



**Newsletter of the  
SOUTHWEST ASSOCIATION OF FRESHWATER  
INVERTEBRATE TAXONOMISTS**

Greetings SAFIT members,

The flagship product of SAFIT, the STE, has been updated, ratified and accepted by the membership. This newsletter issue includes a statement from Brady and Christopher regarding the 2011 update and its significance. A PDF of the STE is available on the SAFIT website (<http://www.safit.org/ste.html>). We continue to solicit contributions to the newsletter from the membership. Photos, interesting bugs, tricks of the trade, a good burger joint in an interesting collecting area, any relevant contributions – please send them in.

Have a job opening that you want to announce, or are looking for a job? Let SAFIT know in the Newsletter! Looking for specimens of a certain species or a literature reference? Need material for research or comparative purposes? Let your colleagues know in the SAFIT Newsletter! Want a workshop on a particular group of organisms? Have references to sell trade or share? Looking for a collecting partner? Put it here in the SAFIT Newsletter! All appropriate requests, queries, non-commercial advertisements and announcements will be considered, and are free to the SAFIT membership.

Thanks!  
Jon Lee, Editor

**The New and Improved STE**  
By  
Brady Richards

What's new in this version of the STE? Mostly, it is the same as the 2006 version. We've added a column for Utah, although some of the taxonomic lists for that state are still incomplete. We've added authorities for every name in the list. Although many labs don't

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use authorities on a day-to-day basis, this move ties each name to the literature: an important step for overall quality assurance.

Many names have been added, more distribution and ecological information has been added. There were very few big taxonomic changes. Some of the more noticeable ones include the following:

There have been considerable revisions to the Ephemerellidae since the 2006 STE. Notably, *Serratella teresa* is now *Matriella teresa* while *Serratella tibialis* and *S. velmae* are now in *Ephemerella*. The *Caudatella heterocaudata* group has been reworked so that the species may be separated, at least for last instar specimens. *Fallceon quilleri* is no longer the only *Fallceon* species known from California. Since there isn't a key that will separate the species now known to occur here, we suggest leaving specimens at genus.

There are a couple new "slash" IDs this time around. We've added one for *Aeshna/Rhionaeshna* since only late instars may be separable. Two species of *Dolophilodes* were removed to the new genus *Sisko*. Since the larvae of *Sisko* haven't been described but are likely similar to *Dolophilodes*, any larvae keying to *Dolophilodes* in existing keys should be treated as *Dolophilodes/Sisko* for the time being.

Finally, there was a mix-up in the hydrobioid snail list during the final construction of the 2006 STE. This was addressed in the Additions/Corrections file, which is available on the SAFIT website. Several taxa were removed to separate families, leaving only *Pyrgulopsis* in the Hydrobiidae. Immature specimens of all other hydrobioid snails should be backed off to a different level, preferably to Hypsogastropoda. Also, the New Zealand Mudsnail's family association hasn't been determined and so should not be considered as a hydrobiid.

For the complete list of changes in the new version of the STE, well, see the STE!

When should labs start using the 2011 STE? For SWAMP work, the new STE should be used for 2011 samples. Doug Post tells me that the SWAMP database has all the new names and changes. The ABL will switch over once we start processing our 2011 samples.

What's next for the STE? Well, Christopher Rogers and I are already working on the next revision, that is, we're tracking name changes and new literature. The next version will differ from previous versions in that there are plans underway to move all the information into a database format. The PDF that is available on the website is actually a behemoth that caused much anxiety to put together and format. All information in the STE comes from a master source file in the form of an Excel spreadsheet that is increasingly unwieldy. Importing this information as tables into a Word file creates a file that is bigger than it needs to be with all sorts of -- shall we say, *interesting* -- problems and concerns. Hopefully, once all the information has been migrated into a database, many of these problems will go away making for the construction of the STE more seamless and less aggravating.

