

LOG OF THE EXPEDITION

Part 1 - Heading For Heard



1997 - Reunion Island

Peter ON6TT and Arie PA3DUU were the first to arrive, one day after Christmas. It was a good decision to come early: one of our containers (the one carrying the precious tractor and wagon!) was missing. Well, not exactly missing. Apparently the ship was delayed, and for several days it was not at all clear that it would arrive before the Marion Dufresne left. Silently I reviewed what was in the container, and whether we could do without it. Nope. We had to have it. It was no small relief when the guys walked into the corporation yard of the shipping agent and found both containers there. Of course, I had the keys, so they simply used boltcutters and broke the padlocks. Inside they found a kit for a small city. Just add water and gasoline and you're operational!

The team was hosted by local hams, particularly Philippe FR5DN and Patrick FR5FC, who put us up in the village of St. Giles les Bains. The village is about an hour from the airport but quite near the Marion Dufresne. It is a quaint semi-tropical resort, with pool, outdoor bar, and bungalows. It was very hot and humid, not particularly good for acclimating the team going to Heard Island.

Soon the other team members started appearing: Ralph KØIR and Glenn WAØPUJ (sporting his new callsign WØGJ) from Minnesota. James 9V1YC, from Singapore. They moved into the bungalows, and almost instantly put Reunion on the air as TOØR. During that first evening, they dragged a table, chairs, transceiver, generator, gasoline, computer, and a Gladiator 160 m vertical antenna a quarter mile down the beach, and set up a station under a picturesque wooden kiosk. The antenna was installed in the ocean, and it tuned well. Not surprising, they were rewarded with a huge pileup. The greatest threat came not from band cops or the lightning strikes, but from the several drunks who patrolled the beach. At 3 AM, the beleaguered and exhausted team packed it all up and retreated to the safety of the bungalows.

With the team on the move, Martha and I spent a blissful week in England. We made the obligatory tours through Westminster and the Tower. On Christmas morning we made a pilgrimage to the church where the body of explorer Sir Richard Francis Burton lies, together with that of his wife Isabel. Denied entrance into Westminster, they repose in a plaster tomb in the church garden, designed to look like an Arab tent on the outside (for him) and a Catholic chapel on the inside (for her). The fact that Isabel had committed the literary crime of the century by burning Burton's diaries when he died was on our minds as we gazed in through a

clear window at their wooden coffins. Although a century of time and an ocean of culture separated us from them, we shared a bond of love for faraway places. And Heard Island is *very* far away.

I began to head for Heard from Heathrow, on Dec. 31. The young lady at the British Air counter explained that my excess weight charge would be about \$2400! No, no, I said. Yes, yes, she said. No, no, no, no, I said. She recomputed it: \$400. As I stood for 30 minutes trying to pay this ridiculously exorbitant fee, my plane took off for Paris without me. I sat down to wait for another.

Some four hours later I finally arrived in Paris, and took the bus to Orly airport. There were my teammates! Al K3VN (WA3YVN), Bob N6EK, Wes W3WL (W8FMG), Bob K4UEE, Mike N6MZ, Michel EA8AFJ, and Ghis ON5NT. But where was Carlos NP4IW? Not here, we all said, but no one knew where he was. He had flown into Paris with Bob N6EK, but had not appeared at Orly when we expected him. As we flew away toward Reunion, we were mystified, and worried.

The flight to Reunion was not easy. It was hot, noisy, smoky. I think there were about 250 babies onboard, all of whom wanted us to know they were not happy. There must have been an equal number of smokers, seated in concentric circles around me. I maintained good British decorum by wearing my coat and tie, and scarf, even though we were flying across the equator into the tropics.

Peter and the others were at Reunion waiting. They had news:

"Telegram from Carlos. He got as far as Paris, turned around, and flew immediately back to California."

"What's the problem?" we asked. "Is he OK?"

"That's all we know now," they said. "Apparently it's complicated." We knew we would have to check on him, but right now there was much to do.

