

in the drift

The NABS Newsletter



Benthic Providence

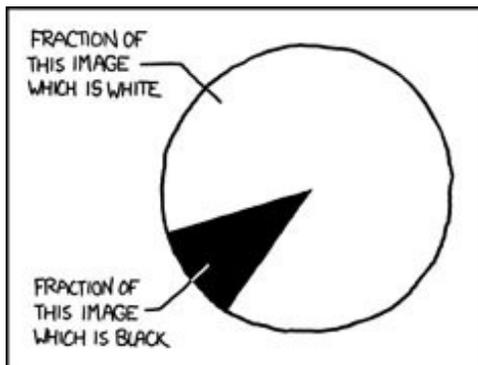
The schedule for NABS 2011 is chock-full of interesting events, from entertainment to a series of important NABS business meetings. Please immerse yourselves in the Spring Bulletin and the meeting website (<http://bit.ly/kIIZWd>) to make the most of your time in Providence!

In the bulletin, take special note of Lucinda's updates on big changes underway within NABS, and read as well her experienced opinion on the NABS name change issue. (Also see a summary of what we will vote on at the business meeting right here in the newsletter, on page 4.)

The theme of our meeting is "Responding to the Global Water Crisis" and among many related activities will be a debate on Mon. afternoon with our fantastic roster of plenary speakers.

A couple more updates/reminders as we head towards Providence:

- ALS donations in Pat Mulholland's name (our current Awardee of Excellence) can



Time to get creative with the presentations, NABSters... see you in Providence! (image from xkcd.com)

be made here: <http://bit.ly/iXXetn>

- We are still working on getting an official JNABS EndNote style; can you help? See: (<http://bit.ly/lfPr1v>)

Finally: we haven't heard from many NABSters lately. Don't forget to send any comments, feedback, and—especially—any word of NABSters in the news to us via email: news@benthos.org!

-Deb Finn, Teresa Tibbets & Julie Zimmerman

issue 10:
Spring 2011

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Did you know... ? (if you didn't, check the Spring Bulletin!)

- NABS 2011 is in Providence: May 22-27, 2011!
- Nancy Grimm has organized a town-hall-style meeting: *Funding Opportunities in Aquatic Sciences with the National Science Foundation*. It runs 12:15-1:00 on Monday of the meeting. Come find out about myriad funding ops!
- Please help out with judging student presentations, if at all possible! Email Peggy Morgan (pegmat307@msn.com) to sign up.
- Bulletin editor Ron French is

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watching "Dumb and Dumber" to get a glimpse of the giant blue termite in Providence.

- Joe Holomuzki will become our new president (with Tom Arsuffi as chair), and Dave Penrose is our president-elect.
- Mayfly key update: Nearctic 'Pseudocloeon' are once again listed under the genus *Labiobaetis*!
- Lots of GRC activities at NABS 2011, including a workshop on Sunday called "Careers and Opportunities in Aquatic Science"
- Also for students: more volunteers are needed for tech assistance in sessions; and this is not strictly "volunteer": you get \$100

for 2 sessions! (contact Erin: ehotchki@uwyo.edu)

- NABS's very own "Benthic Band" will provide entertainment after the Wed. night banquet.
- Wed. afternoon: JNABS editorial board will host a discussion of the ins and outs of reviewing manuscripts.
- Who you gonna call? Check the end of the Bulletin for lists of key NABS contact people.



JNABS article spotlight:

Differences between nutrient diffusing substrata revealed.

Capps, Booth, Collins, Davison, Moslemi, El-Sabaawi, Simonis and Flecker *JNABS* 30: 522-532

This issue's spotlighted *JNABS* article is a great example of how "just a side project with friends" can end in productive results. The authors of the study are tied, either past or present, to Alex Flecker's lab at Cornell University. "We really wanted to do a lab project together prior to any of us finishing our time at Cornell," said Krista Capps, the lead author on the paper, "This was a side project, but it informed a lot of the research we were conducting for our dissertations or postdoctoral work."



