

I'm delighted to answer your questions, attached are some pictures to show you a bit what working at the poles looks like.

1. How do you get to the Arctic and Antarctic? How long would it take from Derry?

Some people travel by ship, but we usually go by plane. One of the planes we use is an LC130 (Hercules), which has skis to let it land on the snow. To fly from Derry to Kangerlussuaq in Greenland in an LC130 would take about 7 hours. To get to Antarctica it would take a lot longer – several days, stopping for fuel along the way.



Figure 1: An LC130 operated by the New York Air National Guard. Our instruments are in the pod hanging below the air force star.

2. What did you eat when you were there?

In Antarctica we eat very well – a lot of frozen food! At a field camp the cook will dig a hole in the ice and use it as a walk-in freezer. In McMurdo station there is a cafeteria, with a famous soft-serve ice cream machine that you can eat all you want from for free. In Greenland food is very expensive, and there aren't many vegetables – we eat a lot of fish, and even Muskox.

3. How cold is it?

It gets pretty cold. The Celcius and Farenheit temperature scale give the same number at -40, and I have seen that in the north and the south. It can be warm in summer though, temperatures in the single digits (Celcius) allow water to melt, and sea ice will melt. In Greenland it can get up to 20C in the summer.

4. What type of animals did you see there?

We see seals, whales and seabirds like skuas in both the Arctic and Antarctic. Antarctica has penguins, and the Arctic has reindeer, muskox, foxes, hares. There is even a kind of arctic bumblebee "Bombus Borealis".



Figure 2: Arctic hares in Thule, Greenland.

5. Did you ever see a Polar Bear? If so how big was it? / What did it eat?

I have seen a polar bear once, from a plane – so it looked a lot smaller than it would have close-up. It was in the middle of its lunch – a seal that it had smelled through the ice. If you look closely at the picture, you can see polar bear footprints (but no bear). You can see where they stopped at holes in the ice to look for food.



Figure 3: Polar-bear tracks on Ellesmere Island, Canada.

6. Have you ever seen some penguins? What did they eat? Were they cute?

I have had Adelie penguins come through our camp in Antarctica. They eat fish, and really are cute, but they are also very noisy. They would waddle through camp and stand outside our tents in the morning and squawk. Quite a rude awakening.



Figure 4: Penguin looking at penguins. These are Magellanic penguins in Punta Arenas, Chile.

7. Are there plants and flowers there?

There are plants and flowers in Greenland. There are no trees, but there is low willow scrub, and heather. The national flower of Greenland is Fireweed – it is the first thing that grows on the bare ground left after a glacier retreats. There are also harebells, just like the ones we have at home. There are no plants in the parts of Antarctica I have visited, but some on the peninsula.



Figure 5: Fireweed and an iceberg in Kangerlussuaq, Greenland.

8. Have you met the Eskimo people? Do they live in igloos? What do they work as? What do they eat? How do you build an igloo? Does it take a long time?

I have met native Greenlanders, who are an Inuit people. They live in brightly coloured wooden houses. In towns there are a lot of the same jobs we have at home – teachers and policemen and shopkeepers. There are a lot of fishermen, and some nomadic hunters who still use dog sleds to travel across the ice. The local diet includes a lot of fish – other foods are imported from Denmark, and are very expensive.

I have not seen an igloo, but I have built snow shelters. You can cut bricks out of snow with a saw and build walls, or even an igloo with them. Sawing through snow is quite easy, but you still need a lot of bricks. It is easier to build a quinzee – you put all your bags in a big pile, and shovel lots of snow on top to make a thick layer. Then you dig a tunnel under the pile, pull out the bags and use the space to sleep in. That is fast – and takes about an hour.



Figure 6: The town of Ilulissat, on the west coast of Greenland. (photo wikipedia)



Figure 7: Sled dogs near Thule, Greenland.



Figure 8: My friend Mary Brown (left) and me (right) in front of the quinzee we built in Antarctica.

9. Did you enjoy travelling to the Arctic and Antarctic - what was your favourite place?

I really enjoy the Arctic and Antarctic, and my favourite place is Greenland. It is very big, and very varied – there is an ice sheet in the middle, that is just flat and white, and the edges have a bit more life – plants, and birds, and a few animals. I like best that there is a permanent population of people there. In Antarctica there are just a few bases with scientists that rely on their home countries. Greenland has small towns around the coast, and families live there. In the summer months the sun does not set, and you see children riding their bikes around town and playing football at 1 in the morning.

I asked one of the people I work with to take some pictures for you – Operation IceBridge is in Antarctica right now, and they say hello to P2 at Oakgrove.



Figure 9: NASA's P3 aeroplane in McMurdo station, Antarctica, November 2013. Mt Erebus (background) is an active volcano.



Figure 10: McMurdo station sea ice airfield, with Mt Discovery in the background.



Figure 11: P2 Oakgrove integrated primary school, with Mt Erebus in the background.