

in the drift

The SFS Newsletter



Happy New Year!

2011, a year of massive changes for NABS/SFS, is finished, and we've all done a pretty reasonable job of acclimatizing. Last issue (way back in late summer), we promised that the name-change transition would be complete by now on all newsletter/communications fronts. Has this come to pass? Well, um, nearly.

We've got an updated news address: news@freshwater-science.org (email us with anything you've got!). And we finally updated the name of the facebook page (www.facebook.com/FreshwaterScience: 'like' us today!). In the newsletter, Pam's JNABS corner has become, simply, *Pam's Journal Notes* (p. 3). We've still got a JNABS article spotlight this issue (p. 2) because the article is from the December issue, back the days when our journal still had that name. For 2012 issues and beyond, we'll have *Freshwater Science* article spotlights.

Take note that we've got to rebuild the journal's impact factor under the new title, so submit some good papers over the next couple of years!



'Over the River' is a temporary work of art by the artist Christo that will cover the Arkansas River with silky fabric for 9.5 river km. Who's ready to sample? More info: <http://bit.ly/90GdwZ>

Our 2012 meeting in Louisville is really coming together, including plans for one night's mixer on historic riverboats on the Ohio River (we didn't know that flowed through Louisville; did you?!), our banquet at the Louisville Bats baseball stadium, and whiskey distillery tours!

Happy new year, SFS-ers (does that work?), and happy abstract writing!

-*Deb Finn, Teresa Tibbets & Julie Zimmerman*

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Winter 2012

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Mark your calendars!

2011 was a crazy year; are you ready for 2012?? Hold on to your hats, here we go... (And don't forget to check the website regularly for detailed info on all the following deadlines and more.)

now: Renew your membership for 2012 ASAP. Go to freshwater-science.org.

"over the next 30 days" (as per Lucinda Johnson; see back page): **VOTE!** -for the next SFS president and 2 delegates to the Board of Directors.

22 Jan: abstract submission deadline for the SFS 2012 meeting.

3 Feb: SFS student Endowment award application deadline: take advantage of available funding to attend the Louisville meeting: <http://bit.ly/zSOUtE>

3 Feb: Instars applications due (for underrepresented undergrads)! This fantastic program started last year in Providence. See: <http://bit.ly/wWnPBC>

15 Feb: applications for Student Conservation Research Awards due (<http://bit.ly/yqs8S8>)

15 March: deadline for nominations/support letters for ALL NON-STUDENT AWARDS (i.e. Excellence, Environmental Stewardship, Service, and Hynes Awards). *We know there are lots of worthy SFS-ers out there, so*

let's get those nominations flowing in! Info on all at: <http://bit.ly/xiHu5o>

1 April: Early registration deadline for SFS annual meeting.

20-24 May: SFS 2012 annual meeting in Louisville, Kentucky!

photos needed for Louisville 2012 playing card deck (due 1 March): Your freshwater organism photos (macroinverts, algae, even fish!) can be part of the 2012 meeting paraphernalia! Submit as many as you like to the official 'Paraphernalia Committee'. (See <http://bit.ly/xFsh5g> for more info.)

freshwater-science.org

JNABS article spotlight: Small but mighty: exceptional biodiversity in headwater streams

Finn, Bonada, Múrria, and Hughes *JNABS* 30(4): 963-980.

In the final issue of the *Journal of the North American Benthological Society*, Rosemary Mackay Fund recipients, Deb Finn, Núria Bonada, Cesc Múrria, and Jane Hughes remind us that streams are not linear, but branching networks fed by numerous, small, headwater streams. The view of streams as networks, the authors argue, is important for assessing the contribution of headwater streams to regional biodiversity. Deb Finn, the lead author, explains: “we were thinking that headwaters make a unique contribution to biodiversity across entire stream networks, given the variety of habitat types among headwaters and their isolation in the tips of networks”.

