The Pileup
Newsletter of the CDXA

The Carolina DX Association

AA4ZZ	Paul Trotter	President
W4GRW	Bill Fisher	Vice-Pres.
W3ZL	Cliff Wagoner	Sec./Treas.
K4MD	Joe Simpkins	Cluster Mgr.
NV4A	John Forbus	Contest Mgr.
W3GQ	Paul Sturpe	4th Call Area Bureau Mgr.
WB4BXW	Wayne Setzer	Webmaster
K8YC	John Scott	Editor

2017 CQ World Wide Results Are Official

John Forbus, NV4A

CQ Magazine published the 2017 CQWW Results in its April (SSB) and May (CW) editions. The May edition also included the Club results for the combined contest. In 2016, CQ published a convenient spreadsheet on-line showing Club results. Since I hate to read fine print, and to retype anything I don't need to, I waited in hopes that the 2017 spreadsheet would show up. No such luck so far, and since most if not all of you have already read the results, I added this years' results to the 2016 Club Score Spreadsheet.

In a nutshell, we dropped one place to 13th, with 30 participants (vs. 37 in 2016) and an overall score of 17,158,529 vs. 20,816,682 in 2016. Our average score per participant was about 9,338 points more per participant than 2016 though, with an average of 571,951 points. Only two of the clubs ahead of us in points had less participants than CDXA, and as I think I've mentioned before, almost all of the higher scoring clubs had the word “contest” or contesters” in their names. So, we did well, but we can do better. We're looking at some ways to suck in . . . . errrr get more members to participate this year. More on that later.

In the meantime, if you've never entered a contest, CQWW is the world's largest DX contest, and a great way to grab ATNOs, add some new band/mode entities or just see how many stations you can contact. Also, LoTW participation is quite high for stations in the CQWW contest so your QSL rate should be high. Even if you aren't a CW operator, there are lots of stations with BIG signals, which can easily be copied by software such as Skimmer or CW Get. N1MM will take care of the transmit side for you too. . . . See? . .no excuses. Start practicing now so you'll be ready, come contest time. See you October 27th and 28th for SSB and November 24th and 25th for CW.

One last item: To honor our club founder and great friend Roger Burt, N4ZC (SK) who loved contesting, and especially CW contesting, we have sponsored the N4ZC Memorial plaque for the 2nd place finisher in CQ Zone 5 each year. (First Place was taken.) Our first plaque went to Greg Cronin, W1KM. Congratulations to Greg.

CDXA PacketCluster & Other Communication Systems	
K4MD (AR V. 4 Cluster via Telnet)	k4md.no-ip.com:23
K4MD (AR V. 6 Cluster via Telnet)	k4md.no-ip.com:7373
W4DXA (AR V.6 Cluster via Telnet)	w4dxa.no-ip.com:23
CDXA Repeater 147.18 MHz (+600)	W4DXA, Near Fort Mill, SC
World Wide Web Homepage	www.cdxa.org
Wednesday Luncheon (11:30 AM)	Skyland Family Restaurant, 4544 South Boulevard, Charlotte, NC

NEW NEW

CDXA Cluster Status Indicators

In the rare instances when the CDXA Cluster seems unavailable, perhaps you've wondered if the cluster is "up" or "down". Our tireless Webmaster, Wayne Setzer, has installed a new feature on the CDXA webpage for the "Packet Cluster" tab. Navigating to that page you'll now find a small table for the three clusters that CDXA maintains. In the middle of the table is a column labeled "STATUS". A small arrow—green or red, depending on whether the cluster is UP or Down, respectively—will tell you the status of the cluster. Wayne has done a little behind the scenes magic to "ping" the clusters to assess their status.

Joe Simpkins, K4MD, maintains two K4MD clusters using Versions 4 and 6 of AR-Cluster at his QTH and Paul Sturpe, W3GQ, maintains the W4DXA cluster using Ver. 6 at his QTH. Those who use the VE7CC User interface will find it is not entirely compatible with the manner AR-Cluster Ver. 6 applies filters to spots. Yet Version 6 has some features that are welcomed by many. Also, Version 4, being older, requires more hands on maintenance to keep it running smoothly.

Later versions of Microsoft Windows must be configured to activate a Telnet session. Instructions for activating Telnet for Windows Vista, Windows 7, 8, and 10 are provided on the page.

The Pileup
Official Newsletter of the Carolina DX Association

Published monthly 10 times per year, excluding the months of June and December.

