in the drift

The NABS Newsletter

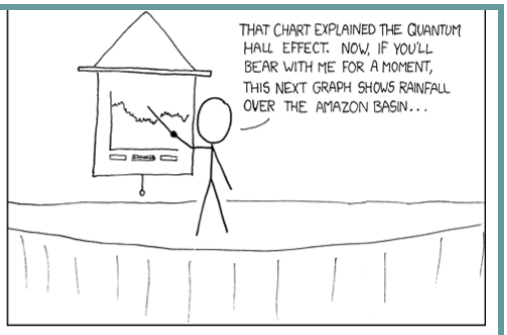
issue 7:
Spring 2010

On the trail to Santa Fe.

It's that time of year. Proposal deadlines, fieldwork preparation, getting our NABS presentations put together... (Don't forget to upload and cross-check your talk in the presentation room no less than 24 hours before you present!)

As usual, there is a lot of dynamism and change going on in our society. The NABS and *JNABS* name-change debate has been re-ignited and is making more noise than ever before. This topic arises in many locations in this issue of *in the drift*, so we'll say no more here.

Sadly, we lost a cherished colleague too early (Rick Seidel, p. 4). But the cycle of life continues, as our own co-editor Julie Zimmerman just brought a 2nd little girl (Sierra Bree) into the world. Word on the street is that Sierra's big sister Maya is psyched to have a net-holder for her adventures in stream bug collection. Please blame only Deb and Teresa for mistakes in this issue, as Julie is on maternity leave!



Do you have your presentation ready for Santa Fe? (cartoon from xkcd.com)

As for the meeting, it will be huge (I think 1700 registrants is the last we heard -?). The joint venture with ASLO, in addition to upping the headcount, has also led to more changes in meeting structure (e.g. various NABS award presentations that we are used to seeing on Sunday night have been redistributed to various mornings).

Roll with the changes, NABSters, travel safely down that trail, and we will see you very soon in Santa Fe!

INSIDE:

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

- NABS/ASLO joint meeting in Santa Fe: June 6-11, 2010.
- New session formats: We'll be trying out several "interactive" sessions in Santa Fe. They are concurrent and start at 8AM Wed. Grab some coffee and check 'em out!
- The GRC will be selling lots of NABS merchandise at the meeting.
- The Spring Bulletin is much thinner this year, as it is minus the meeting schedule and abstracts. Let Ron know what you think about this: frenchrd@cdm.com

benthos.org

- Where are these abstracts and schedules? At the meeting website: http://aslo.org/santafe2010/
- What's in a name? A lot, if you are a NABS member. You can participate in a name-change discussion for our society in a variety of ways, particularly including: via the name-change forum at benthos.org, and by attending a town hall meeting in Santa Fe (Wed. at lunch).
- Nick Aumen is crafting a "Consortium of Aquatic Science Societies" to help promote science-informed environmental policymaking.
- The GRC is updating their section of the NABS website to include a discussion forum for student issues.
- The Constitutional Revision Committee will be proposing four revisions to the NABS bylaws this year at the business lunch.
- Lots of students won awards (both this year for travel and last year for presentations). See them in beautiful format on bulletin pp. 27-28!

Aquatic Sciences: Global Changes from the Center to the Edge

See you there!

JNABS article spotlight: Recreational flow releases and bridging disciplines.

R. Fuller, C. Griego, J. Muehlbauer, J. Dennison and M. Doyle. JNABS 29(2): 750-760

We thank Randy Fuller and Martin Doyle for the following contribution of their story behind the science!

In 2002, Martin Doyle [from UNC] was in the Adirondacks on vacation and heard an NPR story about a controversy between trout fishermen and whitewater rafters on the Indian River. Flows were being released from the Abanakee Dam to facilitate whitewater rafting; fishermen complained that the releases were impacting the ecosystem. The radio story influenced Martin to raft the river and see for himself (in the name of science, of course).