The authors first met, where else, but at a NABS meeting. “Although the four of us are from three different continents, we all tended to be drawn to similar sessions at NABS, typically sessions about biodiversity and how it is distributed through space.” Finn had the main idea to study spatial correlations between genetic and species diversity in headwaters for a few years before pursuing funding to bring the authors together. Shortly



Happy authors. In left panel, Deb Finn and Jane Hughes at Grif-fith Uni (photo Fred Allendorf); right panel, Cesc Múrria and Núria Bonada at a tapas bar in Barcelona (photo Deb Finn).

“...our demonstration that headwaters contribute unique (and substantial!) diversity to whole streams shows that headwaters ought to be brought to the forefront of the aquatic conservation discussion”

thereafter, their idea was approved for a Rosemary Mackay Fund paper, which helped Finn get funding for a few months through the Australian Rivers Institute (where co-author Jane Hughes is based). Finn adds, “it might be encouraging for people to hear that if you pursue something that you care about enough, there is a good

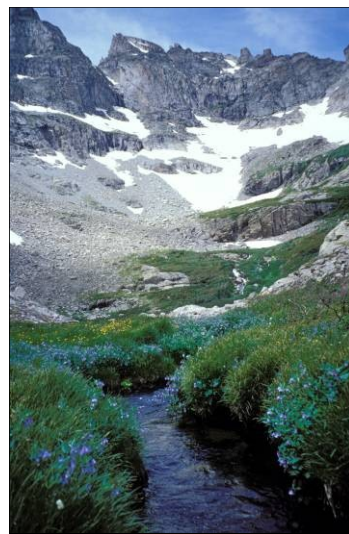
chance you’ll find some sort of funding.”

Finding pre-existing data to test their hypothesis was challenging because they needed regional-scale datasets from a variety of locations, and they needed a combination of community (i.e., species or taxa diversity) and genetic (intra-specific) level

data. Thanks to their own “network” of lab groups and NABS colleagues, the authors were able to get the datasets they needed.

In their study, individual headwaters each contributed a significant proportion of total regional biodiversity. These results are relevant for the future of headwater streams. Finn explains, “there has been a lot of bad news lately about headwaters (e.g. mountain-top removal coal-mining, questions about non-navigable stream protection under the Clean Water Act). We think that our demonstration that headwaters contribute unique (and substantial!) diversity to whole streams shows that headwaters ought to be brought to the forefront of the aquatic conservation discussion.”

Below: Some of the variety of headwater streams included in the study (left to right): Venta Vicario River, Granada, Spain (Mediterranean climate); Coney Creek, Colorado, USA (alpine zone); Whitetail Creek, Arizona, USA (desert highlands)



Pam's journal notes



How do we make the peer review process work effectively, train new reviewers, and support and acknowledge current reviewers for their important work? Pam tackles these questions and more in her journal notes this issue.

A key component of being a professional scientist is participation in the peer review process, the primary means by which scientific ideas, data, and interpretations of data are vetted before publication or before funding is granted. Volumes have been written about its importance, flaws, and potential "fixes."

Interested in shaping a new generation of peer reviewers? Participate in a new mentoring program as a mentor or mentee !

The members of the Editorial Board of *Freshwater Science* (FWS) are concerned with how to obtain good reviews in a timely manner without burning out referees. This discussion began with an article proposing a fix to a major problem in the peer review process: increasing voluntary participation of referees. The system is overloaded, and a relatively few dedicated individuals often provide a disproportionate number of the necessary reviews. Finding and securing referees can take several weeks, reviews provided by overburdened referees are often late or never are done, and the system may result in referee burnout.

