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Women and minorities in weather and climate fields confront harassment, lack of inclusion

By Kay Nolan

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Last year the Black Lives Matter movement that intensified with the high-profile deaths of [George Floyd](#), Breonna Taylor and others led to heightened conversations nationwide around institutional discrimination against marginalized groups in workplaces, academia and government.

Women and minorities in the earth and atmospheric sciences were already on it.

They started their own “Me Too!” movement, pushing for action within the professional scientific societies that are key to giving scientists visibility and career-enhancing opportunities to publish papers, win awards and speak at conferences.

The American Geophysical Union (AGU) and the American Meteorological Society (AMS), among other prominent scientific organizations, began crafting policy statements, holding workshops and discussing tough new sanctions for unprofessional conduct and discrimination within their own memberships early last year.

“This is a climate we want to change,” said Erika Marin-Spiotta, a geography professor at the University of Wisconsin-Madison, at the American Meteorological Society’s 100th annual meeting, held last January in Boston.

The AMS, which has 12,000 members worldwide, includes meteorologists, atmospheric chemists and physicists, oceanographers and other scientists, as well as students and graduate students in those fields. This week, the AMS will convene again, this time virtually, and will [host its second symposium on diversity, equity and inclusion](#). To kick

off the symposium, both early-career professionals and senior scientists are invited “to explore simple, creative ways to cultivate diverse voices, equity, and inclusion” in an interactive session.



A large crowd attended the Women in Science luncheon at the American Meteorological Society meeting in Boston last year. [\(American Meteorological Society\)](#)

“Professional societies have the potential to be powerful drivers of change,” said Billy M. Williams, senior vice president for ethics, diversity and inclusion for the AGU, which has 60,000 members in 137 countries.

A stunning [consensus report](#) in June 2018 by the National Academies of Sciences, Engineering and Medicine, which Williams helped produce, concluded that harassment against women and minorities is pervasive throughout the science fields.

By October 2018, the American Association for the Advancement of Science, one of the world’s largest science organizations with 120,000 members, had published a [procedure](#) for revoking “fellows” honors from offenders with a known record of abuse. It has so far [revoked two fellows](#).

The AGU updated its [ethics policy](#) to spell out potential sanctions ranging from reprimands to suspension from publishing in AGU journals to denial or revocation of honors, awards and membership. Last month the AGU awarded [2020 Presidential Citations](#) to teams of geoscientists who created an [anti-racism petition](#) and [call to action](#).

Mary Glackin, president of the AMS, posted a [statement](#) on racism following Black Lives Matter protests this summer.

In addition to individual efforts, more than 120 science societies in 2019 banded together to form the [Societies Consortium on Sexual Harassment in STEMM](#) to coordinate standards of conduct and share information.

“That’s so you can’t just change your affiliation from AMS to AGU if something bad happens,” said AMS member Gary Lackmann, professor of atmospheric sciences at North Carolina State University. He noted that science societies have a significant overlap in membership, with many professionals belonging to multiple organizations.

Workshops, bystander training foster awareness, empower intervention

Issues of diversity, inclusiveness and harassment took unprecedented prominence at the 2020 AMS meeting, with multiple presentations on the topic throughout the week, a “presidential” town hall meeting titled “Confronting Bullying, Discrimination and Harassment in the Geosciences,” and special welcome receptions for people of color, women and LGBTQ members.

Marin-Spiotta, along with Meredith Hastings, professor of earth, environmental and planetary sciences at Brown University, demonstrated the “bystander training” workshops they have been holding across the country for five years that teach ways to intervene when they see harassment or bullying, especially “in the field” or at scientific conferences.

Attendees squirmed and nodded when the women described examples of harassment:

- *Several scientists are working “in the field” at a research site. A group of men begins to discuss visits to strip clubs, adding details of the physical attributes of dancers. A female scientist is growing increasingly uncomfortable with the conversation.*
- *At a professional “poster session” where scientists present posters that describe their recent projects and data, a senior professor loudly berates a student’s work, scoffing that the student’s appearance is the only thing worth looking at.*

“There’s no such thing as a neutral bystander,” said Hastings. “You’re feeling something, some level of discomfort.”

In these difficult situations, Marin-Spiotta suggested making immediate decisions rather than waiting and filing reports through slow administrative channels, She laid out intervention strategies, including calling out offensive remarks, (e.g., “actually, women do perform well in math”); creating a distraction (e.g., “does anyone know when the next poster session starts?”); alerting someone nearby in authority; or recording the behavior with a cellphone.

At a standing-room-only Women in Science luncheon discussion at the same meeting, more than 200 participants repeatedly observed that women are too often not taken seriously in their professions.



Girl Scouts attend an outreach session at the American Meteorological Society annual meeting in Boston last January. (Fran Virun/American Meteorological Society)

Hastings said this week that she recognized this phenomenon when the Wall Street Journal [published an op-ed](#) in December that questioned whether Jill Biden, the incoming first lady, should refer to herself as “Dr.” when she does not hold an M.D., but a doctorate in education.

