



ZL7/K5WE DXpedition to Chatham Island

September 2022

By Jeff Martin - K5WE

In the Spring of 2022 it had been over two years since I had gone anywhere on DXpedition. Travel had been difficult due to the Covid pandemic. I was eager to go somewhere, work some pileups. In May of 2022, I decided upon the Chatham Islands, a possession of New Zealand in the South Pacific. At that time, Chatham was number 81 on the Clublog Most Needed List. I built a website and began making preparations for a September operation.

At the closest point, the Chatham Islands lie 465 miles from mainland New Zealand. The original inhabitants of the Chatham Islands were the Moriori who are estimated to have arrived on the Island they named "Rekohu" some 1000 years ago. The first European to arrive on the Chatham Islands was Lieutenant William Robert Broughton of the British Royal Navy. Lieutenant Broughton landed in 1791 and took possession of the Islands in the name of King George III. The island was named after Lieutenant Broughton's ship, the HMS Chatham. European sealers and whalers later landed and built bases. The Maori from mainland New Zealand invaded "Wharekauri", the Maori name for the Chatham Islands, in 1835. The main industries on the island are farming, mostly sheep and cattle, and fishing. The population is a little more than 600 people.

I was joined on this trip by my son, Scott - KD5GEY. Our journey began on Tuesday 6Sept2022, Scott flying from his home in Bozeman, Montana and Jeff from his QTH near Tulsa, Oklahoma. We met in Auckland, New Zealand in the early morning of Thursday 8Sept. While at the Auckland airport I bought a cell phone and a pre-paid data plan from one of the local cell providers. This was to be our hotspot and provide internet access. It worked well. That afternoon we took the Air Chathams weekly flight from Auckland to Chatham Island, arriving late afternoon. We were met at the Chatham airport by Sally, who drove us to our rental house which was about 45 minutes away on gravel roads.

The evening of Thursday Sept 8th we unpacked and set up the operating position inside the house. It was too late to do any work outside. Friday morning I put the Hexbeam together. We paused antenna construction to make a run to town for groceries. The rental house came with an older Isuzu 4x4 vehicle to drive. The town of Waitangi has the only 2 stores on the island with groceries. Waitangi is 36 miles away on gravel roads. It takes one hour to get there. We stocked up on groceries

at the two stores and headed back to the house, which is located on the northeast tip of the island. While at one of the stores, we met Stu, ZL7STU. Stu came in the store just as we were attempting to check out with the store clerk. Stu came over and said, "Are you K5WE?" I had expected to pay for the groceries with a Visa card, but the store only took some kind of NZ bank debit card or cash. We didn't have any New Zealand dollars at that time. So, in true ham spirit, Stu paid our grocery bill. I later paid him back via paypal. Thanks Stu!

Back at the house, we got the Hexbeam installed on a push up mast up about 25 feet. The first QSO was made with OH4SS at 0737Z on 9Sept. ZL7/K5WE worked stations for a couple hours, and then we got some sleep.

I was up at 4AM on Friday. Prop on 20 was poor, nothing on CW, few on FT8. Got outside after the sun came up and got the Crank-IR Vertical and the 160 Dipole installed. The weather these first few days was very nice, sunny and not much wind. That was soon going to change.

We discovered that the area immediately in front of the house was traveled by fishermen with their trucks, trailers, and boats to the landing where they put their boats in the water. So, we couldn't put any antennas in front of the house. There wasn't room for the 30 meter dipole, the 40 meter dipole, or the Receive Loop array antenna so they didn't go up. The 160 dipole was just hung along whatever tree or bush we could find. It did not work well at all. So, we had 20-10 meters on the Hexbeam and 80-10 meters on the Crank-IR. Keep in mind that a band change on the Crank-IR involves manually adjusting the length of the vertical element and the radial element; it's not a quick, easy process, especially at night in bad weather...



Jeff - K5WE at the Operating Position

We started working the pileups... The first major problem we encountered was with the logging programs. We had multiple programs talking to each other and some of the time the export of log data was failing. We had hoped to use Clublog livestream so users could have a real time view of stations logged.

After some research and testing with the software programs, we decided to quit using livestream and began consolidating the logs manually and doing a daily upload to Clublog. That's what we did for the duration of the DXpedition.

As I said before, the weather was nice the first couple days. Then the wind picked up. There was a warning of gale force winds. Early Tuesday morning I noticed the Hexbeam was damaged, the 20 meter wire was broken and hanging down. After the sun came up we lowered the Hexbeam for repair. The 20 meter element had a broken string between the wires. Also, the support string that holds up one of the spreaders blew away, we couldn't find it. We repaired the 20 meter element and built a new spreader support string. Also that morning I was seeing high SWR on 30 meters on the Crank-IR. The vertical wire element of the Crank-IR was stuck on one of the clamps and everything was wet. It was still very windy. So we lowered the Crank-IR and wrapped all the clamps with tape to prevent the vertical element wire from hanging up on the clamps. Then we put the Crank-IR back up vertical.



