

in the drift

The NABS Newsletter



Help find NABS meeting sponsors this year!

Happy new year, and please forgive us for continuing to convert the issue that goes with the *Fall Bulletin* into a slightly later, *Winter* issue! It is the same old story: there is truly a lot going on.

As usual, there are many deadlines to be aware of at this time of year; hence the section below ("Mark your calendars!"). This time around, our president Lucinda Johnson is also asking for help soliciting potential business sponsors for the Providence meeting. There are several unique events supporting the theme "Responding to the Global Water Crisis". These include an evening lecture open to the public by Sandra Postel, followed by "It's a Shore Thing: a Coastal Cabaret" (including an aquatic-themed musical performance), in addition to several plenary and special sessions featuring prominent scientists and policymakers. You can download a nice brochure containing all info for businesses who might wish to contribute from the website (direct link is: <http://bit.ly/hBpOPS>).

We also continue our search for NABSters in



2011 NABS calendars are still available!
Order one while the year's still young:
info@freshwatersillustrated.org

Proceeds go to the NABS Conservation & Environmental Issues Committee.

the news. Along with our website, facebook page (username NABSonFB), youtube channel (NABSbenthos), Erin Hotchkiss is also now tweeting aquatic news (BenthosNews on Twitter)! Check them all out, and continue to send us news at: news@benthos.org.

issue 9:

Winter 2011

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Mark your calendars!

It's that time of year: there are so many deadlines to remember that we dedicate an entire section to aid your memories. Check the website for detailed info on each of these, and note the fast-approaching, highly important date of Jan 21st!

now: Renew your membership for 2010 ASAP. Go to benthos.org.

21 Jan: abstract submission deadline for NABS 2011 in Providence.

21 Jan: Last chance to put in your vote for next NABS president-elect! Go to "society business" -> "NABS presidential election" on website.

21 Jan: Last chance to have your say in the society name and journal title discussion (yes, go to benthos.org)

14 Feb: Student Conservation Research Award appl. deadline

18 Feb: NABS [student] Endowment Award 2010 application deadline

1 March: Hynes Award deadline for all nominations, support letters and CVs.

1 March: deadline for nominations/support letters for Award of Excellence and Distinguished Service Awards

31 March: early registration deadline.

31 March: This is also the last day you can request a refund on the registration fee. Apparently, it pays

to plan ahead.

6 May: deadline for online submission to the 6th annual NABS photo contest. Your chance to be published in the calendar (e.g. see photo above)! Check the Bulletin for contest rules.

22-26 May: NABS 2011 meeting, Providence, Rhode Island!

student volunteer info for Providence: Students can help defray travels costs by volunteering for any of several meeting duties (monitoring sessions, working at reg. desk, etc). More info will be sent out via email about this in March, but also see the website (direct link: <http://bit.ly/gOY7KM>) for more info.

JNABS article spotlight: Unraveling the disappearance of a flatworm. Durance & Ormerod JNABS 29: 1367-1378

Thanks to Isabelle Durance and Steve Ormerod (pictured right) from Cardiff University in the UK for contributing their “story behind the study”.

The realisation that rivers are highly sensitive to climate change has provided one of the defining ecological issues of recent years. However, while evidence is now available globally that river flow patterns, temperatures and species’ populations track climate, the exact mechanisms are poorly understood.

We wanted to address these themes by drawing on a unique long-term study in the wet, green hills of Wales. Established initially in 1981 to investigate the effects of acid rain, the Llyn Brienne project involves annual sampling of invertebrates and detailed physical and chemical data in replicate hill-streams.

Over the last decade, strong climatic signals have emerged from these data – tracking either the North Atlantic Oscillation or progressive warming of ~2 °C that occurred up to at least 2005. The apparent effects on both invertebrate abundance and composition



Above: Two of the Llyn Brienne streams in upland Wales, UK



“Although seldom considered closely by freshwater ecologists, this group (flatworms) – much loved for school science projects – can be important stealth predators in freshwaters, and certainly they are intriguing ecologically”

have been large, including species losses: over the period 1990-93 one of two flatworms that had characterised the streams disappeared entirely. More important in our study, the two cool-water species we examined are likely to be affected by warming effects. Even the name of the lost species – *Crenobia alpina* – reveals its cool, upland affinity.