The purpose of the Association is to secure for the members the pleasures and benefits of associating with persons having a common interest in Amateur Radio.

Members of the CDXA shall adhere to "The Amateur's Code" as published from time to time in *The ARRL Handbook for Radio Amateurs*, and shall consist of those valid licensed amateur operators having an interest in promoting amateur radio. Long distance communications (DX) is of special interest to members of the Association, but said interest is not a requirement of membership.

Yearly dues are $25.00. A second licensed Amateur family member living in the same household can join for $5.00 for a total family price of $30.00 per year. The total price for 3 or more licensed family members living in the same household is only $35.00 per year. All family members enjoy full member status. Dues are payable annually in December by check to the Secretary/Treasurer:

Cliff Wagoner, W3ZL
218 Ohenry Avenue
Davidson, NC 28036

Address, telephone, and email address changes should be directed to the Secretary/Treasurer at the above address or via email at: jcw53@cornell.edu.

Ten and Twenty Years Ago

Did you ever wonder what was happening around CDXA ten or twenty years ago? Here are some excerpts from The Pileup as cited in the archives available on the CDXA website.

Ten Years Ago. . .

CDXA's Field Day effort had just broken the 5E Class record by more than 4500 points operating from Ron Bailey's QTH in Shelby, NC. . . . . Cameron Hasson, then 6-1/2 years old had passed his Technician exam and been noticed by the Charlotte Observer. Former CDXA President, Ken Winston, WA4OBO, donated a slightly used Kenwood TS-50 to Cameron to help him get on the air. Cameron made his first FD contact in CDXA's 2008 outing in FD. . . . . The AA4ZZ contest team brought out its 'secret weapon' for the ARRL June VHF contest when Joe Barkley, KI4TZ, and Pat Patterson fielded an EME station atop the Blue Ridge to put a number of European gridsquare multipliers in the log.

Twenty Years ago. . . . .

Editor Don Daso, K4ZA, gave a brief rundown in the July 1998 Pileup on what all the numbers you hear on WWV at 18 minutes after the top of the hour mean (worth reading). . . . . Don calls upon his years of tower building experience in the May issue to relate the value he finds in using stainless steel hardware on your antenna projects to ensure longevity and ensure ease of maintenance if you must climb your tower. . . . John Devoldere, ON4UN, provided a review of the then new DX4WIN logging program which is still available but in an ever-improving Version 9!

2018 FT8 Challenge Update
Through June

John Forbus, NV4A

Here are the latest FT8 Challenge numbers, compliments of W3OA, who feeds our logs through a "magic program" that summarizes our FT8 contacts for us. Looks like some 6 meter openings helped the numbers. There are a couple of things to remember when you submit your logs. First, and most importantly, your power for each QSO MUST be included—no power shown, no score for the QSO. Second, it makes it much easier for Dick's program and your Contest Manager (that'd be me) to make sure the log summaries I receive from Dick are the latest ones uploaded and are in the proper format if you'll please follow the instructions from the FT8 Challenge Rules published back in January to include your call and date submitted as part of the filename. Here's the pertinent information for the above, from the Rules:

Logging:
Your WSJT-x ADIF log will be used as the basis for calculating your score. You must state your output power in your log. It's easy to do. When your QSO is complete, a log entry window pops up with a "TX Power" field. (…*so be sure to fill in the field, and also note that you can check the "Retain" box for the power to help you remember to always include it.*) NOTE: Please also add your call and the submission date to the log file name before submitting it. Simply make a copy of the log, change the name to "[YOUR CALL][DATE in Mo. Day format]wsjtx_log.adi" and save it in a separate folder before submitting it....
Log entries without a power level will not be included in your total QSO count, nor will any QSO made at greater than 100 watts. You may also include QSOs made with other WSJT-x protocols in your log, but, again; only FT8 contacts will

Call	Home Grid	80m	40m	30m	20m	17m	15m	12m	10m	6m	All Bands
K5EK	FM03	397	443	408	684	435	123	12	23	58	2583
W3GQ	EM95	317	412	350	513	451	129	20	21	19	2232
AA4R	FM05	62	237	293	428	484	282	56	37	0	1879
W3OA	EM95	205	360	238	542	104	183	56	83	90	1861
K4GHS	EM96	135	196	387	283	379	220	21	5	0	1626
N4GBK	FM16	47	59	90	132	44	32	88	137	86	715
W4LK	EM93	34	121	132	217	70	25	3	2	8	612
NV4A	EM95	103	86	131	94	74	2	7	2	83	582
W4GEH	EM95	56	151	90	85	39	13	0	0	0	434
WW4DD	EM94	116	130	34	142	5	0	0	1	2	430
W3ZL	EM95	0	36	9	149	5	0	0	2	28	229
W4JHU	EM85	29	73	0	39	26	3	0	4	0	174
N4APR	EM95	0	63	5	40	0	2	0	0	0	110
W4GHV	EM95	3	23	10	22	5	1	0	0	1	65
K8YC	EM95	0	8	21	13	12	1	0	0	6	61