Jeff - On the roof working on the Hexbeam.

Mid-day on Tuesday, Scott and I made another run to Waitangi for groceries and sight-seeing. We drove on to the other end of the island to a spot called Owenga. We got some nice photos of the crashing waves and the sheep by the seashore. The island is T shaped with Waitangi on the west side and our house near Kaingaroa in the Northeast corner. The large Te Whanga Lagoon takes up much of the center of the island.



Map of Chatham Island. Our QTH - Upper Right

On Wednesday morning 14Sept, Chris - ZL7DX came out to the house for a visit. Chris had been helpful with local info via email. Later on, Scott and I drove to Kaingaroa and also drove the gravel roads to West Waitangi doing a little sight-seeing and picture-taking... There are only a couple of miles of paved roads on the island, entering and through the town of Waitangi, the rest is gravel. It's a pretty remote place... With an island population in the 600's, there are many, many more sheep than people...

My daily routine included getting up usually somewhere around 3-4AM. One thing I didn't get much of on this trip was sleep... hi... First chore was to go outside and fire up the generator. Oh yeah... the house ran on generator power for electricity. While outside I would shine my flashlight up at the antennas to see if everything was still there... Much of the time it was very windy and drizzling rain. Temperature was often in the 40's F. Back inside I would build a fire in the wood burning stove. Another daily activity was splitting the wood for the wood burning stove... hi... The only heat in the house was from the wood burning stove or the stove top burners on the cook stove. It was still winter in the Southern Hemisphere, spring would not arrive until September 22nd. Usually my next activity was consolidating the logs and doing an upload to Clublog... By-the-way, thanks very much to Michael - G7VJR for

providing the Ham community with Clublog, it's a great resource... Then I would get on the air...



Scott - KD5GEY at the Operating Position

I'd like to say a few words about operating practices. My favorite mode is CW. This was my first DX Trip where FT8 QSOs outnumbered CW QSOs. Part of that was Scott helping out with FT8. We could operate 2 radios at the same time on different bands, same sequence, on FT8. I still like CW... I learned in my early days of DXing that a key to working DX is "Listening". That still applies today. Listen, listen, listen, figure out the DX stations' routine. Usually on CW I work split, listening up 1 to 2, or maybe slightly higher depending on the number of stations calling. Tip: If you hear me saying up up or up up up that means spread out - go up a little more. Another tip: Call me one time and stand by, more times than not, I get your callsign on the first time you call. If you clearly hear me call you (you copied your callsign), don't send me your callsign 2 or 3 more times. If I called you, I have your callsign, just send me a report and maybe TU so I can move on. If you hear me call someone else, stand by until that QSO is finished. Get in the DX station's rhythm, it will make things go faster for everyone and put more QSOs in the log... One last thing. Many times I noticed a sending station's first dit would get cut off. An example, R1AA would come across as N1AA or SV1AAA would be IV1AAA. I don't know if this is because of VOX or a break-in delay setting or what, but it happened so often it was noticeable... Thanks for listening folks, I'll get off my soapbox... hi...

On Friday morning I discovered the string on the 20 meter element of the Hexbeam had broken on the other side, in another place. It still worked using the antenna tuner so I deferred maintenance for a while. The hanging 20 meter wire also affected the SWR on 17 meters, so on Sunday morning I decided to lower the antenna again and repair the 20 meter element. About 30 minutes after fixing the 20 meter element, the 17 meter element string broke the same way. It looked burnt. I began to think RF and this damp salty environment was causing the breaks. Sunday afternoon I repaired the 17 meter element string on the Hexbeam.

Sunday evening I had a nice run beginning about 5:30PM and lasting until about 7:40PM on 80 meters.

Many Europeans and some W's were worked. After 7:40PM the band just died.

Some may ask, "Why not more activity on the low bands?" Well, there are some reasons. 160 was a bust, the antenna just didn't work. I only heard a few stations, worked one VK and a couple JA's. Several times I listened on 160 and 80 at sunrise or sunset, hearing very little. 80 meters was on the Crank-IR, which meant going out in the weather to change bands. Conditions on all bands were fairly poor in the mornings from the South Pacific. I saw the same thing when I operated from Easter Island as XROYS. The best conditions on all bands were in the local evenings. My priority from the beginning was putting QSOs in the log. So, consider this, we have a good run going on FT8 on 2 radios on 2 bands, lots of folks are calling us. To change bands on the Crank-IR would require going outside, walking up the hill, usually in rain and high wind, adjusting the vertical element and the radial element, coming inside to test, then maybe go adjust again. So, sometimes a decision was made to just stay put, keep putting QSOs in the log on the bands we were on... We did make 462 QSOs on 60 meters; hopefully a few DXers got a new one on that band...