Martin is a fluvial geomorphologist and had been working on the idea of 'effective discharge' (the concept that over long time-periods there is a particular discharge, or range of discharges, responsible for the morphology of a river) for several years. Small discharges change rivers little, but they happen a lot. Large discharges, like a 100-yr flood, change rivers a lot, but they happen infrequently. While floating the Indian River, he realized that the strangely altered hydrology could be a nice setting to work on linking discharge and ecology.

The next year, he discovered me [Randy Fuller, Colgate U.] through my work on how discharge affects benthic communities and processes. We spent a couple days on the Indian River kicking around pebbles and ideas. The site was ideal for a range of studies: having a flood of the same size (40 m^3/s) at exactly 10 am on the same 4 days of every week is essentially like working in a life-sized flume.

Following many scrap-paper sketches, we were excited (and perhaps a bit shocked) to get an NSF proposal funded. We then set up mini-experiments and manipulations in the river and could get field-scale floods to test our ideas. In many ways, the study system was perfect.

A UNC graduate student was able to study highly detailed hydraulics of large woody debris by setting an aluminum dock in the river to measure velocity profiles around debris dams; previous studies always had to rely on flumes. Similarly, the conditions allowed the Colgate-UNC team to do a series of ecological manipulations. During our first field season we recognized that there were permanent refugia behind boulders and rocky shoals but that other areas were subjected to heavy scouring during the frequent releases. These two habitat types had very different communities and we realized we could examine experimentally how floods affected both periphyton and macroinvertebrate communities by reciprocally replacing trays of substrate between these low and high shear stress areas.

Randy Fuller (L) and Martin Doyle (R) on a dock during their study on the effects of flood releases below a dam on the Indian River in the Andirondak Mountains of New York, USA. Student Arjun

An army of students from both universities wound up working on the river. When Jeff Muehlbauer - a UNC graduate student with particular statistical prowess - joined us, we were able to reveal some very interesting patterns in the experimental data.

"We educated each other about how different disciplines think… and it was interesting to talk about what we each notice when looking at the same reach of a river."

Although the study site was ideal from the start, the bridging of multiple scientific disciplines was a bigger challenge. Building a common language and getting a handle on how different disciplines "do" their research is a perennial problem in environmental science. For instance, ecologists rely heavily on broad replicated sampling while hydrologists and geomorphologists rely almost exclusively on intense short-term non-replicated sampling. Questions were fundamentally different: behavior vs. physics; statistics vs. differential equations. Bridging these very basic, underlying approaches to science is a greater hurdle to collaboration than we often realize, until we sit down to actually do the work on the same site, at the same time.

Our efforts to bridge disciplines were worthwhile, because understanding the geomorphology critically informed our understanding of the way the ecosystem had adjusted to the floods. The way stream ecologists had normally thought about disturbance in rivers was largely based on the idea of shifting spatial mosaics. We had been thinking along these same lines at the Indian River – the chronic floods must be shifting bed sediments and significantly altering river communities. But what we revealed was that the bed sediments do *not* move during these floods; the river is geomorphically 'moribund.' Instead of a shifting mosaic, it was a *static* mosaic that the benthic invertebrates had adjusted to.

Another surprise was that areas with high shear stress had higher macroinvertebrate densities than other rivers of the region. Given the high frequency and magnitude of the floods, we expected much lower densities, but the static mosaic had allowed macroin-

(Continued on page 4)

Pam's JNABS corner

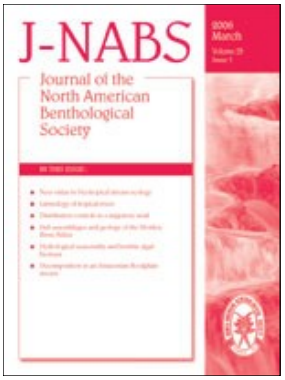
Unless you are completely out of the NABS loop, you've noticed that there is a renewed discussion about name changes to both society and journal. Pam and Irwin would love your participation (psb3@psu.edu: Pam), and this issue Pam has laid out some of the most important journal name-changes issues from the editors' point of view.