Smile a Bit

On awaiting for a QSL card to arrive:

Neither snow nor rain nor heat
Nor any change of season
Stay these couriers from their appointed
Rounds—
So there must be another reason.

Related to civility on the radio bands:

Someone once asked the former Prince of Wales, "What is your idea of civilization?" "It's a good idea," replied the Prince, "somebody ought to start it."

Welcome New Members

Many people are outside enjoying the sunshine in the summer months, but a few people still "find" CDXA in the summer months anyway. This year is no exception. So, we welcome **Wilburn English, K4FX** of Hamlet, NC to our roster.

Returning to our roster this period is **John Fulton, W7WZ** of Fort Mill, SC. Maybe those ARRL DX Contests and new FT8 experiences early in the year caused John to miss the annual renewal payment, but we're glad to see him back on the roster. Welcome to Wilburn and John.

"Snooping" Around Club Log

By John Scott, K8YC

Over the past several years, your editor has assisted a number of CDXA members in getting their logs uploaded to Club Log. I always encourage them to do some "snooping" around Club Log after their log data is uploaded because there are a number of useful and informative tools that can be applied to one's uploaded logs. I always point them to the "Timelines" tab which is shown along the left side of the main Club Log screen. There are five "picks" under that tab—two of which are shown below.

QSOs by Year

Each year's QSOs in your log will be summarized by year indicated the number of DXCC entities worked in the year, the number of QSOs in the year and how your QSOs are split among CW, Phone, and Data modes. Here's what is shown for K8YC for the past 5 years as of 8 July 2018:

Graphs

Again, using your uploaded log data, Club Log will show you how your cumulative DXCC entity count has grown over time. Since my first logged entity was when I became a ham in 1979, that's were Club Log begins its compilation.

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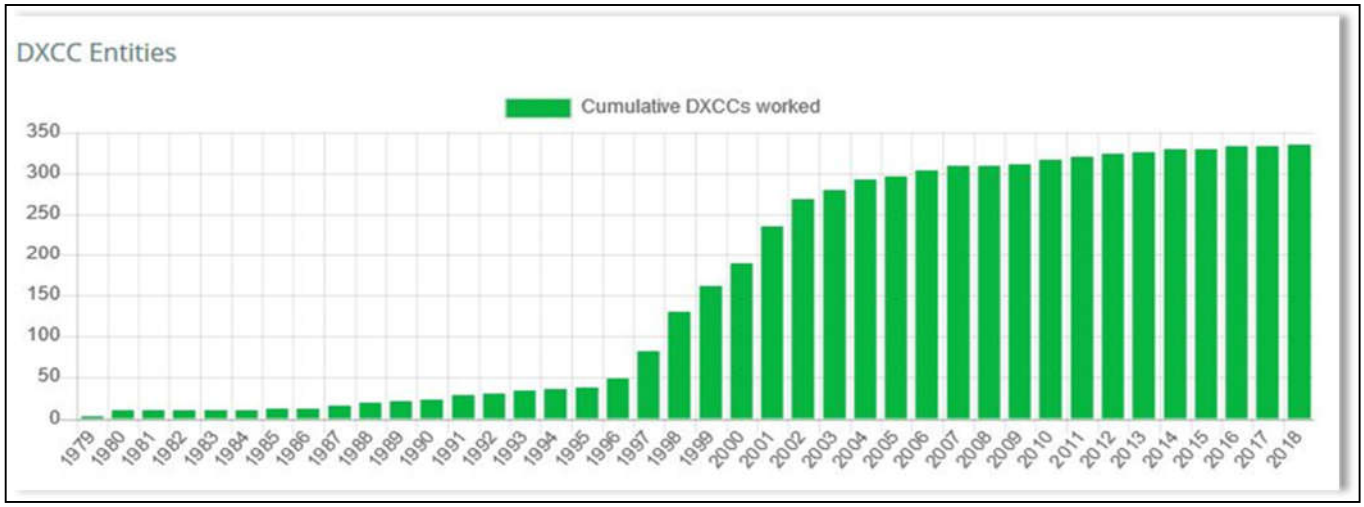

The other three picks under "Timelines" are: First Worked Dates, Needed DXCCs, and Least Worked Entities. Why not visit Club Log to see your statistics? While there, take some time to explore the many other tabs available.

