



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

Greetings SAFIT members,

I hope everyone had a good summer and is looking forward to the fall collecting season. The CABW, SAFIT annual meeting, and SAFIT elections are rapidly approaching. Details for these upcoming events can found under Announcements. 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

ANNOUNCEMENTS

SAFIT MEETINGS

The board of directors meets via conference call on the 3rd 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.

The SAFIT Annual Meeting

Date: Friday, 11 November 2011 - The day AFTER the CABW meeting.

Time: 9AM to 4PM.

Location:

California Department of Fish and Game Yolo Bypass Wildlife Area Headquarters

45211 County Rd 32B (Chiles Rd)

Davis, CA 95618

DFG Information Line: 530-757-2461

DFG Headquarters Office Hours: Monday through Friday 8am-4pm

Wildlife Area Manager: Dave Feliz

Directions: from Davis, take Interstate 80 east to the Covell/Mace/Chiles Road Exit east of Davis. Turn left onto Chiles Road, cross Covell/Mace Road. Drive past the gas stations, hotels, Enterprise Car Rental, and CDF station. The Yolo Bypass Headquarters will be on your right marked by a wooden sign. If you reach the Produce Market or the Yolo Bypass Levee and the road turns under Interstate 80 you have gone too far.

For more about the wildlife area go to:

<http://www.dfg.ca.gov/lands/wa/region3/yolo/index.html>

Lunch and refreshments: We provide doughnuts and cold beverages during the meeting. We typically order out for lunch and take a quick informal break and then resume the meeting. Please bring cash for your lunch order.

SAFIT elections

Elections for three positions on the Board will take place at the annual meeting on November 11 (and also over email for members unable to attend). The positions up for election are the President, Secretary, and Member-at-Large. Nominations for these positions closed on September 30, and candidates will release position statements in early October. Because the Secretary position is up for a vote, the Treasurer will coordinate the election. For information, please contact him (Raphael Mazor) at raphaelm@sccwrp.org

Trichoptera Workshop

The Trichoptera Workshop, originally scheduled for 14, 15, and 16 October 2011, has been rescheduled:

First Announcement

SAFIT Trichoptera Taxonomy Workshop (Tentative)

18 and 19 February 2012

Chico State University, Chico California

Instructors: Robert Wisseman and David Ruiter

The planned workshop will have 2 concurrent sessions covering the taxonomy of caddis adults and pupae in one session and the taxonomy of larvae in the other.

We will have some specimens from California for workshop participants but the workshop instructors strongly recommend that you bring adult and pupal specimens from your local watersheds to identify during the sessions.

Please contact me if you are interested in attending this workshop. I have space for 35 people and I need to know if there is enough interest among SAFIT members to make the workshop viable.

I will provide additional information via the listserv when I know how much interest there is and what the workshop will cost.

Please contact me at jslusark@csuchico.edu if you are interested in attending the workshop as soon as you can.

OTHER UPCOMING MEETINGS AND EVENTS

2011 California Aquatic Bioassessment Workshop

Hello Everyone,

The CABW meeting on November 9 and 10 is just around the corner so I wanted to give you an update on the agenda. This year the CABW meeting will be organized into five sessions consisting of several instructional workshops and presentations covering the following topics:

Session 1 – Aquatic Invertebrate and Benthic Algae Sampling and Physical Habitat Data Collection

Session 2 – Aquatic Invertebrate and Benthic Algae Laboratory Analysis

Session 3 – Bioassessment Data Entry and Output

Session 4 – Ambient and Point-source Bioassessment Data Interpretation

Session 5 – Biological Objectives and Stressor Identification

Each session will have an introductory overview of the topic, updates on new

developments and the opportunity for attendees to ask questions and discuss any concerns they might have on the topic. The idea is to make the CABW a training opportunity for everyone involved with assessing aquatic resources or administering bioassessment projects. I also hope to get input on possibly establishing workgroups where information can be distributed and discussed throughout the year.

I will be sending out a detailed agenda soon, but for now please be sure to register and make arrangements to attend the CABW meeting on the UC Davis campus. Nancy Barker from UCD nlbarker@ucdavis.edu can send you the registration flyer and list of accumulations in the Davis area if you need them.