NABS members are engaged in important discussions regarding changes to both 1) the name of the society, and 2) the title of its journal. These open and linked discussions provide opportunities to hear and evaluate new and old ideas, and I strongly encourage you to participate if possible. Both discussions are pressing, but highlighted here is the discussion regarding the title change for your Journal. Regardless of how you feel about changing the name of the Society, you should consider changing the title of the Journal.

…Integrated freshwater science?… Journal of aquatic ecology?…Freshwaters?…[Your idea here]?…

Get involved in the name-change debate!

The J-NABS Editorial Board spent much of summer 2009 discussing the journal title and the potential costs and benefits of changing it. The unanimous consensus they reached was that a change to the title of the journal was in the best interests of the Journal and of NABS. Arguments are summarized in a white paper that was sent to the membership and posted on benthos.org. It is very important for us as NABS members to read and evaluate the arguments presented in this white paper. Find it here: http://bit.ly/d8yU1z (after loggin in).



Of course, any proposal to change the journal's title must be accompanied by suggestions for a new title. A journal's title is important for both readers (to decide if they are interested in the content) and authors (to decide if their paper will reach the right audience).

Criteria to keep in mind for a potential journal title:

- ***Compatible***. With the mission and name of the Society
- ***Informative***. Scope and content of the Journal should be understandable from its title.
- ***Concise***. Short (≤3 words) and elegant (ideally), and transparent with no unnecessary words (e.g. "Journal of")
- ***Broad***. Not geographically or geopolitically restrictive. Not restricted to benthology, but open to authors working across a broader spectrum of freshwater sciences.
- ***Distinctive***. Different enough from existing journals to stand out and to prevent confusion.

How to be involved? Drop by the J-NABS table or the Town Hall meeting (Wed. lunch) in Santa Fe, participate in the web forum (on benthos.org), contact members of the NABS name-change committee or ExComm, get in touch with the Editorial Board or e-mail Pam Silver or Irwin Polls directly with comments. We really want to hear your opinions.

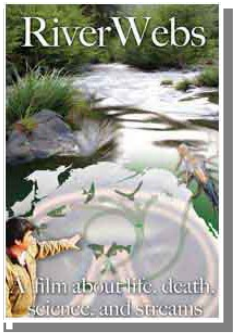
Exciting offerings from Freshwaters Illustrated in Santa Fe!

Freshwaters Illustrated helps NABS members bring our science to life with fantastic visual imagery. Keep supporting FI—don't forget to drop by the booth in Santa Fe! Thanks to Jeremy Monroe for the following updates.

Freshwater Photography Workshop, Sunday, June 6, 9am-5pm, Milagro Room, Sante Fe Convention Center - It's not to late to sign up for FI's *Digital Photography for Aquatic Scientists* workshop. Email us (jeremy@freshwatersillustrated.org) to reserve your spot!

Introducing the NAIAD image archive – Come to the FI booth Monday – Wednesday in the exhibitors hall and take a look at our long awaited Nonprofit Aquatic Image Archive & Depository (NAIAD), designed to visually empower your educational efforts and celebrate the work of our best aquatic image creators.

Freshwaters Illustrated
NAIAD
Nonprofit Aquatic Image Archive & Depository



RiverWebs screening, Thursday, 7:30pm – If you're one of the few who hasn't seen *RiverWebs* yet, come see a special screening on Thursday night, and stop by the FI booth to get your special member copy!

Joint NABS-ASLO Calendar and 5th Annual photo contest – FI, NABS, and ASLO have produced a brand new 18-month 2010-11 calendar, and we're holding another photo contest. Stop by the FI booth purchase your calendar and learn more about the contest.

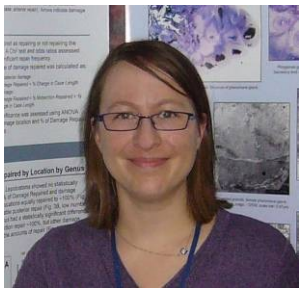
***About NABS* video** – Don't forget to pick-up your *About NABS* video at the FI booth ($10 or free with FI membership).