Dayton Recap

A number of CDXA members made their way to Dayton this year. Many of them gathered at the annual DX Dinner presented by the Southwest Ohio DX Association. Below is a photo of those we could round up after the banquet.

Pictured (left to right): David Funderburk, Wayne Helms, Nyles McKeithan, Gary Dixon, Paul Trotter, Wayne Starnes, Paul Sturpe, Bill Fisher, Rick Kourey, John Scott, Thomas Wright, Dick Williams, Gale Bowman, Karl Bowman.

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Gary Dixon, K4MQG was asked to be the Keynote Speaker to the over 200 attendees attending the DX Dinner. Gary spoke about several of the humanitarian events his lifetime in Amateur Radio had presented to him. Gary's talk was well accepted with a good round of applause at its completion.

Also at the DX Dinner was Art Tolda, W1AJT, who dined with some of his friends from Canada where Art spends his summer months.

It was like "old home week" for Josh Fisher, W4WJF, when he reconnected with Christian Jansen, DL1MGB. Christian is the President of the WRTC event just getting underway in Germany. Josh and Christian met on the Willis Island DXpedition, VK9DWX, when Josh was selected as a "youth" member of the team. (That ***was*** 10 years ago this October!) Christian made a presentation at the Contesting Dinner about his busy leadership role in the preparations for WRTC 2018 in Germany.

Finally, Paul Trotter, Wayne Starnes, and Bill Fisher donned their "formal clothing" for the ARRL Dinner at Dayton's Packard Motor Car Museum.

CQ DX 2017 Marathon Scores Published . . .

John Forbus, NV4A

. . . . so we can finally publish our CDXA 2017 DX King results. Remember that to be included, you had to submit your score to CQ by their deadline, which was Jan 10, 2018 for 2017 logs. Our results are below, but first, some comments from the CQ Magazine article covering the 2017 results. The article started with "Sunspots?! Who needs sunspots?!" It turns out that the overall participation was up 13% over 2016, with a 3% increase in total QSOs. It probably won't surprise you that FT8 is credited with much of the increase. Digital QSOs were up 50% over 2016!

CDXA had a very good year, finishing as the club in seventh place world-wide, and 3rd place in the US with a total of 2139 points. One thing that helped us was a very low error rate. A couple of submissions had no errors at all, and no one lost more than a few points. CQ says that getting the Zone wrong is still the biggest cause of errors, so continue to check those zones . . . .especially the ones in the US and Canada! Here are our results:

Callsign	Category	Final Score	Notes
K7BV	Unlimited	320	#7 Worldwide, #4 in U.S., #1 in "4-land"
K5EK	Unlimited	315	#14 Worldwide
W3GQ	Unlimited	275	
W4HG	Unlimited	263	
K8YC	Unlimited	241	
AA4SC	Unlimited	206	
W3OA	Unlimited	193	
W3ZL	Formula	184	#27 in 100w Formula Worldwide, #4 in U.S.
N4VA	Unlimited	142	
	CDXA Total Score	2139	

Thanks to all who participated. There will be certificates for the members with the top 5 Unlimited scores, and for Cliff, W3ZL, who was our only Formula entrant, and who had the 4th highest 100W Formula score in the US. Of course, as usual, there was also the raffle for a $100 Amazon Gift Card. At lunch last month, CDXA President, AA4ZZ, drew the winning ticket: Dennis, K7BV, was a very popular winner, since everyone knows that, through Yaesu, he has contributed many nice radios for our Holiday Party raffles, and he had the highest score in the club (. . .not to mention being #1 in "4 Land", #4 in the US, and #14 worldwide.) Congrats . . . .and thanks . . . .to Dennis.

2018 DX King Update

John Forbus, NV4A

Here are the latest DX King numbers, through June. Since there was no Pileup last month, I included the latest submissions going back to April. As a reminder, update your numbers through July for the next Pileup. Also, don't forget that there's plenty of time to add your log if you want to add your call to the list of those eligible for the $100 Amazon Gift Card.

