# NEWS

## IN BRIEF

*Edited by*
**Jeffrey Brainard**


The 128-meter U.S. Coast Guard cutter *Healy*, commissioned in 1999, has supported Arctic research.





POLAR SCIENCE

## U.S. icebreaker fleet sidelined following fire

Damaged by an electrical fire in July, the *Healy*, a medium-duty icebreaker, returned to homeport in Seattle last week, cutting short its summer research tour of the Arctic, the U.S. Coast Guard announced. The only other U.S.-operated icebreaker, the heavy-duty cutter *Polar Star*, is also in port for scheduled repairs. The *Healy*'s summer mission included three scientific components: supporting the National Science Foundation's Arctic Observing Network by servicing subsurface moorings and surveying boundary currents; training 20 early-career polar scientists; and making the first single-ship, single-season, high-resolution hydrographic observations on a crossing of the Arctic Basin. It's the second time in 4 years that an onboard electrical fire has cut short a cruise by the 25-year-old ship. Last week, the Coast Guard also announced that a new addition to its icebreaking fleet—a repurposed Arctic oil exploration support vessel purchased this year for $125 million—will be based in Juneau, Alaska. In June, the Coast Guard said it may begin to build another heavy-duty icebreaker by December. Scientists and U.S. policymakers have long called for expanding the fleet; Russia has 55 icebreakers.

### Tribes to lead overdose studies

HEALTH DISPARITIES | The U.S. National Institutes of Health (NIH) has committed $268 million over 7 years for research led by Native American communities about opioid overdoses and other impacts of painkillers on these groups, the agency announced last week. It pledged the spending, the largest of its kind, at the request of those communities because overdose death rates have consistently been highest among American Indian and Alaska Native people. The Native Collective Research Effort to Enhance Wellness Program will also fund Indigenous and non-Indigenous organizations that serve Native American communities. It aims to finance research that incorporates Indigenous knowledge and culture, improve access by researchers and tribal representatives to data on substance abuse and pain, and study pain management.

### Disinformation resource closes

SOCIAL MEDIA | Less than 3 months before the U.S. elections, Meta last week shut down a data source researchers had used to study the spread of disinformation about politics and COVID-19 on the company's Facebook and Instagram platforms. After Meta announced earlier this year that it would close the CrowdTangle service, academics, journalists, and others had asked the company to postpone the change until after the elections. Meta says it will give "qualified" scientists access to its Content Library, which the company contends provides more comprehensive data. Critics say the library is less user friendly and omits important data, such as how often political parties post on certain topics and how many users

PHOTO: PO2 MEREDITH MANNING/PLANET PIX VIA ZUMA

engage with this content, the TechCrunch news service reported. The European Commission asked Meta to explain the closure and suggested it may violate EU rules requiring transparency by social media operators. Meta acquired CrowdTangle in 2016 and offered its data for free.

## Map charts underground currents

GEOPHYSICS | Scientists at Oregon State University (OSU) have completed a nearly 20-year project to map the electrical properties of Earth's crust and mantle across the contiguous United States, a first that could inform efforts to protect its electrical grid from extreme solar storms and electromagnetic pulses. Such events disproportionately affect the grid in certain areas, such as a corridor from Washington, D.C., to Georgia, that are especially prone to naturally induced geomagnetic currents, the OSU team said last week. The researchers with the Magnetotelluric Array project assembled measurements of subsurface electromagnetic energy at nearly 1800 locations, each about 70 kilometers apart, then built a 3D map that reaches 300 kilometers deep. The National Oceanic and Atmospheric Administration's Space Weather Prediction Center is using the freely available data to inform its geoelectric field forecast. The data could also inform mineral prospecting and studies of the geological evolution of North America, OSU said. China and Australia are developing their own underground currents maps.

PHOTO: RYAN WAGNER

CONSERVATION

## Climate change spreads avian malaria in Hawaii

The kiwikiu, or Maui parrotbill (*Pseudonestor xanthophrys*), is among the most endangered birds, with only 130 remaining, confined to high slopes on Maui's Haleakala volcano. Climate change has allowed mosquitoes to carry the avian malaria parasite to higher altitudes where it lives—also harming other Hawaiian bird species, which have no natural immunity. This week, this photo of a kiwikiu won an award in an image competition sponsored by *BMC Ecology and Evolution* and *BMC Zoology*. Taken by biologist Ryan Wagner of Washington State University, it shows ornithologist Sonia Vallocchia giving electrolytes and protein to a kiwikiu before it was taken to a conservation center to join a new captive breeding population.

## Larger teams worsen brain drain

CAREERS | The growth in the size of research teams is a major cause of tight job and funding prospects for U.S. early-career scientists, making them more likely to leave the profession, new research indicates. A team used data from the U.S. National Science Foundation and the Web of Science database of journal articles to examine researchers in each of seven scientific fields from 1973 to 2013. For each one-person increase in average team size for a given research field, newly minted Ph.D.s working in it are 24% less likely to hold a tenure-track job, 11% less likely to receive U.S. federal grants, and 11% more likely to leave science, economist Donna Ginther of the University of Kansas and colleagues reported on 14 August in *Nature Biotechnology*. The scientists most likely to exit research are women and those born in other countries. The doubling of the U.S. National Institutes of Health's budget from 1998 to 2003 led to larger teams, not more labs, doing biomedical research, which may have obscured the contributions of people at the bottom of the teams' rungs, the study's authors say. They suggest the agency could alter these patterns by shifting how it awards grants.

## Mentors' success breeds success

CAREERS | Having a well-cited mentor sets up a junior researcher to also attract many citations, akin to intergenerational wealth transfer within well-off families, a study has found. Matching a database of academic relationships with bibliometric data, a research team ranked the members of 245,500 mentor-mentee pairs worldwide who published almost 10 million papers in 22 academic disciplines. The pairs worked together between 2000 and 2013, so the authors could track work published up to 5 years after the official mentor-mentee relationship ended and then allow time for citations to such papers to accumulate until 2023. The advantage for mentees who had highly cited mentors increased over the study period, the team reported last week in the *Journal of the Royal Society Interface*. Working at a prestigious institution—as measured by the total number of citations of all authors who work there—offered some protection against the disadvantage of a low-ranking mentor. "It's important that [citation] metrics are handled with care [in professional evaluations] because there are all these effects that can impact it," says University College London social scientist and study co-author Fabio Caccioli.

THEY SAID IT

### "That's like trying to solve lung disease while still smoking."

**Environmental activist Shaq Cossé**, in the Capital B news service, about President Joe Biden visiting Louisiana last week to announce $150 million in cancer research funding, which Cossé said overlooked the government allowing continued operation of the state's chemical processing plants, whose pollutants have been linked to a well-known cluster of cancer cases. The new grants, to eight research teams including one in Louisiana, are part of the White House Cancer Moonshot initiative.