Ralph and Glenn inspect some of the supplies for the expedition.



The first thing I wanted to do was see the gear. Although hot and tired from the flight, I insisted that we go immediately to the Jules Roy corporation yard. While some of the team continued on to the bungalows at St. Giles, several of us opened the containers and gazed on the sublime beauty of 2500 cubic feet of expedition gear. While Ralph and others fawned over the generators, I leaped at the tractor. Much to the amusement of almost everyone, we pulled off the flimsy crating, attached the steering wheel, and installed the battery. Then, in a moment of glory I sat on the seat, turned the key, and roared with delight as it's engine came to life instantly. Triumphant I careened around the yard, waving and grinning. But when I invited the others to try it, they demurred and backed away. Hmmm, I mused. They're not yet convinced about the tractor, but they will be, I thought. On Heard Island, where everything will be heavier, they'll be convinced.

Then Peter told us the news:

"Guys. We have a problem. The French Maritime Services, a kind of union all over France, is going to go on strike. It will delay our departure. Unless something changes, it could cost us two days on Heard Island."

To us this loomed like a major disaster. Projecting additional lost time due to high seas, delays in landing due to bad weather, and the possibility of having to leave early if an emergency or storm arose, we were looking at perhaps 10 days of operation. Killing two more days for a strike was atrocious. We reacted angrily, but it did us no good. We would meet with the boat officials on New Year's day. Until then, we could only fret.

Back at the bungalows, we talked over the situation and strategy. We were in total agreement: Heard was priority. If that meant compromising our visits to Crozet and Kerguelen, so be it. Heard had the priority. That was it. Agreed. Period.

Some of our precious cargo is loaded on the ship.



January 1-4 - Preparing to leave

New Year's Day. Ralph, Peter, Willy, and I boarded the Marion Dufresne. We were introduced to the captain, Patrick Regnier, and the operations officer Claude Chaufriasse. The captain was in his late 50's, trim and handsome, with a booming voice that sounded like an organ pipe. Claude was your idea of a perfect uncle: cuddly, smiling, gentle, strong. Claude explained, in French:

"The strike is scheduled from 1500 on January 3 to 1500 on January 5. It's confirmed by TAAF. The strike is mainly concentrated in France, but the crew of the Marion Dufresne decided to go along with the strike as a sign of solidarity. There is no chance of avoiding this. We cannot leave before the 5th."

We sucked in a nervous breath. Peter spoke for the four of us:

"We understand. We want to emphasize how important it is to get our team on Heard Island by Jan. 11. It is absolutely essential in order to keep a schedule with our radio satellite. Missing that date will compromise all our subsequent operations. This will be very damaging worldwide, and would damage the image of TAAF and the French research program."

Peter's explanation was only a slight exaggeration. We were concerned also about Crozet. A brief stop there was planned on the way down, but if the weather was bad, it could further delay our arrival at Heard. Claude responded:

"I propose that we leave at 1600 on Jan. 5 and go directly to Heard, bypassing Crozet. That would put us at Heard on Jan. 11 or 12, on schedule."

We gasped, and smiled. Just what we hoped for. All it took was approval by TAAF. By mid-afternoon, approval was relayed from Paris, and we had a plan. The word was flashed to John ON4UN, who put it out to the Heard internet reflector and the world.

Now we relaxed. Four more team members arrived. Two more to come, and we would be 20. At 3 o'clock we assembled at the bungalows for the first group meeting. For some it was the first time they had met. For others it was seeing close friends. We sat around in a huge circle and I gave each one a copy of the Participant's Handbook. To me, the Handbook seemed like a terse summary of resources everyone would need. To the recipients, it must have seemed like the Manhattan telephone directory. It was about 150 pages long. I told them they should read and master it all, quickly, please. In retrospect they must have thought me mad.