Call	Category	Countries	Zones	Total
K5EK	Unlimited	248	40	288
K5EK	Unlimited	244	40	284
AA4SC	Unlimited	190	40	230
AA4SC	Unlimited	180	38	218
K8YC	Unlimited	162	32	194
W3GQ	Unlimited	153	37	190
K8YC	Unlimited	156	32	188
NV4A	Unlimited	127	28	155
W3ZL	Formula	89	21	110

3D2EU—Rotuma IOTA OC-060—2018

By Ronald Stuy, PA3EWP

CDXF was a contributor to this DXpedition to Rotuma. This report was distributed to contributors. It is included here in its entirety. —Editor

Rotuma is an island belonging to the Republic of Fiji. It is 650 KM north from the main island, therefore it is a separate DXCC country. Only a few amateurs have activated this island. Tony 3D2AG goes to Rotuma a few times a year for his work and family visits. In 2014, a large group of amateurs were active as 3D2R. Rotuma was on our wish list for a few years, this year we realized it, but certainly not without setbacks.

The Operators—Ronald, Ernö, Hans, and Heye

Rotuma is not a tourist island—a hotel does not exist. If you go to Rotuma you always have to stay with local people. You can go to Rotuma by boat, which sails once a month from Fiji, or by plane. The plane goes once a week from Suva (the Fiji capital). It is a small plane because the runway on Rotuma was on a lawn until last month. When in bad weather the plane cannot land, it will be postponed until the weather is improved. During our stay they worked on a paved runway so in the future it's more certain that the flight will go even during bad weather. The period we had chosen was in the winter months in order to make use of the propagation on the low bands. The disadvantage of this period is that it is also hurricane season in the Pacific.

In the middle of 2017, we contacted Tony 3D2AG asking about the possibilities of activating Rotuma. After many email exchanges we decided to use an offer Tony put before us. He would also go with us and we would stay with his family in Fapufa. We were not happy with this location because it is exactly behind a hill towards Europe, which meant working Europe only via the long path. After some discussions, we decided to take a second location on the north side of the island, in the village of Maftoa. This location had already been used by American operators. Here is a house (radio shack) at the beach with a clear view to Europe. We would stay with John and Harieta Bennet. Their house was about 400 meters from the radio shack. Two operators would be active from Maftoa and the other two operators and Tony from Fapufa. The team consisted of: Hans DL6JGN (team leader), Ernö DK2AMM, Heye DJ9RR, Ronald PA3EWP and Tony 3D2AG.

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Tony arranged most of the things for us in Fiji—authorizations, customs documents, receipt of our shipped boxes, including making local purchases of materials, and shipment of most things to Rotuma. Without Tony, it would have been even more difficult to realize our goal.

A few weeks before our trip we were told by Tony that he could not come along due to work circumstances because he could not get the vacation days. The house in Fapufa was therefore not available. We decided to stay with four operators in Maftoa. In retrospect, this was much better than being active from two different locations.

Because we were very limited with our luggage on the flight to Rotuma, we had to send materials beforehand from Fiji to Rotuma by boat. Two crates were packed with different materials such as: fiberglass masts, coax cables, guy materials, bandpass filters, RX antennas, tools, 220-volt junction boxes and extension cords, a homemade amplifier, power supplies and so on. In total it was about 150 kg of materials. At the time of shipping, plans were for two different locations on the island, so many materials were double packed. The crates arrived in Fiji the first week of January.

There is very limited electric power on the island; each village has its own facilities. In Fapufa they have no mechanically generated electricity at all—they use solar energy. In the village Maftoa they have a community generator which is only active from 18:00 to 21:00. For us this was not an option. We therefore bought a generator on Fiji for our time on Rotuma. We also took 2 barrels (400 liters) of diesel fuel on the ship. In this way we had our own power supply and were independent of the village generator.

There was a tropical storm around Fiji a week before our departure for Rotuma—all flights and also the boat were postponed indefinitely. This had us all concerned, but fortunately it worked all out well. The Friday that we arrived by plane on Rotuma, the boat had arrived on Thursday afternoon.

We were already a bit prepared for almost any emergency. A few dipoles and coax cables were packed in our luggage at the last moment to ensure that we could operate in case we had to stay a few days longer on Fiji or the boat with our materials had not yet arrived at Rotuma.

Refueling our generator was part of our daily ritual.

Harieta also flew with us from Suva to Rotuma. Harieta was our hostess on the island. When it was time to check in we were told that our flight to Rotuma had been canceled for an indefinite period of time. They were busy with paving the runway and there was much debris that prevented the plane from landing. At that time, we had a serious discussion with the airline company. We had to wait an hour because they were going to call Rotuma. After an hour we were told that the flight would be delayed only one hour. This was quite a relief.

