

Iceshelf 2002

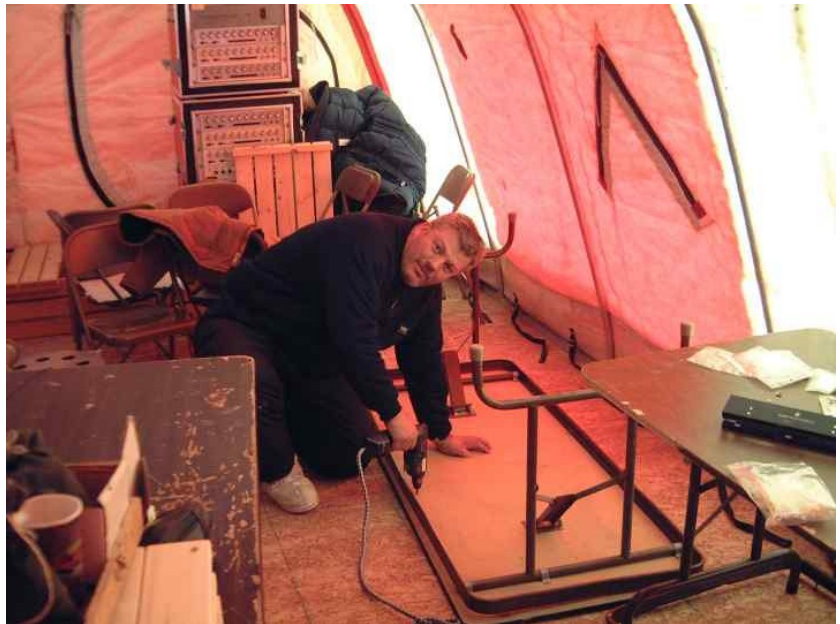
Newsletter #6,

8 April, 2002 (Monday)

Darryl Gittins is still ditributing these emails for me, but please reply to me at (*address deleted*). Please don't use Jim Milne's email address.

Today began bright and clear. (Actually, it was bright and clear at midnight.) People were up and having their first coffee at 0530!! The DREO people headed off to install a hydrophone and wire up the Icepicks that they installed yesterday. Don Mosher worked on stoves for Dorothy. Her fuel-oil stove is leaking oil, and the propane stove was leaking propane. The propane stove was easy to fix – some of the fittings were a bit loose, but the fuel-oil stove is a harder nut to crack. Don's still working on that one. Between the two of them they had three little fires in the kitchen. Don has discovered the usefulness of snow in putting out oil fires. Once again Dorothy showed her stuff as a superb camp cook. She didn't have a stove until 1700 and she served a roast beef supper to twenty at 1900.

Jacques Rouleau, Ivan Bond and Mike Haggarty finally made it out to camp today. They have been working on electronics and other equipment back at Alert. The hope is that by the time the camp is up and working, the equipment will be working, too. Garry has kept them hard at it, and they haven't had the opportunity to visit the camp. Jacques has had a bad cold, and it is good to see him looking so much better. The first picture shows him assembling shelves and tables in the 'Science Tent'. Later, he, Ivan and Mike helped the rest of us haul half-ton ice chunks out of the Phantom hole.



Francine, Val and I used the hot-water drill to cut a 4x8-ft hole through the ice for the Phantom – our remotely operated underwater vehicle. We cut the ice into 8 sections, each weighing about 1000 lbs, and hauled them out with a big skidoo and our A-frame. This, again, was a training session for Val and Francine; Garry is concerned that there aren't many people left at DREA who know the idiosyncrasies of the hot-water drill. This time around, Francine operated the hot-water heater, and Val operated the hoses and underwater equipment. I watched, brought them fuel and such things and kept them out of serious trouble. They both did very well. Francine had the usual number of tiny explosions, over-heatings and other problems, but in every case she shut the equipment down very efficiently before she hollered, 'RON!!!'. It will be Val's turn next time.

I was heading off to the fuel cache to get Diesel fuel for the drill when the newsworthy event of the day began. I was trudging along minding my own business when I looked up and saw something moving – something with a slightly yellowish tinge. I looked again, and, sure enough, it was a bear. I was flabbergasted. In all the years I've worked around Alert in the spring I haven't seen a bear. We've seen tracks a couple of times, but never a bear.



After swearing at it (futilely, of course) I got out the gun and made sure that everyone in camp knew about the bear. And, of course, we called Alert to let them know, too. All work stopped at the camp. People were quite concerned, but they were also extremely interested and very keen to get pictures. The bear also seemed interested and it hung around for some time. It even lay down and watched us for a while. However, it never got closer than about 100 m. After a while it moved off toward Alert, and a little later it was seen moving off toward the north of the runway. Hopefully, he/she was heading toward the shear zone that demarks the moving ice to the north and the stationary ice to the south. There is much open water in this area, and presumably there are lots of seals, too.



The bear picture was taken by Francine, and the picture of Nicole Collison comparing the size of her paws to that of the bear was taken by Garry.

