

Blueshift - January 19, 2010

Science at the End of the Earth, Part II

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Maggie: Welcome to the January 19, 2010 episode of Blueshift, brought to you from NASA's Goddard Space Flight Center. I'm Maggie Masetti.

Last month we shared the first part of an interview with Dr. John Mitchell about doing science in Antarctica. He talked about his project BESS, and why he has to trek to such a remote location to get the data he wants. Antarctica is a continent of emptiness and extremes, but some people call it home, at least for part of the year.

McMurdo Station isn't simply the largest Antarctic research center - it's Antarctica's largest city. Even if you're headed to the South Pole or another remote research location, you'll probably stop in McMurdo first. So what's it like there?

John: McMurdo Station is a rather interesting place. It's been compared many, many times to a mining town in the Midwest. It's located on Ross Island, which is a volcanic island, and it's mostly volcanic rock and dirt and indeed it does look actually very much like a small mining town. Across the McMurdo Sound from McMurdo is what's called the Royal Society Range, which is a mountain range named for the British Royal Society. Just gorgeous. Everything is lovely. It does get a little old after a few weeks, but it ages quite well.

Maggie: Though Antarctica may seem like an unfriendly place to visit, McMurdo Station has many of the comforts of home.

John: Well, in McMurdo we live relatively well. We have of course heated buildings - some people even think they're maybe a little too hot. An excellent cafeteria that actually also works 24 hours a day. It feeds the workers who work night on a different shift from the workers who work during the day. We have dormitories. They're not the world's highest comfort level, but they're nice.

Maggie: One of the most interesting aspects of doing science in Antarctica isn't where you go. It's who you meet.

John: At peak, in the middle of the summer, there are about a thousand people that live there. That includes everything from scientists to heavy equipment operators to janitors to cafeteria workers to artists and musicians. And it's a remarkable place because everyone there has a purpose. Everyone has a job. Everyone wants to be there. And it's bustling with activity 24 hours a day because, of course, we are in the middle of the Antarctic summer, and it's sun 24 hours a day, so there's nothing that stops it. The people that go down there are interesting, the work they're doing is interesting. There's wonderful work being done on Antarctic fish and crustaceans, smaller animals, plankton. The fish in particular are fascinating because they live in temperatures that are actually cold enough to freeze the blood in normal fish. They have in their blood a material that acts basically as an antifreeze, that allows them to keep from freezing. You share rooms when you're in McMurdo, and my first roommate happened to be the world's expert on these fish, and so I learned a lot more about them than I had ever expected to. My second roommate was a man that's an expert on volcanoes, so I learned a lot about volcanoes. And when I was doing a similar recovery from our 2004 flight, I shared about a week of camping with an expert on glaciers, and so I learned a lot about glaciers. None of which I would normally have learned anything

about as an astrophysicist. So it's a broadening experience.

Maggie: And Dr. Mitchell said you might find yourself learning some new skills, or tagging along for unexpected adventures.

John: Oh you get into all kinds of interesting things in McMurdo. The first year that I was there I learned to drive some of the tracked vehicles and as a consequence I ended up going out on a couple of parties to service dive holes, which are places where divers actually go in to study the water under the ice, and you have to clear those out periodically. And it's rather interesting because of course the seals see the dive holes as a unique opportunity to come up without a lot of work, and so anywhere you have the dive holes you also have seals. And so going out and driving out to help clear some of those dive holes was rather remarkable. And I've gotten to do other kinds of work and operate other kinds of equipment that I might not have had the opportunity to do elsewhere.

Maggie: Even though McMurdo is a small city in one of the most remote and empty places in the world, most visitors rarely find themselves bored.

John: One of the very interesting things that you notice in Antarctica is there's a great deal of effort put into keeping the people down there happy. There are lots of different athletic activities, musical events. They have what are in effect garage bands, but everyone loves them. Social events of various sorts. The world's southernmost bowling alley. And there are outside parties. There's even skiing. So it's an interesting place from that perspective. It also boasts the world's southernmost outdoor music event, known as Icestock, which is extremely well-attended and tremendous amounts of fun. And in recent years has also incorporated a chili cook-off. And oddly enough, I believe the last time I was down there the chili cook-off was won by the New Zealanders, which can't be explained in any rational way.

Maggie: Dr. Mitchell's trip out onto the ice to recover the BESS hardware was a success, and he's now headed back to McMurdo to pack up the instruments and prepare for the long trip home.

Want to know more about what it takes to get to McMurdo, and what it's like when you get there? Visit our website at universe.nasa.gov/blueshift. You can also follow our updates on Twitter, we're @nasablueshift. Send us your questions about doing science in Antarctica through our website, or on Twitter, and we'll see if we can get them answered for you. This wraps up our short series about Antarctica. Join us at the end of January, when we'll take you on another adventure. This is Maggie Masetti, bringing the universe closer to you, with Blueshift.

[Musical outro]