Newsletter of the SOUTHWEST ASSOCIATION OF FRESHWATER INVERTEBRATE TAXONOMISTS

Greetings SAFIT members,

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

Western **S**ociety of **M**alacologists

&

International **W**orkshop on **O**pisthobranchs

University of California-Santa Cruz, California

June 24 - 27, 2012

The meeting will be held among the redwoods (and banana slugs) on the beautiful main

campus of the University of California-Santa Cruz in Santa Cruz. Housing and meals will be available on campus. Registration information is TBA soon.

Tentative schedule

June 24: Sunday afternoon - evening: Registration, opening reception, and public lecture on opisthobranch research by Dr. Terry Gosliiner, California Academy of Sciences

June 25: Monday: Talks and posters, including symposium on Terrestrial Gastropods

June 26: Tuesday: Talks and posters, WSM business meeting and banquet

June 27: Wednesday: Optional field trips (due to poor tides the field trips will focus on paleontology and terrestrial gastropods).

Organizers:

WSM President Dr. Janet L. Leonard jlleonar@ucsc.edu
IWO's Dr. Angel Valdes aavaldes@csupomona.edu

Scientific and Common Names of Nearctic Stoneflies (Plecoptera), with Corrections and Additions to the List by Bill P. Stark, Kenneth W. Stewart, Stanley W. Szczytko, Richard W. Baumann and Boris C. Kondratieff, has been published as Miscellaneous Contribution No. 1. 20 p. – The Caddis Press – 2012.

The revision is now posted and available free at the Caddis Press Website <www.caddispress.com>. On the main menu page, click on Publications, then click on Caddis Press and then scroll to the bottom of the publications list where the new publication is listed. You can download the pdf by clicking on the stonefly icon.

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.

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.

Passive collecting methods for riparian adults of aquatic immatures (Part 2)

By

Brady Richards

It's not night, now what?

By collecting only at night, one misses the day-flying taxa. There are some great passive methods for collecting these critters as well.

My favorite is the Malaise trap (Figure 4). Basically, it's a tent set up over water. As insects fly up or down the stream corridor, they encounter the vertical wall in the middle of the trap and then move upwards towards a collecting head filled with preservative (Figure 5). The Malaise trap in the photo has only one collecting head, but larger traps have collecting heads at either end. The ABL used several of these traps during our Lake Davis project. At some of the sites, we wound up with literally thousands of nemourids, particularly *Podmosta*. Several caddis species were caught only with a Malaise trap and not by black light or sweeping/beating the vegetation. These traps can be pricey, as in several hundreds of US dollars. I've had traps knocked down by a falling tree and by various animals, including what I consider to be the number one threat to Malaise traps: bears. Figure 6 shows a trap that was brought down and broken into by a bear. I can only imagine that the fermenting insects provided a tasty treat.

Another type of net-based traps that I haven't had much experience with are emergence traps. There seem to be a lot of designs for emergence traps, but most have the same basic design – a funnel shaped body placed just above the water's surface, tapering upwards to a collection head with preservative. For our Lake Davis project we had planned to deploy a series of emergence traps that would stay out over winter. We had to scrap our plans due to lack of funds and time. We had another, very simple design which utilized a camping product called a Skeeter Defeater™. It is a mesh tent just large enough to enclose a single person in a sleeping bag. I deployed one of these over the stream behind my house for several months one summer. I didn't build a collection head, so I was forced to climb inside the trap each day. The yield included many caddisflies, mayflies and stoneflies, as expected, but also ptilodactylid adults, odonates and corydalids. Since there was no bottom to the "device", I had to be careful not to jostle it. Otherwise, many of the insects simply dropped into the water or flew out from under the trap. A collection head would have made this a very nice and mostly pre-built design.

The last trap I'll discuss was built specifically for stoneflies, although it will likely sample many other aquatics. The Kuusela (1978) box trap works on the principle that emerging stoneflies will crawl upwards to find a place to eclose (Figure 7). The top of the trap is made from transparent plexiglass so that stoneflies entering the box will climb upwards toward the sunlight. There is only a narrow opening on one side of a trough containing preservative so

the stoneflies that climb into this part of the trap will most likely fall into the preservative rather than escape the box. I tested one of these boxes for a couple weeks at Lake Davis with mixed results (Figure 8). However, the trap I set up in my backyard stream yielded a number of taxa. The cost for building three traps was minimal, only about $30 or so, mainly because I used wood scraps instead of buying fresh lumber. The trick to building these traps is to find a suitable trough. Once I found what I wanted, I designed my traps around the trough. The box traps I built were only about 20 inches wide, but the wider the trap, the more specimens it will likely capture. One problem I ran into with these traps was opilionids. Yes, harvestmen (Figure 9). Once these entered a trap, I never seemed to catch any stoneflies afterwards! Richard Bottorff has told me that he built and used box traps with great success during his stonefly studies on the Cosumnes River system.

Kuusela, K. K. and H. Pulkinnin. 1978. A simple trap for collecting newly emerged stoneflies (Plecoptera). Oikos 31:323-325.

Figure 4. Malaise trap.