That afternoon, Arie PA3DUU snapped a photograph of Glenn with his digital camera. At the home of Patrick FR5FC, he logged onto the internet and uploaded it to Andre ON1AIG in Belgium. Andre forwarded it to Don N1DG in Duxbury, Massachusetts, who posted it on the VKØIR web news pages. That evening, Glenn telephoned his wife, only to learn that she had seen his picture on the web before he knew it was there!

I telephoned Martha, who was by now back home in California, and asked about Carlos. She explained that he had simply had too many family and business complications to deal with, and as sad as it was, he simply could not vanish for all of January. Besides, she said, he needed Heard Island (hi hi)!

Sometime during the day, Willy moved onto the ship. He did important things like arrange for the crates to be packed, secure storage space, and find the laundry rooms. He also installed his FT890 (the same one he had taken to Peter I) near the

bridge and hung the Fritzel dipole from the superstructure. We were on the air with TOØR/mm/port (just kidding!).

During the night, the 160 m gang had been at it again on the beach. The glow inside the large open wooden kiosk created a feeling of high mountains, even though we were on the ocean. The team concentrated fiercely, and racked up QSOs. I stood by as an observer. Somewhat to my surprise, some mild aggression, the kind seen in freeway drivers, emerged. Away from the radios the guys were open, friendly, and generous. While within 2 meters of the radio, they did a bit of posturing, a bit of demonstrating. I took all this as a good sign. They were eager to get going.

The experience on 160 m was fascinating. An interesting note came from Jerry WB9Z: "TOØR had a very nice signal here last night, interesting they were coming in over the north east, the same direction as ZS8IR a few weeks ago."

Reporting this to the Heard reflector, John ON4UN editorialized:

"These are the kind of crooked paths that we will have to expect on 160 meters (and even the other low bands). During winter in the northern hemisphere, signals tend to travel as long paths as possible. A typical example well-known in Western Europe is the path to ZL, which comes across South America during European summer, across Central America during the equinox period, and across North America during European Winter months. This means that the direction the signal arrives shifts a full 90 degrees with season."

John's comments were a deliberate heads-up of what might be expected from Heard Island.

The next day, January 2, was moving day. Our two containers were trucked to the ship and we watched as they were lifted by crane and set on the deck. To our astonishment, one container was apparently too heavy, so we partially emptied it on the dock. I gleefully jumped on the tractor and rode it around the dock, to the ridicule of almost everyone. Still no one would drive it but me.

At that point, Bob Allphin K4UEE came up to me and said:

"You know the e-mail messages we left with Patrick last night to upload on the internet? Well, the dog ate them."

"You're speaking metaphorically, of course" I said, one eyebrow raised high. Arie was standing nearby:

"Don't laugh! The dog ate them! That is, the dog ate the disk!"

Later in the day, I got a ride to Patrick's. Sure enough, we had left the disk on a table on his front porch, waiting for him to return. The dog had chewed it like a plastic bone. The forlorn thing was in pieces, covered with dog tooth marks. Naturally, the messages were unrecoverable.

While at Patrick's, I took the opportunity to use his internet connection in real time. I needed to make some small but crucial changes in the VKØIR home page. I was very nervous. For the next month, all access to Heard Island news was going to be through the web home page. If I broke it, I would be the DX goat of the century. I used care like I would use were I defusing a live bomb... Got it! Web page still worked! I reached for a beer.

In the afternoon, the entire team moved onto the ship, and we began the series of daily strategy meetings. I took it as a good sign that when I arrived at these meetings, on time, everyone else was already there.

January 3 and 4 were workdays on the ship. We pulled everything out of the two containers and repacked it in landing crates and bundles. The helo could lift up to 1 ton, and it was necessary to make up packages that weighted no more than that. The generators were run and then drained again. Bob N6EK recovered all the computers from the outhouse—er, shipping container—and set them up in his cabin. Willy produced the extensive set of brass propane fittings he had made up in Switzerland. The green army transit cases were stacked five high, and the ones containing the Alphas were segregated. We opened the package of large white plastic canvas bags and loaded them with coax and other items that could withstand piling and tossing. The outhouse urinal was removed and outfitted with a funnel and plastic tubing for rapid deployment on Heard Island. Willy directed the filling of the French landing crates, each about 5x5x8 ft, sorting the items by type, location, and priority. The food alone used three of these crates. Two transit cases containing our primary landing tools and emergency gear were repacked and marked. One landing crate was filled with all the gear for a complete radio station: shelter, generator, lights, radio, amplifier, antennas, tables, and chairs. It was marked for deployment away from the main village. We used the hose to rinse the eight water containers and fill them with fresh water. And of course, I jumped on the tractor and rode it around the deck grinning widely, as if it was the first time I had done that.