On Tuesday afternoon 3:15PM local 20Sept22, I had just come inside from taking some videos of the water and the beach near the QTH. The wind was howling and cold... Just before I went out I was on 15 meters CW for a while. When I walked back up to the house I found the Hexbeam 15 meter element string broken in two places, with the element wire hanging down from the antenna. So, that's 5 breaks in 3 elements. It must have something to do with the RF and the salty moisture. I decided not to fix it, it was too close to quitting time.

On Wednesday morning 3:47AM local 21Sep22, I went outside to fire up the generator. The wind was strong and cold out of the north with a drizzling rain. I shined my flashlight up at the antennas and guess what? The Crank-IR had fallen over. One of the guy ropes had broken. I spent the next hour repairing the guy rope and repairing the broken radial string and getting everything back up in the vertical position. I thought, "I will operate a few hours and then begin tearing down and packing." The guy rope, actually heavy string, was broken up near where it was tied off, and right where it often came into contact with the vertical element wire when blowing around in the wind. I think RF on the vertical element eventually burnt through the string, or weakened it enough it broke in the wind...

Wednesday morning, the property owner where we stayed, Stuart, gave me a tour of "the farm". If you look on the map of the island and see where I've marked "QTH" up on the NE corner, that whole NE corner peninsula is owned by Stuarts' family. It's a sheep farm. They have thousands of sheep. It's impressive. After

returning from the tour about 11:30 AM, I began tear down of the station and antennas. It was raining harder than it rained the whole time we were there. I was soaked, and of course the wind was blowing and it was cold. Finally got everything packed away by 10 PM in 7 pieces of luggage.

At 8:30 AM Thursday the Air Chathams plane left for Auckland. That evening my Air New Zealand flight left Auckland for Houston, a couple hours after arrival in Houston, my United flight took me on home to Tulsa. It was about the same local time when I arrived on Thursday evening as it was when I left Auckland...

Here are some operating statistics of the ZL7/K5WE DXpedition:

ZL7/K5WE QSOs by Continent

Continent	Total QSOs	%
Africa	52	0.3
Asia	5136	28.1
Europe	8271	45.2
North America	4190	22.9
Oceania	423	2.3
South America	233	1.3
Totals	18305	100

Going into this DXpedition, statistics showed that Chatham was more needed by Europe than the other population centers. The antipode for Chatham Island is in Southern France, so much of Europe is near equal distance long path or short path to Chatham. I was actually surprised by the good propagation on all bands to Europe. We ended up with a larger percentage of QSOs with Europe, 45.2%, than the other continental areas. I was also a little surprised with the lack of propagation to NA. Perhaps the time difference could account for this, my propagation generally wasn't good in the mornings local time and by the time it was good in the afternoon or evening, it was late night, early morning in NA. Asia was always loud...

ZL7/K5WE Band/Mode QSOs

Band	FT8	CW	FT4	SSB	Total	Total %
160	4	0	0	0	4	0.00%
80	109	0	0	0	109	0.60%
60	462	0	0	0	462	2.50%
40	1041	835	0	0	1876	10.20%
30	3055	1238	169	0	4462	24.40%
20	3506	1150	89	303	5048	27.60%
17	1128	643	0	20	1791	9.80%
15	1674	611	0	0	2285	12.50%
12	1016	373	0	0	1389	7.60%
10	622	257	0	0	879	4.80%
Totals	12617	5107	258	323	18305	100.00%

ZL7/K5WE Daily QSO Count

Date	Total QSOs
21-09-2022	23
20-09-2022	1568
19-09-2022	1730
18-09-2022	1851
17-09-2022	1268
16-09-2022	1493
15-09-2022	1806
14-09-2022	1507
13-09-2022	1869
12-09-2022	2235
11-09-2022	1277
10-09-2022	1214
09-09-2022	464
Total QSOs	18305

For more information see the DXpedition website: www.k5we.com/zl7-k5we

Current QSO count is 18,305 QSOs. I hope we put on a good show... We encountered more weather, hardware, and software problems than I anticipated, but we worked through them... It was great having my son Scott - KD5GEY join me in this adventure. I'd like to thank all our sponsors, The Oklahoma DX Association, The International DX Association, The Clipperton DX Club, The Greater Milwaukee DX Association, The European DX Foundation, The Carolina DX Association, The GM DX Group, The Twin City DX Association, The German DX Foundation, The Southeastern DX Club, The Swiss DX Foundation, The Willamette Valley DX Club, The Chiltern DX Club, The Danish DX Group, and all the individuals who have financially supported the ZL7/K5WE Chatham Island DXpedition. We appreciate you! Also thanks to all the Deserving DXers for all the QSOs... It was fun... Hpe to CU Agn... 73, Jeff - ZL7/K5WE

