permanent Committee for Ephemeroptera Scholarship Fund, Merchant account #: X5YQ83HA2AFML  
 Email: [alexa@ecobmi.com](mailto:alexa@ecobmi.com).

Do let me know how I can help if any of this information is unclear.

**Alexa C. Alexander Trusiak,**  
 Permanent Committee Treasurer  
 Environnement et changement climatique Canada |  
 Environment and Climate Change Canada,  
 Department of Biology and Canadian Rivers Institute,  
 University of New Brunswick,  
 #10 Bailey Drive, P.O. Box 4400,  
 Fredericton, NB, CANADA, E3B 5A3  
 +001-506-447-3496  
[alexa@ecobmi.com](mailto:alexa@ecobmi.com)

NOUVEAU | NEW: [alexa.alexander-trusiak@canada.ca](mailto:alexa.alexander-trusiak@canada.ca)

## Need PDFs for Ephemeroptera Galactica

Two questions:

**Have you published a paper on mayflies?  
 If so, did you send a PDF to EG?**

Ephemeroptera Galactica (EG) is a web site that was developed by Mike Hubbard and is now maintained by Arnold Staniczek. One of the great features of EG is the bibliography of mayfly literature at this site. PDFs of hundreds of mayfly articles are available. To keep this bibliography updated, please send a PDF of your articles on mayflies to Arnold ([arnold.staniczek@smns-bw.de](mailto:arnold.staniczek@smns-bw.de)).

## 2018 Joint International Conference – Aracruz, Brazil Second Announcement

The 2018 Joint Meeting of the XV International Conference on Ephemeroptera and XIX International Symposium on Plecoptera will take place in Aracruz, Brazil, 2018.

The conference will be held at the SESC Praia Formosa, a pleasant place located less than one hour (or 45 km) from the airport of Vitória, capital of Espírito Santo. With more than 200 rooms, conference halls, exposition areas, restaurants, and a huge area in front of the beach, SESC Praia Formosa is the perfect place for hosting the conference in Brazil.

More information on scientific program, dates, deadlines, costs, proceedings, and accompanying persons program will be available soon at <http://ephemeroptera.com.br/jointmeeting/>. You can also access information on our **International Conference on Mayflies and Stoneflies, BRAZIL, 2018** page on **Facebook** (<https://www.facebook.com/groups/1011888675495931/>) or contact us by e-mail ([ffsalles@gmail.com](mailto:ffsalles@gmail.com)).

### XV International Conference on **Ephemeroptera**



### XIX International Symposium on **Plecoptera**

**Brazil, Aracruz**  
**03-08/June/2018**

As provided in the first announcement, we would like to share the draft program, information about the mid and post-conference trips, and preliminary information concerning the accommodations.

The third announcement (scheduled for August) will contain details on fees, availability of conference scholarships, call for papers and instructions for authors, and forms for conference registration and dormitory reservation.

Please, if you wish to receive the next announcements and/or if you want to help us to organize a nice meeting in Brazil, fill the attendance interest form at the following link <https://goo.gl/forms/aBm4has2kUWMMWcJ2>.

You can also access information on our website (<http://ephemeroptera.com.br/jointmeeting/>), on our page on Facebook (International Conference on Mayflies and Stoneflies, BRAZIL, 2018) or contact us by e-mail ([ffsalles@gmail.com](mailto:ffsalles@gmail.com)).