This *was* the first time the team had actually worked together, and I was both surprised and pleased at the result. No one seemed to hold back, letting others do the hard work. Every team member was there, volunteering, men doing men's

Packing the boxes



Labeling the shipping cases.



work. Most carried their handbook around with them, using it to find items on the packing lists. They had a penchant for using big black markers to write on the crates and cases: "Priority" "Needed immediately" "Do not use" I was not successful in conveying the fact that such marks are counter-productive, since they rapidly become obsolete. It was of little consequence, however.

All afternoon, we sorted gear and filled crates. Every now and then we would clear the deck and enormous trapdoors would open, big enough to lower a 20 ft. container through. Up would come more crates, and then the trapdoor closed and we returned to our sorting and packing. We looked at our 5,600 liters of fuel, 600 liters of propane, 3,500 liters of water, 2 tons of food. The weight was reported to be variously 25.6 tons to 35 tons. Whatever was correct, we were impressed.

The next day, Jan. 2, the 160 m operation now shifted to the dock in front of the Marion Dufresne. A full-sized 160 m dipole was strung from the ship's rigging, the feed line snaked along the dock to the table next to the van. Later, Willy, who is from Switzerland after all and apparently likes high places, made an incredible climb up a gigantic tower on the dock, to the very tip, probably 200 ft. high, carrying the antenna slung on his shoulder. At the top he attached one end and let the other end drop. After re-attaching that end to the ship's rigging, they pulled it up, and the antenna floated horizontally, in the clouds it seemed. The feed line dropped straight down to the table on the dock. There, in front of God and the curious, KØIR and WØGJ and K4UEE and RA3AUU and N6MZ and W3WL spent the night, while the rest of us slept.

The eve of our departure was one of celebration. The ship's bar did a brisk business. As the hour got later, the music and laughing got louder. I began to identify which of our team were up to the challenge; it became clear that some had more experience with ships' bars than others.

One of the daily meetings held aboard the vessel as we sailed south toward Heard.



January 5-10 - Sailing to Heard

TOØR finally went QRT, with 411 160 m QSOs from 50 countries in the log. The logs were posted on the web server, and the hit rate skyrocketed. We got a message from Lyndon that more than 1500 people had subscribed to the Heard reflector. John ON4UN was posting bulletins to the reflector, and our wives were calling wondering if we had left. It was time to get going! We had a public waiting out there, hungry for Heard Island!

Sailing was scheduled for 1600 local. Most of the team elected to stay close. Missing the boat would no doubt be followed by voluntary leaping into the volcano. We had our customary group meeting right after breakfast. Bob N6EK told us about the computers and the logging procedures:

"I have set up a computer next to the radio, and this can be used for practice while working the pileups. Before you operate, you must write on the paper station log. When you finish operating, you make another entry. This will give a reliable means for correcting any computer or logging errors."

I was inwardly glowing. The handwritten station log was one of numerous ideas that had emerged from the Easter Island XRØY expedition. It was good to see we were progressing.

"I think we should have a radio and computer just for practice, without any pressure to work pileups," I said. That idea wasn't so popular. Almost no one could fathom why we would need practice. I kept quiet.

Around two in the afternoon, several of the French hams arrived to send us off. One of the well-wishers was Conchita FR5GQ. We found her to be a delightful person and good friend. She brought us about six quarts of her homemade special fermented tea for use on Heard Island. Each bottle had a label that said it was for the VKØR [sic] team. We accepted them gratefully and added them to our stash of liquor, alongside the Tanqueri, Jim Beam, J&B, and Captain Morgan's spiced rum.

