

# in the drift

The NABS Newsletter



## Welcome to the inaugural issue of the NABS newsletter!

issue 1:  
Fall 2007

### A new way to stay "in the loop"...

The idea of a newsletter that could be distributed to all NABS members at no cost (i.e., electronically) came up at the 2007 meeting in Columbia. The two primary objectives of the pub are: 1) to remind NABS members of the availability on the website of the latest tri-annual bulletin, and 2) to engage and unite NABS members during some of those other 360 days of the year when we are not at the annual meeting.

Now a project within the NABS Public Information and Publicity (PIP) committee, the newsletter *in the drift* already has taken on a life of its own. Sections that will appear consistently include the

*JNABS article spotlight*, which highlights and personalizes a recent JNABS paper (see p. 2), a *Mark your calendars...* section listing important upcoming dates, and *Did you know...* which highlights information from the concurrent Bulletin.

Beyond those functions, the objectives of *in the drift* are – yes – to act as a drift net for some of the other interesting NABS-related news items (e.g. see the Freshwaters Illustrated section on p. 4), persistent issues (e.g. see important info from Pam Silver about *JNABS e-access* on p. 3), and fun stuff (e.g. benthic artistry and writing wanted: p. 3).

Deb Finn and Julie Zimmerman are doing the bulk of the editing. Please contact us via

email ([finnd@science.oregonstate.edu](mailto:finnd@science.oregonstate.edu)) with any suggestions or contributions. We are having a great time with this and are looking forward to incorporating ideas from other NABsters!



North St. Vrain headwaters, Rocky Mountain Natl Park, USA

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## speaking of which... Mark your calendars!

- **Today.** It's the beginning of the year... Time to **renew your membership** (or join)! [Here](#) is the link to the NABS membership page.
- **January 15, 2008.** Hynes award nominations due.
- **January 20, 2008.** Abstracts due for NABS 2008.
- **February 15, 2008.** Student conservation research award applications due.
- **May 25-30, 2008.** NABS 2008 in Salt Lake City, Utah
- Keep an eye on your email and [www.benthos.org](http://www.benthos.org) for the **early registration deadline**.

# JNABS article spotlight: Parking lot sealants are villains in downstream communities.

Scoggins, McClintock, Gosselink & Bryer JNABS 26:694-707

Mateo Scoggins and coauthors work in watershed protection for the City of Austin, Texas. Behind their recently-published JNABS paper entitled "Occurrence of polycyclic aromatic hydrocarbons below coal-tar-sealed parking lots and effects on stream benthic macroinvertebrate communities" lies a story truly exemplary of the NABS spirit. The study builds on prior collaborations between local (Austin) and federal (USGS) scientists, and it has already begun to inform policy directly using benthic science.



## Fixin' up the parking lot.

Have you ever noticed the "beautification" of parking lots; i.e., when one day you arrive to shop at your local box store and the surface of the lot is a bright, shiny black with the yellow and white lines in intense contrast? This is the result of a recent application of sealant used to beautify and preserve asphalt parking lots.

*A less-than-beautiful result of the sealant...* Scoggins and collaborators had been noticing exceptionally high concentrations of black sediment in several Austin stream pools located near sealed lots. Upon testing, they revealed that, in conjunction with the black sediment, there were unusually high concentrations of polycyclic aromatic hydrocarbons (PAHs).

Traditional sources of PAHs in urban streams are thought to be primarily car-related: exhaust, used motor oil, tire and brake wear, etc. These non-point sources, however, could not explain the unusually high PAH levels in many Austin streams.

***"We were seeing high PAH concentrations in stream sediments all over urban Austin, at concentrations that were not easily explained by traditional sources"***

Collaborative research between the Austin and USGS scientists revealed that the coal-tar-based sealant used by the City of Austin for 75 years (and in fact the predominant sealant used across the US east of the Rocky Mountains) is a major additional source of PAHs. Particularly with runoff during those intense Texas thunderstorms, PAHs leave newly-sealed lots in high concentrations, often flowing immediately into streams.