The consensus of the Editorial Board was that:

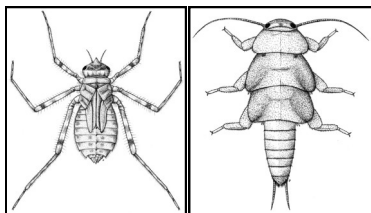
- 1) An excellent referee has the ability to think critically and constructively about a manuscript, convey a logically argued, well-supported and clear critique, and provide reviews in a timely manner.
- 2) Good referees should be recognized for the important service they provide. At FWS, we send referees thank-you notes and copies of decision letters, and we publish a list of referees in the December issue of the journal. Perhaps these forms of acknowledgement are not enough.
- 3) Graduate students should be encouraged to participate in the process as referees. Doing so would augment the pool of referees, teach students "the ropes" of the peer review process, hone their critical thinking skills, and ensure a new generation of high-quality referees.

A key value of members of the FWS Editorial Board is nurturing and mentoring new authors, and nurturing and mentoring new referees is a logical extension. Graduate students should be viewed as referees-in-training and should be accorded appropriate oversight, advice, and assistance. The Editorial Board tested the waters for this idea at the annual meeting in Providence by discussing the peer review process with graduate students in a workshop setting. In the next months, we will be thinking about how to establish a mentoring program for graduate students interested in participating in the peer review process as referees. We welcome volunteers and advice on how best to proceed, and we will keep you posted on our progress.



Awesome new book filled with many NABSters' favorite 'bug' stories, out now!

Edited by our own Judy Li and Michael Barbour, the new book *Wading for Bugs: Exploring Streams with the Experts* is a collection of stories by 23 aquatic entomologists (all quite familiar to SFS members). Each story shares a memorable field encounter with a particular aquatic insect. Settings vary from large rivers of the Arctic and interior Mexico, to small mountain headwaters in the

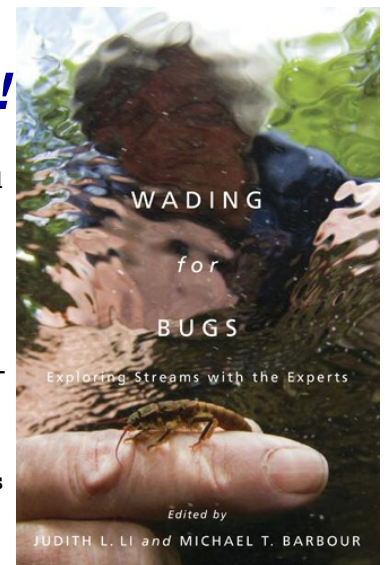


Some stars of the new book include *Macromia magnifica* and *Tallaperla maria*, in chapters by Christopher Beatty and Dave Penrose. Illustrations by Boonsatien Boonsoong.

alpine zone and desert, to rainforest streams of the Pacific Northwest, a tiny island off New England, and even a lake in Minnesota. All are North American sites, but the personal narratives of adventure and excitement, all in the name of fantastic aquatic insects, are certain to have universal appeal.

The narratives are grouped taxonomically, and a general summary introduces each Order. Elegant line drawings by Boonsatien Boonsoong accompany each story, along with morphological, life history, and habitat information for the insect star of each account.

Intended for general readers as well as students, naturalists, and outdoor enthusiasts learning about streams, this book helps readers understand why aquatic insects are useful as habitat indicators in streams. ...And SFS members will love comparing field notes with many of our close colleagues!



November 2011. 176 pages. Oregon State University Press. ISBN 978-0-87071-608-9. Paperback. \$19.95. Get it (or order it) today at your favorite bookstore or online vendor! See also: <http://bit.ly/wluse7>

The latest from Freshwaters Illustrated

There is a reason Freshwaters Illustrated (FI) is one of our all-time favorite nonprofits: the photos they produce of our favorite organisms and habitats are astounding!

Director Jeremy Monroe has big news for all fans of FI's imagery: the Nonprofit Aquatic Image Archive & Depository (NAIAD) was recently launched. Visit www.NAIAD.org to see, share, and print breathtaking and high-quality images of freshwater life. FI members have exclusive access to download images for educational use, so if you aren't a member or you need to renew, take advantage of the ongoing membership drive—see website below.