Christopher and I would like to thank the STE Committee for their critical reviews of the master source file and the new STE. Doug Post, Jon Lee and Larry Serpa in particular provided considerable help and useful criticism. The SAFIT Board of Directors also provided a round of review and constructive suggestions. Kim Kratz helped with formatting issues for the PDF.

## **ANNOUNCEMENTS**

### **SAFIT MEETINGS**

The board of directors meets via conference call on the 3<sup>rd</sup> Friday of the month. Please contact one of the officers if you have anything you want on the Board of Director's Meeting agenda. The contact information for the officers is at the end of the Newsletter.

#### **First Announcement of a Trichoptera Workshop**

Instructors: Bob Wisseman and Dave Ruiters

Location: California State University, Chico

Date: 14, 15 and 16 October 2011.

There will be an optional field collecting trip on the 14<sup>th</sup> to various locations in the Northern Sierra Mountains. On the 15<sup>th</sup> and 16<sup>th</sup> there will be concurrent laboratory training sessions in the taxonomy of Trichoptera larvae, pupae and adults. Watch for a more detailed announcement on the upcoming workshop at our website [www.safit.org](http://www.safit.org).

#### **SAFIT ELECTIONS**

SAFIT will be holding elections for three positions on the Board of Directors at our upcoming annual meeting (November 11, following the California Bioassessment Workgroup meeting in Davis, CA). All SAFIT members are eligible to run, and may nominate themselves or another SAFIT member. SAFIT Treasurer Raphael Mazor will run this election. Please email your nominations to [raphaelm@sccwrp.org](mailto:raphaelm@sccwrp.org) by September 30.

Duties of the Board of Directors are described in the SAFIT By-Laws. The three positions up for election are **President**, **Secretary**, and **Member-At-Large**. The first two positions are also defined in the By-Laws.

#### **President**

The President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, supervise and control the affairs of the corporation and the activities of the officers. He or she shall perform all duties incident to his or her office and such other duties as may be required by law, by the articles of incorporation of

this corporation, or by these bylaws, or which may be prescribed from time to time by the board of directors. Unless another person is specifically appointed as chairperson of the board of directors, he or she shall preside at all meetings of the board of directors. If applicable, the president shall preside at all meetings of the members. Except as otherwise expressly provided by law, by the articles of incorporation, or by these bylaws, he or she shall, in the name of the corporation, execute such deeds, mortgages, bonds, contracts, checks, or other instruments which may from time to time be authorized by the board of directors.

### **Secretary**

The Secretary shall:

Certify and keep at the principal office of the corporation the original, or a copy of these bylaws as amended or otherwise altered to date.

Keep at the principal office of the corporation or at such other place as the board may determine, a book of minutes of all meetings of the directors, and, if applicable, meetings of committees of directors and of members, recording therein the time and place of holding, whether regular or special, how called, how notice thereof was given, the names of those present or represented at the meeting, and the proceedings thereof.

See that all notices are duly given in accordance with the provisions of these bylaws or as required by law.

Be custodian of the records and of the seal of the corporation and see that the seal is affixed to all duly executed documents, the execution of which on behalf of the corporation under its seal is authorized by law or these bylaws.

Keep at the principal office of the corporation a membership book containing the name and address of each and any member, and, in the case where any membership has been terminated, the secretary shall record such fact in the membership book together with the date on which such membership ceased.

### **Member-at-Large**

The position of Member-At-Large is not defined in the By-Laws, but provides an additional opportunity for SAFIT members to participate in Board decisions as a voting member.

## **OTHER UPCOMING MEETINGS AND EVENTS**

### **Great Plains Bioassessment Symposium**

We are pleased to announce that a Great Plains Bioassessment Symposium is now planned for **10 – 12 August 2011** at the University of Kansas, Lawrence, hosted by the

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Kansas Biological Survey. This symposium is for everyone (students and professionals) conducting aquatic ecological studies that contribute to the field of biological monitoring in the central USA. This is an opportunity to meet, present posters or oral presentations of our work and research, and look for collaborative opportunities. All fields of freshwater biology and associated water regulatory issues are welcome: phycology, entomology, ichthyology, taxonomy, water quality, invasive species, biomonitoring, permitting and regulation. Please forward this email to all potentially interested parties.