In their recent JNABS article, Scoggins et al. asked: Is there an impact of the sealant PAHs on benthic invertebrate communities that can be detected above and beyond the "normal" background PAH levels expected in these urban streams? Well-conditioned and somewhat cynical urban stream ecologists, it seems their expectations were low that they would be able to demonstrate this single effect on streams that were quite degraded to begin with.

But their results suggest otherwise: the coal tar sealants and resulting in-



***Coal tar overspray powder collecting at edge of lot. Breaks in curb allow easy access to streams.***

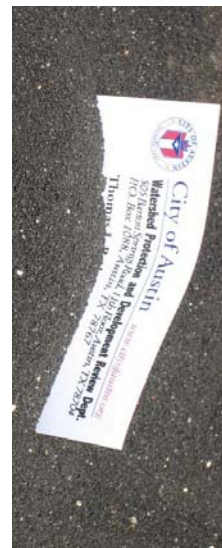
creased PAH concentrations in stream reaches downstream vs. upstream of recently-sealed parking lots had significant effects on invertebrate communities. Five of seven sample streams showed significantly increased PAH concentrations in downstream reaches, and richness and density metrics significantly decreased with increasing levels of parking lot PAH runoff.

Scoggins was shocked at the significance of these results and by the revelation of this commonly- to excessively-used urban pollution source. 75 years of this! Imagine how things could have been...

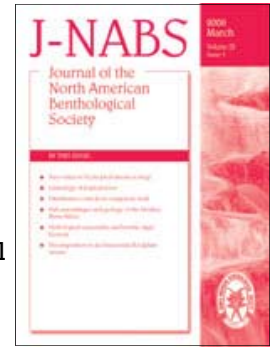


***Mateo Scoggins and Nancy McClintock at one of their Austin, TX streams. Turns out Nancy is a real Texan. Mateo just wishes he were. Not pictured are co-authors Leila Gosselink and Pam Bryer.***

On the bright side, this research has already begun to influence policy. The City of Austin has led the way among US cities as the first to ban coal-tar sealant, and Dane Co. (Madison) Wisconsin has followed suite. The authors hope that the strength of their own results will spur further research around the country and ultimately influence policy at the federal level. We wish these NABSters good luck in their continuing efforts and appreciate their representation of NABS and of Austin watersheds!



# Uncovering the mystery of JNABS e-access



As most NABS members probably know, *JNABS* is available electronically as a membership benefit. There are various ways to access the journal, depending on the issue and whether the reader has institutional access to BioOne and JSTOR. Some ways of accessing articles return money back to the society, others are revenue-neutral, and some cost the society money. *JNABS* editor Pam Silver has given us a few guidelines about where to find the journal and how to download articles. Thanks for the summary, Pam!

## Availability

**Allen press**—issues from 2000 to the present, including the Current Issue and Issue in Progress

**BioOne**—issues from the past 3 years, including the Current Issue and Issue in Progress

**J-STOR**—digitized images of the print version of all issues of *JNABS* and *Freshwater Invertebrate Biology* from 1986 to 3 years ago

### Pam says:

- **Access to J-NABS is a benefit for all NABS members**
- **Use the NABS website to access through Allen Press, JSTOR, or BioOne**
- **Access through your institution if possible—this increases revenue to NABS!**

## Access

NABS members can access J-NABS from any of these locations. From the NABS homepage, click “Journal (JNABS)”, then click “Access JNABS”

### **If you belong to a library or institution that subscribes to BioOne or JSTOR...**

Click “Access JNABS current and last 3 years issues on BioOne through your institution/library” or “Access JNABS back issues on JSTOR through your institution/library”. **NABS receives revenue every time an article is accessed or downloaded using this approach.**