Figure 5. Malaise trap collection head with one week's catch.

Figure 6. Malaise trap after visit from bear. Note the area where it sat down to feast on MY bugs.... @#$% bear!

Figure 7. Modified Kuusela box trap.

Figure 8. Modified Kuusela box trap showing trough and one week's catch.

Figure 9. Harvestmen set up ambush inside a box trap.

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.

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

Borza, P., A. Czirok, C. Deak, M. Ficsor, V. Horvai, Z. Horvath, P. Juhasz et al. 2012. Invasive mysids (Crustacea: Malacostraca: Mysida) in Hungary: distributions and dispersal mechanisms. North-Western Journal of Zoology 7:222-228.

Plecoptera

Kondratieff, B. C. and R. W. Baumann. 2012. A new species of the western North American genus *Triznaka* from Oregon (Plecoptera: Chloroperlidae). Illiesia 8:10-15.

Nelson, C. R., *J. B. Sandberg, D. Muranyi, and B. C. Kondratieff. 2012. Interesting winter emerging stoneflies (Plecoptera: Capniidae) from southern California. Perla 30:16-23.

*Sandberg, J. B. 2012. Vibrational communication of nine California stonefly (Plecoptera) species. Western North American Naturalist 71:285-301.

*Sandberg, J. B. 2012. Vibrational communication of seven California stoneflies (Plecoptera: Perlodidae). Pan-Pacific Entomologist 87:71-85.

Stewart, K. W. and B. C. Kondratieff. 2012. Larvae of the Nearctic species of the stonefly genus *Megarcys* Klapálek (Plecoptera: Perlodidae). Illiesia 8:16-36.

Trichoptera

Hossack, B. R., R. L. Newell, and *D. E. Ruiter. 2012. New collection records and range extension for the caddisfly *Arctopora salmon* (Smith, 1969) (Trichoptera: Limnephilidae). The Pan-Pacific Entomologist 87:206-208.

Houghton, D. C., E. A. Berry, A. Gilchrist, J. Thompson, and M. A. Nussbaum. 2012. Biological changes along the continuum of an agricultural stream: influence of a small terrestrial preserve and use of adult caddisflies in biomonitoring. Journal of Freshwater Ecology 26:381-397.

Melnitsky, S. I. and V. D. Ivanov. 2012. Structure and localization of sensilla on antennae of caddisflies (Insecta: Trichoptera). Journal of Evolutionary Biochemistry and Physiology 47:593-602.

Miller, S. W., D. Wooster, and J. Li. 2012. Developmental, growth, and population biomass responses of a river-dwelling caddisfly (*Brachycentrus occidentalis*) to irrigation water withdrawals. Hydrobiologia 679:187-203.

Ratia, H., K. M. Vuori, and A. Oikari. 2012. Caddis larvae (Trichoptera, Hydropsychidae) indicate delaying recovery of a watercourse polluted by pulp and paper industry. Ecological Indicators 15:217-226.

Zuellig, R. E., B. D. Heinold, B. C. Kondratieff, and *D. E. Ruiter. 2012. Diversity and distribution of mayflies (Ephemeroptera), stoneflies (Plecoptera), and caddisflies

(Trichoptera) of the South Platte River Basin, Colorado, Nebraska, and Wyoming, 1873–2010. U.S. Geological Survey Data Series 606:1-257.

Coleoptera

Shepard, W. D. 2012. Survival of stream dewatering by *Postelichus immsi* (Hinton) (Coleoptera: Byrrhoidea: Dryopidae). The Pan-Pacific Entomologist 87:54-56.

Diptera

Bickel, D. J. and P. H. Arnaud. 2012. *Medetera johnthomas*i (Diptera: Dolichopodidae), a new species from California with notes on the *aberrans* species group. Pan-Pacific Entomologist 87:124-129.

Cranston, P. S., N. B. Hardy, and G. E. Morse. 2012. A dated molecular phylogeny for the Chironomidae (Diptera). Systematic Entomology 37:172-188.

Demin, A. G., N. V. Polukonova, and N. S. Mugue. 2012. Molecular phylogeny and the time of divergence of midges (Chironomidae, Nematocera, Diptera) inferred from a partial nucleotide sequence of the Cytochrome Oxidase I Gene (COI). Russian Journal of Genetics 47:1168-1180.

Harkrider, J. R. 2012. Life history of *Neoplasta parahebes* (Diptera: Empididae: Hemerodromiinae). Canadian Entomologist 143:392-398.

Mathis, W. N. and T. Zatwarnicki. 2012. Revision of New World species of the shore-fly subgenus *Allotrichoma* Becker of the genus *Allotrichoma* with description of the subgenus *Neotrichoma* (Diptera, Ephydridae, Hecamedini). Zookeys:1-101.

Miscellaneous

Dallas, H. F. and N. A. Rivers-Moore. 2012. Critical thermal maxima of aquatic macroinvertebrates: towards identifying bioindicators of thermal alteration. Hydrobiologia 679:61-76.

