E&E NEWS

FEDERAL WORKFORCE

Climate, marine, chemicals scientists up for top award

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Published: Thursday, May 6, 2021

Some of the federal government's top scientists on climate change, marine life and chemicals are under consideration for a prestigious civil service award.

The Partnership for Public Service announced this week 29 finalists for its annual Samuel J. Heyman Service to America Medals. The "Sammies," thought of as the Oscars for the civil service, are given to federal employees each year who have made outstanding contributions to the country's well-being.

The government research group's awards fall in several categories, including medals for career achievement and emerging leaders, as well as science and environment.

The Partnership this year also added a new award category for federal employees' response to the COVID-19 pandemic, with finalists recognized for distributing aid, boosting testing and developing vaccines. In addition, Dr. Anthony Fauci, the longtime director of the National Institute of Allergy and Infectious Diseases who has become the public expert on the virus, was named last year's federal employee of the year for the awards.

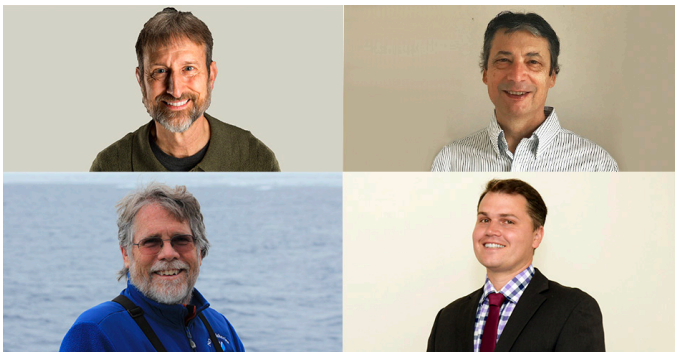
Research not centered on the outbreak, however, has continued over the past year, and the Sammies have spotlighted government scientists who have excelled in a variety of fields.

C. Mark Eakin is one of the awards' finalists, competing in the career achievement category. He served nearly three decades at NOAA before retiring at the end of last year. He remains a consultant for the agency.

His work has focused on coral reefs and how they're affected by climate change. In an interview with E&E News, Eakin, 62, said, "I've been drawn to the ocean all of my life."

"These are such amazingly diverse ecosystems, and there is so much going on," said Eakin, who has a doctorate in biological oceanography from the University of Miami.

At NOAA, he worked on Coral Reef Watch, which used satellite observations and climate models to predict coral bleaching around the world. Rising sea temperatures have endangered the reefs, which Eakin has tried to spot before they become disastrous.



(Clockwise) C. Mark Eakin, Gregory Ruiz, William Hart-Cooper, Jay Barlow. (Partnership for Public Service)

"There is an old saying that the sun never sets on the British Empire. There is no empire any more, but the sun never sets on U.S. coral reefs," Eakin said, adding that they start in the U.S. Virgin Islands "and go all the way to tomorrow," with American territory in the far Pacific like the Northern Mariana Islands, Guam and American Samoa.

"If you can say bleaching is going to happen in three or four months, then they can really start to take meaningful action to help the reef," Eakin said. "By looking at the impacts of climate change, we can look into the future for coral reefs."

Eakin added that his being named a Sammie finalist reflected Coral Reef Watch's great work over the years.

"I'm able to represent them and give them this great recognition for their work in protecting coral reefs around the world," Eakin said.

Tracking and saving marine life

Another NOAA scientist is an award finalist. Jay Barlow is in the running in the science and environment category.

Barlow, a senior scientist for NOAA's Southwest Fisheries Science Center in La Jolla, Calif., has helped develop new

ways to track the ocean's marine mammals, like whales and dolphins, and keep them safe.

"I just watched way too much Jacques Cousteau when I was growing up, and that got me into oceanography," Barlow, 66, told E&E News. "On whales, I just fell in with the wrong crowd."

The Southwest Fisheries Science Center is near the Scripps Institution of Oceanography, where Barlow earned his doctorate. "It is literally just up the hill from the office I worked at as a graduate student," he said. He was introduced to the researchers there who were working on conservation efforts for dolphins at the time.