The cost is \$40 per person. We can only accept checks at this time. **Please make checks out to the Kansas Biological Survey.** Checks can be **mailed to:** D. Christopher Rogers, Kansas Biological Survey, Kansas University, Higuchi Hall, 2101 Constant Avenue, Lawrence, KS 66047-3759. Please include the name of the attendee, telephone number and email address. Receipts (if necessary) will be provided at the venue.

Abstracts must be submitted by 15 July 2011 to [dcrogers@ku.edu](mailto:dcrogers@ku.edu). Abstracts must be a single paragraph, single-spaced, Times New Roman, 12 pt. font. Abstract must not be longer than 250 words. Oral presentations are limited to 15 minutes, plus five minutes for questions. Presenter's name, email address, and affiliation must be included.

General attendees (not presenting): if you are interested in coming, please email us (before 15 July 2011), send your name, email address and affiliation. We look forward to seeing you in Kansas!

If you have any questions, please call or email:

D. Christopher Rogers ([dcrogers@ku.edu](mailto:dcrogers@ku.edu) / 785.864.1714)  
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Debbie Baker ([dbaker@ku.edu](mailto:dbaker@ku.edu) / 785.864.1551)

### **MEDECOS XII - Linking Science with Resources Management.**

The International MEDECOS Conference on Mediterranean-climate ecosystem ecology will be held September 6-9, 2011, in Los Angeles at the Covell Commons Conference Center on the UCLA campus. The international MEDECOS Conferences on the ecology, biodiversity, and conservation of the world's five Mediterranean climate ecosystems began in 1971 in Valdivia, Chile. This year will mark the 40th Anniversary of this conference at the University of California, Los Angeles.

This year's conference theme, *Linking Science with Resource Management*, emphasizes our interest in highlighting research findings that directly inform critical management decisions. Please note, however, that all topics pertaining to the ecology, biodiversity and conservation of the world's Mediterranean-climate ecosystems are welcome. The UCLA Institute of the Environment and Sustainability and the La Kretz Center for California Conservation Science is the lead sponsor for this event, and will also be organizing field trips to Stunt Ranch in the Santa Monica Mountains.

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There will be several sessions on stream and riparian ecology organized by Vince Resh (UC Berkeley), Matt Kondolf (UC Berkeley), Raphael Mazor (SoCal Coastal Water Research Project), and Karen Ensler (Stellenbosch Water Institute, South Africa). Registration is now open for [MEDECOS XII - LOS ANGELES, CA - 2011](http://medecos2011.com/index.html) (<http://medecos2011.com/index.html>).

Abstracts may be submitted through July 15.

## **EMPLOYMENT OPPORTUNITIES**

Please contact the editor if you would like to post on an employment opportunity.

## **FIELD & LAB**

*A feature in each Newsletter issue exploring an aspect of aquatic macroinvertebrates beyond sample processing that may be beneficial to members. Contact the editor to contribute or comment.*

Changes in shipping regulations for biological specimens

By

Brady Richards

For those of us who ship ethanol, isopropyl and formaldehyde solutions, there is an exciting new change in the shipping regulations: Special Provision A180, which may be found in the new International Air Transport Association (IATA) Dangerous Goods Regulations. This change has been long in the making and there are several discussions that can be found by Google search. For a full discussion plus PDFs of the new regulation and supporting documentation, see this post from the Entomological Collections Network (ECN) listserv: <http://listsrv.unl.edu/cgi-bin/wa?A2=ind1012a&L=ECN-L&D=0&F=P&P=71>. The regulation can also be found in the 2011 edition of IATA's Dangerous Goods Regulations.

