

Funded Grants

List of Grants (Totaling \$220,000)

Allen, T.H., Bernardin, S., and Castendyk, D. 2010. Gender out of Bounds: Interdisciplinary Dialogues. IDEA Grant, SUNY College Oneonta (Grant Amount: \$3,500).

Allen T. H. 2009. *Primary Succession and Community Composition on Three Different Aged Geomorphologic Surfaces Following Surge and Retreat Events of the Bering Glacier, Alaska*. Walter B. Ford Grants Program: Faculty and Staff Professional Development and Faculty Research, 2009-2010 – Grant Amount \$1000.

Allen, Fleisher and Rubenstein, M. 2008. *GIS processing of GPS and bathymetric data, Bering Glacier, Alaska*. Academic STEP – Student Travel for Excellence Program, Office of Student Development, State University Of New York College at Oneonta – STEP Grant Total: \$726

Allen, Fleisher and Rubenstein, M. 2008. GIS processing of GPS and bathymetric data, Bering Glacier, Alaska. Student Grant Program for Research and Creative Activity – Student Faculty Grant total: \$1100

Allen, T. H. and Wasser, J. 2007. Oneonta Creeks Water Quality Assessment. Student Grant Program for Research and Creative Activity – Student Faculty Grant total: \$1400

Schaumloffel J., Allen T., Armstrong W., Muller P., Palmer A. 2004. A Comprehensive Undergraduate Laboratory for Environmental and Analytical Chemistry. National Science Foundation, Division of Undergraduate Education.

Allen T.H. 2004. Patterns of Montane Forest Cover and Deforestation in the Kham Region of Eastern Tibet, China. SUNY College at Oneonta Faculty Research Grant Program.

Allen T. H. and Stewart C. E. 2003. Benthic Macroinvertebrates as Water Quality Indicators in Streams of the Central Adirondacks. SUNY College at Oneonta Faculty-Initiated Grant Program for Research and Creative Activity – 2003-2004.

Allen T. H. 2003. Remote Sensing Survey of Deforestation and its Impacts on Long-Term Land Use Patterns and Riparian Resources in the Tibet Autonomous Region, China. SUNY College at Oneonta 2003 Faculty Research Grant and Summer Fellowship Program.

Allen T. H. 2003. Remote Sensing Analysis of Wetland Habitats and Land Use/Settlement Patterns of the South Chesapeake Bay Region. State of New York/United University Professions Joint Labor-Management Committees Individual Development Awards Program.

Allen T. H. 2003. Remote Sensing Survey of Deforestation and its Impacts on Long-Term Land Use/Settlement Patterns and Riparian Resources in the Tibet Autonomous Region, China. Faculty Development Funds. SUNY College at Oneonta Provost Office Funding.

Allen T. H. 2001. New Island Greenway Environmental Education Grant, United States Environmental Protection Agency Grant, Grant period 2001-2002.

Allen T. H. 1999. Areal Distribution, Change, and Restoration Potential of Wetlands within the Lower Columbia River Riparian Zone, 1948-1991. Oregon State University Geosciences Dissertation Completion Grant, Oregon State University, Corvallis, Oregon.

Allen T. H. 1995. Photo Interpretation and Classification of Land Cover and Riparian Habitats Along the Lower Columbia River for the Years of 1948 and 1961, U.S. Army Corps of Engineers.

Allen T. H. 1995. Photo Interpretation and Classification of Land Cover and Riparian Habitats Along the Lower Columbia River for the Years of 1973, 1983, and 1991, U.S. Army Corps of Engineers.

Selected Grants and Abstracts

National Science Foundation Grant

Schaumloffel J., Allen T., Armstrong W., Muller P., Palmer A. *A Comprehensive Undergraduate Laboratory for Environmental and Analytical Chemistry* (\$100,025 - Funded).

Our primary goal is to complete a multidisciplinary laboratory so that our undergraduates have the capability to determine most environmentally significant compounds in atmospheric, aquatic and terrestrial samples. A study of the environment amongst the co-PIs, our close collaboration and collegiality, and the energy of the faculty involved are factors that support the strength of such a facility. We effectively share instruments cross-departmentally such as our ICP-AES which Schaumloffel, Tausta, Muller and Palmer all use. We collaborate on student research projects. For example, Schaumloffel (an analytical chemist) works with Muller (a petrologist) and his students on analysis of REE in Adirondack formations by ICP-AES. In Mr. Ralph Narain's senior capstone project in Environmental Chemistry (Narain 2003), Schaumloffel provided training and support on the chemical analysis while co-PI Allen assisted with GIS and mapping. Yet, we lack the critical capability to educate students on modern analytical techniques for ionic species (e.g. an ion chromatograph, IC) and structural analysis of semi-volatile and volatile organics (e.g. gas chromatograph-mass spectrometer, GC-MS). We will complete a sound, well-rounded, shared facility for undergraduate education and research with this project. All affected students, especially the non-chemistry majors, will get exposure to the fundamental principles of qualitative identification of analytes and quantitative analysis of environmental samples. Our objectives:

- Add GC-MS, IC and field-portable and sampling apparatus to our ICP-AES, GC, HPLC, XRD, NMR, FTIR and other major instruments, providing a comprehensive analytical toolbox for education and research in the environmental, earth, analytical and related sciences.
- Promote cross-disciplinary research collaborations amongst students, using the example projects and lab experiments we describe and the assistance of a student peer-educator.
- Making a suite of analytical instruments available for our pre-service teachers and continue to provide access to instrumentation to those who remain regionally while student-teaching or after they graduate.
- Bring all students using the facility together during campus seminars, symposia and encourage student presentation at national and regional scientific meetings.

Environmental Protection Agency Environmental Education Grant Program
New Island Environmental Education and Greenway Development Project

Summary Statement: Located in Oneonta, New York, New Island offers a unique opportunity for public environmental awareness and for student participation in ecotourism and ecological planning. Through the New Island Environmental Education and Greenway Development Project, funded by the Environmental Protection Agency, environmental science students are studying the ecosystem of one section of the Susquehanna River riparian zone. Project results will aid in the potential construction of a multiuse nature trail in an environmentally sensitive park.

Project Purpose Statement: The purpose of this project is: 1) to promote environmental education and career development by giving students experiential training in responsible riparian ecosystem conservation; 2) to determine the potential development plan for a greenway on New Island; and, 3) to advise the Oneonta Susquehanna Greenway Development Committee about the ecological resources on New Island available for public enjoyment.

Project Study Site: New Island is unusual in that it is an area of longstanding biological productivity and diversity, despite being adjacent to a heavily developed river lowland and city. New Island is located along the banks of the Susquehanna River within the city limits of Oneonta, New York. It is an 82-acre (33-hectare) riparian lowland located in the floodplain of the Susquehanna River. Officially, New Island is designated as a park, although no city park facilities exist.

Methodology/Results: Ten way-stations/observation points, referred to as Eco-stations, were “virtually” established to explain various ecosystems and ecologically significant habitats. The Eco-stations exhibit and interpret ecological features to the public via a virtual eco-tour uploaded to the World Wide Web. A hypothetical trail connects each Eco-station, creating a virtual circuit that reduces the environmental impact of the trail system, while maximizing connectivity.