See you soon, jim

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Algae Laboratory Processing Workshops

Dear stream bioassessment community,
A pair of back-to-back workshops will be held at Cal State University, San Marcos in late October of this year on the diatom and soft-bodied algae laboratory processing and enumeration procedures used for stream bioassessment in California's SWAMP program. The all-day (9am-5pm) workshops will be taught by Prof. Patrick Kociolek of University of Colorado, Boulder (diatoms: Thursday 27 October) and Prof. Robert Sheath and Dr. Rosalina Stancheva of CSU San Marcos (soft-bodied algae: Friday 28 October). These workshops are geared toward helping build state capacity for taxonomic analysis of algae samples, with a focus on southern California taxa. They will be open to staff at the Regional Boards, the Water Board, and other agencies, consulting companies, and non-profit organizations of the state.

In each workshop, information will be presented on sample processing and specimen enumeration/quantification, as well as a brief introduction to the taxonomic analysis of algae samples for water quality monitoring. This will provide participants with some exposure to what is entailed in the laboratory procedures. (Note, however, that the goal of the workshops is not to turn participants into expert taxonomists, which would require a great deal more training.) Each workshop will include lecture-format presentations and some lab-based microscopy work.

Registration for both workshops is free, however space is limited, and registrants will be admitted on a first-come/first-served basis. Prospective participants must register through the State Water Board's Training Academy website at

<http://www.trainingforce.com/5/lp/gowater.aspx?ot=8&otid=381> and

<http://www.trainingforce.com/5/lp/gowater.aspx?ot=8&otid=380>. In an effort to broaden participation across institutions as much as possible, only one participant from any given institution will be permitted to attend a given workshop, so please coordinate within your institutions to decide who is the most appropriate party to participate before registering. Also note that anyone interested in taking both workshops must register separately for each one. Please feel free to forward this message to other interested parties, and let me know if you have any questions.

Best wishes,
Betty Fetscher

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!~!

The Crustacean Society Summer Meeting

3-7 June 2012 Athens, Greece

Information can be found at: <http://www.cssm2012.gr/>

Furthermore, please ask young crustacean researchers in your group or society to become a member of TCS and attend meetings.
Please access the following web-page and become members!

https://timssnet.allenpress.com/ECOMCRSO/timssnet/memberships/tnt_membership.cfm

Sincerely,
Akira

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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.

Active collecting methods for riparian adults of aquatic larvae

By
Jon Lee

Insect species descriptions are based on adult morphological characters, generally adult male reproductive structures. Terrestrial adults of aquatic taxa are often found on streamside vegetation, rocky banks, or manmade structures. Adult stoneflies (Plecoptera), caddisflies (Trichoptera), and beetles (Coleoptera) can be abundant but not noticed by the casual observer due to their cryptic coloration and often-sedentary nature. If one sits streamside and is patient and observant, these creatures can appear out of the shadows. For those who lack patience, some simple collecting techniques using inexpensive tools can be employed.

The simplest collecting method is to just pick specimens from a surface with soft forceps (Featherweight Forceps) or with the aid of an aspirator. Soft forceps can grasp a soft-bodied insect without crushing it. The forceps have a hole through one end where a cord can be strung to help prevent loss. This feature is especially beneficial to those of us who have lost expensive forceps in the field. A simple aspirator has a pair of tubes connected to a collecting vial via a two holed rubber stopper. By inhaling on one tube insects are vacuumed up by the end of the other tube and deposited into the collecting vial. This is a more efficient method of collecting many insects and preferred by many, but I prefer picking with forceps. Some insects emit a foul smelling substance that is not pleasant to inhale (but different aspirator styles can alleviate this) and I have had trouble damaging insects that I wanted to keep alive, when using an aspirator.

