

2007 GSA Denver Annual Meeting (28–31 October 2007)

Paper No. 233–5

Presentation Time: 2:30 PM–2:45 PM

## **DEVELOPING A WATERSHED FIELD COURSE TO INSPIRE INTERDISCIPLINARY LEARNING**

PEARCE, Andrea<sup>1</sup>, BIERMAN, Paul<sup>2</sup>, DRUSCHEL, Gregory<sup>2</sup>, MASSEY, Christine<sup>2</sup>, RIZZO, Donna<sup>1</sup>, WATZIN, Mary<sup>3</sup>, and WEMPLE, Beverley<sup>4</sup>, (1) College of Engineering and Mathematical Sciences, University of Vermont, Votey Hall, 33 Colchester Ave, Burlington, VT 05405, arpearce@uvm.edu, (2) Department of Geology, University of Vermont, Delehanty Hall, 180 Colchester Ave, Burlington, VT 05405, (3) Rubenstein School of Environment and Natural Resources, University of Vermont, 324 Aiken Center, Burlington, VT 05405, (4) Department of Geography, University of Vermont, Old Mill, 94 University Place, Burlington, VT 05405

Given the global importance of water, there is a pressing need to train natural scientists and engineers in watershed science. Although watersheds are the fundamental unit of water resource management, water-related studies have traditionally fallen under the disciplinary umbrellas of many disparate fields. Under NSF support, faculty at the University of Vermont (UVM) are developing, testing, and refining a 4-week-long interdisciplinary summer Watershed Field Course. The goal is to prepare students for study, research, and careers in watershed science and provide an understanding of field fundamentals and the means to communicate with others in a variety of disciplines.

Students are first introduced to the problems facing Lake Champlain, New England's largest inland water body. Then, five UVM faculty members in geology, geography, civil & environmental engineering, and natural resources lead the group of academically diverse undergraduates from Mount Mansfield's headwaters down the Winooski River watershed into Lake Champlain. A residential first week cements working relationships and bonds students while allowing important informal contact between students and faculty. Working in pairs to develop field exercises, faculty actively demonstrate connections between disciplines and the benefits of cooperation. Cross-disciplinary discussions and peer-to-peer instruction enhance the learning experience for students and

faculty. Field data are collected to address critical questions such as: 1) How is watershed science applicable to solving society's water-related problems? 2) What factors contribute to the ecological integrity of a stream? 3) How do channels change over time? 4) How do receiving bodies such as Lake Champlain reflect their watersheds? Student teams balanced by differing disciplines prepared 30-minute presentations, synthesizing large scale watershed issues such as the transport of sediment, water, and nutrients.

This course contributes to the growing body of field-based courses that play an important role in the early academic training of engineers, geographers, environmental scientists, and geoscientists interested in water resources. We present our work to date ([www.uvm.edu/watercamp](http://www.uvm.edu/watercamp)) as a model for institutions interested in interdisciplinary field-based education.

2007 GSA Denver Annual Meeting (28–31 October 2007)

General Information for this Meeting

Session No. 233

The Future of Geoscience Field Courses II

Colorado Convention Center: 404

1:30 PM–5:30 PM, Wednesday, 31 October 2007

Geological Society of America Abstracts with Programs, Vol. 39, No. 6, p. 621