Gradually the official cars and delivery trucks disappeared, and most of the guests drifted away. The ship's horn let out a mighty blast, and the gangway was lifted off the dock and tied to the rail. The last of our crates was lowered into the hold at 1536 hours (local), and at precisely 1600, an hour after the strike officially ended, the Marion Dufresne—all 120 meters of her, all 10,380 tons of displacement, her two dining rooms, forum, lounges, video-conference rooms, sports hall, library, verandah, hospital, pharmacy, 1000 tons of fuel, 30 tons of kerosene, 550 tons of fresh water, twin landing craft, three diesel generators producing 8 MW of power driving two propeller shafts, 2 flap rudders, and bow thrusters, her 31 labs with 650 square meters of floor space, winches, cranes, electronics, inflatables, her crew of 25 and a hundred passengers—backed away from the dock and pointed her bow south.

What was *not* aboard, to our consternation, was a helicopter. An hour out, as we scanned the horizon, a speck appeared and grew into a helo, and it settling gently on the big H painted on the stern deck. We were aghast. It looked like a toy, something to hang on your Christmas tree, perhaps. To make things worse, the pilot looked for all the world like a pizza cook, and he had his 11-year-old daughter with him!

Our fears were unfounded. Soon we came to understand that this is a Lama helicopter. It may look small, but boy does it have lift! It is rated to pick up a ton. By now we had totaled our gear at more than 30 tons. We were impressed when we learned that the round-trip sortie time at Heard Island was about 3 minutes. The arithmetic was easy: 30 trips, 90 minutes. While we were low on every estimate, it made us feel better. As we got to know the pilot, nicknamed Tonton (which means uncle), we came to realize that he could very well be our secret weapon. His skill alone might well determine whether we could make the landing on Heard Island by helo or by boat. Tonton turned out to be all we could have hoped, and we began to be very protective of him.

As we sailed smoothly south, I took a turn around the ship, seeing some of it for the first time. On the bridge is a transparent plastic panel mounted in part of the deck that overhangs, allowing you to look straight down about a hundred feet directly to the ocean. When I stood on it, my entire skin felt like I was awash with crickets. The forward-looking windows on the bridge have neat wipers and freshwater sprayers, just like my Nissan Sentra. The entire bridge is open; crew and passengers roam freely among the islands of instruments. The door to the bridge is connected to a switch that automatically douses the white passageway light and turns on a red night-vision light. Nearby is a small library stocked with hundreds of classics in many languages. The dining room has a video player that accepts NTSC tapes. There are dozens of small meeting rooms and labs. Everywhere are rubberized non-slip mats.

Willy gave us a tour of the radio room. For the first time we saw the inmarsat that we would have on Heard Island. It looked exactly like a briefcase with a telephone handset on the top. Willy explained that to use it, you just lift the handset, dial 011 and your number. Anywhere in the world. Of course, *we* had an unlisted number.

Peter explained that we would have four phone lines: (1) regular telephone; (2) fax; (3) data; (4) answering machine. Instantly we began to invent the message for the machine:

"Hello. You have reached the Heard Island Expedition. For a QSO, press 1 now. To make a suggestion, press 2 now. To reach the galley, press 3 now. To reach a member of the team, dial the extension now. For an operator, please listen on 20 or 40 meters."

We thought of installing a 900 number, and paying for the trip by collecting fees. We figured that it would be no use explaining to a wrong number where we were. We gleefully anticipated calling Australia to order a pizza, delivered; most of us didn't believe we would get it.

At dinner that night I recognized Hal Heatwole, the biologist from the 1983 VK9NS expedition, and I introduced myself. He in turn introduced Myriam Preker, a Canadian biologist living in Queensland, Australia. Both Hal and Myriam were on a quest for tardigrades, he for terrestrials, she for marines. We resonated, and for a short time I considered abandoning the radio team, eloping with Hal and Myriam to become a tardigradophile (just kidding!). After all, I had a permit to collect tardigrades on Heard Island.