Danehy, R. J., R. E. Bilby, R. B. Langshaw, D. M. Evans, T. R. Turner, W. C. Floyd, S. H. Schoenholtz et al. 2012. Biological and water quality responses to hydrologic disturbances in third-order forested streams. Ecohydrology 5:90-98.

Grantham, T. E., M. Canedo-Argueelles, I. Perree, M. Rieradevall, and N. Prat. 2012. A mesocosm approach for detecting stream invertebrate community responses to treated wastewater effluent. Environmental Pollution 160:95-102.

*Herbst, D. B., *M. T. Bogan, S. K. Roll, and H. D. Safford. 2012. Effects of livestock exclusion on in-stream habitat and benthic invertebrate assemblages in montane streams. Freshwater Biology 57:204-217.

Koperski, P. 2012. Diversity of freshwater macrobenthos and its use in biological assessment: a critical review of current applications. Environmental Reviews 19:16-31.

Marchetti, M. P., E. Esteban, A. N. H. Smith, *D. Pickard, *A. B. Richards, and *J. Slusark. 2012. Measuring the ecological impact of long-term flow disturbance on the macroinvertebrate community in a large Mediterranean climate river. Journal of Freshwater Ecology 26:459-480.

Monk, W. A., P. J. Wood, D. M. Hannah, C. A. Extence, R. P. Chadd, and M. J. Dunbar. 2012. How does macroinvertebrate taxonomic resolution influence ecohydrological relationships in riverine ecosystems. Ecohydrology 5:36-45.

*Rogers, D. C. 2012. Taxonomic certification versus the scientific method. Zootaxa 3257:66-68.

Young, B. A., R. H. Norris, and F. Sheldon. 2012. Is the hyporheic zone a refuge for macroinvertebrates in drying perennial streams? Marine and Freshwater Research 62:1373-1382.

THANK YOU FOR YOUR MEMBERSHIP!

Newsletter of the SOUTHWEST ASSOCIATION OF FRESHWATER INVERTEBRATE TAXONOMISTS

Foggy and cool north coast greetings SAFIT members,

Hope you're all enjoying summer. Another lean newsletter issue but 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.

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***Helodon* (Simuliidae).** I have been ignorant of this genus until recently finding some very different looking pupae in Klamath River tributary benthic samples. The pupal gill resembles a pair of divergent clubs bearing numerous fine filaments (as in Adler et al. 2004, Figure 549, *Helodon onchodactylus* s.s.). I bring this up because the larvae are similar to *Prosimulium* and perhaps others are unfamiliar with *Helodon*. I have been calling any simuliid larva with: antennae possessing light colored proximal and medial article and a distinctly dark distal article; and mentum possessing a tridentate appearing median tooth – *Prosimulium*. The character separating larvae of *Helodon* and *Prosimulium* (the size of a sclerite on the prothoracic proleg) is pretty easy to see and appears to work but alas, doesn't always seem to work for my specimens (or eyes?). Anyone for *Prosimulium/Helodon*? If so, get your petitions in to Brady and Christopher!

Adler, P.H., D.C. Currie, and D.M. Wood. 2004. The black flies (Simuliidae) of North America. Cornell University Press, Ithaca, New York. 941 pp.

***Namamyia plutonis* Banks, 1906 (Odontoceridae).** Pete Haggard recently sent the following caddisfly picture wondering what it might be. He had seen several of them on willows and they are so striking he had to get a picture. I have seen them on spring creek-side sword ferns tapping their abdomens on the ferns in what appeared to be vibrational communication ("drumming" in stoneflies). Pete also observed "drumming" when he took the picture. I haven't heard of this occurring in Trichoptera but it may be worth investigating.

Namamyia seems to occur primarily in small, forested spring run type streams but I recently found larvae in samples from the more torrential creek in the following photo. It is quite an attractive bug whether larva or adult.

Namamyia plutonis. **Photo by Pete Haggard.**

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Crustacea

Asem, A. and *D. C. Rogers. 2012. Clarification of the publication date for *Artemia urmiana* Günther (Crustacea: Anostraca): 1890, 1899 or 1900? International Journal of Artemia Biology 2:3-6.

*Rogers, D. C., J. P. Corrêa Gomes, and F. Veria. 2012. A new species of *Dendrocephalus* (Crustacea, Anostraca) from Serra dos Carajás (Pará State, Brasil). Zootaxa 3363:52-58.

Mollusca

Hershler, R. and H. P. Liu. 2012. A new species of springsnail (*Pyrgulopsis*) from the Owyhee River Basin, Nevada. Western North American Naturalist 72:21-31.

Liu, H. P. and R. Hershler. 2012. Phylogeography of an endangered Western North American springsnail. Conservation Genetics 13:299-305.

Ephemeroptera

Burian, S. K. and L. W. Myers. 2012. A new species of *Acentrella* Bengtsson (Ephemeroptera: Baetidae) from New York and New England (USA), redescription of the nymph of *A. parvula* (McDunnough), and key to known adult males of Nearctic *Acentrella*. Aquatic Insects 33:305-334.