In short, regulations for shipping under Limited and Bulk Quantities remain unchanged. Special Provision A180 only applies to shipments of small quantities of ethanol solutions, formalin and isopropyl. Rather than an upper limit on vial size, there is now a limit on the amount of ethanol, etc. per vial/container. This allows for shipping larger biological items which may be wetted so long as the amount of ethanol is under 30 mL per inner container. The upper limit of ethanol per package is now 1 L, rather than 0.5 L as under Excepted Quantities. So if you are shipping vials containing ethanol, the new regulation doubles the number of vials per package than were allowed under the Excepted Quantities regulations.

Special packaging is now required, but the only restriction is that now everything must be in heat-sealed plastic bags within a heat-sealed plastic bag. Shipping larger biological specimens requires a third layer of heat-sealed bag. There are several brands of food sealant devices on the market in a variety of price levels. I won't advertise for any

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particular one here but I chose a brand that is available in many stores and for which the sealant bags are reasonably priced. The box must be marked “Scientific Research specimens, not restricted. Special Provision A180 applies.” This phrase must also appear on the waybill. Otherwise, requirements for packing materials and boxes are as they were before.

I’ve been shipping under the new regulation for a couple months now. I have had some issues arise because of the vacuum/heat seal. Using the vacuum feature is nice in that the inner packaging can be reduced considerably and there is more internal support so that the vials don’t rattle around. However, it turns out that the vacuum pump is strong enough to draw ethanol out of snap-cap vials, even when the caps are taped in place. I haven’t had this happen with screw-cap vials. Some of the vials I’ve shipped have been broken. It was unclear whether the vacuum pump was the culprit, or whether I hadn’t used enough cushioning. I suggest anyone using the vacuum feature to not “overdo it”.

Anyone reading this needs to check out the new regulation for themselves. I’ve written this note simply to inform people about the new regulation. Personally, I’m still planning to maintain my certifications for shipping hazardous materials.

Disclaimer: none of this should be construed as the final word or as a replacement for training. Remember: regulations change yearly.

**Miscellaneous bug notes** (anecdotal notes, including distributional records in the SAFIT region, which may be helpful to SAFIT members). To make contributions or comments contact the editor: [jlee@humboldt1.com](mailto:jlee@humboldt1.com).

**Odd Diptera larva.** An odd looking Diptera larva (Figs. 1-4) has been showing up in bioassessment samples from Humboldt and Mendocino Counties over the years. This little critter (2 – 4 mm long) appears to belong to the Orthorrhaphous-Brachycera assemblage. It has ventral creeping welts (or at least hooks) on the abdominal segments (I’m using these for dorsal/ventral orientation) and the integument is finely striate. The most unusual characters are eight elongate, caudal processes: the six dorsal and lateral processes long and filamentous, approaching abdomen length; the two ventral processes shorter and slightly curved.

I don’t think I’ve collected this interesting critter but have found it occasionally in BMI samples. I believe it occurs in third order streams in at least the Eel River watershed.

If anyone knows what it is or has seen it outside of northern California, please let me know.

Thanks,  
Jon Lee ([jlee@humboldt1.com](mailto:jlee@humboldt1.com))



Figure 1. Diptera larva, ventral.



Figure 2. Diptera larva, caudal end.



Figure 3. Diptera larva, head capsule, ventral.



Figure 4. Diptera larva, head capsule, lateral.

Photo credit: Dave Ruitter.

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## LATEST LITERATURE

If you know of any literature or if you yourself have published any papers of interest to the SAFIT membership, please send copies or the citations to Brady Richards ([arichards@csuchico.edu](mailto:arichards@csuchico.edu)) for inclusion in the next issue of the SAFIT Newsletter.

Thanks!!

**Asterisk (\*) indicates author is a SAFIT member.**

### Mollusca

Burlakova, L. E., A. Y. Karatayev, V. A. Karatayev, M. E. May, D. L. Bennett, and M. J. Cook. 2011. Biogeography and conservation of freshwater mussels (Bivalvia: Unionidae) in Texas: patterns of diversity and threats. *Diversity and Distributions* 17:393-407.