We tasked ourselves to diagnose, retrospectively, how this local extinction might have occurred by examining possible effects of water quality, climate and competition for prey with the second flatworm, *Phagocata vitta*. It’s now clear that *C. alpina* was unable to withstand a period of summer droughts, warm/wet winters and prey scarcity linked to an unprecedented amplification of the North Atlantic Oscillation in the early 1990s. This huge Atlantic weather system affects the climate of both Europe and North America, but also provides analogues of future climate change. Evidence from previous years showed how *C. alpina* was likely to be out-competed for prey under exactly these warmer conditions. In other words, climate probably combined with inter-specific competition to tip the balance against this species. A bigger lesson for us has been about the challenge of knowing unequivocally when and how climate

change is involved in extinction: links between climate change and ecological processes can be complex, and data availability often restricts our understanding.

Like many scientific stories, this one has a very human plot-line. While Steve has been in from the project’s beginning, it was Isabelle who started to probe climate change signals in the data while on maternity leave after the birth of our youngest child. After she gave up a permanent lectureship in France when we married in 2004, climate-change has been the theme of two research Fellowships focussed on bringing her back into full-time science. One of them – a Daphne Jackson Fellowship, funded in Isabelle’s case by the UK Natural Environment Research Council – is designed specifically to re-employ women after family career breaks of this type. It’s sobering to think that without such funding, this and other important science might never be done or reported.



Photo: biopix.dk (<http://www.biopix.dk>)

C. alpina, now extinct in Llyn Brienne streams

We were very honoured when M. Barbour, A. Hamilton and B. Bierwagen invited us to the NABS meeting as part of a special session on climate change. Many of the special session papers are in the recent issue of JNABS which, in our view, will be a pivotal step in assessing climate change effects in freshwaters.

–I. Durance & S. Ormerod

Pam's JNABS corner



In this issue Pam addresses plagiarism—not her favorite topic for discussion, but an important one. Most of us (or all of us, we hope) know that an author should not copy or paraphrase from another person's work without proper attribution. But, do you know what constitutes self-plagiarism or dual publication? Read on to find out...

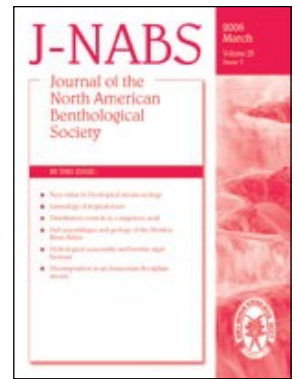
- **Authors may violate JNABS dual publication rules if any part of their manuscript, including methods sections and data, have been published elsewhere (including in online reports or other publicly available documents)**

In this age of electronic publication and proliferation of scientific publications, plagiarism has become easy to commit (intentionally or unintentionally) and both easier (via electronic searching and anti-plagiarism software) and harder (because so much material is there to be searched) to detect. The problem is increasing and is so pervasive that many publishers are making routine use of anti-plagiarism software. The *J-NABS* Editorial Board began a discussion of this problem at the annual meeting in Santa Fe. A formal policy statement and decision regarding the use of anti-plagiarism software will be coming soon. Meanwhile, au-

thors might find the following definitions helpful.

Plagiarism—the unauthorized use of written, spoken, or graphical material belonging to someone other than the author of a manuscript. Material that is quoted directly from another source should be placed in quotation marks and the page on which the quotation can be found should be listed in the citation. Paraphrased material also must be accompanied by a citation and page reference or a notation of personal communication. In general, quotations and paraphrasing are strongly discouraged. Material and data already published by an author in another paper or publicly available report (“self-plagiarism”) also requires proper attribution.

Dual publication—the publication of all or part of an article in more than one journal or venue. Authors are required to verify that manuscripts or parts of manuscripts submitted to *J-NABS* have not been submitted or published elsewhere. The journal regards material published in a format that is publicly available (print or online) as published elsewhere. Doctoral dissertations and Master’s theses generally are exceptions to this rule (grad students should check with their institution). Authors who are unsure whether they might be in violation of this policy are encouraged to contact the editor or associate editor for clarification.



‘Bugs in muck’ article exemplary of NABSsters in local media

Last year, NABSsters Rob Mattson and Rich Merritt were featured in a *Florida Today* article called ‘Bugs in the muck hold clues to water supply’ (by staff writer Jim Waymer). *Florida Today* is the local newspaper for Brevard County, Florida.

No, ‘bugs’ and ‘muck’ are not proper scientific terms for macroinvertebrates



Brett Merritt (Rich’s son) sampling ‘bugs’ from bulrush habitat in Lake Poinsett.

and their substrate, but this simple and informative article provided the locals with easily digestible material about relevant benthic science going on their backyard – thus meeting a key objective outlined in the NABS strategic plan, to increase benthological outreach to the wider public.