The Flecker Lab Pyramid—Bottom row from left to right: S. Collins, M. Booth, K. Capps; 2nd row: A. Flecker and M. Davison; Top: J. Moslemi (photo D. Capps)

Nutrient diffusing substrata (NDS) have been deployed in hundreds of experimental field studies mainly to assess nutrient limitation in streams. The basic idea behind NDS is that the researcher can control the nutrient ratios "diffusing" to periphyton colonizing the substrata, thereby making NDS an easy and relatively cheap way to do experiments on nutrient limita-

tion in streams. There are many different methods for using NDS, from clay pots filled with nutrient-infused agar to "periphytometers" made using small nalgene bottles filled with nutrient salt solution and capped with a membrane and filter.

Most of the authors were either using NDS or were thinking about using NDS in their respective studies when they realized they were each choosing different methods mainly based on logistical reasons. "We wanted to confirm that the methods we were using would provide comparable results across systems so that we could compare nutrient limitation patterns in each of our systems with other published studies," says Capps.

When they say "across systems" they are not joking around—this group must compile serious frequent-flyer miles during their field seasons. Krista Capps studies fishes in Mexico, Mike Booth studies suckers in the southwestern U.S., Jen Moslemi studies snails in Trinidad and nutrients of Colorado streams, Sarah Collins studies food webs in New York State and Trinidad, Marita Davison studies flamingos in Bolivia and Rana W. El-Sabaawi studies ecosystem processes in Trinidad (whew!). Oh, and Alex Flecker travels all over the place too.

How does a group of international researchers get together to implement a "side-project"? "Prior to executing the study, we sat down and attempted to plan out all of the activities along the way. Although there were bumps in the road, everything went pretty smoothly. Joe Simonis, an honorary lab member, came into the project later to help with data analysis. Scheduling was the biggest problem. We all really enjoy working with each other, but it was very difficult to have us all in the same place—even the same country—at the same time!"



First author Krista Capps working with modified clay pot NDS in Mexico (photo D. Capps)

If you have used, or are thinking of using NDS, you should read their paper. In a head-to-head test of different NDS methods in the same stream at the same time, each produced a different nutrient limitation scenario. "Our results also suggest that NDS construction method may be important and influence patterns of algal biomass generated in nutrient limitation experiments. Therefore, studies using NDS need to be interpreted with caution until the causes of variation among methods are better understood."



M. Davidson carefully taking a filter off of the top of a periphytometer NDS (photo M. Booth)

Pam's JNABS corner



Have you ever wondered who should be included as an author on a paper? Or how authors should be ordered? Or how author order should relate to credit and responsibility? Questions related to authorship are the subject of increasing scrutiny and concern in the scientific community as well as this issue of Pam's corner...

JNABS criteria for authorship states: "All persons listed as authors of a manuscript must have made a substantial intellectual and scientific contribution to the manuscript by:

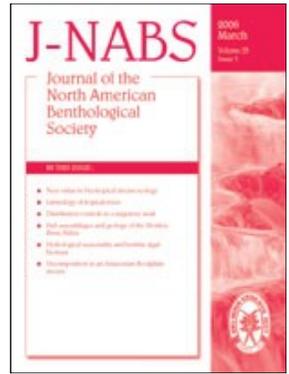
- 1) conceiving, designing, or implementing the study,
- 2) analyzing or interpreting the data, or
- 3) writing the manuscript"

Read the full JNABS criteria for authorship at: <http://bit.ly/mL9b8Q>

JNABS also requires a statement from authors verifying that all authors have read and approved of each version of a paper at the time it is submitted. Any change in authors or order of authors requires a written statement from all authors agreeing with the change.

These criteria help to determine who should be an author, but how do you allocate credit and responsibility among authors, and how do you convey this allocation to the reader? There is significant variability in ordering schemes:

some authors are ordered based on decreasing level of contribution while others place the senior member of a group in the last position, or even list authors alphabetically. In most cases, authors fail to explain their rationale. Order of authorship is important because it often determines which name is listed in in-text citations and can be used by academic or other evaluation committees for purposes of promotion and tenure decisions.



