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They both took part in the 35th Polar Expedition to the Hornsund Polar Station on the island of Spitsbergen, and the 40th Antarctic Expedition to the Arctowski Polish Antarctic Station on King George Island.



COLD BUT FASCINATING YEARS

We had not always dreamed of becoming polar explorers. It was through pure chance, and a bit of courage, that we became the first married couple to spend winters at both of Poland's polar stations.

**Dagmara Bożek
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When the weather's cold, you can always dress more warmly, whereas when it's not there's not much you can do. This is probably why we had no fear of staying in a place where temperatures are low for most of the year. And why we responded immediately when we saw an online advertisement recruiting for a polar expedition. Three weeks later it turned out that we were going to the North Pole. In July 2012, after undergoing tests at the Polish Military Institute of Aviation Medicine, a series of training sessions and eight days aboard the research ship Horyzont II, we found ourselves in the Arctic taking part in the 35th Polar Expedition organized by the PAS Institute of

Geophysics. The Polish Polar Station, Hornsund, on the Norwegian island of Spitsbergen became our new home for the next year.

Among the bears

When we told our family and friends about our plans, some of them thought it was a great idea, but others said we wouldn't last a single polar day, or night. And that the bears would eat us.

We did not think much of it while being trained at a shooting range. It was not until we arrived in the Arctic that we realized that polar bears were no joke. In Hornsund we noted every one of their visits. We wrote down who had shooed off the bear, when, where, and with what. It was not so bad when they came near the station buildings. The dogs barking got us to our feet and we would run out to the entrance, sometimes in our pajamas, with loaded weapons (you always have



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to carry a weapon in the Arctic). It was much worse to run into a bear out in the field, where there was no place to hide. At that point the only choice was to run away, or, unfortunately, as a final resort, to use heavy ammunition. Fortunately, no one had to use this option during our stay that winter.

And what about those very long days and nights? First we had to get used to the fact that for several months the sun does not set. Later, for the next few months we would not be able to see it at all. The latter was a much more interesting experience for us, because there was a lot to admire in the sky, such as the aurora borealis, which we witnessed quite often. We did not actually experience the predicted months of depression. The only thing we felt occasionally was more sleepiness.

So without any great shocks we spent that time carrying out our duties, that of a geophysicist (Peter) and that of an administrator and teacher conducting online classes as part of the Eduscience project (Dagmara). When we returned, we knew that if given another chance, we would repeat this adventure. We immediately missed the tranquility of the North, the clean air, and unique nature. Two years later, we fulfilled our plan.

Among the penguins

And so in November 2015 we found ourselves on King George Island in the Antarctic as participants of the 40th Polish Antarctic Expedition. At “the Arctowski,” as the station is commonly called, our roles were electrician and computer scientist (Piotr), and administrative worker (Dagmara). Of course we continued promoting Eduscience in the form of online lessons from the Antarctic, thanks to the help and kindness of PAS

Institute of Geophysics staff. The living conditions were similar, but there were noticeable differences.

The “Arctowski” is located outside the Antarctic Circle, so it does not experience polar days or nights. What surprised us most were the animals, which are everywhere, close enough to touch. They have no natural enemies on land and so are not afraid of people. You can almost trip over seals, or be frightened by a sea lion when you mistake it for a boulder lying on the beach.

Despite what some people may imagine, there are no polar bears in the Antarctic. On the other hand, there are penguins instead. We first saw them on the way from the ship to the base. While we were unloading, three Gentoo penguins stood calmly at the seashore. We quickly learned that these animals don’t stay at the penguin colony all day, but wander right up to the station as well.

Before we saw those first penguins, we had spent 36 days on the ship Polar Pioneer, sailing from the Polish port of Gdynia. First we counted the days, then weeks. We had a lot of time to get to know each other, watch movies or read books that we never had time for before. Sometimes there were attractions like dolphins jumping in front of the bow or flying fish. In the vicinity of the equator the temperature rose to about 35°C and most of the passengers and crew spent time sunbathing.

A last stop in Argentina was our final contact with civilization for a year. Later, when the summer season ended, we were left only with our eight-member group and occasional explorers from other expeditions visiting us from time to time, such as from Brazil’s nearby Comandante Ferraz station. In the summer, both stations were visited by tourist cruise ships and private yachts. Sometimes helicopters flew over. In the north, every few months we had been visited by the residents of the Norwegian town of Longyearbyen, who brought us our mail. That had made for a very nice break from the monotony of dark winter months on Spitsbergen.

Holiday time

Holidays were, of course, the nicest time. For two polar years, despite thousands of miles separating us from our home and family (over 3,000 km on Spitsbergen, and over 14,000 km on King George Island), we still celebrated our private events, such as wedding anniversaries, the Midwinter Feast, or the one-hundred-day mark before the end of our wintering on King George Island. But the most important holidays were Easter and Christmas.