January 6. Our first full day at sea. Hal was at our morning meeting:

"You should have very little difficulty siting your aerals. The terrain is not the problem, but the wind might be." We'd heard it before, but now it was beginning to take on some greater reality.

As well-prepared as the team was, it was clear that the meetings were essential. The team worked phenomenally well together, but I had some trouble getting them to take the next planning step. There seemed to be a general feeling that the equipment was packed and we had the manual, so any problem that came up could be handled on the spot. I harangued them about being totally prepared before we landed, so there would be no time lost to confusion. I emphasized that we must work for efficiency. I felt guilty talking to a talented team like this. But I knew I had to. They had to understand that when we landed on Heard Island, we would not have time to figure it out. Every man had to know exactly what he would be doing, and how to do it. The tools and materials had to be in the right place, and the timing had to be right. I gave them a criterion:

"If we're prepared correctly, no one will need to say anything. The less talking there is, the better we are."

The team listened and learned very well.

Peter took his turn at the team with the logging program. In spite of his exhortations over the past year, some on the team were simply not proficient at CT. He set up daily training/practice sessions. Bob N6EK brought all the computers to the meeting room, and hooked them up in a network. Peter walked around and around the table shouting out callsigns while we typed them on the keyboard. To

The team pre-assembled the shelter floors on the helo deck.



my amusement, he used real, recognizable callsigns, and several of the practicers were distracted enough to make remarks about who was being "worked."

As we worked with the computers, we began to have problems. Sometimes the entries would spontaneously change. Sometimes CT would quit. Sometimes the computers froze up.

"I'm seeing bugs," I said.

"That's not reasonable," said Bob. "I've never seen such bugs in CT."

"I don't doubt that," I countered. "But here we have field conditions. *You* may never make these errors and CT may not be making them, but *we* are making them here under less than optimal conditions. Reality is winning."

Bob quickly grasped the reality. It became apparent that there was at least one real bug in networked CT. Going back to edit a previous QSO caused the cursor on all the other computers to jump to the beginning of the call currently being entered, thus garbling the entry. Bob called the bug "spectacular." It was potentially devastating to our Heard Island operation. In addition, there may have been other problems with the network. On a single computer, everything worked fine.

To his great credit, Bob quickly proposed that we abandon the network. It was a courageous decision, since he had invested considerable energy implementing the network. It was, however, the right decision, we all agreed.

Preparing loads for the helicopter. A collection of antennas and a collection of tote boxes was about the right size and weight. The loads were piled on the helo deck to await the flights.



January 7. The sea a deep, deep blue. A few cumulus clouds and visibility to the horizon. A beautiful day. We were running at 14.4 knots. Time to go to Heard Island: 4 days 5 hours.

At the morning meeting, I formally appointed Wes Lamboley W3WL ombudsman. We spent some time going over the process of facing and solving people problems. In the Handbook I had set forth a formal procedure for resolving disputes. But I was concerned that this might not be enough. The ombudsman was the person you could talk with when there was no other alternative. The team relaxed. Just knowing that there would be somewhere safe to go with a problem probably served to vitiate many of those problems.

The site plan in the Handbook survived a penetrating and critical analysis by the group. It wasn't a pushover by any means, and there was lots of urging for major changes, particularly in the sleeping arrangements. Some thought they could arrange the bunks to give everyone more room. Others thought we should put the com shelter away from the sleeping area. We made a couple of good changes. The team voted to use the insulated shelters for sleeping, leaving the uninsulated one for the galley (reasoning: the galley has stoves and other heaters). More significantly, the 12x12 ft. warehouse was abandoned in favor of establishing a predominantly CW op site.

