

\$2.95

The DX Magazine

The Bimonthly Magazine for DXers



**Most Wanted Countries,
Kermadec DXpedition,
Hungarian Amateurs**

Volume IX, Number 1

January/February, 1997

Chris Hannagan ZL2DX, Bin Tanaka JA3EMU, Peter Watson ZL3GQ, and Al Hernandez WA3YVN/ZL3AH. It was clear that this team, with many years of combined DX and contesting experience, had the operating and technical capabilities to attempt this complex expedition with a high probability of success.

History and Geographic Perspective

The Kermadecs consist of four groups of small islands, with rock-bound coasts and deeply-indented bays open to the fury of Pacific storms. The largest and only habitable island of the group, seven-by-four miles of precipitous cliffs and densely-forested mountainsides, was discovered by the French explorer D'Entrecasteaux in 1793 and named by him, Raoul Island.

Located halfway between New Zealand and Tonga, Raoul lies on an



*Back row: Ron ZL2TT, Lee ZL2AL, Peter ZL3GQ, and Chris ZL2DX.
Front row: Ken ZL2HU, Al WA3YVN, and Bin JA3EMU.*

active volcanic arc that extends southwards to New Zealand. It is a bewitched Pacific paradise that has captured the imagination of many would-be DX-peditioners, luring some to its shores over the past thirty years. But the island's volcanic core that vents with alarming frequency has sounded an alarm of caution with the New Zealand government, making it difficult to obtain permission to visit the island.

Those DXers fortunate enough to receive permission to land and operate amateur radio from the Kermadecs are faced with a long voyage through the stormy Pacific. The tropical cyclones often encountered in this region have adversely affected past expeditions, in one case wrecking the expeditioners' ship leaving them stranded for several weeks.

It was the infrequent amateur radio activity that had placed the Kermadecs in the category of a rare and most wanted DX location in the world.

Finances and Transportation

This expedition didn't come cheap. With projected expenses of over \$40,000, it was clear that much financial support was needed before this expedition could take place. The DX community rallied behind the expedition team. Bin JA3EMU handled fundraising in Japan, AL WA3YVN in North America, and the New Zealand team members in New Zealand, Europe, and the rest of the world. It was a long and arduous process which saw funding levels slowly climbing to the point where the expedition had become a reality.

One of the key hurdles was locating suitable transportation at a reasonable cost. Ken found the research vessel *Evohe* which was available in the time frame when the expedition was to take



It took 30 trips by zodiac to off-load all cargo.



Reliability and safety made the Evohe the ship of choice for cruising the stormy Pacific.

place. After a visit to the ship and a meeting with the ship's captain, Ken knew that he had found the right ship.

The Evohe was built in 1978 and was selected because it met the highest standards of safety and reliability and was equipped with modern satellite navigation equipment. It is an 80-foot, twin-masted, motor sailor ketch, capable of speeds up to 12 knots when operating under combined power and sails.

Heading North

On the morning of April 30 after final preparations in Hastings, the team, escorted by other amateurs from local radio clubs, family, and friends, traveled to Napier, the home port of the research vessel Evohe, located on the East coast of New Zealand and port of departure for this great DX adventure.

The expedition team and crew loaded over 4000 pounds of food, camping gear, and radio communications equipment aboard the ship for the long and dangerous voyage to Raoul Island. Finally, at 1300 hours on the afternoon of April 30, after all cargo had been loaded and secured, the

Evohe, at a rental cost of over \$25,000, set course for Raoul Island.

Everyone on the team felt a great sense of relief knowing that the expedition was finally underway after many months of detailed planning and hard work. The fresh sea breeze filled the air with excitement, and dolphins danced happily around the ship escorting the Evohe out of Napier, with a rainbow

pointing the way to Raoul Island.

Some expeditioners immediately took to the airwaves using the ship's HF radio. Hams all over the world wanted to know the whereabouts of the ship and most importantly, the estimated date of arrival at Raoul. Other expeditioners went below deck and turned on their laptop computers to review landing plans and operating schedules and procedures, while others were already feeling seasick and wondering if sailing the Pacific was really such a good idea after all.

