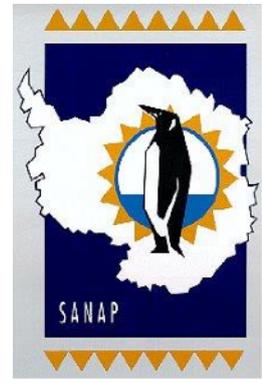




71° Below

**SANAE 57 Newsletter
November 2018**



Good day all! Once again this newsletter is frightfully late! It's almost Christmas and the take-over team has arrived and the base is bustling and busy once again. I will go into more details with that in the December newsletter. But for this one I will be focussing on answering two questions that I've received. Firstly, how has the cooking gone during the year? And secondly, perhaps best considered a sequel to the first question, what happens to all the food once it has left our bodies? For the squeamish readers do not be alarmed...you may safely read that section. It will be easily digestible! (*Sorry, couldn't resist!*)

Cooking at SANAE IV

A big part of this year was sharing the preparation of the team meals. Cooking expertise varied wildly. Many had never really done any cooking. A few had been a part of overwintering teams before, so cooking for 10 or more was no problem. Some were enthusiastic amateur cooks but needed to learn to cook for 10. All in all the team took the meals seriously and everyone put in thought and effort for every meal.

The team did attend a two day cooking course with Cooking with Kelly before we left Cape Town as part of our team training, which was excellent. We left with new knowledge and skills, and a cooking book which included some easy recipes and a lot of useful basic cooking tips and tricks. We used the cooking book a lot, especially in the beginning. There are some excellent chicken dishes, a great cottage pie recipe, and a very simple and tasty beef stew. But as the year went on we started searching the internet for recipes, just to increase the variety.

We did face a few challenges. Since we are only supplied once a year, when the SA Agulhas II arrives with the take-over team, we couldn't just run out and buy an ingredient that we didn't have. Also when items ran out we had no way of replenishing them. Thus recipe selection was largely based on what ingredients we did have, which curtailed our possibilities somewhat.

However, the cooking was also a lot of fun! Part of that fun was finding creative alternatives to ingredients that we didn't have. For example, when our actual onions ran out, and then the tinned onions ran out, and then the dried onions ran out, we tried pickled onions. This actually gives a surprisingly good flavour to the food! Sadly those ran out also, but take-over is close and fresh supplies imminent!

We had a large supply of frozen store-bought bread, but we wanted to actually bake fresh bread. There was a large stock of flour, but didn't have a large supply of baker's yeast. So we did some research and then made our own replenishable sourdough starter and baked sourdough bread! We made plenty of mistakes but eventually got really good results. It is very satisfying to watch the loaves rise, smell the fresh baked bread, then eat a warm slice dripping with honey! We experimented with seeds, herbs, cheese, and honey and cinnamon. Very tasty! We also baked cakes for birthdays, cupcakes, date fingers, biscuits, and plenty of other goodies!!

The best part of cooking, however, was the social aspect. Guys would often sit in the kitchen with the team that was cooking and just chat and relax, unwinding and connecting while the weather raged outside.

Below are some pictures of some of the dishes we concocted.



From left to right, top to bottom:

- one of our hearty beef stews
- pizza for ten on homemade sourdough bases
- roast leg of lamb
- sourdough loaves, 12 per week
- beef kofta, chick pea curry, homemade naan bread, and basmati rice
- grilled hake with a lemon butter drizzle, vegetable bake with homemade white sauce
- tartlets for ten...we overdid it a bit. We were eating them for almost a week!
- Koeksisters
- More tartlets (stewed dried fruit filling, homemade crust), pies, date fingers (3 varieties)
- Cupcakes
- One of our birthday cakes. They got more elaborate as the year progressed! This was the last one we made.

Waste Disposal



The twin vacuum pumps.

I have been asked this question surprisingly often. The stories of the harsh conditions faced by Antarctic explorers paint a picture of cold and discomfort, accompanied by undignified toilet facilities. Fortunately things have progressed significantly since the early 1900's. We spent the year in a modern, comfortable base replete with sophisticated waste disposal facilities.

Starting at the beginning we have normal household toilets and urinals which flush with a vacuum system, which uses a tenth of the water of an old cistern flush system. The vacuum is generated in C-block and is connected to all the toilets, showers and sinks throughout the base through a network of pipes. Grey water (shower and sink water) is piped completely separately from black water (toilets and urinals) until both pipelines empty into the buffer tank. This was done so that at some stage, in a future upgrade, the grey water can be reused to flush the toilets.

The buffer tank is a large, ventilated tank just next to the vacuum pumps. It collects all the black and grey water from the base and holds the waste while it passes through into the processing plant. The reason for this is so that should anything go wrong with the actual waste processing plant then we have a buffer that can hold waste water and we can continue to use the toilets and showers while the plant is being repaired.

From the buffer tank the waste moves into the actual waste processing plant (affectionately called the 'poo plant'). This is a brand new system that was installed last take-over. It comes housed in a single 6m shipping container which sits in the hangar. This remarkable device takes all the waste generated and passes it through a series of three tanks, each of which performs a different biological function. Varying types of bacteria in these tanks digest and breakdown the different waste components into a thick sludge. The sludge then passes through a membrane system that extracts almost pure water from the sludge. This water effluent meets the international standards established in the Antarctic treaty system and can be safely discharged outside into the environment.



The container housing the poo plant, residing in the hangar.

The sludge goes into a separate tank for storage. Once this tank fills up then the sludge goes into a large centrifuge (also housed in the poo plant) and is spun until quite dry. The liquid that is spun off goes back into the poo plant and is reused. The now much smaller volume of sludge goes into drums and is taken back to South Africa for disposal.

And that's how we go to the toilet! Possibly way too much information, but I hope you found it interesting.

Weather news

We are still experiencing some strong winds, but the temperatures are rising. We now have 24 hours of sunlight, with the sun just moving around the sky. Midday it is north-west, and at midnight it is more south-east.

Maximum temperature: -1.4°C (*not a typo! It's warming up!*)

Minimum temperature: -22.5°C

Average temperature: -12.1°C

Strongest wind gust: 37.8m/s (136 km/hr or 73.4 knots)

Camping Trips



Our camping spot at Grunehogna.

During November our request to go camping was approved. These trips are a way to test the vehicles and caboose (basically a caravan on a sledge) after being outdoors during the winter. It's also a good opportunity for the team to ensure the GPS and navigation equipment, which will be used for the cargo trips, are functioning. It's also a reward for the team to get out of the base and see some scenery beyond the base, before the madness of take-over begins.



Taking a walk to Valterkulten, all roped up in case of crevasses.

As you can imagine there are many stringent safety precautions that need to be taken, and a very long list of equipment that needs to be packed. I won't bore you with these but rest assured they are extensive!

We took two of the base vehicles, the caboose, and the technical sledge, which contains spare fuel, extraction equipment and a snowmobile to be used in case we need to get back to the base in a hurry.

We arranged two trips to ensure that everyone who was keen had the chance to come along. There has to be a minimum number of people back at base to keep things running.

During the two trips we visited three of the nunataks south of the base. Firstly was Valterkulten, then Schumacker, and finally Grunehogna. It's strange to think that these nunataks we visit are really the tips of mountains sticking above the glaciers, while we drive over the thick ice that covers deep valleys and smaller mountains.

Being South Africans we, of course, braai'd every night, enjoying the good weather to the full. It was an absolute privilege to be able to experience this!



Cobus, Sabelo and Foster hiking up Grunehogna.

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