Cheng, Y. W. and L. L. LeClair. 2011. A quantitative evaluation of the effect of freezing temperatures on the survival of New Zealand mudsnails (*Potamopyrgus antipodarum* Gray, 1843), in Olympia Washington's Capitol Lake. *Aquatic Invasions* 6:47-54.

Mazza, G., N. Agostini, L. Aquiloni, S. Cianfanelli, E. Tricarico, and F. Gherardi. 2011. Ecological characterisation of streams invaded by the New Zealand mud snail *Potamopyrgus antipodarum* (Gray 1843): the case study of a National Park in Italy. *Ethology Ecology & Evolution* 23:151-164.

Rizhinashvili, A. L. 2011. On the controversial questions of the taxonomy of Bivalvia (Mollusca): Too many species or too few characters? *Biology Bulletin* 38:311-317.

Shea, C. P., J. T. Peterson, J. M. Wisniewski, and N. A. Johnson. 2011. Misidentification of freshwater mussel species (Bivalvia: Unionidae): contributing factors, management implications, and potential solutions. *Journal of the North American Benthological Society* 30:446-458.

### Crustacea

Faulkes, Z. 2011. The spread of the parthenogenetic marbled crayfish, *Marmorkrebs* (*Procambarus* sp.), in the North American pet trade. *Aquatic Invasions* 5:447-450.

MacNeil, C., D. Platvoet, J. T. A. Dick, N. Fielding, A. Constable, N. Hall, D. Aldridge et al. 2011. The Ponto-Caspian 'killer shrimp', *Dikerogammarus villosus* (Sowinsky, 1894), invades the British Isles. *Aquatic Invasions* 5:441-445.

Martin, P., H. Shen, G. Fullner, and G. Scholtz. 2011. The first record of the parthenogenetic *Marmorkrebs* (Decapoda, Astacida, Cambaridae) in the wild in Saxony (Germany) raises the question of its actual threat to European freshwater ecosystems. *Aquatic Invasions* 5:397-403.

Nagakubo, A., K. Sekine, Y. Tanaka, R. B. Kuranishi, S. Kanada, and K. Tojo. 2011. Rapid expansion of the distributional range and the population genetic structure of the freshwater amphipod *Crangonyx floridanus* in Japan. *Limnology* 12:75-82.

Ozbek, M. and N. Ozkan. 2011. *Dikerogammarus istanbulensis* sp. n., a new amphipod species (Amphipoda: Gammaridae) from Turkey with a key for the genus. *Zootaxa* 2813:55-64.

### **Ephemeroptera**

Salles, F. F., R. Boldrini, Y. Shimano, and H. R. S. Cabette. 2011. Review of the genus *Aturbina* Lugo-Ortiz & McCafferty (Ephemeroptera: Baetidae). *Annales De Limnologie-International Journal of Limnology* 47:21-44.

### **Plecoptera**

Shepard, W. D. and R. W. Baumann. 2011. Canopy fogging in the Valdivian forest of southern Chile produces stoneflies (Plecoptera). *Illiesia* 7:127-132.

Stewart, K. W. and B. P. Stark. 2011. Further descriptions of western North American *Podmosta* larvae and their separation from *Ostrocerca* larvae (Plecoptera: Nemouridae). *Illiesia* 7:104-117.

### **Megaloptera**

Contreras-Ramos, A. 2011. Phylogenetic review of dobsonflies of the subfamily Corydalinae and the genus *Corydalus* Latreille (Megaloptera: Corydalidae). *Zootaxa* 2862:1-38.

### **Trichoptera**

Flint, O. S., Jr. and K. M. Kjer. 2011. A new species of *Neophylax* from Northern Virginia, USA (Trichoptera: Uenoidae). *Proceedings of the Entomological Society of Washington* 113:7-13.