I'm losing my reputation with this bunch. I said that the winds were usually calm, that it hardly ever blew hard and if it did it would

blow for only a few hours. So it stormed for two days. Then I said that bears were very rare in Alert. In over ten years we had seen tracks a couple of times but never a bear. So, a bear walks by and proves me extremely fallible. They're asking things like, "Say, Ron, are there penguins in the Arctic?" Luckily, I can still do a few things for them. Finding thin ice outweighs a lot of faults.

Morale is still very good. We continue to work hard and have a good time doing it. They are a great bunch to work with.

Best wishes to all,

Ron Verrall

Newsletter #7,

9 April, 09:30 (Tuesday)

Last night we maintained a bear-watch. We paired-up and took two-hour watches between 11:00 and 07:00. It was a beautiful night with the sun well above the horizon between 0300 and 0500. (I can't honestly say where it was at midnight.) The sea, the cliffs and the mountains were cold, remote and lovely in the early morning light. I should add that we didn't see any bears.

This morning we learned that the bear was still down at the end of the Alert runway and that people were keeping an eye on it. Here at the ice camp things are returning to normal. We did finish the ice hole before supper yesterday, even though the bear-delay caused some of the fittings and hoses to freeze up. Getting them operating again was good training, too. One doesn't learn if nothing ever goes wrong. The DREO recording site, which is a somewhat remote from the main camp, has given itself a new radio call sign this morning: "This is *Bearbait*". Gallows humour!

9 April, 23:30

It took a long time for this camp to get a name. Some wanted to call it Windy Acres in remembrance of the first couple of days. The other chief contender was 'Camp Paradise' so that we could truthfully say, 'Another day in Paradise'. A straw vote over lunch today was that the kinder, gentler name should prevail, so we are now Camp Paradise. Garry and I ran into Alert for a few hours during the late afternoon, and when we returned we were met by wooden signs nailed to small wooden posts pounded into the snow. The one at the entrance to the camp said, 'Welcome to Camp Paradise'. The Octagons were all named, too. Ours is 'Fantasy Land'. Francine's and Nicole's is 'Windy Acres'. I assume both names say something about the occupants. Other names are 'Al, Val and Pal', 'DonR, DonM and Chief Surveyor' (Gordon Ebbeson being the 'Chief Surveyor'). Another was 'Vacant', but that won't last long. It's now occupied by Haggarty, Bond and Rouleau.

Don Mosher and Kevin Whalen stripped down the kitchen fuel-oil stove today and found that the pot in which the oil burns was rusted through in a couple of places - hence the dripping oil and the occasional flare up in the kitchen. The pot was removed and sent back to Alert for repair. Our fingers are crossed that they can do something effective. In the meantime Dorothy has to do with her one propane stove, and the kitchen tent is being heated with one of our little stoves. The outside temperature is minus 30'ish, and we really need the big oil-burning range to keep the big tent comfortable in the evenings when the temperature dips and the sun goes behind the island. Yes, the solar heating during the day is substantial.

10 April

The DREO people out at Camp Bearbait are busy making measurements with their hydrophones, Icepicks and other seismometers. One of the acoustic sources that they use is the breaking of light bulbs (under water). They were very frustrated this morning since the fancy bulb-breaker that had been brought from Halifax wouldn't work. Garry says that the hole in the sliding weight (or hammer) was not drilled according to specs. It is much too small, and it won't slide smoothly over the ice- and snow- covered wire. Clearances need to be bigger. At Stan Dosso's request I rustled up a short length of pipe, a hoseclamp, a piece of wire and a length of string. In twenty minutes we had a working bulb breaker. Viva simplicity! It's ugly, though.

Garry and some of his technician have been setting up the 'Science Tent' in preparation for the installation of the various arrays. Nothing has been installed under the ice yet. The vertical array will be installed soon, but all horizontal arrays will need the services of Phantom, and it is still being kept warm back in Alert. And, although Jim Milne is a good Phantom driver, our principal

operator, Mark Rowsome, isn't here yet. He is scheduled for tomorrow's Rotator, and we already know it will be at least one day late.

Gordon Ebbeson and I went out this afternoon to test out the Geodimeter, DREA's new surveying instrument. We had – shall we say – only moderate success, and Gordon is presently studying the manual with even greater vigor. It's one of those menu-driven instruments, and there are no nice simple rotating knobs that are so necessary for old guys like me. Even the level bubble has been replaced by a LED picture of a level bubble. Now I ask you!!

All is well here. We maintained a bear-watch again last night, but the bear when last seen was heading northwest toward the sheer zone. And from the water-sky in the northwest I deduce that there is lots of open water out there. If I were a bear that's where I would be going.

There are three pictures today. Two are of Camp Paradise, and the third is of me diligently watching for bears on the 0300 to 0500 shift. I figured that there was no reason not to be comfortable. The Black Cliffs are in the background.

All for now.

