

# USE CIT SCI

*The latest news and updates from the USE Cit Sci Network.*



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## **Announcements**

LOOKING FOR PEOPLE  
INTERESTED IN SERVING ON  
A WEBSITE SUBCOMMITTEE.

Contact [hurlbert@bio.unc.edu](mailto:hurlbert@bio.unc.edu) if interested.

NEW WEBSITE DOMAIN:  
[USE-CIT-SCI-NETWORK.ORG](http://USE-CIT-SCI-NETWORK.ORG)

CHECK IT OUT!



# Instructor Spotlight: Gillian Bowser



An intern on their summer project through Colorado State University.  
Photo by Gillian Bowser.

Gillian Bowser is an Associate Professor in the Department of Ecosystem Science and Sustainability at Colorado State University. Bowser previously worked as a wildlife biologist and ecologist for the U.S. National Park Service in Yellowstone, Grand Tetons, Joshua Tree and Wrangell St. Elias. She currently serves on the board for the Rocky Mountain Sustainability and Science Network, and participated in the U.N. Framework on Climate Change Convention and U.N. Global Environmental Outlook. Her current research focuses on ecological indicators of climate change, specifically in Peru, looking at the linkages between changing ecological conditions, local community livelihoods, and climate. Dr. Bowser also has a new project using classrooms and public engagement to develop an inventory of pollinators at US National Parks with citizen science!

Her students use the iNaturalist citizen science database in combination with epicollect, which is a tool to co-create questions with other students and citizen scientists. Students use the backbone of iNaturalist for taxonomic details and use associated apps to create research questions that can be answered by field observations. This dual step is critical to get non-experts to use citizen science databases to create their own path of inquiry. The coursework takes place in undergraduate 400 level classes, lasts usually the duration of summer for a field practicum class, and is geared towards Ecosystem and Natural Resource science majors.

## **Why did you decide to integrate citizen science into this course?**

"The larger databases both give students ideas of types of questions that can be answered with observations but also provides the taxonomic expertise needed for questions on organisms like pollinators or plants. The citizen science databases also can provide students with a measure of their own accuracy of species identification (through research grading observations that iNaturalist does)."

## **How do you feel the involvement in this project has impacted your students' engagement and learning?**

"Such projects allow the students a sense of ownership in that they create a research question and can find data and resources through citizen science apps to validate their questions. It also helps them see the larger interest in their questions when other database users comment on their projects or provide them with information."

Dr. Gillian Bowser



# Project Spotlight: Crowd the Tap

Each month the RCN Use Cit Sci newsletter would like to highlight a citizen science project that readers can consider adapting to their courses. This month, we feature the citizen science project "Crowd the Tap" run by Nicole Esch, a Project Manager at NC State University.



## CrowdTheTap.org



### **About Crowd the Tap**

Our goal is to identify areas for tap water testing and infrastructure replacement using data collected from households in the US. Crowd the Tap is important as it helps create a national inventory of remaining lead pipes so we have a better understanding of the nation's tap water pipe infrastructure. Participants in Crowd the Tap can help us prioritize areas for water testing and pipe replacement by completing a simple survey about their home, and using a chemistry strip to test their tap water.

### **Ideas for how instructors could implement project with students?**

The Crowd the Tap team has worked with educators to develop a dual-level curriculum consisting of a choice between 1 to 4 in-class project days to fully explore the chemical, political, medical, and infrastructural aspects of lead contamination in the US. Teachers can find the first level of this program on [crowdthetap.org](http://crowdthetap.org), and can contact us for access and assistance with the level 2 programming.

### **What tools are available for instructors?**

Curriculum, video introductions and instructions, data entry forms, and additional resources can be found at [crowdthetap.org](http://crowdthetap.org)!

### **Are there any materials needed for this project?**

Participants can simply fill out the survey (requires 1 penny and 1 magnet) or they can request a water testing strip in order to give us a better picture of the water chemistry in their home.

### **What is the best time of year to work on this project? For how long?**

Any time of year! Expect to dedicate 1-2 class periods for level 1 entry involvement, and 4 class periods if approved for level 2 involvement.

### **Anything else to know?**

If you are interested in doing the water chemistry strip test or the level 2 testing, you'll need to contact us at [crowdthetap@ncsu.edu](mailto:crowdthetap@ncsu.edu) to provide us with the number of test strips you require, and a shipping address.

