SCWRS Wilderness Lakes project, highlighted this week on MPR, seeks to understand algal blooms in remote lakes in NE Minnesota

SI Owned by Sarah Imholte •••
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If you were listening to MPR's *Morning Edition* on Monday, October 17, you may have heard a story about the St. Croix Watershed Research Station's work in the wilderness lakes of the Boundary Waters and Superior National Forest.

The project, led by Dr. Lienne Sethna and Dr. Adam Heathcote, is based on years of research in northeastern Minnesota. The team of station scientists are finding blooms of toxic algae in these lakes with more and more frequency, and they're trying to understand why.

The team is in year two of the three-year project, and fieldwork has taken them to lakes in the Boundary Waters and Superior National Forest that are mostly isolated from pollution sources that are impacting other lakes. This leads them to believe that they're being impacted by a combination of something in the air or precipitation (atmospheric sources) and by our changing climate.

To make sense of the puzzle, station scientists are using an existing monitoring network to measure dry deposition, or dust deposition. They're also spending a significant amount of time traveling to these lakes in northeastern Minnesota to sample basic water quality and algal productivity, and they have deployed buoys that are constantly measuring temperature and oxygen, which are two climate-sensitive physical parameters. They'll also be collecting sediment cores to compare what they're seeing now with what has happened in these lakes over time.

What do they expect to find? “The exciting part about this work is that it’s not an open and shut case where we knew the answer before we wrote the proposal,” says Dr. Adam Heathcote, director of the Science Museum’s department of Water and Climate Change. “The project is open-ended, and we don’t know what we’ll learn. We have our hypotheses, but we could easily find something completely different.”

Comment

(L-R) Dr. Lienne Sethna, Dr. Adam Heathcote, and SCWRS lab technician Amelia Wilson-Jackson during a recent trip to the Boundary Waters and Superior National Forest for the Wilderness Lakes project

In true service of the museum’s mission, the information gathered during this project will not help us understand what’s causing these algal blooms, but it will also help inform the next steps for agency and resource managers in the area. “What are they going to do if they’re trying to manage these lakes using the traditional method of cutting off the local pollution source if a local pollution source is not actually the problem?” says Heathcote. “This research will help inform how they’ll move forward.”

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