Best wishes,

Ron Verrall





Newsletter #8,

11 April, (Thursday)

Francine and Nicole have returned from a short stay at Alert where they had a good night's rest away from all the work and away from a heating stove that alternately roasted them and froze them. Anyone who reads into these emails that we have too much fun should have seen how tired Francine looked. Fortunately, she now seems to be back to her cheerful self. Don Richard, who also works extremely hard, is also back at Alert getting a bit of a rest and nursing a cold. Luckily, Jacques Rouleau is pretty well over his cold, everyone else seems to be in fine fettle.

The DREO people (and Stan Dosso) are hard at work testing their Icepicks. They are using a variety of underwater noisemakers to produce acoustic signals, and they seem to have a routine that is working well for them. Their hardest problem now seems to be finding ice that is thin enough. They are happy with 12-ft ice, which corresponds to two-year-old ice. Anything thicker is *really* thick, and they have neither the drills nor the enthusiasm to drill deeper. One of the noise sources is the so-called BATS (Broadband Acoustic Transmission System), developed by Denis Jones at DREA. The radio call sign of the travelling party operating the BATS is, of course, 'Batsmobile'.

In the evening I went out with Stan Dosso to help him find thin ice. (I do a lot walking on thin ice around here...) Nicole, who also is interested in understanding the nature of Arctic ice, came with us. She says she wants to be the 'sorcerer's apprentice'. I say that flattery will get her anywhere. At our first stop we shovelled down to the ice and found beautiful, smooth ice that looked just like the six-ft ice around the camp. Bingo! We got out the 4-inch drills to check the thickness, and we went down and down, getting more and more discouraged. When we had used all our drill stems and had gone down 14 ft we gave up. I think we had been drilling on a refrozen melt-pool, which is a small frozen lake sitting on a thick old floe. The next spot we tried was, indeed, only 6-ft thick, and we regained some of our lost confidence. The DREO people hustled over to the new hole and started their acoustic experiment, and we went looking for more thin ice. Nicole spent five minutes lying on her stomach on the smooth ice investigating all the air bubbles that seemed to have frozen suddenly while rising through the water. Why did they stop before they reached the surface? Or does gas continually rise up against ice while it is getting thicker and thicker?

Tomorrow will be the last recording day for the DREO experiments. They will use the kytoon to drop one last Icepick, and they will record its output as soon as possible after impact. They are interested in the rate at which the ice sinters around the pick – the rate at which the local 'noise' decreases.

Luckily for the kytoon, there has been no wind around here since it was first brought out. It just sits there, tethered at 100 ft. It will go back to Alert with Mike Vinnins and his people when they return tomorrow.

Yesterday afternoon, Lloyd Gallop, from DREO, installed corner reflectors for Maureen Y Jeremy (DREO) who wasn't able to come north. She works with image information (pictures, etc.) from a radar satellite, and she wants to know how well she can determine the boundary between the sea and the snow-covered land, especially when the land rises slowly out of the sea. The pictures that I have seen give a clear demarcation between the two, but there is no guarantee that this demarcation is in the right place. The corner reflectors will help give some confidence to this assumption. They reflect the radar very strongly and will produce a bright spot on the image. Lloyd placed four of them along a shoreline where the reflection is normally rather weak and where the reflectors will show up strongly. Maureen will be able to see the reflectors on the image, and she will be able to verify that the shoreline is actually where picture says it is. I believe the next satellite pass will be on Saturday (13th), so we will get some feedback shortly.

12 April

Yesterday afternoon we installed the vertical array – known as the VLA (Vertical Line Array). Unlike the horizontal array, it is easy to install; it requires only gravity for an assist. The horizontal arrays, on the other hand, need a line under the ice between two holes. This means that Phantom is required.

We drilled an 8-inch hole with a power-head driving the drill, which was a new experience (also called training) for the new people, and the VLA was lowered without incident. Not only that, it worked a treat, and so did the data acquisition system. Everyone was pleased and relieved. Francine, who is the principal user of the VLA, collected data last night, and she now is busy making everyone be quiet while she collects lots more. (People walking around, or even talking, pollute the acoustic data that she is recording.) Luckily for the rest of us, her recording periods are fairly short.

A new contingent of people arrived at Alert by Hercules today: Mark Rowsome and Dave Thomson from DREA, Jason McInnis from MDA (McDonald Dettwiler), Bob Creber and Chris Fletcher from NRaD, San Diego, and Kevin Amundsen from Benthos. They're still being settled away in Alert. They will probably come out to the camp tomorrow or the next day – after the DREO people have gone back to Alert.

We still don't have a working second stove in the kitchen hut. One of the results is that the tent gets rather cold in the evening. The other result, of course, is that it makes Dorothy's job harder. Richard Van Der Pryt is trying to organize the fabrication of a new stove pot. We wait with bated (and cold) breath.

The picture today is of Al Tremblay working in the Spinnaker building. Al has been very busy organizing equipment to go from Alert out to the Icecamp. He organize and helps build the loads, making sure tha equipment goes out as it is needed; he repairs equipment and he help everyone else with the problem of the momer Somehow he knows where everything is at all times – an extreme valuable resource. Now that the main camp build-up has been completed he is out at the icecamp keeping u all organized there. H works very hard, and we appreciate it very much.

Best wishes, Ron Verrall