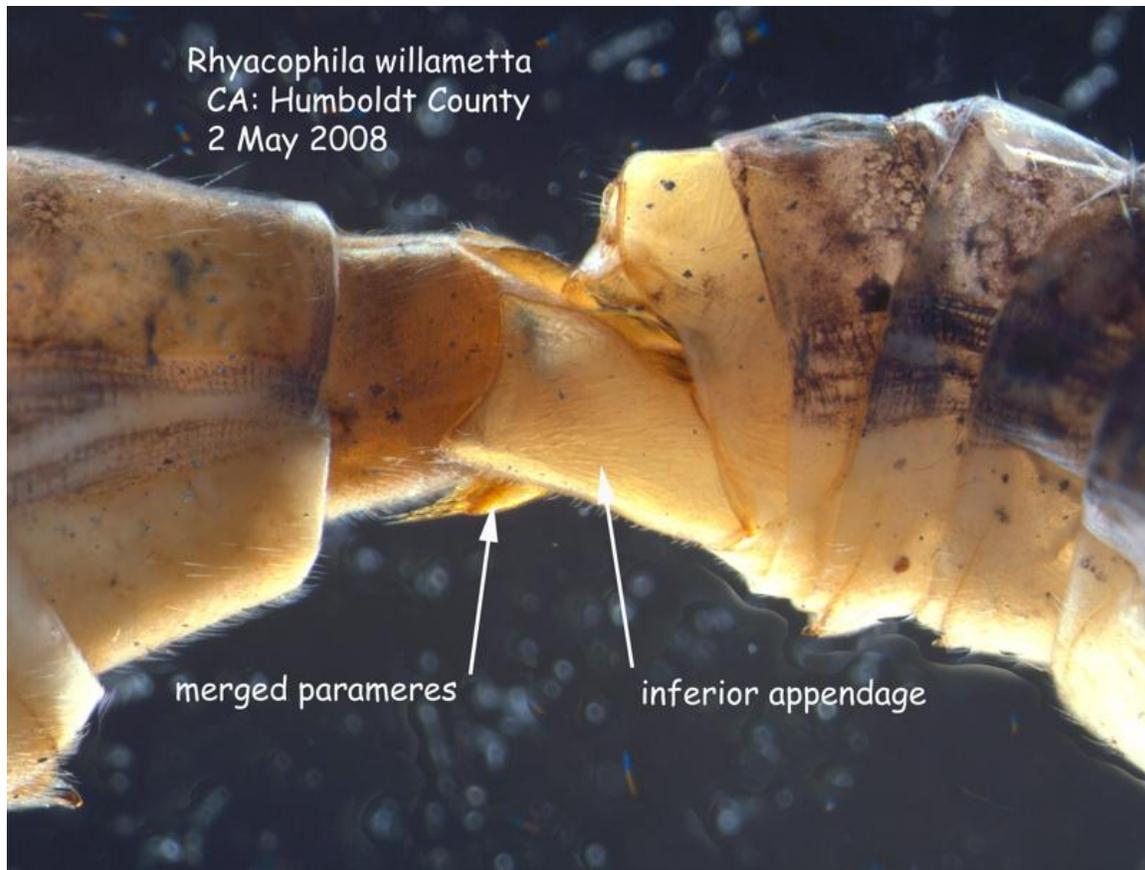
A beating sheet is a standard collecting tool for terrestrial insects. Many insects will do a free fall when disturbed. "Beating" exploits this behavior. The beating sheet is placed under a tree branch (or other vegetation) and the branch is hit with a stick or net handle. The fallen insects are picked or aspirated from the sheet. The beating sheet (Figure 1) is cloth stretched over two crossed supports. Pictured are a 1 m² nylon ripstop sheet over PVC plastic tubing and a smaller canvas sheet over a wooden frame. They both work well but the larger one, though lightweight, tends to feel heavy and unwieldy if used for an extended period of time. Any stick will do for beating but I prefer a 48" long, 1" diameter hardwood dowel. One can give a branch a good whack and the long reach is helpful. The beating sheet works best in cool weather. As the temperature climbs the critters become much quicker and often fly as soon as they hit the sheet. I've attached a section of hardwood dowel to the aluminum handle of a heavy-duty aerial net to double as a warm weather beating stick. This works well for beating and if one is quick, the critters flying from the sheet can be netted. If the temperature is hot, using the aerial net for flying insects, or using it to sweep vegetation, may be the most affective active collecting method.



