

Lycoming Students Work on Local Watersheds

"I'm having a great time. I get to canoe most every day on the Susquehanna River; I spend a lot of time outdoors; and there's lots of variety which keeps it interesting;" **Laura Lockard** sums up her summer internship at Lycoming College, where she is one of eight students working on projects to improve the area's watershed.

The students are part of Lycoming College's Clean Water Institute, directed by Dr. Mel Zimmerman, a Lycoming College professor of biology who has a passion for the .

Dr. Zimmerman founded The Clean Water Institute in 1999. It is unique among small colleges. The Institute gives Lycoming biology and environmental science students the opportunity to do significant field work at an undergraduate level in a growing area of environmental importance. And it's made environmental science a very popular major.



"I really enjoyed the fish electro-shocking," says Laura Lockard, front right!

Here she is with the rest of her team. Katie Swanson (Eldred, Pa), Christy Bowersox (Ephrata, Pa), and Allison Raymond (Edison, N.J.). Front Row left: Amy Curry (Fallen Timber, Pa.),

The Williamsport area, where Lycoming College is located, is surrounded by small streams and woodlands. (Some of the best trout fishing in the United States is close at hand). The students are working on seven different watershed projects- in and around the West Branch of the Susquehanna River, which is the largest (in terms of acreage) watershed in Pennsylvania and the major component of the Chesapeake Bay watershed.

Laura Lockard, a recent graduate from Ephrata, Pa. is using the canoe to conduct a water

quality study of the West Branch of the Susquehanna along a 75- mile stretch from Lock Haven to Sunbury. Laura usually canoes 6 to 7 miles a day, taking GPS sightings and pictures of every island in the river, testing the discharges from each sewage treatment plant, and monitoring water quality at 12 different sites once a month. This is Laura's third year and she's off to graduate school in the fall to pursue an advanced degree in environmental chemistry.

Christy Bowersox, a senior biology major from New Columbia, Pa., is studying erosion. She is also on the job by 7:30 a.m., walking the stream in hip waders. She stops every half mile to take a riparian assessment. "It does keep you cool," she said of the waders, "although it can get hot in open fields."



One of her projects was to study the habitat around the Montour Preserve, about 25 miles from campus, which proved to be an eye-opening experience. "Although I live in the region and had been to Montour Preserve before, I didn't really know how much erosion there was," she says. Now she sees it closer to home

Christy Bowersox saw a nifty belted kingfisher this year.

Funding

Funding for the interns, for these are paid internships, comes from a variety of sources including individual watershed associations. But a significant amount has come from the Growing Green Project, a state initiative through the Pennsylvania Department of Environmental Protection. Since 1999, the CWI has received over \$200,000 in grants of its own.

The rewards of a summer doing field work are intangible. "I saw a nifty belted kingfisher," says Bowersox, "and I heard a scarlet tanager, this year."

Other student projects:

Amy Curry, a May graduate from Fallen Timber, Pa., is working on the completion of the final plan of the Pine Creek River Conservation Plan, a project funded by the Endless Mountains RC&D- Pine Creek Grant. Pine Creek watershed is 981-square mile area in the northern part of Pennsylvania known for its scenic Pine Creek gorge. Lycoming College interns have worked on this project for the past three years, compiling pages of tables and information that went into the plan. Dr. Zimmerman and the Clean Water Institute were

cited for their efforts in July 22, 2005, issue of the Williamsport Sun Gazette.

Lower down on the Susquehanna River watershed, **Brad Musser**, a senior biology major from Mifflinburg, Pa., and **Katie Swanson**, a junior biology major from Eldred, Pa., are working on a physical stream assessment of the tributaries of Buffalo Creek which flows into the Susquehanna. These assessments include stream chemistry and aquatic health of each part as well as assessment of stream and bank erosion.,



Katie Swanson

Tyler Machamer, a sophomore from Williamsport, Pa., is conducting a functional use assessment of the dry hydrants of Lycoming, Sullivan, Tioga, Bradford, Wyoming, and Susquehanna Counties. Tyler is mapping all of these emergency hydrants and making sure they can be used in the event that water has to be pumped directly from a stream to combat a rural fire.

Brandon Ford, a senior biology major from Montoursville, Pa., is working on the completion of a water quality study and data on two acid mine seeps on the tributaries to Lycoming Creek.

Allison Raymond, a junior biology major from Edison, N.J., is working on the development of a website and stream restoration database as part of the Keystone Stream Team.