

**Sabbatical Report**  
(Spring Semester 2006)

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My sabbatical proposal was structured to enhance my ongoing research on aquatic ecology in the Lake Superior watershed by collaborating with scientists conducting analogous research in the Pacific Northwest. My plans were to focus my attention on interactions with colleagues in Idaho (USDA Forest Service) and Oregon (USDA Forest Service and Oregon State University) that were conducting ecological research in streams and riparian systems in Western regions of the United States. After submission of my proposal, the USDA Forest Service scientist I was to interact with in Idaho accepted a promotion and transferred to the Forest and Rangeland Ecosystem Science Center (FRESC) of the U.S. Geological Survey in Corvallis, Oregon. This facility is housed on the Oregon State University campus where I focused my sabbatical interactions during the spring semester of 2006.

Although officially on sabbatical all of spring semester, I remained at MTU through mid-February so that I could finish writing grant reports, analyze specific data sets, as well as participate in two graduate student defenses and several graduate student committee meetings.

While on sabbatical leave, personnel from an elementary school in the small, mountain town of Hungry Horse, MT requested my assistance in their module on natural resources. The specific topic they were covering at the time was *Montana Fish and Fishing* so I spent one afternoon working with them on issues related to introduced species, watershed health, and their importance to native fish communities. I focused my presentation on the federal listing of native bull trout in MT. This allowed me to teach them about the Great Lakes because the primary cause of the decline of bull trout was the introduction of lake trout, referred to locally as mackinaw, relating to their Great Lakes origin.

I also met with EPA scientists at the Washington State University Center for Sustaining Agriculture in Prosser, WA. My primary goal was to learn about the deployment of environmental monitoring stations. I incorporated aspects of this knowledge as I deployed a variety of remote environmental sensors the following summer as part of my research program in the Huron Mountains.

My sabbatical activities were focused at the FRESC facility on the campus of Oregon State University. The staff provided me with an office, printers and an internet connection. Fortunately I was able to ride into work with their head aquatic ecologist on a daily basis, providing us opportunities to talk science and collaboration potentials. During this time we formulated a research collaboration based on the development of a literature review to support a new concept in salmonine life histories in the Northern United States.

My office location allowed access to approximately three seminars weekly. I also presented a public seminar on my research program. In addition to meetings with numerous scientists from OSU and USGS, I was able to communicate with aquatic scientists from the U.S. Forest Service

Pacific Northwest Research Station, located in the same building. I met with the director of the new Oregon State University fisheries hatchery for a tour of the research facility and discussion of collaboration potentials using their facility. Adding to the diversity of my sabbatical experiences, I participated in a population survey of native river mussels. Unfortunately, a shift in USGS research schedules precluded my planned involvement in and potential to learn new riverine fish survey techniques. I plan to return to learn these techniques that I intend to employ in my Great Lakes research program.

The focus of my sabbatical was to enhance my research program; however, I was surprised by the impact the sabbatical had on my teaching, both in terms of materials and motivation. I took several opportunities to discuss methods and content with multiple faculty members, mostly in the Zoology Department, where I earned my BS. Not surprisingly, the focus of many of my conversations with zoology faculty in particular, was how they have accelerated and magnified their presentation of information pertaining to global change. I also captured hundreds of images, many of which I have already used to enhance the presentation of material in my courses. I commonly found myself looking at a scene, an ecosystem or organisms through the lens of how I could use the image in my teaching. I have since utilized these images and concepts in three courses: Principles of Ecology, Restoration Ecology and Fish Biology. Equipped with all the new conceptual material and associated digital images, I took the opportunity to redo my lectures, converting them to digital format.

#### **Results of my sabbatical:**

The primary objective of my sabbatical was my professional growth gained through interactions with a diverse array of scientists outside of the MTU community. This goal of increased “scientific conversation” was obviously met although as scientists we always crave more. The sabbatical also brought broader recognition of my research and graduate education program, as well as of MTU as an institution for innovative research.

I intended to enhance my overall research program by gaining new conceptual insights and analytical tools. Given the schedule of my primary sabbatical host I was unable to be actively exposed to some of the field techniques I was planning to learn. However, I benefited tremendously from discussing these techniques and others with faculty, research scientists and graduate students. There was also bidirectional exchange in the process as multiple graduate students and scientists met with me to discuss and get feedback on their research. In addition, the access to new literature that I was afforded while at OSU was tremendously beneficial to my research and teaching programs. Part of each day while at OSU was spent accessing literature not readily available through our library. Finally, while away I was rewarded with enhanced inspiration for teaching. Some of this inspiration came from meeting with OSU faculty, and discussing their teaching and passion for educating students and the public about critical issues such as global change and ocean conservation. My enthusiasm for teaching was also enlivened through exposure to the various ecosystems encountered while I was away. I have already included aspects of these experiences and knowledge into my teaching at MTU and will continue to do so. I suspect that my experience and rejuvenated enthusiasm is not unusual for faculty returning from sabbatical. These benefits aid the retention and advancement of faculty in this career and I suspect indirectly aid in the recruitment, retention and success of our students.