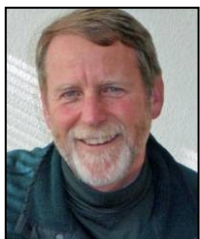
At the SFS 2012 meeting in Louisville, get ready for an FI photo workshop + excursion, visit the FI booth, submit a photo in the annual photo contest (and get published in the SFS calendar—look for submission details on the SFS website soon!), and find the new 'About SFS' video DVD in your registration packet!

Visit: freshwatersillustrated.org !



Elections 2012. Yes, the really important ones.

In Chicago they say "Vote early, vote often". Johnson says "JUST VOTE". (Thanks to Lucinda Johnson for this content!)



Presidential candidate Randy Fuller was Chair of the Executive Committee last year, and has served on or as chair of the Education and Diversity Committee for 10 years.

There's something new afoot regarding SFS elections this year. As you probably remember, we voted in Providence not only to change the name of our society but also to be governed by a Board of Directors containing several elected delegates (instead of presidential appointees). This year, in addition to two fantastic presidential nominees (look left!), we are voting on one delegate to represent the 'Academic' sector (nominees are Al Steinman and Caryn Vaughn) and one for the 'Early Career' sector (nominees David Costello and Michelle Greenwood).

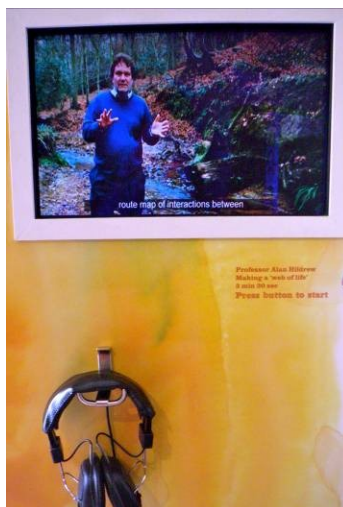


Presidential candidate Sherri Johnson has served on or chaired the Publicity and Public Information committee for many years and most recently served as the chair of the Name Evaluation Committee.

The Elections & Place committee selected this year's nominees, but anyone interested in representing SFS in the future (e.g. next year we choose 'International' and 'Non-Academic' delegates) should contact the E&P committee!

Ballots, info on candidates, & voting deadline will be posted online this week. Please keep an eye out and have your voice heard.

VOTE!



Dr. Hildrew explains food webs near a favorite chalk stream on a 3-minute film loop at Charles Darwin's House. Click here for more info: <http://bit.ly/9FBBmx>

We thank Alan Hildrew for the input!

Spotted: Alan Hildrew at Darwin's house!

In the English countryside not far from London is the house where Charles Darwin spent most of his married life (and also where he developed his ideas about natural selection and wrote several books). In 2009, the house and surrounding grounds (including Darwin's greenhouses and labs ~awesome!) were opened to the public.

On the second level of the house is a museum of sorts, including SFS member Alan Hildrew (see photo), who was invited to 'wax lyrical' about food webs and Darwin's 'tangled bank' of interactions. Alan says he was thrilled to participate because Darwin 'is undoubtedly the most important giant on whose shoulders we all sit... he even made some nice early observations on caddis larvae—clearly a great man!'

Did you know...? (check the Bulletin!)

- The Instars program will be able to cover meeting expenses for at least 10 new Fellows at Louisville 2012! They are looking for both fellows (<http://bit.ly/wWnPBC>) AND graduate-student mentors (<http://bit.ly/xwO5t1>)
- Plenary speakers 2012: an estimable lineup of global leaders in freshwater stewardship
- Matt McTammany represented the Education and Diversity Committee at an NRC convocation on infusing evolutionary science into high school biology and introductory university courses in the US.
- There is a new subcommittee of the Science&Policy Committee for 'Climate Change Oversight' - it will help connect SFS members to the broader climate change community.
- The Long-Range Planning Committee is discussing the idea of SFS regional chapters!