

projects, and poster sessions. The three presenters discussed their individual projects and also the unique ways each student approached the research process. The session was a very effective means of highlighting undergraduate research on sustainability, and we anticipate future recipients will participate in similar panel presentations each year.

#### Conclusion

The libraries at Temple University, the College of Wooster and the University of Delaware, as well as the undergraduate research program at the University of Delaware, have found working with Gale to be a rewarding partnership. The librarians and undergraduate research programs have developed a new prize to enhance outreach and promote all relevant library resources. Gale has benefitted from opportunities to collect feedback from faculty, students, and librarians on resources to support teaching and learning in these areas. Notably, Gale has provided the opportunity for winning entries to be peer-reviewed and included in the GREENR database, helping talented students develop resumes and a research experience that may enhance their academic careers. 

#### Caring for a Shared Place: Undergraduate Research to Restore an Urban Watershed

Gail Gunst Heffner, David P. Warners, *Calvin College*, [gheffner@calvin.edu](mailto:gheffner@calvin.edu)

Much has been written about service-learning as a pedagogy that strengthens undergraduate education. In the late 1990s Calvin College, like many other institutions across the country, experienced considerable growth in academically based service-learning. In 1997, the Calvin Environmental Assessment Program (CEAP) emerged as an effort to integrate service-learning into the natural science curriculum. CEAP has involved faculty members in creating regular lab assignments or course projects to collect data that contribute to an overall assessment of the environment of the campus and surrounding community. The program also has been integral in creating institutional practices that foster sustainability and providing a context for meaningful links between the college and the broader community. From this work we discovered that the creek draining the watershed in which our college exists is highly degraded. The realization of our institutional and collective personal complicity in its degradation led us to organize an initiative for restoration of the watershed that has become known as Plaster Creek Stewards.

Plaster Creek Stewards is a collaboration of Calvin College faculty, staff, and students, working with local schools, churches, and community partners to foster sustainability and restore the health of the watershed. The initiative focuses

on three areas: research, education, and on-the-ground restoration. Education and outreach are needed to increase awareness of the problems; on-the-ground restoration addresses the degradation this stream has experienced; and research is needed to help us learn more about the creek and how to best work toward its restoration.

Involving undergraduates in this research has been an important development. Students are eager to invest themselves in research that has real-world implications, especially when the “real world” is the very watershed in which their college exists. We currently advise four active research programs connected to the watershed:

1. A research-methods class (Biology 250) is the fourth semester of our core biology sequence. The Plaster Creek Watershed serves as the laboratory for this class; students perform experiments and write research reports that inform our restoration activities.
2. Faculty in the natural sciences have mentored a number of summer research students on projects related to water quality, bird diversity and behavior, bacterial dynamics, Geographic Information Systems modeling, and restoration of native habitat.
3. Senior engineering students have been involved in yearlong projects addressing stormwater runoff, de-channelization, and bio-swale design for large-scale stormwater retention.
4. A Calvin faculty member in the social sciences has directed students in an oral history project documenting the life experiences of long-time residents of the watershed. A history professor has directed students in documenting past urban and rural land-use practices and their impacts across the watershed.

By promoting sustainability on a watershed-wide scale, we have created opportunities to engage students in authentic interdisciplinary, place-based research. In addition, faculty members from a wide array of disciplines (history, English, biology, environmental science, engineering, urban studies, geography, education) are increasingly drawn to this watershed restoration initiative for their scholarly activity. This work has garnered more than \$1.5 million in grants for ongoing research and on-the-ground restoration activities, and it continues to inspire our campus and our local community to live more sustainably in the Plaster Creek Watershed. 