The excitement was short lived; early that evening a bulletin was received on HF marine radio warning all ships in the area of impending tropical cyclones. It didn't take long for the Evohe to be immersed in the fury of 60-knot winds and 20-foot seas, which made the bow of the ship dip into the ocean only to emerge and point up at the sky as if to beg for mercy.

Some of the "old salts" continued to operate the ship's HF radio, while others strapped themselves to their bunks and remained in a state of suspended animation for the remainder of the voyage. There was little food con-



Large bags holding several hundred pounds of cargo are ready to be lifted by the flying fox.

sumed during the four-day, 700-mile voyage, with all team members losing a little weight in the process.

The Landing

Suddenly, it was over. At dawn on May 4, the dark silhouette of Raoul Island appeared on the horizon. As we approached, the early morning light revealed a rocky coastline with sea cliffs up to 800 feet high surrounding the island and heavy swells crashing the rocky beaches. It was clear that landing here was difficult—the main reason why so few DX operations have been carried out from this island.

The island's present shape is the result of volcanic eruptions dating back to 2000 BC, with the most recent eruption in 1964 when black mud, steam, and rocks shot up five miles. Earthquakes occur frequently, keeping the Department of Conservation's permanent staff on the island in a constant state of alert.

The Evohe anchored at Fishing Rock Point on the north side of the island, which has a gantry crane and a flying fox, making it the only suitable location to land large amounts of heavy



Heavy cargo was transferred from zodiacs to shore using the crane hook.

expedition cargo.

By daybreak, the weather had improved considerably and the DOC officer in charge was contacted on marine VHF radio for assistance in getting ashore. It took over 30 trips by zodiac and more than ten hours of hard work to move the team and all cargo to the expedition field site.

Team members were motored in by zodiac. Landing procedures were difficult, consisting of pressing the bow of the zodiac against a rock face, allowing an individual to jump cautiously onto a slippery ledge and climb up about 15 feet to the flat rock jetty. He had only one chance to make a clean jump onto the slippery ledge. A miscalculation or hesitation would certainly result in a drop to the water below, as the zodiac had to back out quickly to avoid being crushed against the rock by heavy swells.

Procedures for landing cargo were to load the gear into zodiacs, race the zodiac to shore with the gear in cargo nets, and make a flying pass at the crane hook. The net was snagged on the hook as the zodiac dangerously pitched up and down in the swells. Zodiac operators had to dodge the load as the crane hoisted it up and swung it around on the rock.

The gear was loaded onto a flying fox and lifted 800 feet to the top of the cliff, unloaded from the nets onto a trailer, and pulled by tractor along the edge of the cliff for two miles to the operating site. The flying fox was



Bin JA3EMU, Peter ZL3GQ, and Al WA3YVN, the three amigos, operated RTTY from the island.

unsafe for lifting personnel, so the expeditioners had to climb the steep cliff. This was not an easy task for those who had spent the previous four days fasting and seasick.

The next 24 hours were spent setting up the field camp spread over a 200 by 200 foot area on a flat plateau looking northward over the Pacific ocean. Two tribanders, a WARC band duobander and four vertical antennas went up without mishap. Even a large delta loop antenna for 40 and 80 meters was suspended high from huge Norfolk pines.

Four radio stations were assembled consisting of Yaesu FT-1000, FT-1000MP and FT-900 transceivers and an assortment of power amplifiers, RTTY modems, portable computers, CW keyers, band-pass filters, and antenna tuners.

Finally at 0400 UTC on May 5, the much-anticipated Kermadec operation got underway with the first contact made on 20-meter single sideband by Ken Holdom with radio station AA2GQ. This was followed by contacts with AA7UN, K7OH, K6UMB and K4MZU. Within a few minutes four



ZL8RI field camp, showing active volcanic peaks in the background.

stations were on the air, and it was then that we realized that it had all been worthwhile. From this point on, it was hour after hour of exciting DX at its best.

