

Janet M. Traub

Department of Environmental Sciences (Geology) University of Toledo Master's Student
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http://www.utoledo.edu/nsm/lec/gk12_grant/

PROFESSIONAL PREPARATION:

M.S. Geology University of Toledo, Understanding the Optical Character of CDOM in the Western Basin of Lake Erie; 2010—present
B.S. Biology Bowling Green State University; 1975

APPOINTMENTS:

2011—present National Science Foundation GK-12 Fellow, University of Toledo Graduate Teaching Fellows in STEM High School Education: An Environmental Science Learning Community at the Land-Lake Ecosystem Interface. NSF# DGE-074239, including a cooperative classroom participation with Northview High School, Sylvania, OH.

PROFESSIONAL EXPERIENCE:

1976—2009 Land survey field data reduction and mapping, survey record comparisons, property title work analysis, and conferences with attorneys and property owners, G.M. Barton Survey Company, Maumee, OH
2010—present Teaching Assistant, Intro Geology Lab, Department of Environmental Sciences, University of Toledo

RESEARCH INTERESTS:

I research the variations in the color spectra of Lake Erie water after all filterable components have been removed. Satellite data are being used to track algal bloom intensity and propagation in the western basin of Lake Erie, but one character affecting the optical signal in the same wavelength range as algae is colored dissolved organic matter, CDOM, which does not optically reflect. Up to now, the total signal received at the satellite has been adjusted to account for the CDOM effect by letting a typical value represent CDOM absorption in Lake Erie. In fact, CDOM absorption slopes vary over location and season and I am studying the patterns of the variations. The variations in this faint color may be pronounced enough in many cases to skew concentration estimates of algae populations as analyzed though satellite-sensed wavelengths. I am modeling the effect that the color differences will have through the eyes of various satellite sensors. This could improve the ability to correctly follow algal blooms in Lake Erie from satellites, promising an economic benefit to all provinces and states bordering the lake.

PUBLICATIONS:

Neher, D.A., Walters, T.L., Tramer, E., Weicht, T.R., Veluci, R.M., Salya-Cork, K., Will-Wolf, S., Toppin, J., **Traub, J.**, Johansen, J. (2003) Biological soil crust and vascular plant communities in a sand savanna of northwestern Ohio. *Journal of the Torrey Botanical Society*, 130(04): 244-252

PRESENTATIONS AT PROFESSIONAL MEETINGS:

- Traub, J.**, Darmon, T., Baca, K., Blockland, J., Brislawn, E., Fang, M., Krantz, D., Fisher, T.G., Stierman, D. (2011) Evolution of the Grand Mere Lakes, southwestern Michigan, inferred from geophysical surveys and coring. Poster presented at **Geological Society of America** Northeastern and North-Central Joint Meeting, Pittsburgh, PA, March, 2011.
- Traub, J.**, Baca, K., Blockland, J., Krantz, D., Fisher, T.G., Stierman, D. (2011) Evolution of the Grand Mere Lakes, southwestern Michigan, inferred from geophysical surveys and coring. Poster presented at Midwest Graduate Student Research Symposium, University of Toledo, Toledo, OH, March 2011.

GRADUATE ADVISOR AND COMMITTEE:

Richard Becker, Ph.D. Assistant Professor of Environmental Sciences, UT;
Kevin Czajkowski, Ph.D Professor, Department of Geography and Planning, UT;
Dr. Thomas Bridgeman, Ph.D. Assistant Professor of Environmental Sciences, UT.

SYNERGISTIC ACTIVITIES:

- 2008—present Green Ribbon Initiative Education and Outreach Committee. Consortium of environmentally interested organizations spreading awareness of the globally rare oak openings ecosystem in northwest Ohio
- 2008—present Oak Openings Conservation Plan Steering Committee for coordinating projects and cooperating on funding searches

MEMBERSHIPS:

American Society for Photogrammetry and Remote Sensing
Geological Society of America
President, Oak Openings Region Conservancy
Tree Commission, Village of Whitehouse, OH
American Bryological and Lichenological Society
Ohio Moss and Lichen Association

COMMUNITY SERVICE AND EDUCATION PRESENTATIONS:

- 2011, Fall Winterim Project Sponsor, Maumee Valley Country Day School, Toledo, OH advising on a self-led short course for two high school students in an environmental/cultural comparison between NW OH and Kissimee, FL.
- 2011, April Volunteer science poster judge at GK-12 Poster Show, Lake Erie Center, University of Toledo
- 1983—present Volunteer **Crew Chief** at Kitty Todd Preserve of the Nature Conservancy, leading volunteers in natural areas stewardship projects. Lucas Co., OH
- 2010, Oct. Mushroom biology and ID presentation, Wild Ones, Toledo Chapter
- 2006, Sept. Presented one-day Moss Workshop, one-day workshop including field-trip for naturalist continuing education credits, Wood County Park System.
- 2003, Sept. Moss ID workshop, moss characteristics presentation and in-park ID hike, Metroparks of the Toledo Area