**SECOND ANNOUNCEMENT (continued)****DRAFT PROGRAM****Sunday 03 June**

14:00 - 18:00 / Registration  
18:00 - 18:30 / Opening ceremony 18:30 / Welcome reception

**Monday 04 June**

08:00 - 09:00 / Registration  
09:00 - 10:00 / Lecture 1  
10:00 - 10:45 / Session 1  
10:45 - 11:15 / Coffee break  
11:15 - 12:15 / Session 2  
12:15 - 14:00 / Lunch  
14:00 - 14:45 / Session 3  
14:45 - 15:45 / Lecture 2  
15:45 - 16:15 / Coffee break  
16:15 - 17:00 / Conference proposals  
17:00 - 18:00 / Posters

**Tuesday 05 June**

09:00 - 10:00 / Lecture 3  
10:00 - 10:45 / Session 4  
10:45 - 11:15 / Coffee break  
11:15 - 12:15 / Session 5  
12:15 - 14:00 / Lunch  
14:00 - 14:45 / Session 6  
14:45 - 15:45 / Lecture 4  
15:45 - 16:15 / Coffee break 16:15 - 17:00 / Session 7  
17:00 - 18:00 / Posters

**Wednesday 06 June**

08:00 - 19:00 / mid-conference trip to Vargem Alta, Monte Verde Golf & Resort (<http://www.hotelmonteverde.com.br/>)

**Thursday 07 June**

09:00 - 10:00 / Lecture 5  
10:00 - 10:45 / Session 8  
10:45 - 11:15 / Coffee break  
11:15 - 12:15 / Session 9  
12:15 - 14:00 / Lunch  
14:00 - 14:45 / Session 10  
14:45 - 15:45 / Lecture 6  
15:45 - 16:15 / Coffee break  
16:15 - 17:00 / Session 11  
17:00 - 18:00 / Posters

**Friday 08 June**

09:00 - 10:00 / Lecture 7  
10:00 - 10:45 / Session 12  
10:45 - 11:15 / Coffee break  
11:15 - 12:15 / Session 13  
12:15 - 14:00 / Lunch  
14:00 - 16:00 / Concluding remarks and close, presentation of prizes 19:00 / Conference dinner

**Saturday 09 June**

08:00 - 18:00 / Optional post-conference trip to Sooretama, Reserva Natural da Vale (<http://www.vale.com/brasil/EN/initiatives/environmental-social/natural-reserve/Pages/default.aspx>)

**MID-CONFERENCE TRIP**

Early on June 06, on our way to Vargem Alta, we will make a stop at the city of Domingos Martins where we will be able to see one of the most spectacular landscapes of Espírito Santo, the Pedra Azul (a gnaissic mountain that reach more than 1800 meters and, depending on the sun and other factors, may have a bluish coloration - hence its name in Portuguese, Blue Rock).

After that, we will spend the rest of the day at the Monte Verde Hotel. This resort is surrounded by an exuberant area of Atlantic Forest, where we can take an ecological trail along the giant ferns and reach a nice and preserved stream. For lunch, a Brazilian barbecue (with vegetarian options) will restore everyone's energy.

**POST-CONFERENCE TRIP**

For the post-conference we decided to choose a different landscape, away from the mountains, at the north of Espírito Santo. Vale Natural Reserve, along with the contiguous Sooretama Biological Reserve, is one of the largest conservation areas of the state. The Atlantic Forest biome in this area is dominated by a different and almost exclusive kind of vegetation, the Mata de Tabuleiro. Sharing affinities with the Amazon forest, this area houses some of the most emblematic and endangered species of Brazil, such as jaguars (*Panthera onca* and *Puma concolor*), harpy eagle (*Harpia harpyja*), tapirs (*Tapirus terrestris*), among others. Besides ecological trails, Vale Natural Reserve has a restaurant, a hotel and a large green area for leisure, with swimming pool, natural spa and sports court. In addition, the public can enjoy a playroom and a Visitor Centre with permanent exhibition on the Atlantic Forest and information on environmental education.

**ACCOMMODATION**

Given the relatively isolated location of SESC Praia Formosa and all the facilities provided by this incredible tourism center, every delegate is supposed to be hosted at the conference venue. Accommodation fees, therefore, will be included in the registration rates. We are doing all the efforts to provide special fees for students and all the rates will be provided on the next announcement.