Noting that Vice President-elect Kamala D. Harris is the daughter of the late [Shyamala Gopalan](#), a noted research scientist originally from India with a PhD in endocrinology, and [Donald Harris](#), a retired Stanford University economics professor who is Black, Hastings added, “Certainly having more women, more people of color and a first lady who has a [doctorate] is incredibly inspiring and important for the movements that are happening right now to lead to actual, systemic change. There is greater hope that the new administration will contribute to better, broader respect for science and scientists.”

A new emphasis on broader inclusion

Last year the AMS changed the name of its Board on Women and Minorities, established in 1974, to the Board on Representation, Accessibility, Inclusivity and Diversity (BRAID), in part to acknowledge that other underrepresented groups, such as those in the LGBTQ community and people with physical disabilities or neurological differences like autism, continue to feel left out.

The society will no longer overlook steps as simple as providing technology at future meetings to assist those with vision or hearing impairments, said board chairman Aaron Piña, a deputy program scientist with NASA's Earth Science Division.

C. Todd Rhodes, a marine systems scientist at Coastal Carolina University in South Carolina, who is gay, says professional societies are correct to address social issues, such as inclusion. "We deal with it on a daily basis," he said, adding that even those with many years of experience and impressive titles still feel they do not belong.

Alex Johnston, a recent meteorology graduate from the University of Missouri, was especially relieved that AMS now offers stickers to add to name badges to state a person's preferred pronouns. Johnston chose "they/them." Since 2019, AMS also has offered rainbow stickers for any member to wear to show support for LGBTQ issues.

Secrecy, sluggishness persist

Despite calls for aggressive change, society leaders acknowledge they still struggle to call out harassment that does not reach the level of criminal behavior and to disclose to members at large when and how they take action.

At the AMS presidential town hall meeting in January 2020, executive director Keith Seitter revealed — to many participants' surprise — that at least one sexual harassment incident had been reported at each of the society's past six or seven annual meetings. He called for "rapid action" in such cases, along with better transparency. "People don't report incidents if they think nothing's going to happen," said Seitter.

When asked later, however, to describe incidents that prompted sanctions, Seitter said he was uncomfortable to do so, even if he left out details that might identify either victim or perpetrator. He would not say if AMS keeps files of reported incidents or whether it plans to inform members that complaints or actions have occurred.

Sheila O'Rourke, senior campus counsel for the University of California System, sympathizes with that reluctance, noting that "bullying is the eye of the beholder" and that the weather and science fields are international in scope, encompassing varied cultures and standards.

"It's slippery territory," said O'Rourke of publicizing complaints. "Every individual who is failing in their career or studies could blame their mentor. What is the line between constructive criticism and bullying? I've seen false reports. They're rare, but they happen."

But Marin-Spiotta says the potential for retaliation against those who report harassment dissuades frivolous reports. "False accusations are terrible," she said, "but data shows that only one or two percent of accusations are false, and the ones that are true represent only a small fraction of things that are happening."

Piña says this year's AMS conference will continue to hammer home the need for action. "Systemic and institutional prejudice against marginalized groups has always been present," Piña said this week. "AMS is attempting to address this head-on. It includes anti-racism as one of the Presidential Forum themes. As Vernon Morris, who has a PhD and is co-author of "[No Time for Silence](#)," which won an AGU 2020 Presidential Citation award, eloquently said, 'People who are not affected by prejudices have been hitting snooze for years, and after Summer 2020, many people finally woke up.'"



Attendees at a session of the American Meteorological Society in Boston last January. ([American Meteorological Society](#))

Overcoming a lack of awareness

Jeff Zimmerman, a deputy regional director at the National Weather Service in Salt Lake City, speculates that people who do not experience bullying or discrimination might not be aware it is even happening. Zimmerman pointed out that he was among very few straight, White men to attend AMS diversity sessions. “If things are happening, societies have an obligation to report that something happened and that action was taken,” he said.

Others agree that the message is not always reaching those who need to hear it most. For example, AMS’ 2020 “presidential town hall” on bullying was held in a room with a 700-person capacity. Only about 70 people showed up.

“Maybe these things should be mandatory,” mused Jason B. Wright, senior meteorologist at the National Weather Service. He added, however, that “some of the people who did attend were prominent people, so there’s a multiplicative effect because those people then go back to their organizations with the message. Plus, if it’s recorded, we can send others a link to that presentation.”

“As a middle-aged White guy, it’s our issue, too,” said Lackmann. “It’s not something we can just wash our hands of. It pertains to all of us, and it affects our science.”

Kay Nolan is a journalist based in Milwaukee, Wis., where she has covered public policy, education, business, health care and breaking news as a correspondent for The Washington Post, The New York Times, Christian Science Monitor, WisPolitics.com and more. She is a former reporter and multiplatform copy editor for the Milwaukee Journal Sentinel.