- \*Lee, J. J. and \*D. E. Ruiter. 2011. *Rhyacophila weitchpec* sp. nov. from northern California, with discussion of the *Rhyacophila viquaea* Milne 1936 species group (Trichoptera: Rhyacophilidae). *The Pan-Pacific Entomologist* 86:126-130.
- Limm, M. P. and M. E. Power. 2011. The caddisfly *Dicosmoecus gilvipes*: making a case for a functional role. *Journal of the North American Benthological Society* 30:485-492.
- Malm, T. and K. A. Johanson. 2011. A new classification of the long-horned caddisflies (Trichoptera: Leptoceridae) based on molecular data. *BMC Evolutionary Biology* 11.
- Morris, M. W. L., M. Hondzo, and M. E. Power. 2011. Scaling *Glossosoma* (Trichoptera) density by abiotic variables in mountain streams. *Journal of the North American Benthological Society* 30:493-506.
- Stocks, I. C. 2011. Description of the female of *Parapsyche cardis* Ross (Hydropsychidae: Arctopsychinae) and a revised key to the genera of Hydropsychidae (Trichoptera: Annulipalpia) of the southeastern United States, using wing characters. *Zootaxa* 2831:23-38.

## **Coleoptera**

- Angus, R. B. 2011. *Boreonectes* gen. n., a new genus for the *Stictotarsus griseostriatus* (De Geer) group of sibling species (Coleoptera: Dytiscidae), with additional karyosystematic data on the group. *Comparative Cytogenetics* 4:123-131.

## **Diptera**

- De Oliveira, C. S. N. and F. L. Da Silva. 2011. Two new species of *Larsia* Fittkau, 1962 (Diptera: Chironomidae: Tanypodinae) from Neotropical Region, with a checklist of *Larsia* species of the world. *Zootaxa* 2786:27-41.
- Du, J., X. H. Wang, and O. Saether. 2011. Redescriptions of species of *Bryophaenocladus* Thienemann, 1934 (Diptera: Chironomidae) described by Brundin (1947). *Zootaxa* 2743:40-48.
- Ferrington, L. C. and O. A. Saether. 2011. A revision of the genera *Pseudosmittia* Edwards, 1932, *Allocladius* Kieffer, 1913, and *Hydrosmittia* gen. n. (Diptera: Chironomidae, Orthoclaadiinae). *Zootaxa* 2849:1-314.
- Siri, A., M. Donato, G. Orpella, and J. Massafferro. 2011. *Alotanypus vittigera* (Edwards) comb. nov.: adult redescription, immature description and a phylogenetic analysis of the genus (Diptera: Chironomidae: Tanypodinae). *Zootaxa* 2795:46-64.

**Miscellaneous**

Ferreira, W. R., L. T. Paiva, and M. Callisto. 2011. Development of a benthic multimetric index for biomonitoring of a neotropical watershed. *Brazilian Journal of Biology* 71:15-25.

Keizer-Vlek, H. E., P. W. Goedhart, and P. F. M. Verdonschot. 2011. Comparison of bioassessment results and costs between preserved and unpreserved macroinvertebrate samples from streams. *Environmental Monitoring and Assessment* 175:613-621.

Medeiros, A. S., C. E. Luszczek, J. Shirley, and R. Quinlan. 2011. Benthic biomonitoring in Arctic tundra streams: a community-based approach in Iqaluit, Nunavut, Canada. *Arctic* 64:59-72.

Merriam, E. R., J. T. Petty, G. T. Merovich, J. B. Fulton, and M. P. Strager. 2011. Additive effects of mining and residential development on stream conditions in a central Appalachian watershed. *Journal of the North American Benthological Society* 30:399-418.

Zherdev, V. N., A. V. Lynov, and A. E. Shevyreva. 2011. A new model of light traps for collecting benthic invertebrates. *Zoologicheskyy Zhurnal* 90:240-242.

## **THANK YOU FOR YOUR MEMBERSHIP!**

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