Plecoptera

DeWalt, R. E., Y. Cao, T. Tweddale, S. A. Grubbs, L. Hinz, M. Pessino, and J. L. Robinson. 2012. Ohio USA stoneflies (Insecta, Plecoptera): species richness estimation, distribution of functional niche traits, drainage affiliations, and relationships to other states. Zookeys 178:1-26.

Trichoptera

Blinn, D. W., *D. E. Ruiter, and A. Haden. 2012. Do semi-arid landscapes in the American Southwest cause discrete communities of caddisflies (Trichoptera) in streams? Southwestern Naturalist 57:119-122.

Rainbow, P. S., A. G. Hildrew, B. D. Smith, T. Geatches, and S. N. Luoma. 2012. Caddisflies as biomonitors identifying thresholds of toxic metal bioavailability that affect the stream benthos. Environmental Pollution 166:196-207.

Coleoptera

Arribas, P., J. Velasco, P. Abellan, D. Sanchez-Fernandez, C. Andujar, P. Calosi, A. Millan, I. Ribera, and D. T. Bilton. 2012. Dispersal ability rather than ecological tolerance drives differences in range size between lentic and lotic water beetles (Coleoptera: Hydrophilidae). Journal of Biogeography 39:984-994.

Diptera

Adler, P. H., Y. T. Huang, and H. Takaoka. 2012. Nearctic-Palaearctic relationships of black flies (Diptera: Simuliidae): chromosomal and morphological evidence for the *Prosimulium magnum* species group in Japan. Journal of Natural History 46:1467-1475.

Brodo, F. 2012. *Prionocera* revisited (Diptera: Tipulidae). Canadian Entomologist 144:182-185.

Cranston, P. S., E. Barley, G. E. Langley, A. Dieffenbacher-Krall, A. Longmuir, and J. Zloty. 2012. *Propsilocerus* Kieffer (Diptera: Chironomidae) from the Nearctic. Aquatic Insects 33:343-350.

Mangan, B. P. and M. D. Bilger. 2012. First record of phoresy between chironomid larvae and crayfish. American Midland Naturalist 167:410-415.

Saether, O. A. and P. S. Cranston. 2012. New World *Stictocladius* Edwards (Diptera: Chironomidae). Neotropical Entomology 41:124-149.

Taber, S. W. 2012. A new Nearctic species of *Micropsectra* Kieffer midge (Diptera: Chironomidae). Southwestern Entomologist 37:61-71.

Miscellaneous

Hughes, R. M., A. T. Herlihy, W. J. Gerth, and Y. Pan. 2012. Estimating vertebrate, benthic macroinvertebrate, and diatom taxa richness in raftable Pacific Northwest rivers for bioassessment purposes. Environmental Monitoring and Assessment 184:3185-3198.

Lawrence, J. E., M. J. Deitch, and V. H. Resh. 2012. Effects of vineyard coverage and extent on benthic macroinvertebrates in streams of Northern California. Annales de Limnologie-International Journal of Limnology 47:347-354.

Lunde, K. B. and V. H. Resh. 2012. Development and validation of a macroinvertebrate index of biotic integrity (IBI) for assessing urban impacts to Northern California freshwater wetlands. Environmental Monitoring and Assessment 184:3653-3674.

Stribling, J., B. Sweeney, J. Morse, G. Corkum, G. Lester, S. Miller, R. Mitchell, B. Poulton, S. Strachan, and M. Wetzel. 2012. "Taxonomic certification versus the scientific method": a rebuttal of Rogers (2012). Zootaxa 3359:65-68.

Yoshimura, M. 2012. Effects of forest disturbances on aquatic insect assemblages. Entomological Science 15:145-154.

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Greetings SAFIT members,

The fall busy season is upon us. Hope you are all enjoying it! The CABW and SAFIT annual meeting are around the corner, SAFIT elections are approaching, and a SAFIT sponsored mayfly workshop will be greeting 2013. As usual, we solicit membership contributions to the newsletter - 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.

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The SAFIT Annual Meeting

Date: Friday, 9 November 2012 - 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.

