

The Magazine of the Chesapeake Bay Foundation

save the bay



*In Harm's Way
Can a Clean Creek Be Saved?*

The Bay-Bayou Connection

A Plan for the Next President

From Bay to Bayou

College Students Make Cross-Country Environmental Connections

By Carol Denny

Far beyond the Chesapeake and its tributaries, citizens of the world's waterways are facing the same kinds of environmental problems: nitrogen and phosphorus pollution, toxic contamination, and the loss of their fisheries. All are directly related to human activities, and all have a human cost.

Over the past three years, selected students at Pennsylvania's Dickinson College have been getting a wide-lens perspective on the effects of these environmental crises. More than 50 have completed the school's Luce Semester, a program that compares the two largest estuarine systems in the United States—the Chesapeake Bay and the lower Mississippi River basin. Funded by the Henry Luce Foundation, the 13-week session puts ecological science in a real-world context, examining how the loss of a resource takes its toll on the environment, the economy, and the culture.

Professors Candie Wilderman, Michael Heiman, and other Dickinson faculty members lead Luce students through an intensive course of lectures, lab work, and no-frills field trips. Wilderman describes it as "three weeks in Louisiana, one week on the Bay, and nine weeks in the upper Chesapeake watershed." Participants complete independent research on behalf of local watershed associations and other partners near the Carlisle campus, and visit numerous sites on the Louisiana bayou and the Bay (including the Chesapeake Bay Foundation's education centers).

The experience leaves students inspired and engaged. "The program has really

deepened students' appreciation of the complexity of the issues—not just the problems, but also the solutions," says Wilderman. "We find so many connections between the two areas, in everything from the science to the culture.

"Our students meet people of passion everywhere: advocates, government officials, scientists, policy makers, oil industry executives, and educators," she continues. "We tell them, 'Everyone you meet is a textbook,' and students take it to heart. It opens up their minds to what they can do in real life that's related to the environmental issues they care about." Luce alumni currently hold positions with advocacy groups, the EPA, and environmental consulting firms, and many are pursuing graduate degrees.

For Adam Wickline, Dickinson '06, the Luce semester was the inspiration that led directly to his current position with the Chesapeake Bay Foundation (CBF). Wickline, who serves as an educator and manager at CBF's Fox Island education center, describes his months in the Luce course as "the ultimate in hands-on, experiential education," and "an incredible capstone to my college years."

Wickline credits the semester with opening his eyes to the big Bay picture. He especial-

ly valued the opportunities for active exploration in the watershed, such as paddling the West Branch of the Susquehanna and seeing its challenges firsthand. "Almost everyone in class had covered this in some form before, but now we were out there on the water, learning about abandoned mine drainage and what's going on downstream," Wickline says. "The Bay focus that Candie Wilderman brought—that was new for a lot of us." Wilderman, who has been leading Dickinson students on Chesapeake trips since 1985, received CBF's Educator of the Year Award in 1999.

By design, the Luce curriculum illuminates problems common to both estuaries. Wilderman cites two leading examples: the collapse of native species like crabs and oysters in the Bay and shrimp in the Gulf, and the ongoing loss of wetlands in both areas. That loss has diminished water quality in the Chesapeake region and heightened hurricane-related dangers in Louisiana.

"Both estuaries are dealing with hypoxia (a lack of oxygen in the water)," Wilderman notes, "but the politics [in the Gulf region] are made even more complicated by the fact that 31 different states, and two provinces of Canada, drain into that system. Like the Chesapeake, what happens upstream is so critical, and regional management is essential."

"I was told that the Chesapeake is in the forefront compared to other estuaries: it's the most heavily researched area. In Louisiana, people said, 'You're the flagship in trying to restore the waterways,'" recalls Wickline.

Word-of-mouth about the Luce semester has kept interest high on campus, and Wilderman hopes that Dickinson will continue the program in 2009 (the original grant funded only three years). In the meantime, Wickline says, he keeps two lessons learned from the experience with him every day.

"The first is to remember the connection between the land and the water, and always reinforce it with my students here. The second is to remember that there are many people out there who are dedicating themselves to making the changes they want to see." ♣



Students in the 2005 Luce program waded into their studies, exploring Chesapeake tidal marshes near Smith Island, Virginia.



On the West Branch of the Susquehanna River, a kayaker breaks for note-taking.



Dickinson grad Adam Wickline, shown above during the 2005 Luce semester, joined CBF and now manages CBF's Fox Island Education Center.



Professor Candie Wilderman launched the Luce semester program to draw connections between the Bay and the lower Mississippi basin.



Participants visit sites on the lower Mississippi, where the collapse of native species and the loss of wetlands parallel conditions in the Chesapeake region.



Oil drilling and industrial waste degrade Louisiana waters.