

# CAREERS

**STAY IN TOUCH** Follow us on Twitter  
[twitter.com/naturejobs](https://twitter.com/naturejobs)

**BLOG** Personal stories and careers counsel  
[blogs.nature.com/naturejobs](https://blogs.nature.com/naturejobs)

**NATUREJOBS** For the latest career listings and advice [www.naturejobs.com](https://www.naturejobs.com)

KSENIIA ASHASTINA



The winning entry: a researcher collects samples from a permafrost range in Siberia, June 2014. Taken on a Nikon D300 with an aspherical 17–50 mm lens.

PHOTOGRAPHY

## Science on camera

*Announcing the winners of the inaugural Scientist at Work photo competition.*

BY JACK LEEMING

**P**alaeobotanist Kseniia Ashastina took this picture of her supervisor, Frank Kienast, collecting samples of ancient plants from a permafrost exposure in northeast Siberia, in June 2014. Ashastina, who is a PhD student at the Senckenberg Research Station of Quaternary Palaeontology in Weimar, Germany, says it was a welcome 20 °C at the time; this region of the world endures temperatures below freezing for 7 months a year. Over hundreds of thousands of years, the water in the soil has frozen and thawed over and over, carving deep

cuts into the ground and creating steep, icy formations like the one pictured above.

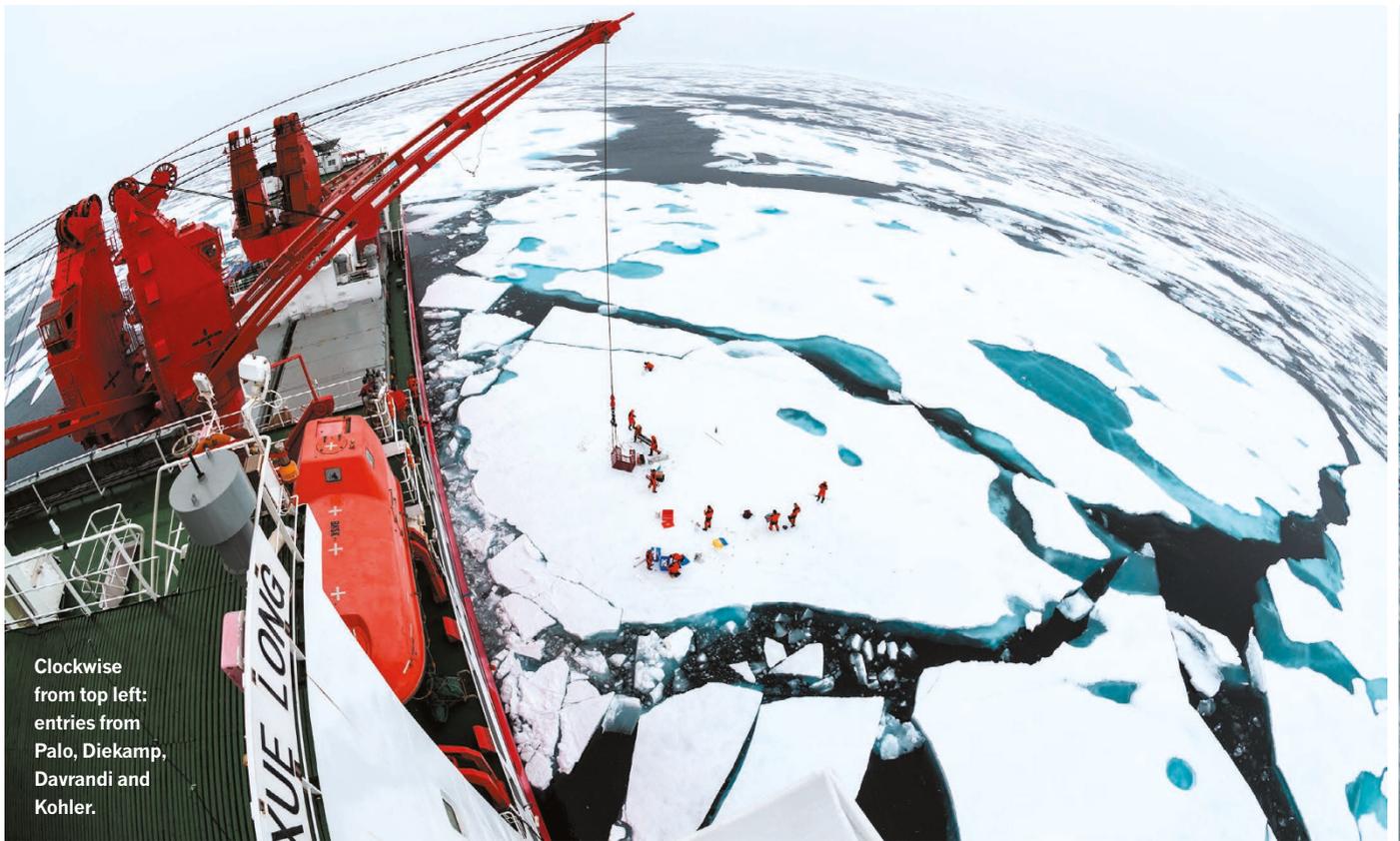
It's a remote area: Ashastina and Kienast were the only people there, and there was no phone signal. It doesn't look it, but it's noisy, says Ashastina. "There are tons of mosquitoes there trying to bite you. There is cracking ice and creaking trees. It's dangerous. You'd need to be crazy to enjoy it, but in a good way."