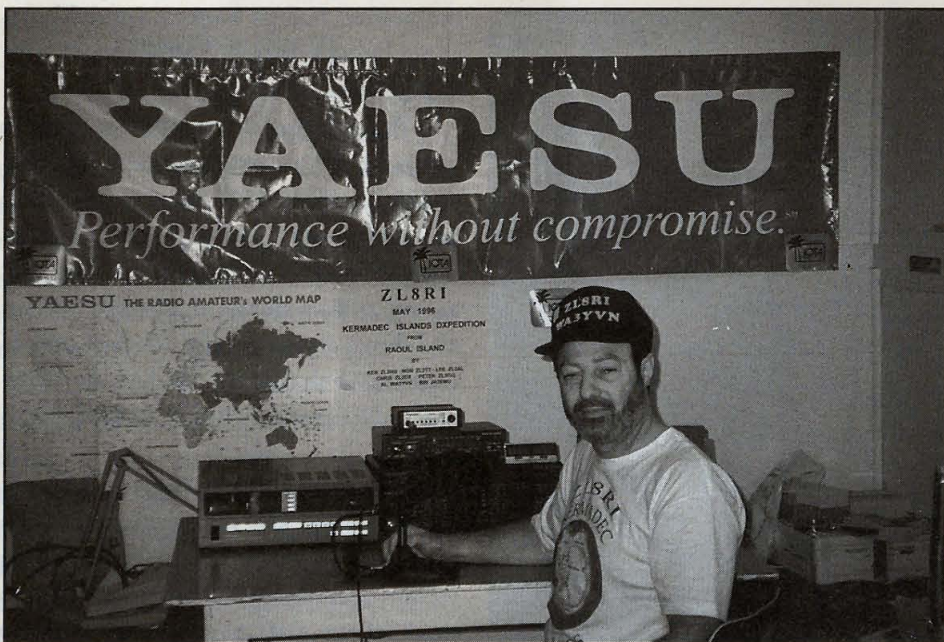
The team operated day and night using rotating shifts with operators achieving at times QSO rates of over 200 per hour.

The next nine days found operators settling into daily routines. Some enjoyed night work more than others, and Peter and Bin were always vigilant of sunrise and sunset around the world, working the always-difficult 160-meter openings.

The division between day and night became blurred. Sleep was difficult with the noise of generators and radio activity. By the second day, Bin, Al, and Peter began to operate RTTY, which was in great demand from this location.

As the number of radio contacts increased, QSO rates on some bands began to drop off, signaling that most of the need had been satisfied. Hams from all over the world gave high marks to the DX operation, often thanking the team for a job well done.

Even with this level of success, some parts of the world didn't fare well due to propagation conditions. Many operators in Western Europe will have to wait for another operation from the Kermadecs since "old sol" did not favor Europe very much this time.



Good equipment helped tame huge pile-ups on 20 meters. Al WA3YVN.

Raoul Island and Conservation Efforts

Expeditioners found time to relax between busy operating schedules, hiking and exploring the island. Day temperatures ranged from 55 to 68 degrees Fahrenheit, and night temperatures from 50 to 60 degrees.

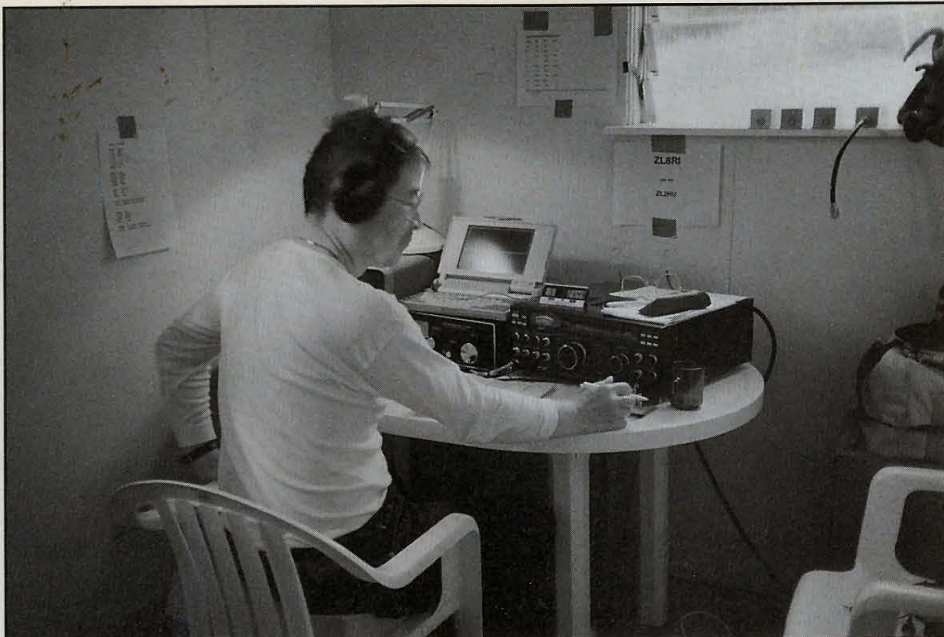
The New Zealand Department of Conservation, which began to manage the Kermadec Islands in 1987, maintains a permanent staff of four to five scientists on Raoul on one-year contracts. One of the conservation priorities on the island is control of non-native plants. The staff also operates the seismic and meteorological station providing vital information to the global weather and seismic network. These facilities are located in a cluster of white buildings which provides a sharp contrast against the green vegetation.