Every room at the SESC Praia Formosa is provided with WC and shower, tv, air conditioning, and a small fridge. Delegates will be able to choose rooms for one to four guests. For those leaving on Saturday, accommodation will be provided from June 03 to 09. For those staying for the post-conference trip, accommodation will be provided from 03 to 10.

**Organising committee**

Dr. Frederico Falcão Salles, Universidade Federal do Espírito Santo  
Dr. Rodolfo Mariano, Universidade Estadual de Santa Cruz  
Dra. Roberta Paresque, Universidade Federal do Espírito Santo

## Call for applications: Conference Scholarships

### 2018 Joint International Conference – Aracruz, Brazil

The 2018 Joint Meeting of the XV International Conference on Ephemeroptera and XIX International Symposium on Plecoptera will take place in Aracruz, Brazil, 2018.

Applications are invited from research students, early career scientists and those lacking institutional funding for travel scholarships provided by the Permanent Committee of the International Conferences on Ephemeroptera and the International Society of Plecopterologists. The scholarships are for attending the joint XV International Conference on Ephemeroptera and XIX International Symposium on Plecoptera in Aracruz, Brazil, from 03 - 08 June 2018. (<http://ephemeroptera.com.br/jointmeeting/>), and are intended to defray some of the travel expenses. A contribution towards the cost of accommodation and the conference fee may also be considered.

Applications should contain:

- Short curriculum vitae, including a list of any publications
- Budget for travel expenses using the cheapest economy air fares and total sum applied for
- Other sources of funding
- A provisional abstract of the proposed presentation or poster
- Contact addresses (postal address, fax number and e-mail)

Selection of awards will be based on:

- Financial needs
- Topic of presentation
- Direction of previous research

Applications for mayfly scholarships should be sent by e-mail to Professor Javier Alba-Tercedor, University of Granada. [jalba@ugr.es](mailto:jalba@ugr.es)

Applications for stonefly scholarships should be sent by e-mail to Professor John E. Brittain, University of Oslo, Norway. [j.e.brittain@nhm.uio.no](mailto:j.e.brittain@nhm.uio.no)

If research covers both orders, send applications to both e-mail addresses. However, it should be stated that applications have been submitted to both committees.

Applications should be sent as soon as possible and no later than 31 October 2017.

## Call for nominations: Lifetime Achievement Award

Since 2008, The Permanent Committee of the International Conferences on Ephemeroptera have acknowledged the important contributions of mayfly workers by presenting to them a Lifetime Achievement award. This award is presented at the Joint International Ephemeroptera and Plecoptera meeting, which will be held in 2018 in Aracruz, Brazil.

The previous recipients of these awards were:

- 2008 (Stuttgart): Ingris Müller-Liebenau, Janice Peters, John Flannagan
- 2012 (Wakayama): Peter Malzacher, Pat W. McCafferty
- 2015 (Aberdeen): Elda Gaino, Tomas Soldan, Ian Campbell

If you know a mayfly worker who has made important contributions to the study of mayflies, please contact Michel Sartori ([michel.sartori@vd.ch](mailto:michel.sartori@vd.ch)), explaining your reasons for the nomination.



## Book Review: *Mayfly Larvae of Wisconsin*, by Tom H. Klubertanz (2016)

Ethan Bright<sup>1</sup> & Luke M. Jacobus<sup>2</sup>

<sup>1</sup>Museum of Zoology, University of Michigan, Ann Arbor, Michigan, USA

<sup>2</sup>Division of Science, Indiana University Purdue University Columbus, Columbus, Indiana, USA

*Mayfly Larvae of Wisconsin*

Klubertanz, T. H.

Cooperative Extension Publishing, University of Wisconsin, Madison, Wisconsin, USA

viii + 291 pp.