Introducing Dr. Patina Mendez, new NABS Web Editor

Welcome, Patina, and thanks for sharing!

In her own words…

Over this last year, the NABS website (benthos.org) has undergone substantial changes in its look, feel, and functionality. Antoine Morin, who built and managed the website for the last 10 years, ushered the site through the redesign and I took over the responsibilities of editing the website in October.



How did I end up here? My website experience began during my undergraduate years. After I completed an art degree, I worked as a website producer in the video game industry at Sega.com. I earned my PhD at the University of California, Berkeley with a dissertation on life history traits of benthic macroinvertebrate communities and life history variability in caddisflies. During a two-year postdoc fellowship at the University of Minnesota Insect Collection, I worked with Ralph Holzenthal to create the *Trichoptera Literature Database* (www.trichopteralit.umn.edu). Now back at Berkeley I lecture two senior thesis courses in Environmental Sciences and continue research on caddisflies and community ecology.

For benthos.org, one of the biggest recent updates is the ability for members to contribute to discussion forums. We launched several forums related to the proposed NABS name change and *J-NABS* title change, general open discussion forums, and a graduate student forum. We encourage all members to login to the Members Only section of the site to participate. The website also has integration with Facebook, Twitter, and a number of other social media applications. Many sections of the website remain similar to the previous site and the classifieds section remains the most accessed and member-contributed section. Although benthos.org is the main repository of information for members, the BENTHOS-L email discussion list remains active and is available on a subscription basis.

Moving forward, we are excited about fostering a substantial level of interaction among NABS members. For example, members will be able to: (1) contribute to discussion forums, (2) contribute website content, or (3) share site content easily and quickly with collaborators and colleagues. We also look forward to creating sections in which committee members can post and manage their own committee-related content.

As we continue to transition and evolve the new NABS website, we aim for the site to be a nexus for communication and collaboration. If you have suggestions for the site or would like to contribute, please send me an email!

webeditor@benthos.org

In fond memory: Rick Seidel (1975-2010)

Dr. Richard A. Seidel was an active NABS member and respected colleague who will be remembered for his commitment to family and for his unstinting sense of responsibility to science and the colleagues with whom he worked closely and unselfishly. He was in just his first year as assistant professor at Southern Adventist University (Tennessee), having recently completed his PhD with Dave Berg at Miami of Ohio. Rick and Dave, together with colleagues Brian Lang and Makiri Sei, had been researching highly isolated springs in the Chihuahuan desert, where Rick studied the diversity of amphipods with passion and concern. In spite of his short time at Southern, he taught several Biology courses and was respected and beloved by students.

Rick, superhero of Chihuahuan desert springs (photo by Makiri Sei)

Rick had a small son, Hayden. In Rick's memory, contributions are being accepted for the "Hayden Seidel Education Fund" (c/o The Grandview Foundation, 405 S. Grand Ave., Dayton, Ohio 45405).

Dave Berg, Brian Lang, and Rick Seidel (L to R) prepare to drive off into the sunset following a long day of fieldwork. (photo by Makiri Sei)

"His lectures were punctuated with fun facts about everyday life, like how some places here in TN take the dead Christmas trees and tie them to the docks to provide homes for the little fish in the rivers or lakes." -from the blog of a former student in Rick's general biology course

Thanks and deep condolences to Dave Berg, Brian Lang, and Makiri Sei.

*(**Article Spotlight**, continued from page 2)*

vertebrates adapted to these conditions to flourish. In contrast, species diversity was relatively low in the Indian River, suggesting it is a limited fauna that is able to tolerate the variable flow conditions.

While Martin and I might have made a dent in crossing the biological-physical divide in studying rivers, in the end it is more likely that the students who participated will make the more substantial advances. Their first exposure to river science was a jumbled, hodge-podge of disciplines and questions – probably a much better way to experience rivers and develop new questions!