January 8. We continued working through the czar plans. Safety czar David VK2JDM offered up a brilliant suggestion: Why not pre-assemble the wooden shelter floors, and fly them to the island? This would eliminate all the complications of carpentry on the uneven ground, and trying to work with tools in bad weather. We consulted with Tonton, who agreed to do it. After lunch we established a carpentry shop on the helo deck. Four hours later the entire set of 2x4 and plywood floors, all ten of them, were neatly stacked, tied together and ready to fly. We figure it saved us 50 man-hours on the island, and may well have given us one extra precious day of operating radio. We pronounced it brilliant, and repaired to the bar.

January 9. At 0100 UTC, we were at 39° south latitude. Time to go to Heard Island: 2 days, 18 hours.

We continued to work on details, packing and repacking the landing crates. It was frustrating: we couldn't locate our tools and materials. If it turned out to be like this on HI, I thought, we'd be in trouble.

This was a day of rest and relative quiet. Many people were tired. The CT instructional classes went on, and we provided instruction in operation of the FT890 and FT1000MP radios.

Willy prepared a detailed list of the crates and their landing sequence. We worked out the strategy: KØIR, KK6EK, ON6TT, and 9V1YC (with the video camera) would land first. Then the helo would get Michel EA9AFJ, who would be my interpreter, while Peter and Willy remained onboard to sequence the off-loading. Then the helo would bring the landing tools and emergency supplies, then two groups of team members, then...

After a while, we could find no way to improve the plan. It was finished.

January 10. At 0200 UTC, we were at 44° south latitude, 500 miles from Heard Island, running 13 knots. Time to go: 1 day, 11 hours. It was chilly.

In mid-morning I was handed a fax from the AAD in Hobart, Tasmania:

"We have had reports from airlines that Big Ben is erupting. During your stay on the island, could you please record any observations you make of steam, smoke, or similar phenomena?"

Sailing to a live volcano! We had known this, but it was always theory before. Now suddenly we visualized rivers of red molten lava flowing down the glaciated slopes and across our campsite. We discussed what to do if we were threatened. Would lava make a good ground?

Willy found that all 500 (really!) loaves of bread that had been supplied by TAAF were completely rotted. The ship promised to replace them. Why, I mused. The new ones would just rot, too. But there just wasn't time to work every detail, and we packed hundreds of new loaves of bread.

A fair portion of our time was now spent signing envelopes and other printed souvenirs. Various team members had brought hundreds of these items, and it seemed that just when you finished one stack there was another. Several of us had made up rubber stamps with the logo, and these were passed around and used liberally. Even the captain borrowed mine, presumably to stamp passports and other important documents.

Sometime during this day, we simply ran out of things to talk about. Apparently we had worked through every issue of substance—except one: radio! My guess is that the team was already confident about the radio aspects. Almost as a postscript, I turned the last meeting over to Peter, who went through his extensive Handbook guide for radio operations. Peter correctly assessed the team as requiring little guidance about radio matters.

There was a protracted discussion about what we should do if the computers failed. It went something like this:

"Let's say I'm in a heavy pileup and my computer suddenly freezes, and I can't get it restarted?"

"You should call for help."

"But wait! In a storm in the dark? It might take 15 minutes or more to get help to my location. By then the pileup is getting out of control."

"Then we should agree to always have an expert on call."

"Forget it. If this happens, I'll pick up a piece of paper and write my logs. Hell with the computers."

The discussion actually got testy. It was clear that the team came from two viewpoints: those who thought the system should work the way it was designed, and those who thought we should be prepared for unexpected behavior. We had to adjourn and cool off over dinner. In the end, the issue was finessed, so there were no winners or losers.

John ON4UN also ran out of crucial things to say. He gave the position of the vessel, noted the lack of activity on the log server in Holland, reviewed the plan to put up all the shelters before coming on the air, and described the campsite in detail. He was an announcer without a show.

It was a nervous wait for everyone. We were restless.

The landing party: Ralph KØIR, Bob KK6EK, James 9V1YC, and Peter ON6TT.



The helo is away! In two minutes Heard Island will have visitors from another world.