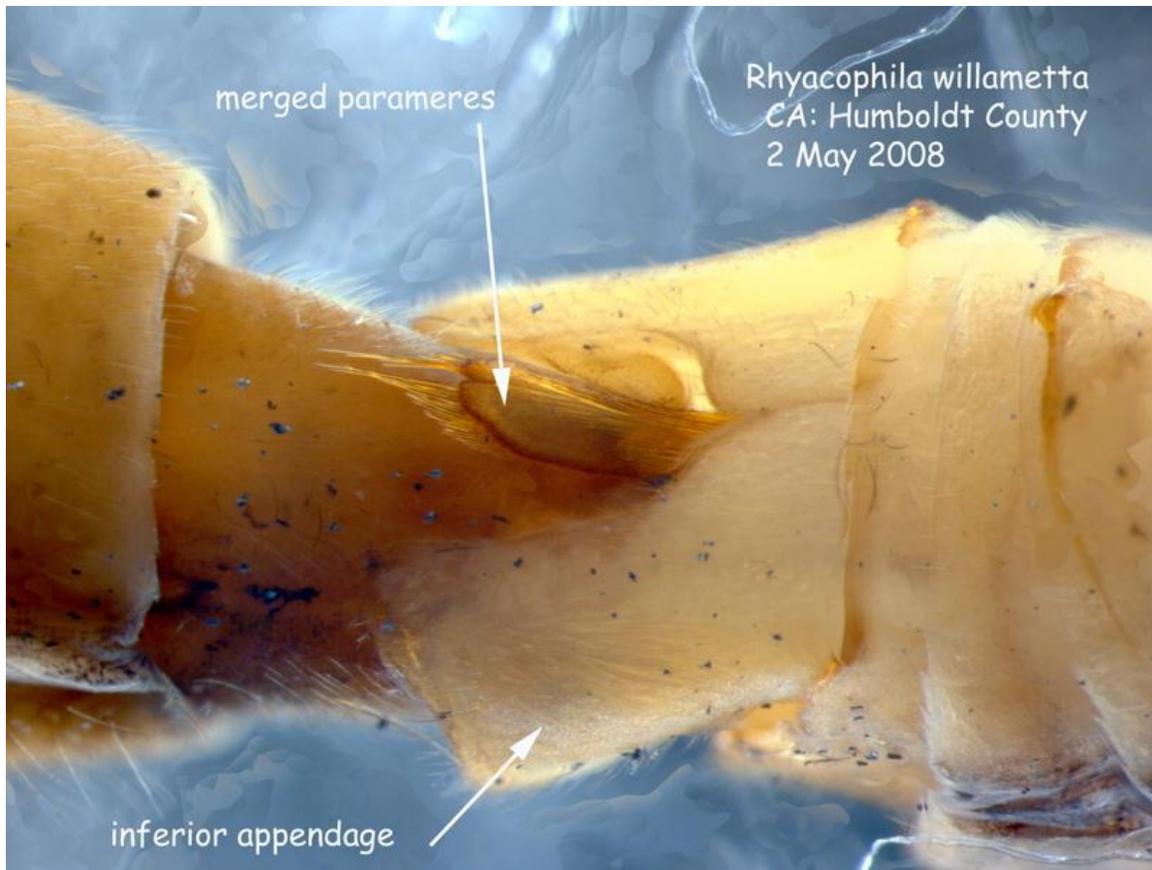
Figure 1. Canvas beating sheet, heavy-duty aerial net with extended handle, nylon beating sheet, and 48” hardwood dowel.

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

***Rhyacophila willametta* Ross, 1950 in copula.** A mating pair of the caddisfly *R. willametta* was captured and did not separate when preserved in ethanol. It was very interesting to see that the apical segment of the inferior appendage (clasper) of the male was folded against the basal segment so that the outer part of the apical segment was holding the female segment VIII. The pair was sent to Dave Ruitter who cleared the abdomens and took the following pictures. It is also interesting to see the parameres (paired processes that are part of the male phallic apparatus) merged and cradling the exterior of female segment VIII.



Rhyacophila willametta in copula, lateral view. Female on left, male on right.



Rhyacophila willametta in copula, ventrolateral view. Female on left, male on right.



Rhyacophila willametta in copula, dorsal view. Female on left, male on right.

Photo credit: Dave Ruiter.

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) for inclusion in the next issue of the SAFIT Newsletter.

Thanks!!

Asterisk (*) indicates author is a SAFIT member.

Crustacea

Buric, M., M. Hulak, A. Kouba, A. Petrussek, and P. Kozak. 2011. A successful crayfish invader is capable of facultative parthenogenesis: a novel reproductive mode in decapod crustaceans. *Plos One* 6.

Favaro, L., T. Tirelli, M. Gamba, and D. Pessani. 2011. Sound production in the red swamp crayfish *Procambarus clarkii* (Decapoda: Cambaridae). *Zoologischer Anzeiger* 250:143-150.

Holsinger, J. R., L. M. Ansell, and J. Shafer. 2011. Four new species of the subterranean amphipod genus *Stygobromus* (Amphipoda: Crangonyctidae) from shallow groundwater habitats on the Coastal Plain and eastern margin of the Piedmont in Maryland and Virginia, USA. *Zootaxa* 2872:1-21.