We arrived at Rotuma about 2½ hours later than expected. We knew there would only be a few hours of daylight and the chance that we could be active that evening was almost none. After a visit to the guesthouse we went to the radio shack. This was a big disappointment. We found a building that had not been inhabited for 10 years, no windows and doors, and a roof which was as leaky as a sieve. The mold stood on all walls due to the moisture. They had only cleared the building for us, nothing else. There was one room that was reasonably dry, so we used it. The roof was sealed by a local resident with a piece of sail cloth.

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This was to be our radio "shack" for our stay. A piece of sail cloth provided a roof.

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We started to make this space a little habitable. The table had to be raised at least 25 cm because it was much too low. The window had to be closed with a piece of sail cloth because during rain and wind the equipment would get wet. We had also arranged for an extra table and 4 chairs. We searched for a suitable place for the generator which finally was placed about 10 meters from the house. We also quickly looked where to put the antennas on the beach the next day. After all these preparations it was dark and we went back to the guesthouse for dinner. That ended our work for the evening.

The inside of our shack was not exactly a great habitat for our radio equipment, either.

Early the next morning at sunrise we started right away. Unfortunately, we could not place the antennas on the beach because it was high tide which left no beach available for antennas. Preparations were made to place the antennas two hours later. This was a lot of work and we knew that we couldn't finish all the antenna work that day. We focused on the antennas up to 40 meters. The low band antennas were for the next day. We knew by now that we were facing challenges because we could not place the 18m fiber masts on the beach. We asked John if there was someone in the village who wanted to climb the palm trees for us to hang a pulley for 80m and 160m. John arranged for a climber the next day. The 40-meter antenna was perfectly positioned on some rocks about 1 meter above sea level during high and low tide. It was very difficult to find a place to affix the guy-wires but our choice survived the whole period. The other two multiband antennas were placed in a way that they were free of the trees. The biggest challenge were the guy-wires which had to be placed in the sea. Fortunately, there were some rocks found at low tide which we found to be suitable.

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A blessing of a tropical island DXpedition venue is that there are usually palm trees from which to hang antennas, and the residents are quite adept at climbing them!

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The first day we were able to make QSOs on all bands up to 40 meters. The next day, a local boy from village climbed into the selected palm trees to fix pulleys as high as possible. Heye and I focused on the 80 and 160 meters antennas. We first installed the 160 meters inverted-L. We moved the horizontal part more than 50 meters away. Unfortunately, this was not entirely towards the north (Europe) but we did not have other options. We only had room to install a single elevated radial. This also had certain "bends" in it. There was simply no space to put up a second radial. After some minor adjustments in length, the resonant frequency and SWR were good.

In the afternoon we installed the 80-meter inverted-L; we had to hurry because the afternoon high tide was rapidly approaching. The palm tree we used for 80m was a little shorter than the 160m palm tree. The last 3 meters were horizontally pointed towards the north. Because of a lack of space, we also had just a single elevated radial, which was pointed such that it hung free from the trees and could not affect the other antennas. Almost the entire beach was filled with our antennas—we could not do much more with the available space. Fortunately, we had enough coaxial cabling with us because some antennas needed more than 60 meters of cable to get into the shack.

With most of the antenna work behind us, we also had to find another place for the generator, because the neighbors complained about the noise. We were not surprised about this; it was indeed a terrible sound. We placed the generator under our house, which allowed the neighbors to sleep normally again. The disadvantage for us was that when the weather was calm, the exhaust gases immediately entered into the shack. We regularly had a break to breathe some fresh air for five to ten minutes. HI.

The next day I put up the K9AY reception antenna, which was about 15 meters away from our house. This K9AY could be used on multiple radios thanks to a splitter and bandpass filters from Stockcorner (Thank You Casper). In most situations the reception at 80 and 160 meters was better on the verticals than with the K9AY. The noise level on the vertical was extremely low.

Our station consisted of two Elecraft K3 and one Elecraft K2. All stations had an amplifier; Expert 1.3K, Tokyo High Power 1.1 and a homemade 600 watt amplifier. We logged the QSO's with Wintest (CW / SSB and RTTY) and WSJT-X (FT8). We used bandpass filters between the exciters and the amplifiers.

During the day it was often difficult to be active with three stations at the same time because we only had two multiband verticals. Regularly we used the 40m vertical at 15 meters. This worked reasonably well. Later we assembled an additional vertical dipole for 17 meters. This allowed us to combine multiple bands.