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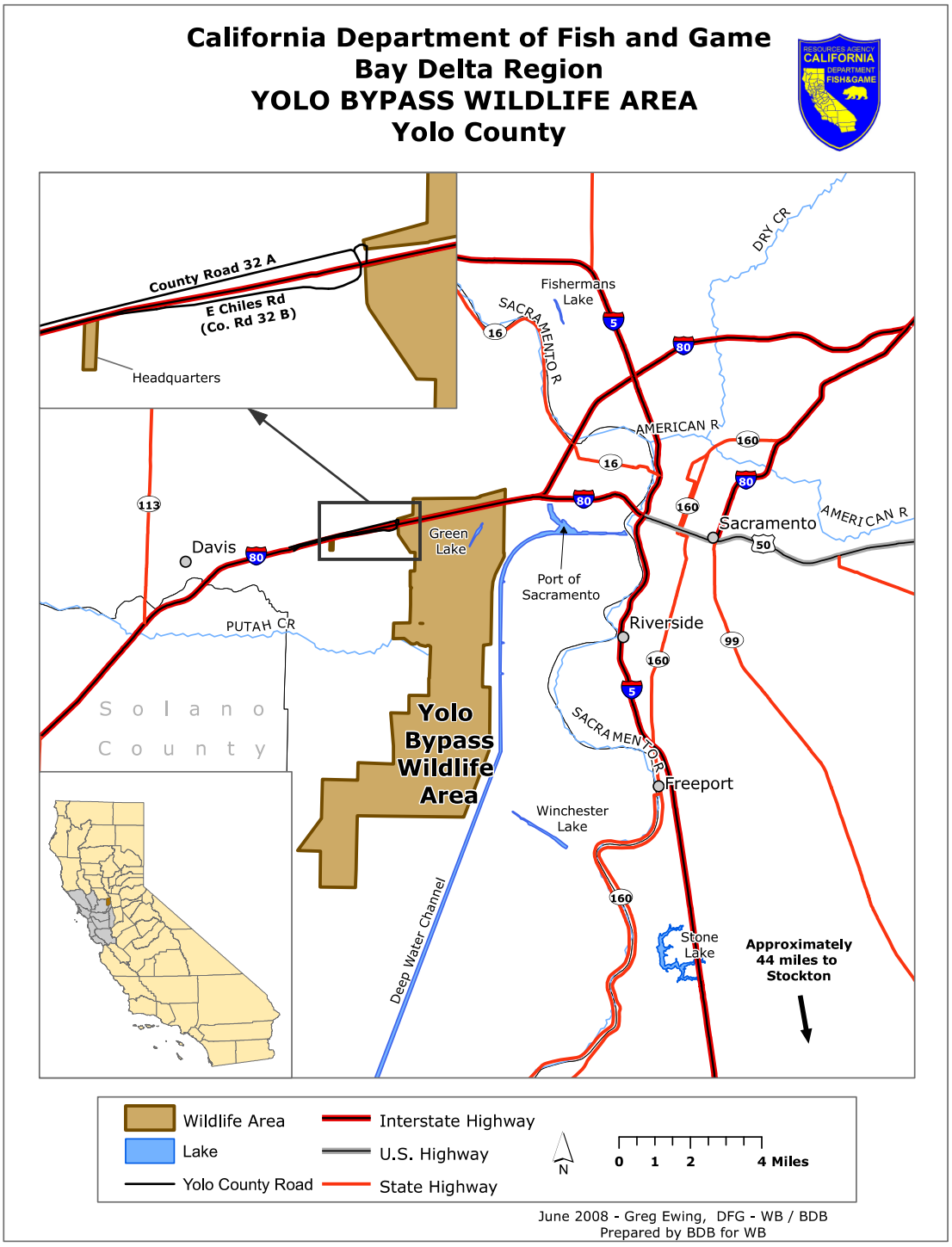
California Department of Fish and Game
Bay Delta Region
YOLO BYPASS WILDLIFE AREA
Yolo County
County Road 32 A
E Chiles Rd
(Co. Rd 32 B)
Headquarters
Fishermans Lake
SACRAMENTO R
DRY CR
AMERICAN R
Sacramento
Davis
Green Lake
Port of Sacramento
Riverside
PUTAH CR
Solano County
Yolo Bypass Wildlife Area
Winchester Lake
Freeport
Deep Water Channel
Stone Lake
Approximately 44 miles to Stockton
Wildlife Area
Lake
Yolo County Road
Interstate Highway
U.S. Highway
State Highway
N
0 1 2 4 Miles
June 2008 - Greg Ewing, DFG - WB / BDB
Prepared by BDB for WB

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ANNOUNCEMENTS

SAFIT elections

Elections for two positions on the SAFIT Board of Directors will be conducted this year at the annual meeting on November 9th (and also via email for those members unable to attend). The two year positions of Vice President and Treasurer are up for election. Descriptions for those positions can be found in the SAFIT bylaws. Nominations for these positions will close October 12th, and candidates will have the position statements in by October 26th. Wendy Willis, the Secretary, will coordinate the elections, so please contact her at wendy@aquabio.org for any questions or nominations.

California Aquatic Bioassessment Workgroup
19th Annual Meeting
November 7 and 8, 2012
8 am – 4 pm
The Ballroom
Activities and Recreation Center Conference Facility
University of California
Davis, CA

Registration:
There is no fee to attend, but registration is required.
Pre-registration:
Register online at: http://www.trainingforce.com/5/lp/gowater.aspx?ot=8&otid=48

In-person registration:
8 am-9 am on November 7 and 8, 2012

For more information registering:
Toni Marshall
Water Boards'
SWAMP Program
(916) 322-2518
tmarshall@waterboards.ca.gov

Location Information:
Directions: Interstate 80 to Hwy 113 north toward Woodland. Take Russell Boulevard exit and turn right on Russell Boulevard. Turn right on La Rue Road. Turn left on Orchard Road and drive directly into Visitor Parking Lot 25.

Parking: Permits are required and cost $7.00 per day. Parking permit dispensers accept quarters, one-dollar bills, five-dollar bills, or VISA and MasterCard.