Macdonald, K. S., R. Sallenave, and D. E. Cowley. 2011. Morphologic and genetic variation in *Triops* (Branchiopoda: Notostraca) from ephemeral waters of the Northern Chihuahuan Desert of North America. *Journal of Crustacean Biology* 31:468-484.

Pessacq, P., L. B. Epele, and *D. C. Rogers. 2011. A new species of *Lynceus* (Crustacea: Branchiopoda: Laevicaudata) from Patagonia, with comments on laevicaudatan systematics. *Zootaxa* 3043:25-32.

Mollusca

Alonso, A. and J. A. Camargo. 2011. Subchronic toxic effects of fluoride ion on the survival and behaviour of the aquatic snail *Potamopyrgus antipodarum* (Hydrobiidae, Mollusca). *Archives of Environmental Contamination and Toxicology* 60:511-517.

Alonso, A. and J. A. Camargo. 2011. Toxic effects of fluoride ion on survival, reproduction and behaviour of the aquatic snail *Potamopyrgus antipodarum* (Hydrobiidae, Mollusca). *Water Air and Soil Pollution* 219:81-90.

Ephemeroptera

Dias, L. G., T. Bacca, L. Navarro, F. E. Acevedo, P. M. Benavides, and P. S. F. Ferreira. 2011. Association of nymphs and adults of Ephemeroptera (Insecta) using the amplified fragment length polymorphism (AFLP) technique. *Annales De Limnologie-International Journal of Limnology* 47:151-157.

Odonata

Abbott, J. C. and T. D. Hibbitts. 2011. *Cordulegaster sarracenia*, n. sp (Odonata: Cordulegastridae) from east Texas and western Louisiana, with a key to adult Cordulegastridae of the New World. *Zootaxa* 2899:60-68.

Plecoptera

Béthoux, O., Y. Cui, B. Kondratieff, B. P. Stark, and D. Ren. 2011. At last, a Pennsylvanian stem-stonefly (Plecoptera) discovered. *BMC Evolutionary Biology* 11:1-12.

*Lee, J. J. and R. W. Baumann. 2011. *Mesocapnia aptera* (Plecoptera: Capniidae) a new wingless winter stonefly from northern California, U.S.A. *Illiesia* 7:192-196.

*Sandberg, J. B. 2011. The *Isoperla* of California (Plecoptera: Perlodidae); larval descriptions and a key to 17 western Nearctic species. *Illiesia* 7:202-258.

Stark, B. P. and S. Green. 2011. Eggs of western Nearctic Acroneuriinae (Plecoptera: Perlidae). *Illiesia* 7:157-166.

Stewart, K. W., E. F. Drake, and B. P. Stark. 2011. Larvae of five species of the winter stonefly genus *Capnia* (Plecoptera: Capniidae) from California, U.S.A. *Illiesia* 7:167-181.

Coleoptera

Arce-Perez, R. and M. A. Moron. 2011. Synopsis of the Hydrophiloidea of Mexico (Coleoptera: Hydrophilidae, Helophoridae, Epimetopidae, Georissidae, and Hydrochidae), with a key for the identification of genera. *Revista Mexicana De Biodiversidad* 82:491-514.

Inoda, T. 2011. Cracks or holes in the stems of oviposition plants provide the only exit for hatched larvae of diving beetles of the genera *Dytiscus* and *Cybister*. *Entomologia Experimentalis Et Applicata* 140:127-133.

King, J. G., J. R. Starr, and P. K. Lago. 2011. Molecular data resolves relationships within Heteroceridae (Coleoptera: Dryopoidea). *Systematic Entomology* 36:435-445.

Diptera

Bouchard, R. W. and L. C. Ferrington. 2011. The effects of subsampling and sampling frequency on the use of surface-floating pupal exuviae to measure Chironomidae (Diptera) communities in wadeable temperate streams. *Environmental Monitoring and Assessment* 181:205-223.

Miscellaneous

Koperski, P., E. Dumnicka, and J. Galas. 2011. Abiotic parameters determining fauna composition in karstic springs. *Polish Journal of Ecology* 59:159-169.

Weigel, B. M. and J. J. Dimick. 2011. Development, validation, and application of a macroinvertebrate-based Index of Biotic Integrity for nonwadeable rivers of Wisconsin. *Journal of the North American Benthological Society* 30:665-679.

THANK YOU FOR YOUR MEMBERSHIP!

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