

Washington Symposium Participants Explore the Concept of Citizen Science

More than 100 invited participants and guests gathered in Maryland and Washington, DC for NCSCE's fourth Washington Symposium and Capitol Hill Poster Session. The Symposium, co-hosted by the University of Maryland with support from the dean of undergraduate studies, the vice president for research, and the college of chemical and life sciences, featured a varied program that included presentations of campus-based SENCER projects, discussion groups, a panel discussion with representatives from the National Geographic Society and the National Oceanic and Atmospheric Administration, and a keynote address by University of Montana professor Garon Smith. Sessions and discussions focused on the role the citizen scientist plays in our society and how best to encourage students, and the public, to engage.

The Capitol Hill portion of the symposium program was designed to give participants the opportunity to discuss results of their campus-based work with members of their congressional delegations, prior to presenting their posters to colleagues and guests. The poster session and reception, held on Tuesday, March 31st, followed these individual meetings. A member of Congressman Tim Holden's staff, Courtney Williams, welcomed attendees and commented on the importance of projects that engage undergraduate students in science, technology, engineering, and mathematics topics to prepare them to consider public policy implications. Congressman Holden is the representative for the home district of NCSCE and Harrisburg University of Science and Technology in Pennsylvania.

Congressman Rush Holt of New Jersey considered the citizen scientist in his address to symposium participants and guests, as well as the importance of bringing together scientists and people who do not identify as interested in science. Rep. Holt is a physicist who was the assistant director of the Princeton Plasma Physics Laboratory until his election to the U.S. House of Representatives, and thus brought his understanding of both science and its connection to government and policy to the discussion. He noted the history of America as a "self-critical, self-correcting society" founded by natural philosophers, essentially the scientists of the time. Their mode of empirical thinking strongly influenced the idea of balance of powers, among other features of American government. He noted the strength of the SENCER projects as their ability to remind students of the connection between the seemingly abstract science and math concepts they learn and the quality of their daily lives, and their tendency to remind scientists that it is for the non-science students and public that they practice science – to contribute to a better society.

Participant presentations during concurrent sessions on Monday, March 30th touched on several of the main areas of focus and interest to Symposium participants and carried through the theme of citizen science. Gary Booth, Janet Lee, Analiesa Leonhardt, Jessica Rosenvall, Laura Jimenez, and Michelle Frandsen from Brigham Young University gave a session on using mentored graduate research in the undergraduate classroom to engage students. By using graduate work in introductory courses, students better understand the applications of what they are learning to their lives and their communities.

Cindy Kaus, SENCER Visiting Mathematician, chaired a session on "Understanding Our World Through Quantitative Literacy," which featured the work of Karen Saxe (Macalester College) on democracy and Dorothy Sulock (University of North Carolina at Asheville) on reality math. Panelists also discussed how to sustain courses with civic engagement components in math courses.

Faculty from the host institution discussed their Marquee course program, a series of large enrollment courses that focus on contemporary world problems and are aimed at non-science majors. Robert Briber, Jordan Goodman, David Hawthorne, Robert Hudson, Alan Kaufman, Wesley Lawson, Ann Smith, and Donna Hamilton of the University of Maryland presented the session.

Finally, Helen Qammar, Annabelle Foos, and Brittany Skelly of the University of Akron shared information on a chemical engineering course that uses the ongoing potable water crisis in Haiti as the point of focus for a semester-long design project.

A panel of representatives from the National Geographic Society and the National Oceanic and Atmospheric Administration moderated by Richard Duschl brought their perspectives on citizen science, as well as the strategies both organizations use to engage the public. Sarah Schoedinger and Stacey Rudolph, representing NOAA's education office, and Kathleen Schwillie and Tim Watkins from NGS talked about the programs and grant projects they sponsor, as well as the resources available to educators and members of the public. A transcript of this discussion will be posted to www.sencernet.org soon.

Both NOAA and NGS coordinate programs that especially aim to connect the public to their local environments and inspire sustainability. BioBlitz, for example, is a program that engages students and a community in cataloging as many plant and animal species in a given area in 24 hours. To celebrate the 100th anniversary of the founding of the National Parks Service, the National Geographic Society is sponsoring a BioBlitz every year for ten years (beginning in 2007). This year, BioBlitz will be held in May at the Indiana Dunes. Programs for toddlers to adults are planned throughout the 24 hour period to supplement cataloging excursions.

NOAA supports science literacy through grant programs, such as the Environmental Literacy program and the Bay Watershed Education and Training Program. Funds support projects that connect K-12, college and university students with their local environments, especially watersheds and the ocean. NOAA also has a vast amount of data on local environments that is updated continuously and can be integrated easily into classroom discussions and student projects, and locally affiliated organizations serve as an entry point for groups and educators interested in forming a partnership with NOAA. Many of the posters presented on Capitol Hill are available for viewing from the DC Symposium page on the SENCER site.

Video and transcripts of the panel discussion, talk by Congressman Holt, and presentation of the Bennett award will be added soon.