The propagation was certainly not optimal in the first days, during the night there were at least two hours that all bands were dead. Nothing to do. Fortunately, later that week the propagation improved a bit, otherwise the long night shifts were terrible. Almost every day during the European Sunrise and Sunset we were active on the low bands. However, the propagation was poor on the low bands. At 160 meters, only a few Europeans made it in the log, certainly not the Western Europeans. At 80 meters there were only 3 or 4 reasonable openings into western Europe. Forty meters was much better—around sunrise/sunset in Western Europe—the signals peaked above S9. The higher bands, 10, 12 and 15 meters, were not good for Western Europe; even at 17 meters we logged less than 100 QSOs with Zone 14. Ten and 12 meters could be used for Asia and North America. Almost 1,000 QSOs were logged here. These band openings were often open no longer than one hour, so you had to be there or you missed the openings.

On average, we made between 1,500 and 2,000 QSOs per day. However, at the end of the 2nd week Ernö became seriously ill, so the QSO number dropped. We went to the local hospital twice to try and find out what was wrong with Ernö. Fortunately, after some medicine and enough rest, he felt much better during the third day. All four of us had health issues. Because the temperature was far above 30 degrees C. with humidity of around 90%, every wound on your body was infected within a day. This in combination with a lot of flies and generally poor hygiene, it was particularly unhealthy. I had to wear a pair of long pants with socks after the third day. This, to keep all flies away from the infected wounds. With such temperatures that was certainly no fun.

Due to the high humidity, everything was clammy. We slept outside in a cabin above the water. Here we lay on thin mattresses under a mosquito net. However, after a few days these mattresses were wet due to the high humidity. I can assure you it is not

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comfortable. Also, all clothing was just clammy, if you hang a T-shirt on a line before sleeping, a few hours later it was wetter than when you hung it. There was regularly no running water from the tap. If you had rinsed your clothes, it would take 2-3 days before it was a little dry to put them on again. We drank all the beer on the island. There was nothing left for sale. We were able to buy the last 2 boxes in a shop on the other side of the island. There was nothing more in the shops. We practically drank only water, coffee, or tea; there was nothing else to buy on the island!

Humidity? In the tropics, umbrellas are usually nearby.

Our sleeping quarters. Just like the travelogues show, except we had no air conditioning—and that makes all the difference.

About 2,000 people live on the island. They speak their own language, Rotuman. Children from 6 years old start learning English at school. Rotuman is always spoken at home. Until about 17 years they can go to school on Rotuma, then they have to go to Fiji or beyond to continue studying. All houses on Rotuma are owned by families, they are not allowed to sell these houses. It always stays in the family. On average, one out of three houses are empty for many years (including our radio shack, HI). All residents on the island are very friendly and hospitable.

The island's export products are mainly fruit, coconuts, wicker mats and baskets. John and Harieta have a company specializing in a natural healing oil. The hefau trees produce nuts that contain this oil. Many Rotumans work for them. John gave us a very educational tour into the interior of Rotuma. For years he has great interest in Botanica, and then specifically focused on plants for medical health. The last week we drove around the island to see more than just the Itu'muta district. Fortunately, it was dry and sunny that morning.

I was the only SSB operator of our team. That was very unfortunate because my favorite mode is CW. But on the other hand, I can also speak with happiness that I could change a lot of modes. Especially the last week the pile-ups decreased, and of course the propagation was not optimal that week. I noticed after about 20 minutes of making QSOs in a certain mode the pile-up was as good as gone. I then went to another mode and got the same results again. So, I changed from CW, SSB to RTTY. Strangely enough there were always signals in FT8. It seems that more and more hams are active in this mode. Here the pile-up was huge. Unfortunately, the DXpedition mode of the WSJT-X software was not yet available. We still had to do it the traditional way. If the signals were fine we could make 1 QSO per minute. I worked a few Europeans in this mode. When I noticed that the band was open to Europe, I immediately went to CW or SSB. In any case working the FT8 mode was a nice experience. In total, we logged 1,212 QSOs in this mode. We were very focused on working Europe. This is also apparent from the statistics, 32.6% of our QSOs were with Europe.