### **If you do not have institutional access to BioOne...**

Click “Access JNABS 2000-present at Allen Press”. A membership verification screen will appear after a reader asks to see full text of an article. Use standard NABS login and password. **This choice is revenue neutral.**

### **If you do not have institutional access to JSTOR...**

Click “Access JNABS back issues through JSTOR through NABS website”. A membership verification screen will appear and members are asked to login. **NABS pays a fee every time a member downloads an article in this way.**

## Benthic cartoonery and other fun stuff

We need your help! We're running out of creativity (OK, we didn't have that much to begin with)... We'll not elaborate on the agonizing efforts just to get this silly mayfly cartoon (at right), copyright *The Wall Street Journal*, of all places, for the newsletter.

If you are an aspiring cartoonist, poet (we particularly like haikus), crossword-

author, or benthological artist or writer of any sort: *Please* send us something for the next issue! Email Deb at [finnd@science.oregonstate.edu](mailto:finnd@science.oregonstate.edu)

In the meantime, try these expert-level benthic wordscrambles (answers p. 4):

ONLE NESHY  
SCLTOLAOUHHON



# Freshwaters Illustrated provides visual imagery for NABS science

The Freshwaters Illustrated (FI) documentary film *Riverwebs* premiered in Columbia at NABS 2007 and received a standing ovation in a jam-packed room. The film combines the human-interest story of the late Japanese ecologist Shigeru Nakano with a user-friendly and beautifully-illustrated approach to understanding the scientific process in general and stream ecology in particular. As FI's boldest effort



yet, *Riverwebs* epitomizes the twofold mission of this young, not-for-profit organization: to educate

### FI's stated mission:

- to educate diverse public audiences about the life, study, and conservation of freshwater ecosystems through illustrative science-based efforts
- to provide illustrative resources and services to scientists, educators, and media

the public about freshwater ecology and to provide visual resources for other scientists and educators to do the same.

Founded and directed by long-time NABS-ter Jeremy Monroe, FI also has a slew of other projects aimed directly at helping NABS members share their knowledge and wonder of fresh waters. Check out the NABS video library, the NABS photo calendar, or the photography workshops held during the annual meetings... FI is responsible for all of these, and a project is currently underway to produce a 5-minute NABS promotional video that will

be available on DVD at the next annual meeting in Utah. Last but definitely not least: Jeremy and Dana Monroe provided the black fly and *Brachycentrus* photos and provided design help for the newsletter logo (go back to p. 1 to revisit)!

Jeremy says: "The trust and support of the NABS community is key to our mission, because it's really your knowledge and passion that we need to share."

Wow, what a score for NABS! Be sure to check out the FI website and give serious consideration to joining. FI depends on membership to persist.

Find out more about Freshwaters Illustrated (and join!) at: [www.freshwatersillustrated.org](http://www.freshwatersillustrated.org)

Learn more about the film *Riverwebs* at: [www.riverwebs.org](http://www.riverwebs.org)



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

- If you are age 65 or older and have been a member of NABS for 25 years or more, it's time to apply for emeritus status (and end those pesky dues...).
- Deadlines for 2008 NABS awards are fast approaching! These include the Hynes award, the environmental stewardship award, and the student conservation research award. Read the Bulletin for application procedures and other details.
- Some of our very own benthologists work for the Metropolitan Wastewater Reclamation District of Greater Chicago, one of the largest-scale and long-standing biomonitoring programs in the US (see the new feature "Working the Waters")
- The Graduate Resources Committee now has 41 members... We hope overall NABS membership follows this upward trend!
- *JNABS* has a new "Issue in Progress" series for early online publication of fully-corrected articles.
- There are myriad exciting events scheduled for the NABS 2008 annual meeting. Furthermore, you can indeed get full-strength beer in Salt Lake City, so don't let that be an excuse to miss NABS 2008.

Visit the website:

[www.benthos.org](http://www.benthos.org)