Online campus map: http://facts.ucdavis.edu/map.lasso

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Guidelines for taxonomic determination of *Baetis adonis* and *Baetis tricaudatus* specimens in Southern California SWAMP bioassessment samples, a webinar presentation.

Joseph Slusark and John Sandberg of the Aquatic Bioassessment Laboratory conducted a web seminar, or webinar, to discuss problematic *Baetis* species in southern California on 16 August 2012. Recent DNA analysis of southern California Baetidae has indicated the species *Baetis adonis* and *Baetis tricaudatus* are part of a complex composed of several species. The webinar demonstrated what to do with these problematic taxa utilizing the new SAFIT CCD video camera.

The webinar was hosted by Erick Burres and the California Water Quality Monitoring Collaboration Network and is available for viewing at URL:
https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&rID=47670822&rKey=a09414c07668c12f

Other webinars are accessible at the California Water Quality Monitoring Collaboration Network website:
www.waterboards.ca.gov/mywaterquality/monitoring_council/collaboration_network/index.shtml

Electronic publication made available with amendment to the International Code of Zoological Nomenclature (From the ICZN http://iczn.org/)

The International Commission on Zoological Nomenclature has voted in favour of a revised version of the amendment to the International Code of Zoological Nomenclature that was proposed in 2008. The purpose of the amendment is to expand and refine the methods of publication allowed by the Code, particularly in relation to electronic publication. The amendment establishes an Official Register of Zoological Nomenclature (with ZooBank as its online version), allows electronic publication after 2011 under certain conditions, and disallows publication on optical discs after 2012. The requirements for electronic publications are that the work be registered in ZooBank before it is published, that the work itself states the date of publication and contain evidence that registration has occurred, and that the ZooBank registration state both the name of an electronic archive intended to preserve the work and the ISSN or ISBN associated with the work. Registration of new scientific names and nomenclatural acts is not required. The Commission has confirmed that ZooBank is ready to handle the requirements of the amendment.

The amendment, with a brief discussion, is available in open access and was simultaneously published at 7am GMT 4 September 2012:
Zootaxa : http://www.mapress.com/zootaxa/list/2012/3450.html
Zookeys: http://www.pensoft.net/journals/zookeys/article/3944/

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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.

Simple Hanging LED Blacklight for Caddis collection.
By Dave Ruiter

I have collected in the Pacific Northwest over the last few years. I soon realized it is overrun with blackberries. The low elevation stream crossings and lakes are impenetrable. Great for habitat protection, bad for collecting. On a recent collecting trip to the Olympic Peninsula, Dean Blinn and I drove by many streams that were inaccessible because of either blackberries, gradient, or both.

A discussion with Bob Wisseman, from several years ago, about the need for a small, portable blacklight came to mind. There are the large 5 gal bucket traps with a 12v battery, the 12" florescent tube hanging in front of a sheet (which I really like as a social event), and the 6" flashlight on a plastic sandwich pan. But we were looking for something smaller and easier to use. Bob Wisseman found a small blacklight sold as a 21 LED UV 4 Mode Headlamp. It comes with a head strap to use it that way, but that strap can be easily removed. The idea was to tape this light to the top of a gallon jug with holes cut in the side to let the critters in.

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Bob come came up with the gallon jug idea but I was looking for something smaller, and something to get around the blackberries and hang from bridges. I had an empty isopropyl bottle that proved to be the perfect size. Drill a hole in the top of the light and add a cord to the light. Cut two holes in the side of the bottle with at least one of them big enough to fit the light inside, and string the cord through the bottle neck.

The actual wavelength of UV lights is very difficult to measure but the website where I bought these (http://www.blacklightshop.com/shop/viewitem.php?productid=23) says they are 380nm lights. I am looking for 365nm for caddis but these work. I don't know if they make 365nm LEDs.

The light runs on 3 AAA batteries. It has four light settings, 1 LED, 8 LEDs, 21 LEDs and a 21 LEDs flashing strobe (whatever that is for). I compared battery life for the first three settings using 3 year old batteries from the same large box. After 24 hours, the 21 LEDs were dimmer than both the 1 LED and 8 LED settings. The 21 LED battery life was about 28 hours. Interestingly, the other two settings were both running at 72 hours when I turned them off. The 1 LED was the brightest at the end, but not by much. The light seems fairly waterproof as is. I added a drop of glue where I stuck the cord through which should be adequate to waterproof the bottle, or a little tape would seal the top of the bottle very well.

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It is very easy to hang this light from a bridge. A cord tied around one of the bridge rails works, or bend a coat hanger wire over the top of the bridge. To avoid the cord/wire being seen on the bridge, use fishing line or a rusty wire. We were collecting along Highway 101 and folks were going by so fast they could not have seen a string around an abutment. Whenever you pick up the trap simply pull it up and pour the contents into a jar, Ziploc bag, pan, etc.

Since I barely know the difference between a photosensor and a timer (I am sure I am not going to figure this out), here is a request to any electricians amongst the readers and a reward for whoever does: the addition of a photosensor like the ones in solar yard lights would turn this light on at dusk. An hour before dusk would be great. That would allow the light to be set at a location during the day. And wiring a timer into it would be awesome. A timer that would allow the light to run for three hours after it turned on at dusk would allow collection of the vast majority of caddis species attracted to lights at that location. If soap and water or propylene glycol are used as the preservative, it could stay there for several days and turn on for a couple hours each evening.