We tried to upload our log every day to Clublog. This was not always possible. Our internet was very slow, it was a 3G connection but too busy. From 06:00 in the morning to the late evening it was impossible to use the internet at all. We uploaded the log overnight. And, even that was not always possible. When I was on the low bands, most of the time I was also active

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on the ON4KST chat side. This gave many advantages. What is also very clear to notice is that more and more amateurs are no longer searching on the bands for DX, they are waiting for a dx-spot in the DX cluster. We often gave a CQ for 10 minutes and did not receive any response, we spotted ourselves in the DX cluster and less than a minute later the pile-up started.

For the children in our village we had brought several small things; for the boys, matchbox cars and baseball caps and for the girls, hair bands and bracelets. We also took many T-shirts to hand out. They were greatly appreciated.

At the end we had more than half a barrel of diesel left, and we gave it to the people in the village. They could use it for the village generator. We gave our generator to our host and made an agreement with him that if Tony 3D2AG is active again from Faputa he could borrow a small generator from John. Tony does not have to use solar energy and batteries anymore, and he can also use a small amplifier.

Also for Tony, I left 2 pieces of 10m glass fiber masts. Jan DJ8NK had given us an 18-meter Spiderbeam mast, which we also donated to Tony. We also left our wire antennas for 80m and 160m for him. Now Tony can also become active on the low bands. We also left over 100 meters of coax cable and hundreds of tie-raps.

On Thursday, March 15 we started to take down most of the antennas since Friday was the day that we would fly back to the world from which we came. Except for the 10/15/20 meter, 40-meter vertical and one complete station, everything was cleared at the beginning of the evening. That way we could remain active until the last moment. We wanted to be sure that we would log a little bit more than 30,000 QSOs. In the morning at 05.00 I had the last shift and had planned to make some QSO's at 40 meters during our last sunrise. First, I started to upload the complete log on Clublog. This took a little more time than expected. While doing this I noticed that there were already more than 30K QSOs in the log and decided not to make any more QSOs. I started to take down the last radio setup and packed it for transport. When daylight came the shack was as good as empty. After breakfast we packed the last two antennas and cleared everything. The crates were closed and ready to be transported to Fiji. Around midday we were completely ready for our return journey.

Around 15:00 we left for Fiji and by 7 PM we were in our hotel in Suva. This was a paradise for us. Almost no flies, hot water while showering, a normal dry bed, no mold on the walls, no cockroaches, no exhaust from the generator, normal windows, air conditioner, a menu card in the restaurant, again plenty of beer etc. At that moment you realize what you have missed in the previous three weeks. From that moment on you will always appreciate the smaller things that were otherwise considered normal.

After a good night's sleep, we went to a medical clinic to have a look at the wounds on our legs again. In Fiji they have more experience with this than in Europe. After a check we all got antibiotics and ointment. The doctor suggested that we should have another look at the wounds again in Europe if they were not any better. But after 3 days we all noticed some improvements. We also received anti-worm tablets as a precaution. This is because the drinking water sometimes carries these parasites.

In the afternoon we visited Tony 3D2AG; he lives on the other side of Suva on a beautiful location near the sea. You can hardly have a better location for our hobby. We offered him several ideas to improve his antenna situation. Now he uses many dipoles whilst verticals would function much better (less than 10 meters away from the salt water).

The crates with our materials were to arrive on Sunday afternoon by boat from Rotuma. Tony and John will arrange further transport to the Netherlands. After a few hours we went back to our hotel following our pleasant and unforgettable meeting with Tony.

Sunday morning, we had a farewell breakfast with John and Harieta. They also flew back with us from Rotuma. That day we walked around for a few hours in Suva as regular tourists. In the evening we flew by plane to Nadi on the other side of the island. In Nadi we stayed for another two days before we flew back to Europe. These additional days we had specially calculated as a buffer to minimize risk if the small plane could not fly from Rotuma to Suva. We were active from Nadi, only on 17 meters with a simple dipole from the balcony. More than 300 QSO's were made in CW and FT8 as 3D2EU/P. We returned on Tuesday evening via Singapore to Frankfurt. I had to stay for an additional night in Frankfurt because that night there were no flights to Amsterdam anymore.

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A big thanks to all the club and individual sponsors. The realization of this DXpedition was made easier by this financial and material support.

We want to thank our regular sponsors and especially GDXF and Jan DJ8NK. Check our website for an overview for some additional information:

http://www.rotuma2018.de

All QSO's have been uploaded to LOTW and all QSL's will be sent in May, direct or via the Buro. In the meantime, we are already busy with the preparations for our next DX-expedition.

"3D2EU Rotuma—a DXpedition to never forget"

On behalf of the entire team,

—73, *Ronald* PA3EWP.

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