

field notes

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MBL Science Journalism Fellowship

Training the Translators to Speak the Language of Science

By Emily Stone

Ten new researchers will arrive at Toolik Field Station this summer, ready to take soil and water samples, process them in the lab and draw conclusions about their findings. They will also have essentially no idea how to go about doing this.

But that's OK, because the researchers will be journalists who have gone to Toolik to learn what it's like to be a scientist. They'll be part of the [Marine Biological Laboratory's](#) (MBL) annual Science Journalism Program, which has been revamped this year to put more emphasis on arctic and antarctic fieldwork. The 22-year-old program's goal is to help journalists understand what scientists do in the field



MBL journalism participants Anton Caputo (L), an environmental reporter for the San Antonio Express-News and Jim Metzner, executive producer of NPR's Pulse of the Planet, filter groundwater they collected at Lagoon Pond, on Martha's Vineyard, MA. Photo: Christopher Neill

and the lab, so the journalists can do a better job of conveying this information to the public.

"It's designed to let reporters see science through a scientist's eyes," said Christopher Neill, associate scientist at MBL and principal investigator on the NSF-funded project.

MBL will take 10 mid-career science journalists to Toolik each of the next three summers. Three or four of those journalists will also travel to Antarctica's Palmer Station during the following antarctic summer to do similar work there. In previous years, the journalists met at MBL's Woods Hole, Mass., headquarters, where their

fieldwork and lab training focused on coastal pollution in Cape Cod. Some of the journalists then traveled to Toolik to spend time with scientists in a more informal setting.

Starting this year, as part of the International Polar Year, all of the journalist's time will be spent in the polar regions, with a focus on climate change. The two-week arctic curriculum will be divided into two parts. The first week will consist of the Polar Hands-On Laboratory. Journalists will work with PIs from the Arctic Long Term Ecological Research (LTER) program to learn about key questions and research methods in arctic science. They will focus on ongoing, interdisciplinary research on polar environmental change.

The journalists will be divided into groups of two and matched with a PI



Left: MBL journalism participants in 2006 analyze field data to understand how changing land use and runoff of dissolved nutrients influence the chemistry and biology of coastal waters. Journalists interpret data they collect and prepare power point presentations on their findings. Photo: Christopher Neill

MBL continued on page 2

MBL continued from page 1

so they can do a day of field work, collecting samples and bringing them back to the lab to process. The five areas of research they'll focus on are: the effects of temperature and moisture change on tundra vegetation and soil carbon balance; the role of increased shrub cover on tundra energy balance and feedbacks to climate; the extent of the disappearance of permafrost and its consequences on nutrient cycles and vegetation; how changing thaw depths and vegetation influence the movement of water and nutrients from tundra to fresh waters; and how changes in nutrient delivery to rivers will affect the structure and function of river ecosystems.

The journalists will compile their data, analyze it for trends, and then interpret the significance of their findings in the context of large-scale arctic environmental change. They'll present their findings to their peers and the larger Toolik community in a formal symposium.

During the second week, the journalists will be matched with LTER scientists based on their particular area of interest to shadow in the field and lab. MBL-sponsored journalists who go to Antarctica will work side-by-side with scientists from the Palmer Station LTER.

The journalists gain an appreciation for how tedious much of the scientific process is, Neill said. For example, they learn about prepping samples and doing wet-to-dry weight conversions, while having to make judgment calls every step of the way on how to analyze and interpret the data.

For their part, the scientists learn that journalists often have little formal scientific training, Neill said. And the scientists start to appreciate the journalists' need to make research understandable and engaging enough to attract readers, viewers or listeners, something which scientists can bristle at if they think their



Reporters survey the view of the Sagavanirktok River, looking south toward Alaska's Brooks Range. Photo: John Hobbie

work is being oversimplified.

Plus, everyone gets phone numbers to call when the next big story breaks. Past participants have gone on to do stories on arctic science for *National Public Radio*, *Science*, and others.

"We hope that they can carry some of our message to the general public and make people aware of what we are finding," said Bruce Peterson, senior scientist at MBL and the Arctic LTER's coordinator for stream research, who has worked with journalists at Toolik for many years.

Peterson said he talks to journalists about Toolik's natural history, the LTER research there, and what they've seen happening to the whole arctic ecosystem as the result of climate change. For example, he tells journalists about his team's research that has shown that a small amount of additional nutrients can cause the river to go from bare rocks to completely moss covered. Or how the open-water season in the area's rivers is starting earlier in the spring and ending later in the fall.

The journalists are generally amazed at the extent of the changes, he said.

"They get wide-eyed and say, 'is this possible?'" he said.

John Hobbie, the Arctic LTER director and co-principal investigator on the

journalism program, said getting word out about research is "part of our job as scientists. ... Having good science writers is a very important thing. They're the translators in terms of what the average person knows." ●

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