The island's vegetation consists of a tangle of palms, shrubs, and large-leaved trees typical of sub-tropical regions. Wisps of steam still rise from a gaping volcanic caldera in the center of the island where three lakes lie in craters of past eruptions. Fumaroles spitting scalding water and frequent earthquakes are constant reminders that the island is an active volcano.

We were surprised to find the lush green forests of the island almost silent. The birds that once inhabited the island have largely disappeared, decimated by the introduction of cats and rats over the last 150 years by whalers and as a result of shipwrecks. These mammals are a lethal combination on the island's bird population. Rats eat the eggs and chicks while the cats prey on the adult birds.

The Storm and Grand Finale

Back at the radio camp, all equipment continued to operate well and we enjoyed good weather conditions until May 12, when one of the two, 5-



It takes concentration to work the European pile-ups. Bin JA3EMU.

kilowatt generators broke down with no possibility of repairs. In addition, a strong, tropical cyclone brought winds of 50 knots to the island, damaging the 160-meter antennas.

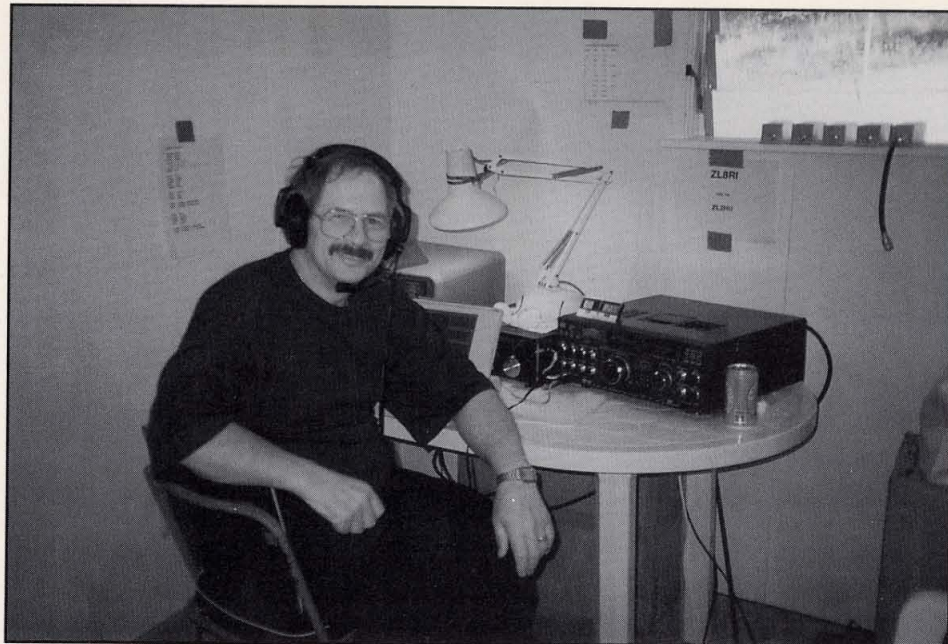
At this point, with more than 30,000 contacts logged, we began to prepare for departure, and on the last evening on the island took a few hours off to attend a cookout as guests of the

DOC staff.

The final hours of operation yielded a few thousand more QSOs. The last contact of the expedition was made by station UR4LWC on 20 meters, May 13 at 1638 UTC. By 4:00 a.m. local time, with 34,000 contacts in the logs, the team began dismantling and packing the remaining radios and antennas, and by 8:00 a.m. everyone



The division between night and day is blurred as operators work day and night. Ron ZL2TT.