ISBN 978-0-9801401-6-3

US\$60.00

<https://learningstore.uwex.edu/Mayfly-Larvae-of-Wisconsin-P1813.aspx>



At a time when it seems that fewer taxonomists are producing comprehensive regional works about a particular invertebrate group, another significant work about mayflies has thankfully appeared. This new volume by Tom Klubertanz (University of Wisconsin, Rock County) is a welcome addition to the library of mayfly diversity and distributions. It is a book that will be very useful not only for aquatic insect taxonomists and environmental workers in that state but also for the western Great Lakes Region of the United States and Canada and naturalists in general. It also will be of interest to scholars from other regions who seek to expand their knowledge and understanding of the Nearctic mayfly fauna.

This work is a continuation of the long tradition in Wisconsin—largely under the stewardship of William Hilsenhoff and others—of biological surveying and ecosystem monitoring, and it is a much-needed synthesis of an increasingly large, tedious body of scientific literature and unpublished works with limited access. Following this tradition, the book is designed less as a field guide for naturalists or fly fishers and more a practical tool for the researcher identifying preserved samples at the microscope as well as a launching point for further surveying of mayflies across the state. On the other hand, the volume seems to depart a bit from this tradition, as there is no emphasis on discussion as to why mayflies are important water quality indicators, with no reference to literature documenting their sensitivity to temperature and dissolved oxygen, excessive sedimentation, physical habitat change, toxic chemicals, or other environmental perturbations.

The spiral-bound format is convenient for desk and bench work, and the chapters are well-organized into sections with regards to biology (life cycle, feeding, body form and environment, and collection methods), morphology and taxonomic history (overview of past studies, geographic patterns in biodiversity, conservation status of rarer species). A separate chapter is dedicated to each of the 22 families of mayflies found in the state. The author does an admirable job in synthesizing his years of experience, as evidenced by his comments in the keys, particularly where our uncertain knowledge in differentiating certain species argues for taxonomic caution, such as in the genus *Leucrocuta*. The book ends with a current (as of 2015) checklist of the 157 species now reported from Wisconsin, a glossary of terms, and bibliography of the taxonomic literature pertinent to the region. A few works are missed, most notably Molineri's (2010) revision of species historically included in the genus *Tortopus*; as a result, the author does not include *Tortopus primus* in its current genus, *Tortopsis*. Eighteen species are reported from Wisconsin for the first time in this book, thus making it primary literature and not just a synthetic work. The number of species reported from Wisconsin is nearly equal or much greater than other states and provinces in its region of North America, and thus this book will be of use for improving faunistic knowledge in other relatively nearby areas.

Other useful features include photographs of (preserved specimens of) species and the many line drawings illustrating pertinent characters for identification. The photographs wonderfully depict gestalt and some real-life pattern characters; real life coloration, so rarely depicted because it is so difficult to do in the field, is often quite stunning but dulls with alcohol preservation. These undoubtedly will assist the user, particularly for those not as familiar with the group as the experienced author, and further help educate about the relationship between body form and habitat. Figures are of general high quality and usually are located near their points of usage, but figure plates often are not located on the same page as associated key couplets, necessitating some awkward searching and much page turning. Each species also has its reported distribution depicted in state county maps, and can provide suggestion as to where a taxon is likely to be encountered. However, one must be mindful of the saying: Absence of evidence is not evidence of absence. Some ecotype rendition (e.g., WDNR terrestrial and aquatic ecosystem renderings or drainage basins) could have also been incorporated to provide some power of prediction for as-of-yet undiscovered distributions.

Because the identifications of some taxa are very difficult, requiring observation of features with a transmitted light compound microscope, there should have been a short section on the various methodologies of slide mounting mayfly

parts. Comments on clearing, mounting medium and necessary magnification (which could have been indicated in illustrations) as well as information on the necessary equipment would have been helpful, especially to those new to the field. More information on some of the peculiarities of maintaining a collection of mayflies would also have been welcome for the general user, such as unique field methodologies and specimen processing techniques.

