

NAVIGATING *the* WATERS

FOR THE HUNDREDS OF ORGANIZATIONS, researchers and state agencies committed to protecting watersheds in the Mid-Atlantic region, it can be challenging to find and showcase measurements, photos and other information to help them in their work. But with access to a new interactive and searchable database, these groups and any other interested individuals can now virtually explore watersheds and highlight their interests and efforts.

The Mid-Atlantic Watershed Atlas (www.mawa.psu.edu)—a collaborative effort of researchers at Penn State, Drexel University and Johns Hopkins, led by Dr. Patrick Reed, Penn State associate professor of civil and environmental engineering—is easy to use, with search and share functions, downloadable images and live stream data displays.

Take, for example, Spruce Creek, a favorite fishing locale for former President Jimmy Carter. The atlas allows users to explore the creek from either a road or aerial view and discover flow conditions, among other things. Organizations working to protect the creek can interactively place tags on the map to briefly describe their efforts.

“It’s a way for organizations to advertise themselves and see who’s doing what,” said Reed. “It’s a way to make this work more public.”

The Susquehanna River Basin Commission, a multistate water management agency, is excited about the project. “The sharing and gathering of information is the first step in any water-related assessment,” said Andrew Dehoff, a director at the agency.

Over the next few months, Reed and colleagues will be continuing an educational outreach effort on the project.



Steve Tressler, Vista Professional Studios

Watershed groups can publicize their work.

Flying SQUIRRELS

IN AN OLD CARTOON SERIES, Rocky the Flying Squirrel and his moose pal, Bullwinkle, always emerged unscathed from harrowing escapades. Today, perhaps Rocky’s adventurous spirit would be helpful in finding out why a real-life counterpart, the nocturnal Northern Flying Squirrel, is disappearing from Pennsylvania.

Dr. Carolyn Mahan, Penn State Altoona associate professor of biology and environmental studies, has studied the squirrels since 2001, when a colleague noticed their numbers dwindling in the northern part of the state. “Hemlock and other coniferous trees provide nesting sites and a nourishing fungus for the squirrels,” Mahan explained. However, “the hemlocks are disappearing because of development and pest infestation.”

Live traps and nesting boxes placed in the squirrels’ habitat show them only in Warren County and the Poconos. Southern Flying Squirrels, increasing in Pennsylvania, carry a parasite harmful only to their northern counterpart—and compete with them for nesting sites.

Mahan likens the situation to a “canary in a coal mine”: “Because we’re losing the squirrels and the conifers, it’s a signal that things are not going well with our forests. There may be a symbiotic relationship between Northern Flying Squirrels and conifers. Squirrels eat the fungi and then spread the fungal spores around, helping to inoculate other trees so they can better absorb nutrients.”

In 2007 the squirrel was declared endangered in Pennsylvania due, in part, to Mahan’s studies, funded by the Wildlife Resource Conservation Program and the Pennsylvania Game Commission. She worries time is running out, explaining that while capture efforts have increased, the number of squirrels encountered is decreasing.



TRAIL MIX

Learning to thrive in the wilderness—and at Penn State

WHO WOULD IMAGINE that a hike in the woods could ease the transition to college life? Penn State's award-winning ORION Wilderness Orientation Program is designed to do just that—in a setting far removed from University Park's teeming campus.

In July and August, before fall classes begin, ORION staff members accompany participating first-year students on a six-day overnight backpacking trip through the central Pennsylvania wilderness, to help them learn outdoor living skills as they develop bonds with each other and their natural surroundings. On the fifth day, they take part in a canoe trip or high ropes course. Participants are also required to keep a journal, submit a final paper and take part in a follow-up community service project in the fall semester.

"[The trip] inspired and changed me more in six days than I had ever anticipated," said participant Lacey Salberg.

A Guiding Constellation

Taking its name from a prominent constellation in the northeastern sky that has long guided explorers, the program—run by Shaver's Creek Environmental Center, a unit of Outreach—was first offered in 1996 to 10 freshmen. It has grown steadily and is so popular that it was just expanded to four sessions this summer, taking in 240 students instead of its traditional 180 students. And one of the four sessions has been opened up—for the first time—to sophomores transferring to University Park from other Penn State campuses.

The course, which fulfills two credits of the students' General Activity requirements, "goes beyond the traditional orientation program and allows students to develop bonds with one another that helps them throughout



Courtesy of Shaver's Creek Environmental Center

A backpacking trip eases the transition to college life.



their University careers," said Susanne Dubrouillet, ORION's program director.

Michael Loggia called his decision to participate in the ORION program "the best decision I have made upon my arrival at Penn State."

Dubrouillet added that the program has been a model for many universities developing first-year wilderness programs throughout the United States.

INSIDE THE OUTDOOR CLASSROOM

SHAVER'S CREEK Environmental Center's staff and guests are enjoying the new covered outdoor teaching pavilion adjacent to the center—complete with deck, stone fireplace and universally accessible climbing wall. The pavilion is thanks to contributions from private donors, the Penn State President's Fund, the University Access Committee, and the Pennsylvania Department of Conservation and Natural Resources.