Good propagation conditions bring a smile to Lee ZL2AL's face.

was ready to go. The same procedures used to bring the gear to the field camp were followed in reverse.

Sharks, Cyclones, and the End

All gear was loaded into a trailer in cargo nets, moved two miles to the flying fox, down to the rock, and finally to the Evohe. By 2:00 p.m. local time on May 14, the team and all gear were safely back aboard and ready for what was to be a very rough trip back to New Zealand.

The Evohe made one last stop at L'Esperance rock, which is the southernmost island in the Kermadec group. This rock shelters a helicopter landing pad and fuel depot and is used for long range search-and-rescue operations in this region.

We took time for a swim. Two divers from the ship surveyed the underwater marine life and reported seeing a large school of Galapagos sharks. The news of the sharks was not as alarming as the weather report received warning all ships in the area of approaching tropical cyclones.

For three days we went through hell on the high seas as 60-knot winds and

monstrous waves pounded the ship from all directions. Finally, as the sun was setting on May 18, the Evohe—with the only remaining engine barely working and with wind-ripped sails—arrived in Napier to everyone's relief, thus writing the final chapter to this great adventure.

Primary Equipment and Final Remarks

The feedback received from the DX community indicates that ZL8RI was a successful expedition. Personally, I enjoyed the company of the entire expedition team and the warm hospitality that they and their families extended me in New Zealand. All QSLs were handled directly by Ken Holdom ZL2HU with help from the New Zealand team members.

This expedition would not have been possible without the support of many equipment manufacturers. The primary equipment consisted of Yaesu radios and linear amplifiers; Nagara, Cushcraft, The Radio Works Super Delta Loop, and K9AY 160/80 Expedition Antenna; Timewave DSP filters; LinkPlus LinkMate Lincompex units; ZJ Electronics low band accessories and Heil Sound boom sets.

Permission to land on Raoul Island was granted by the New Zealand Department of Conservation. This expedition wouldn't have been possible

DXCC NAME BADGES



This ID badge is engraved with the DXCC colors, a White field with red letters, DXCC and border. The space under the globe can contain addition info such as CW, SSB, RTTY, VHF, Honor Roll or country totals. This design is exclusive with us and is available for \$9.95 postpaid in the U.S.. \$12.95 DX. Send Check or M.O. to Robinson's, 7300 Romilly Oval, Parma, OH 44129
Additional info 1-(216) 845-8040

without the support and cooperation of DOC personnel at Raoul Island.

Our sincere thanks go to NCDXF, INDEXA, the worldwide DX community, and the many clubs, foundations, DX newsletters and equipment manufacturers that helped make this expedition possible by providing much-needed finances, equipment, and expert advice to the expedition team. It is with utmost respect that we say thank you. For all of us, the Kermadec Islands dream is now a reality and we can finally say "Been there ... Done that."

QSO Statistics

We were active on all HF bands (160m - 10m) and primary modes (CW, SSB and RTTY). The team made 34,000 QSOs including 1,439 on RTTY and 303 on 160m with the following breakdown by continent and mode:

	NA	SA	EU	ASIA	AFRICA	OCEANIA
SSB	10,150	180	1,780	5,560	40	840
CW	6,800	60	1,770	5,100	20	260
RTTY	560	2	80	780	1	16

The above data shows a QSO split of 54.6% SSB, 41.2% CW and 4.2% RTTY.

Callbooks
tional, is
book CD-
Decem-
l.95. The
ndbook is
25% tax.
D-ROMs
d/DXM1,



Tropical cyclones brought expeditioners to their knees.

Overseas Airmail Postage for Better QSL Returns

SASE for country list.

J.E.Mackey

P.O.Box 270569

W. Hartford CT 06127-0569

THE QSL MAN NOW!! Free QSLs

Join the **W4MPY QSL CLUB**
and qualify for **FREE QSLs**
Write for complete Information
682 Mt. Pleasant Road
Monetta, SC 29105
Phone or FAX (803) 685-7117
Email: W4mpy@PBTComm.net
URL: <http://www.mindspring.com/~w4mpy>