



Glaciologist Richard Jones captured the moment a crew member on RV *Polarstern* prepared to rescue a measuring device trapped in ice.

WINNING PHOTOS OF WORKING SCIENTISTS

Nature's annual photography competition showcases stunning images from around the world. **By Jack Leeming**

This image, taken on top of the icebreaker research vessel *Polarstern*, shows the delicate process of retrieving an instrument called a CTD (short for conductivity, temperature, depth) that had become trapped under sea ice off the coast of northeastern Greenland.

CTDs, which are anchored to the sea floor, measure how ocean properties such as salinity and temperature vary with depth. At some point, the sea ice had closed over the top of this one, forcing the *Polarstern* to skirt carefully around the equipment, breaking the ice to rescue it from the freezing ocean.

"You're crashing into ice and breaking through it. So it wasn't particularly calm sailing for the majority of the trip," remembers Richard Jones, who took the image in September 2017 and is the winner of *Nature's* 2024 Working Scientist photography competition. His research aims to improve estimates of the rate at which ice is being lost from the world's glacial ice sheets.

Jones, a glaciologist at Monash University in Melbourne, Australia, highlights the photographic contrast between icebreaker and ice that he'd become used to in his five weeks aboard the *Polarstern*. "All you really see is

blue and white. And sometimes that might feel pretty monotonous, but the colours from the CTD instrument and the orange of the crane contrast the scene and also complement it quite nicely."

We received more than 200 entries this year from researchers working around the world. The winner and the four runners-up (highlighted on the following pages) were selected by a jury of *Nature* staff, including three of the journal's picture editors. All will receive a prize of £500 (US\$620), in the form of Amazon vouchers or a donation to charity, as well as a year's subscription to *Nature*.

Work / Careers

Here are the rest of the winning images from the competition.

Library of leaves

PhD student Kim Castro took this photo of her colleague, postdoctoral researcher Luiz Leonardo Saldanha, in a herbarium that they both work in regularly. It's shared between the University of Zurich and the Swiss Federal Institute of Technology (ETH) in Zurich. Both Castro and Saldanha investigate the medicinal plants of the Amazon at the Department of Systematic and Evolutionary Botany at the University of Zurich, although the two have very different approaches: whereas Saldanha investigates their chemical diversity, Castro looks at how the plants are perceived by Indigenous communities in the Amazon, specializing in how the plants smell.

A herbarium, Saldanha says, is "like a library — but instead of books, there are plants here". Saldanha posed with this particular sample (*Palicourea corymbifera*, collected in 1977) because it comes from his home country, Brazil, but is used by the Indigenous Desano people in Colombia as a medicinal herb. "So it creates a commonality between South American countries," he says.



ONLY 130 OF THESE BIRDS REMAIN ON EARTH. A SINGLE MOSQUITO BITE CAN KILL A KIWIKIU."

Reaching the beak

Conservation biologist Ryan Wagner snapped this photo of field biologist Sonia Vallocchia feeding a recently caught kiwikiu (*Pseudonestor xanthophrys*), in January this year. It was taken on Haleakalā volcano on the Hawaiian island of Maui. Wagner, a PhD student at Washington State University Vancouver, was on an expedition to the island as a science communicator, hoping to raise awareness of the plight of the endangered birds.

"Only 130 of these birds remain on Earth," explains Wagner. "Their numbers have crashed due to avian malaria, which is spread by invasive mosquitoes. As climate change warms the island, mosquitoes have advanced upslope into the high-elevation refuges where native birds survive. A single mosquito bite can kill a kiwikiu."

He hopes that ornithologists such as Vallocchia, who works for the Maui Forest Birds Recovery Project in Makawao, will help to save these birds by bringing some of them (by helicopter) to the Maui Bird Conservation Center, also in Makawao. There, they will be treated for malaria and join a captive breeding programme, he says.





Mountain drop-off

In this dramatic image, taken from below the still-spinning, deafening blades of a military helicopter, scientists shelter with their equipment after being dropped off at the top of a remote mountain in northern Amazonia. They are taking part in a biodiversity-research expedition to Serra Imeri, an isolated mountain range that rises through the forest canopy near the border of Brazil and Venezuela, in November 2022.

"A total of 14 scientists and dozens of military support personnel took part in the expedition, which lasted for 11 days and resulted in the discovery of several new species of amphibians, reptiles, birds and plants," says photographer Herton Escobar, a science journalist who works with the scientists pictured, at the University of São Paulo in Brazil.



Go with the floe

Emiliano Cimoli, a remote-sensing scientist at the Institute for Marine and Antarctic Studies at the University of Tasmania, Australia, took the second photograph featuring the research vessel *Polarstern* in this year's collection of winning images. Here, Carolin Mehlmann and Thomas Richter, mathematicians at the University of Magdeburg, Germany, are measuring the depth of snow across a giant ice floe drifting in the middle of the Arctic Ocean.

The image was taken during a two-month voyage organized by the Alfred Wegener Institute, based in Bremerhaven, Germany, in August 2023. The goal of the expedition was to evaluate interactions between the ice physics, biology, hydrography, biogeochemistry and biodiversity of the Arctic ecosystem, from the sea ice to the sea floor.



LEAVES: LUIZ L. SALDANHA/KIMBERLY P. CASTRO; KIWIKU: RYAN YAGNER; MOUNTAIN: HERTON ESCOBAR/UNIV. SAO PAULO IMAGES; FLOE: EMILIANO CIMOLI