In the Arctic, as Christmas and Easter approached, preparation duties were divided between expedition members. Through such cooperation, on Christmas Eve we were able to have our traditional Polish dishes of borsch, mushroom soup, carp, salmon in lem-

The PAS Institute of Geophysics was the originator and leader of EDUSCIENCE, an innovative educational project (running 2011–2015). More than 3,500 schools and 15,000 teachers benefited from the project. The aim was to raise the interest of children and young adults in mathematical and natural sciences through innovative teaching methods and communication with scientists, including employees of the Polish Hornsund Polar Station on the island of Spitsbergen. Students were encouraged to take part in the research and to use the research methods at school. The Institute staff supported these activities by providing over 6,000 educational materials. An eLearning platform was created for the purposes of the project, as well as a natural science website (www.edusciencje.pl with over 200,000 visits per year), methodological materials, 9 educational tours, and a nature monitoring program. The project was tested in 250 schools in Poland. Approximately 56,000 class hours, 254 field trips, 89 EDUSCIENCE picnics and 12 Science Festivals were held. No other academic institution in Poland has offered access to such a large number of educational materials to so many audiences. The project proved such a success that the Institute of Geophysics decided to continue it throughout Europe. Since 2016, it has coordinated the **EDU-ARCTIC** project funded by Horizon 2020 and implemented by 6 institutions from 5 countries (www.edu-arctic.eu). The chance to learn about the fascinating Arctic world and polar research is available to high school students across Europe. Researchers are able to bring the subject closer to students, thus encouraging them to take an interest in science and to pursue a career in a scientific field. Students from 30 European countries will have the opportunity to learn more about the work of scientists and the nature of polar regions thanks to online classes conducted from the Arctic, and even trips to polar expeditions. The project offers webinars with polar explorers, an environmental monitoring program, Polarpedias, Arctic competitions and workshops for teachers. All classes are free for teachers.

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on sauce, fried potato and cheese pierogi, and three types of cabbage dishes, including with peas and with mushrooms. There was also the traditional dried fruit compote, and for dessert we had cheesecake, gingerbread, kutia and Silesian poppy seed cakes. At the South Pole, most of the Christmas Eve dishes had been prepared by the cook who worked at the Arctowski station during the summer. Thanks to her, we had fancy Christmas dishes like stuffed trout and jellied carp. There were also great poppy seed cakes, the culinary debut of our colleague, as well as kutia, but we also had the traditional poppy seed noodles, borsch with dumplings, and cabbage pierogi. Almost like home, if not for the distance – which still seemed just as great during these special celebrations, even with satellite communication available.

In addition to tasty dishes, there were also presents, Christmas carols, a Christmas tree, and in the Antarctic we even had a Kraków Nativity scene and the traditional Christmas wafer, which made it to us undamaged, shipped in a box together with a board game. At midnight, we organized a Midnight Mass outside a chapel at the lighthouse, and thanks to the

satellite link and VOIP telephony, we could share Christmas wishes with our families back home.

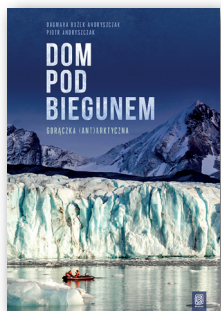
We celebrated New Year's Eve as well. In Hornsund we had saluted the new year with our weapons. In the Antarctic, luckily no one had the idea to launch the signaling flares, which could have scared off the penguins or sea lions. Part of the group preferred to spend New Year's Eve at the nearby Brazilian station, but we, along with a few members of the summer group, decided to celebrate it at the "Arctowski." After all, this had been our dream, even back in the days at Spitsbergen.

Everyday life

Although a distance of 16,252 km separates the stations, the average day of the people working at the two locations is in fact quite similar. It consists of daily shared meals, of work and completing their individual tasks, and – in their free time and in good weather – of trips to explore the area. The fact that everyone is away from their loved ones, in an inaccessible place where there are no planes landing or boats mooring on a daily basis, brings people closer together. They get used to the place and each other, and they miss it all when they return home. They miss the frosty beauty of the polar regions, the Northern Lights in the Arctic, the amazing Antarctic fauna, and the slower pace of life. They also miss the clean air. When we came back to Kraków we really felt the difference. In the polar world, the only sources of pollution are generators or waste incinerators, whereas natural scents are produced by penguin colonies and clusters of seals and sea lions. The air in the polar regions is refreshing, and it takes on a characteristic scent when the tide goes out.

The Arctic and Antarctic change people. Spending time there made us feel more confident. We realized that we can do many things in life, and we are only limited by our imagination. We were in a place that many people will never visit, much less spend an entire year there. We have represented Poland at both the northernmost and southernmost points of the Earth. We have worked for the good of education, and in our spare time we pursued our passions. We were far from civilization, but we felt we were at the center of the universe. When we returned, working at a corporation no longer satisfied us, as time sitting behind a desk felt even longer than usual.

Polar regions are places one wants to go back to. But in the meantime we have our memories, we have the polar friendships we made in such distant places in the world. And we have our book, *Dom pod biegunem* [House Near the Pole] about how we found our home-away-from-home at Spitsbergen and on King George Island. And about how a long stay away from civilization did not turn out to be just a hard-to-explain "gap in our resumes." ■



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Dom pod biegunem
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