The permafrost under the exposed surface makes this area perfect for Ashastina's research, because it's too cold for her samples to be digested by bacteria. The same goes for the bones of the mammals that once roamed

this area, around 20,000 years ago, when a green, energy-rich land bridge joined Asia and North America. Femurs, skulls, fibulas and tibias are churned up every summer as the ice melts along the formation, and the cut retreats further into the forest.

### GUNS AND IVORY

Shortly after this photo was taken, as Ashastina and Kienast camped near the formation, two locals — drunk and carrying guns — emerged from the forest and demanded to know what the scientists were doing. Every summer, the pair had made money by pulling the tusks ►



Clockwise from top left: entries from Palo, Diekamp, Davrandi and Kohler.

► of long-dead woolly mammoths out of the mud and selling the ivory — and they were convinced that these newcomers wanted a piece of the action. But the locals were shocked sober, Ashastina says, when they looked inside her sample bags to find that the strangers before them were ignoring the ivory in favour of the mud.

This kind of story is exactly what we hoped we'd find when we announced the Naturejobs Scientist at Work photo competition at the start of March. Scientists spend their time finding connections and building a research story. But they themselves often have fascinating, scary, guns-and-ivory tales to tell, and those stories are frequently best told with an image.

When meteorologist Timo Palo, who also features in this article, started working in the Arctic in 2006, he realized that bringing his message back home could be achieved more easily with a camera. "It's often too hard for scientists to put their work into simple words," he says. "Photography can help there."

Here we present five of the best images from the competition, which ran throughout March and attracted about 170 entries, from New Zealand to Norway, Canada to Qatar. Winners were chosen by a panel of *Nature*

#### ➔ NATURE.COM

See also [Nature India photo competition 2016 at go.nature.com/2ojcebw](http://go.nature.com/2ojcebw)

designers and journalists, who judged the images purely on their aesthetic impact. We did not ask for additional context,

and we accepted only one image per person. Submissions could be made either through social media or by e-mail.

"Science and art have quite a few things overlapping," says Timo Kohler, whose picture also appears here. "Even as a non-expert, if you look at life under a microscope, for example, there's absolute beauty in it. You're looking at a completely different world that you've never seen before. There's art there."

## TIMO PALO Photographing fragility

*Beaufort Sea, Arctic Ocean, July 2010; Nikon D300 with a 10 mm fisheye lens*

In 2010, when Timo Palo's temporary home — the Chinese research and cargo vessel *Xue Long* (which translates as *Snow Dragon*) — gave up searching the Arctic Ocean for a stable berth and paused to allow scientists on to an ice floe instead, he climbed to the top deck to take this photograph using a fisheye lens.