Barlow has now served 40 years in government and is still at NOAA today. It's also where he met his wife, another NOAA employee, on a research cruise for the agency.

Barlow has worked on changes to the Marine Mammal Protection Act to better regulate fisheries and has also used acoustic tools to measure the number of marine mammals. Relying just on sight to count them can be difficult, considering whales spend very little time at the surface of the ocean.

"That's critical," Barlow said. "If you don't know what's going on, you won't know where to concentrate your conservation efforts."

He said he was "flabbergasted" to be named a finalist.

"Maybe I can be the token representative for Team NOAA. I certainly don't deserve it any more than this long list of people who have dedicated their careers to conserving marine life," Barlow said.

Gregory Ruiz, named a finalist for career achievement, has also focused on marine life, specifically on how cargo ships can transport all sorts of species, from microorganisms up to fish, and plop them in new coastal ecosystems.

"It is an amazing conveyor belt that connects all the ports in the world. It's like a superhighway. Not many people know most of our goods come by sea," Ruiz told E&E News. "It creates the opportunity to move species around on a large scale."

When a cargo ship comes into port, it drops off its shipment but sucks in seawater as ballast to stabilize it. When the ship travels to another port, it discharges that ballast into the ocean — and everything with it, including a potential host of organisms new to the area — as it picks up new cargo.

A senior scientist at the Smithsonian Environmental Research Center in Edgewater, Md., Ruiz said that dumping of ballast can result in invasive species entering a new environment, which could introduce a new predator, bring disease or even collapse fisheries.

"When you explore those pieces, what you see is commercial ships are a major source of invasions in coastal marine systems," Ruiz, 63, said. "It's what we have seen in our research in the United States, but it's also happening globally."

Ruiz, who earned his doctorate in zoology from the University of California, Berkeley, has worked on the National Ballast Information Clearinghouse, which tracks ballast from 100,000 cargo ships arriving at U.S. ports each year. He said he has worked on policy to help limit the spread of invasive species, and now more ships are treating their ballast to mitigate damage to coastal sea life.

"Once an invasion comes in, it puts those species at risk, even if you have protected the habitat," Ruiz said.

The push to break down packaging, disinfectants

William Hart-Cooper has combined two passions — an appreciation for the natural world and a penchant for making things — at the Agricultural Research Service.

He's been named a Sammies finalist in the emerging leaders category. His work at ARS, which is part of the Agriculture Department, has focused on creating packaging and disinfectants that degrade quickly once they're used so they don't linger for years as pollution.

Hart-Cooper, a research chemist at ARS's Western Regional Research Center in Albany, Calif., said he got hooked on the power to change things on a tiny scale. He remembers being allowed to experiment by his professors at Grinnell College, his undergraduate school.

"They gave me a chance to play in the lab and make some new molecules," Hart-Cooper, 33, told E&E News. "That was always a magical thing to me."

He later got his doctorate in chemistry from UC Berkeley and joined ARS in 2015, where he has been since.

Hart-Cooper has worked on a number of innovations, including with ARS colleague Jennifer Wilson-Welder on a hoof balm for cows that breaks down quickly when diluted. It helps cows stricken with digital dermatitis, a bacterial infection that causes painful lesions on their feet and can be costly for farmers.

"We wanted to find some solutions there. Let's create cosmetics for cows," Hart-Cooper said.

He hopes his work can lead to less waste lingering in the environment, either from plastics or from disinfectants.

"The ideal thing is we start making these things from our waste," Hart-Cooper said. "We can achieve an economy that is more circular and sustain our relationship with the planet."

The Sammies winners will be announced in the fall.

Sen. Joni Ernst (R-Iowa), Rep. Bennie Thompson (D-Miss.), Howard University President Wayne Frederick and author Michael Lewis are some of the members of the awards selection committee.

Also, all finalists are eligible for the medal's People's Choice Award. Starting this week, the public can vote online for who should win that honor. That winner will be announced this summer.