Solutions to this problem are journal-specific. Some journals require that authors state explicitly the contribution of each author to the work in a footnote. Tscharrntke et al. (2007) recommended that authors explain their ordering scheme in the Acknowledgments section of their paper. JNABS does not require specification of the contributions of each author or an explanation of the ordering scheme used. However, many authors voluntarily include this information in the Acknowledgements section, and this behavior is encouraged.

For more information, check out the following:

Laurance, W. F. 2006. *Nature* 442:26.

Tscharrntke, T., M. E. Hochberg, T. A. Rand, V. H. Resh, and J. Krauss. 2007. *PLoS Biology* 5(1):e18.

Weltzin, J. F., R. T. Belote, L. T. Williams, J. K. Keller, and E. C. Engel. 2006. *Frontiers in Ecology and the Environment* 4:435-441

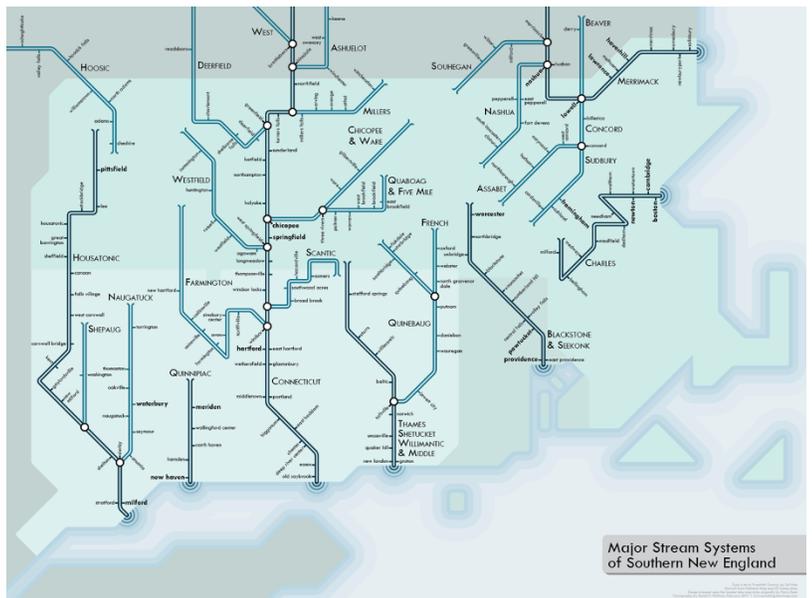
River Maps: stream networks as transport corridors

When we asked Daniel Huffman, a lecturer in cartography at U of Wisconsin-Madison, if he ever interacts with any of the fantastic benthologists there, he admitted he has little background in the realm of freshwater ecology. But that was part of his motivation to create *River Maps*, maps of major rivers done in the abstract style of public-transport maps. Huffman argues that a vast majority of today's city-dwelling population likely doesn't even realize that a major river runs through or near their town. This was in fact his own experience growing up with the Kalamazoo River (Michigan) practically in his backyard.

River Maps exploit the style first made popular (by Harry Beck) in the 1930s for mapping the London Underground, a style in which, in Huffman's words "geography is intentionally distorted to clarify relationships". As a result, with *River Maps* the historical importance of rivers in linking human settlements becomes abundantly clear. And it is possible that these creative maps can communicate the importance of rivers as elaborate networks to the public more effectively than scientists can with an emphasis on strict spatial representations.

River Maps also make cool posters that we can hang in our offices. To date, Huffman has the major river systems of the US covered (see his website, listed in the caption) and the last we heard, he is planning an atlas and considering going international. The

maps completed thus far are for sale at several different resolutions, and, as a bonus, 10% of the proceeds go to local watershed groups. (Huffman may be open to suggestions for worthy groups. If you've got one, find his contact info on the *River Maps* web site, below.)



Daniel Huffman's S. New England map (including Providence!); for more *River Maps* and more about Daniel, go to: <http://bit.ly/giQvjr>

Rock (Pebble? Cobble?) the vote.