Palo, a meteorologist at the University of Tartu in Estonia, has watched this part of the world change dramatically. Temperatures in the Arctic are rising about twice as fast as the average temperature in the rest of the world, he says. "Sea ice is shrinking. As a scientist, you can't have any conclusions before you analyse

the data. But visually you can see it. And when you capture something that moves people, it can have a lot more impact than words can have."

Normally, Palo says, he uses a wide-angle lens to convey the scale of the Arctic. "There's this vast territory of snow and ice, and tiny human beings in the middle of it. You feel small there," he wrote to me after our interview. But he realized that a fisheye lens would help him to impart a different message. "We know the Arctic Ocean is on the top of a globe. It's like a roof on our planet." The distortion, he thinks, helps the viewer to visualize this roof — and the cracks that run across its surface.

## VOLKER DIEKAMP Science on the high seas

*Atlantic Ocean, December 1997; Contax 137 MD Quartz (ASA film) with a 35 mm lens*

Volker Diekamp, a marine-geology technician at Marum — an ocean and sea-floor research institute at the University of Bremen in Germany — spends his working hours inspecting sediment from the bottom of the ocean.

He's used to photographing scenes like this one, which was taken off the coast of the Canary Islands in winter 1997. It shows scientists and sailors struggling to pull



ocean-analysis equipment aboard the German research vessel *Meteor*. He's travelled on board the same ship, as both technician and resident photographer, on trips to the oceans around South America, Africa and India (his first voyage was in 1991). When on land, he's equally busy taking pictures of academic colleagues. "Here at the university, scientists at work are my main topic," he says.

In July — "Summer, but it's still cold," he says — he flies to Greenland to join the *Merian*, another German research vessel.

In 1997, the water was mercifully warm. Just before this shot was taken, Diekamp says,

he "felt the movement of the ship" and knew immediately that his colleagues were about to get very wet. What about him and his camera? "Almost not at all," he says. "I was in a safe place. I could care about the picture, not the water. It's a once-in-a-lifetime shot."

### TIMO KOHLER

## Shining light on life in the lab

*Researcher and microfluidic chip, magnified, March 2017; Canon 6D with a 24–105 mm lens*

When he took this photograph, biochemist Timo Kohler had just returned from a group skiing retreat organized by Florian Hollfelder, who runs a laboratory at the University of Cambridge, UK. Hollfelder likes to encourage his students to travel together, Kohler says. Since joining the lab, Kohler has been to Crete, India and Austria, and more trips are planned. "There's a lot of social bonding going on," he says. "You make friends."

The image shows one of Kohler's fellow PhD students inspecting a microfluidic chip. To take it, Kohler reversed the magnifying glass that's normally used to see the fine detail in these chips. "It's an artistic effect. In science, I'm not allowed to do it; in photography, I can point the light where I want," he says.

### MEHMET DAVRANDI

## The accidental almond tree of life

*Bacteria on blood agar, November 2016; Canon 80D with a 24–70 mm lens*

Mehmet Davrandi, a microbiologist at University College London, says the image above is the result of an error. He uses blood agar to grow and observe oral bacteria, so that he can better understand dental plaque. On this occasion, he spread the germs the wrong way. When he came to hold the plate up to the light, to check the bacterial colonies, he saw what looked like a tree.

Davrandi is from Cyprus. "We have a lot of almond trees in the gardens," he says. "So everyone from Cyprus loves almonds." But he feels that the image has a deeper meaning: "It's surprising how rare things happen, and those rare events turn out to be very big things. It really represents how accidental life can be."

Davrandi wasn't worried that his experiment had gone wrong: he had more agar plates to work with. The next day, he brought in his camera and took the above picture. "Technically, we're not allowed to have that sort of thing in the lab, but I'm pretty sure nobody's going to complain."

Jack Leeming is the editor of *Naturejobs*.



**CORRECTION**

The Careers Feature 'Science on camera' (*Nature* **545**, 123–125; 2017) accidentally claimed that sea ice is sinking. It is, of course, shrinking.