These are but minor faults in an otherwise accomplished and high quality work that required an exhaustive effort on the part of the author, and one that will be a thankful addition to many taxonomic libraries. It will greatly assist taxonomists and others doing ecological research in this region, and hopefully it will also encourage a new group of students to follow in the footsteps of past mayfly specialists into the 21<sup>st</sup> Century.

### Reference

Molineri, C. 2010. A cladistic revision of *Tortopus* Needham & Murphy with description of the new genus *Tortopsis* (Ephemeroptera: Polymitarcyidae). *Zootaxa* **2481**: 1-36.



Steve Burian

*Rhithrogena anomala* nymph from the North Branch of the Saranac River, New York, USA

## Announcements and News



### AQUATIC BIODIVERSITY INTERNATIONAL CONFERENCE

27-30 September, 2017, Sibiu, Transylvania, Romania

[http://stiinte.ulbsibiu.ro/aquatic\\_biodiversity\\_conference/](http://stiinte.ulbsibiu.ro/aquatic_biodiversity_conference/)

with the collaboration of the International Association for Danube I A D  
(<http://www.iad.gs/>)

(Submitted by Gabriela Lesanu)

**Notice:** Ephemeroptera workers may be interested in knowing that Dietrich Braasch passed away last year and that his types of mayflies are now deposited at "Museum für Naturkunde" of the Humboldt-University of Berlin.

See [http://www.ephemeroptera.de/inhaltsverz\\_deutsch/Galerie\\_\\_\\_\\_/Braasch/braasch.html](http://www.ephemeroptera.de/inhaltsverz_deutsch/Galerie____/Braasch/braasch.html) for more information.

(Submitted by Arne Haybach)

## We're looking for submissions to the *Mayfly Newsletter*!

Do you have anything you'd like to share with your fellow ephemeropterists? In addition to the Notices, Mayfly Bibliography, and information about the upcoming International Meeting, we'd like to include book reviews, notices of upcoming meetings of interest to Ephemeroptera workers, requests for collaboration, and just some interesting notes about mayflies.

So - my questions to you - Are you looking for collaborators on a project? Do you have some spectacular mayfly photos that you'd like to share with your colleagues? Is there a special collecting site or new collecting method whose details would be of interest to other mayfly workers? Have you ever had an adventure in collecting mayflies? We publish our data in our research papers, but sometimes the story behind the story is equally interesting!

### Deadlines:

- Summer issue: May 15
- Winter issue: Dec. 1

## Our "new" *Mayfly Newsletter*

Starting with the Winter 2016 issue, the Mayfly Newsletter has gone digital! You will be able to find the link to the issues on *Ephemeroptera Galactica* (<http://www.ephemeroptera-galactica.com>). If you haven't already passed your email address to Peter Grant, remember to contact Donna ([giberson@upei.ca](mailto:giberson@upei.ca)) with your email address if you would like to receive notification when new issues are posted. Unfortunately, due to costs of printing and postage, we won't be able to send a printed newsletter out by post.

We're excited to report that you're embracing the on-line format as well. Since the last issue (Jan. 1 - June 16, 2017), there have been 876 downloads of the Mayfly Newsletter, from 62 countries! Most of these have been of the most recent issue, but many have also downloaded back issues as well. This represents a considerable increase in "traffic" since putting the issues on line (archived through the Digital Commons initiative of Southwestern Oklahoma State University), since only 287 downloads were seen in the previous 10 months.

**The Mayfly Newsletter** is the official newsletter of the Permanent Committee of the International Conferences on Ephemeroptera and is published to facilitate communication among ephemeropterists.

Subscriptions to the Newsletter are free. To place your name on the e-mailing list or to contribute information for the next issue, contact:

Dr. Donna Giberson                    ([giberson@upei.ca](mailto:giberson@upei.ca))  
The Mayfly Newsletter  
Department of Biology, University of Prince Edward Island  
Charlottetown, PE Canada C1A 4P3

ISSN 1091-4935