We've got a lot of society business to take care of in Providence – indeed, so much that the business meeting (usually only during Wed. lunch) will begin officially on Monday night at 8:00 and conclude after the regularly scheduled Wed. lunch.

But enough of the eye-rolling and snoring sounds – wake up! Not *all* of this business is boring, and it is very relevant. You can access readily all the juicy details on the website (<http://bit.ly/m7PTqd>), and here we condense them down to the bare essentials. There are **5 independent motions** that we will vote on at the business meeting. They are:

Motion 1: Society name-change to the “Society for Freshwater Science”.

Motion 2: Journal name-change to Freshwater Sciences.

Motions 1 & 2 have been a long time coming (see: <http://bit.ly/luxzup>), but there is a venue for further discussion: the Monday night start to the business meeting. Please attend Monday (8:00-9:30pm), after which the business meeting will be recessed until Wed. lunch. The votes on **Motions 1 & 2** will then take place at the *beginning* of the Wed. lunch meeting. These votes will be via paper ballot and –again – will occur at the **beginning of the Wed. lunch meeting (so be there!)**.

The remainder of the lunch meeting will then be dedicated (in addition to the typical annual activities) to some discussion of, followed by votes on **Motions 3-5:**

Motion 3: Updating of By-Laws language.

These updates would include several changes to the language and organization of our By-Laws (primarily to allow the By-Laws to become compliant with Federal requirements for non-profit organizations). Key results would be moving language about [standing] committee operation to the NABS *Operations Manual*; and clari-

fying the missions of each committee.

Motion 4: Creation of a Publications Committee.

This new standing committee would oversee all of NABS's major publications, including journal, bulletin, web site, and literature review. The respective committees for these pubs would become subcommittees under the Publications Committee, which would oversee the finances and personnel of each.

Motion 5: Change in the governance structure.

Did you know that the NABS president is essentially an autocrat? That's right, there are no official checks/balances to the president's powers designated in the current By-Laws. Approval of this motion would create a 15-member Board of Directors (2/3 of which will be elected by the NABS membership), which would replace the current Executive Committee (a large, unwieldy group comprised primarily of presidential appointees). This motion represents another major change for NABS; as such, a lunchtime meeting for its discussion runs **12:30-1:30 on Tuesday**.



Her highness (?), President Lucinda Johnson.

These are all very important motions, and they are the culmination of multiple years of work. So, once again, please mark your calendars:

MONDAY, 8:00pm: Society and Journal name-change discussion

TUESDAY, 12:30pm: Town Hall meeting re: change in governance structure

WEDNESDAY, 12:00pm: Business Lunch, including votes on all motions

“Waters of the United States”



In the second issue of *in the drift* (<http://bit.ly/mFDhk9>), we reported on Judy Meyer's involvement in protecting small streams and wetlands under the U.S. Clean Water Act. There had been a recent Supreme Court decision requiring that such small, non-navigable waters must be demonstrated to have a

“significant nexus” to larger, navigable waters in order to be considered true “Waters of the United States” and hence be protected by the federal law.

The Obama administration has now released much-anticipated draft guidelines for defining “Waters of the US”. This draft is currently open for public review and comment, but there is not a lot of time. The draft was posted on 27 April and the comment period is 60 days (= a deadline of **26 July June** by our calculations). Are the guidelines acceptable? You be the judge: <http://1.usa.gov/>

Instars!

NABS 2011 is the inaugural meeting for “Instars”, a mentoring program for undergraduate student members of under-represented groups interested in freshwater sciences. Checo Colon-Gaud has taken the lead on this program and informs us that there will be 6 Instar Fellows joining us in Providence—coming from across the US and Puerto Rico.

Their program will start with a Sunday workshop where Instars will meet mentors and learn a bit about NABS and the annual meeting. The Program strives to build and maintain a network of mentors at various career stages (i.e., “instars”), and several graduate student mentors in Providence will help the Instar Fellows navigate through sessions and activities.

We can all help build diversity within NABS. Keep an eye out for the Instars, and help them feel welcome!

ready to fly!