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Again, I have to thank Bob Wisseman for the initial idea and info on the light. If you have questions on the above (or want to volunteer as an electrician!) let me know. Dave Ruiter - druiter@msn.com.

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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.

I recently collected benthic samples in a small, cascading spring creek - looking mostly for *Rhyacophila* larvae - but a lot of interesting critters live in that type of habitat. A nice surprise was the *Homoplectra* pupa pictured above. This was the first *Homoplectra* pupa

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I have seen and the forked anal processes are distinctive. This got me thinking – it would be nice to try and put together a picture key of the pupae of non-case making Trichoptera.

During the recent SAFIT Trichoptera Workshop, Dave Ruiter emphasized the importance of keeping well-developed caddisfly pupae since they also possess both adult and larval (when larval sclerites remain with the pupa) characters. The best available generic key to caddis pupae is Ross (1944). I come across well-developed pupae of the more primitive trichops occasionally in bioassessment samples. I'm sure other folks do, also. It would be a good collaborative project to pool specimens and come up with a generic key using mandibular and other morphological characters. If anyone has well developed caddis pupae and wants to part with them – let me know!

Thanks,
Jon Lee

Photo credits: Dave Ruiter

Ross, H.H. 1944. The caddis flies, or Trichoptera, of Illinois. Bulletin of the Natural History Survey 23(1).

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

Asterisk (*) indicates author is a SAFIT member.

Crustacea

Chucholl, C. 2012. Understanding invasion success: life-history traits and feeding habits of the alien crayfish *Orconectes immunis* (Decapoda, Astacida, Cambaridae). Knowledge and Management of Aquatic Ecosystems 404:1-22.

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*Rogers, D. C. and M. Hamer. 2012. Two new species of *Metabranchipus* Masi, 1925 (Anostraca: Branchipodidae). Journal of Crustacean Biology 32:971-980.

*Rogers, D. C., N. Rabet, and S. C. Weeks. 2012. Revision of the extant genera of Limnadiidae (Branchiopoda: Spinicaudata). Journal of Crustacean Biology 32:827-842.

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Mollusca

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Ephemeroptera

*De Jong, G. D. and S. P. Canton. 2012. Report of the family Ameletidae (Ephemeroptera) from South Dakota. Entomological News 122:22-26.

Webb, J. M., L. M. Jacobus, D. H. Funk, X. Zhou, B. Kondratieff, C. J. Geraci, R. E. DeWalt, D. J. Baird, B. Richard, I. Phillips, and P. D. N. Hebert. 2012. A DNA barcode library for North American Ephemeroptera: progress and prospects. Plos One 7:e38063.

Plecoptera

Baumann, R. W. and R. G. Call. 2012. *Lednia tetonica*, a new species of stonefly from Wyoming (Plecoptera: Nemouridae). Illiesia 8:104-110.

Martinson, R. J., *J. B. Sandberg, and B. C. Kondratieff. 2012. Life history and food habits of *Isoperla quinquepunctata* (Banks) (Plecoptera: Perlodidae) from a spring source and Willow Creek in the Piceance Basin, Colorado. Illiesia 8:125-133.

Teslenko, V. A. 2012. A taxonomic revision of the genus *Arcynopteryx* Klapalek, 1904 (Plecoptera, Perlodidae). Zootaxa 3329:1-18.

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Landeiro, V. L., L. M. Bini, A. S. Melo, A. M. O. Pes, and W. E. Magnusson. 2012. The roles of dispersal limitation and environmental conditions in controlling caddisfly (Trichoptera) assemblages. Freshwater Biology 57:1554-1564.

Diptera

Borkent, A. 2012. The pupae of Culicomorpha-morphology and a new phylogenetic tree. Zootaxa 3396:1-98.

Conflitti, I. M., M. Spironello, and D. C. Currie. 2012. Molecular phylogeny of the North American *Simulium malyschevi*-group species (Diptera: Simuliidae). Systematic Entomology 37:571-577.

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Miscellaneous

Oliver, A. A., *M. T. Bogan, *D. B. Herbst, and R. A. Dahlgren. 2012. Short-term changes in-stream macroinvertebrate communities following a severe fire in the Lake Tahoe basin, California. Hydrobiologia 694:117-130.

*Rogers, D. C. 2012. Reply to ""Taxonomic certification versus the scientific method": a rebuttal of Rogers (2012)" by Stribling et al., 2012. Zootaxa 3450:62-63.

THANK YOU FOR YOUR MEMBERSHIP!

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Newsletter of the SOUTHWEST ASSOCIATION OF FRESHWATER INVERTEBRATE TAXONOMISTS

Season's greetings SAFIT members,

We present the winter issue of the newsletter; a bit bare-limbed to match the season. 2012 ended on a somber note, as we lost Dr. Kenneth W. Stewart, a pillar of the aquatic insect community. But, it's a new year and as usual, we continue to solicit membership contributions to the newsletter - 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

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.