Drinking water for communities in Brevard County comes almost solely from groundwater in the St. John’s River watershed. But this practice is not sustainable under the growing human population, and the St. Johns River Water Management District (‘the District’) has been charged with evaluating various scenarios for surface-water withdrawal.

Mattson is the District’s representative scientist on the benthic side of the project, sharing funding with co-PIs Merritt and Ken Cummins. They began sampling Lake Poinsett, in the upper watershed, for the project in 2009. The St. John’s watershed already had a period



Rob Mattson sampling benthos in wet prairie adjacent to Lake Poinsett

of intense diversion followed by restoration in recent history (for background, see <http://bit.ly/f6ivqr>). The issue of future water withdrawals is therefore a sensitive one, both ecologically and socially – hence amplifying the importance of scientific communication with the local public.

According to Mattson, “We were pleased that the writer factually conveyed information about a complex, highly technical topic in a way that was easy for his readers to understand.”

NABS's new Economic and Population Growth policy

Thanks to Bob Hughes for contributing all of the important information for this piece.

All NABSters can thank our Science & Policy Committee (SPC) for years of hard work culminating in the recent passage of our society's economic and population growth policy (see a condensed version of the 70-page document at <http://bit.ly/hvY1VE>). Essentially, the policy is a statement reflecting NABS's official position on global-scale economic and population growth.

SPC co-chair Bob Hughes explains the importance of the policy: "It is critical that professional ecologists make it clear that we are concerned about the widespread beliefs by politicians and the public that economies and populations can grow forever – without fundamental and negative changes in the earth's ecosystems, and eventual collapse of both economies and populations."

Hughes and other SPC members have been instrumental in allowing NABS to become the first aquatic ecological society to adopt an economic growth policy (we follow other societies, including The Wildlife Society, Society for Conservation Biology's North America Section, and the Ecological Society of America). In 2006, the SPC presented to the NABS ExComm the first draft statement, which was returned with a request for further information and study time. After adding substantial background adapted from an AFS (American Fisheries Society) study report, the draft statement went through a few more

rounds of back-and-forth and several more revisions until, in 2009, the ExComm approved a version to be posted on benthos.org for a period of review and comment by NABS members. That year, the SPC also organized a symposium on population and economic growth vs. biodiversity conservation at the annual meeting. These years of work then culminated finally with the ExComm unanimously approving the final version of the policy at the 2010 meeting – a fantastic accomplishment and one of the most important outcomes of 2010 for NABS!

For further information, see steadystate.org, Hyatt et al. (2007 *Fisheries* 32:252-254), Speth (2010 *Solutions* 1(5):33-41), and Vörösmarty et al. (2010 *Nature* 467:555-561).



The NABS Science and Policy committee meets in Santa Fe, June 2010. (photo by Mark Wetzel)



This year's NABS Awardee of Excellence, Pat Mulholland, is currently battling the mysterious and pervasive neurodegenerative disease known as ALS. The ExComm is working with the Rhode Island chapter of the ALS Association

(see <http://bit.ly/dWOx3A>) to raise money to support ALS research in Pat's name. Please visit this website, and click on

the 'NABS Community of Hope Fund' link (at the very top of the page) to read about the NABS/ALS Association partnership and to donate to the cause. At the moment, there is a general contribution category, and in the near future there looks to be a way to set up personal pages to accumulate pledges, which may even be linked to the 5K and volleyball tournament at the meeting!

Brian Shelley has taken the lead role on this effort. Stay tuned to NABS emails for more info.

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

- You can join the BENTHOS Listserv to join in on benthic-related e-discussions. How? Download that Bulletin and look on page 1!
- Lucinda described the 'NABS hurricane' of events in her latest *President's Environment*.
- The NABS volleyball tournament returns in Rhode Island!
- Avis will give NABS attendees special rental car rates from the Providence airport—good for cars rented anytime between 15 May and 2 June. Bulletin has details.
- Lots of great pre- and post-meeting excursions are planned in and around Providence.
- <http://www.benthos.org/Annual-Meeting.aspx> (all about the meeting, put together by Judy Li and Patina Mendez)
- The Technical Issues Committee has several workshops planned for 22 May, including one dedicated to the work of Bruce Wallace on the influence of species-specific traits on stream ecosystem function.
- Introduction this year of new "INSTARS" mentoring program for undergrads from under-represented ethnic groups.
- Lots of meeting souvenirs will be available for purchase, with proceeds going to the GRC.

benthos.org