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ANNOUNCEMENTS

Kenneth W. Stewart 1935-2012

Dear Colleagues: I know many of you have heard the sad news of Ken W. Stewart's death from complications of leukemia and a stroke. He died on Sunday, December 9th, 2012, and his funeral was held at his church in Denton, Texas. Please continue to hold his wife Francene and their children in your thoughts. Ken was much more than my graduate advisor at the University of North Texas; he made all of his students feel as if they were part of his own family. His exceptional support of student research and his contributions to stonefly biology and taxonomy will be genuinely missed. *J. Sandberg*
Here is a link to Ken Stewart in his habitat:
https://www.youtube.com/watch%3Fv=tCtXOCqDeDY

SAFIT elections

Congratulations to the new SAFIT Vice President, Dessie Underwood and new SAFIT Treasurer, Bill Isham.

EMPLOYMENT OPPORTUNITIES

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

Marine / Aquatic Scientist
Employment Opening

Applied Marine Sciences, Inc. (AMS) has a pending opening for an aquatic scientist in its San Francisco Bay Area offices. The duties of the position include participation in study design, field collections, laboratory and data analysis, report preparation, project management, and business development. The successful candidate will have strong verbal and written communication skills, an undergraduate or graduate degree(s) in a marine or aquatic science discipline, some practical work experience in marine, estuarine, and other aquatic environments, and developed computer and business skills. Training and experience in SWAMP bioassessment and water quality monitoring, scientific SCUBA diving, GIS, familiarity with electronic sampling equipment, and knowledge of state and federal water regulations are a plus. Please email your letter of interest, resume and salary requirements to ams-jobs@amarine.com.

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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.

New Zealand Mudsnail observations from Larry Serpa

The photo below is of a New Zealand Mudsnail we noticed at one of our downstream sites. After watching them I am a little less concerned about our crews spreading them in the drainage. It was difficult to pick up snail occupied rocks without the snails falling off. I had to do it very slowly and not tilt the rock at all. When they detected movement they immediately withdrew into their shells and closed their opercula. Since our people move around a lot, the snails would probably close up when disturbed by the survey crew. However, caution and preventive action should always be taken to avoid spreading the snails. It seems they are much more likely to crawl up onto a fisherman that was standing in one spot for a considerable amount of time.

In captivity, I noticed some small *Gnorimosphaeroma insulare* (Isopoda: Sphaeromatidae) had tagged along on the rocks with the snails. Some of them were dead and had all their flesh removed, and when I killed one of the remaining isopods the snails immediately mobbed it (up to seven snails) and consumed all the flesh, just leaving the exoskeleton. The snails also were good at hanging from the underside of the water surface, so they would be able to easily float downstream to new sites. After a couple of days without adequate food, they simply closed up into their shells and went dormant, waiting until conditions improved.

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

Asterisk (*) indicates author is a SAFIT member.

Crustacea

Aguilar, A. 2012. Range-wide and local drivers of genetic structure in an endangered California vernal pool endemic crustacean. Conservation Genetics 13:1577-1588.

Breinholt, J. W., M. L. Porter, and K. A. Crandall. 2012. Testing phylogenetic hypotheses of the subgenera of the freshwater crayfish genus *Cambarus* (Decapoda: Cambaridae). Plos One 7. (9):e46105

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Ephemeroptera

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Odonata

Bried, J. T., F. D'Amico, and M. J. Samways. 2012. A critique of the dragonfly delusion hypothesis: why sampling exuviae does not avoid bias. Insect Conservation and Diversity 5:398-402.

Plecoptera

Boumans, L. and R. W. Baumann. 2012. *Amphinemura palmeni* is a valid Holarctic stonefly species (Plecoptera: Nemouridae). Zootaxa 3537:59-75.

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Newell, R. L. and R. W. Baumann. 2012. Stonefly sex gone awry: An attempted mating by a *Perlinodes aureus* (Smith) male with a *Pteronarcys californica* Newport male. Illiesia 8:152-157.

Megaloptera/Neuroptera

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Trichoptera

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Diptera

Fu, Y. and O. A. Saether. 2012. *Corynoneura* Winnertz and *Thienemanniella* Kieffer from the Nearctic Region (Diptera: Chironomidae: Orthocladiinae). Zootaxa 3536:1-61.

Lencioni, V., L. Marziali, and B. Rossaro. 2012. Chironomids as bioindicators of environmental quality in mountain springs. Freshwater Science 31:525-541.

Miscellaneous

Brown, L. R., J. T. May, *A. C. Rehn, *P. R. Ode, I. R. Waite, and J. G. Kennen. 2012. Predicting biological condition in southern California streams. Landscape and Urban Planning 108:17-27.

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Purdy, S. E., P. B. Moyle, and K. W. Tate. 2012. Montane meadows in the Sierra Nevada: comparing terrestrial and aquatic assessment methods. Environmental Monitoring and Assessment 184:6967-6986.

THANK YOU FOR YOUR MEMBERSHIP!