



Northern California DX Foundation

www.ncdxf.org

Spring 2014

T33A ~ Banaba 2013

Jay Slough, K4ZLE

IT WAS MORE THAN A DXPEDITION. It was an adventure. It was a challenge. It was a learning experience and, equally important, it was a mission of mercy.

On 3 Nov 13, 19 hardy Hams met in Tarawa, Republic of Kiribati, to begin a journey they would long remember. Our concierge, Anne Corbett, a Kiribati native with Banaba relations, accompanied us. Without her assistance the activation of T33A probably would not have occurred. Most of the team was comprised of seasoned DXpeditioners and/or testers but there were a few rookies who quickly learned about operating from the neck of the funnel!

There has been little more than a handful of operations from Banaba



Group photo: (front row, from left) Gerd, DJ5IW; Dom, DL5EBE, and Mike, N9NS; (second row) Cliff, KD6XH; Jay, AA4FL; Arnie, N6HC; David, N6HD; Axel, DL6KVA; Ann, WA1S; Charlie, W8KK, and Al, K3VN; (back row) John, N7CQQ; Ron, WA6FGV; Jay, W2IJ; Dave, NIEMC; Ricardo, PY2PT; Alan, AD6E; Jay, K4ZLE, and Bob, WA1F.



Anne Corbett, our concierge.

since the late Jim Smith, VK9JS, activated it 25 years ago as T33JS. Most of those expeditions were much smaller in scope than T33A and, in total, netted just over 200,000 QSOs. As a result T33 stood number 33 on *The DX Magazine's* "most-wanted" list. Our challenge was to put a sizable dent in the demand for this DXCC entity.

What time is it?

Kiribati consists of 32 flat coral atolls and one raised coral island
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From the President's desk

In the Spring 2013 newsletter I noted that NCDXF dipped into its endowment account to fund a \$50,000 grant to the FT5ZM Amsterdam Island DXpedition (which is on the air right now as I write this). At that time, the Foundation had already spent more in grants than it had received in contributions. Boy, did that ever change in the last quarter of 2013! According to NCDXF's Treasurer, Don Greenbaum, N1DG, 2013 contributions soared to \$117,161, with 44% of it contributed in the last 90 days. That is a 48.5% increase over the \$78,917 contributed in 2012, and 158.5% over 2011's total of \$45,318. In fact, 2013 turned out to be the second best year in NCDXF's history financially, exceeded only by the \$126,930 received in 2004, and most of that year's total came from a very large bequest from the estate of DXer Merle Parten, K6DC, who became a Silent Key in 2001.



Why was 2013 such a good year for NCDXF? Part of the answer lies in our receiving some extraordinarily generous support from a few sources. Bill, W7OO, devised a remarkable matching grant challenge which was hugely successful. Several DX Clubs dug deep into their treasuries to help us with unusually large donations and a few individual supporters wrote very substantial checks. The main part of the answer, though, is because you, our core contributors, increased the average size of your contributions by about 33% compared to the year before. The DXing community is beginning to realize how terribly expensive some of today's DXpeditions are, and those of you reading this should be proud of yourselves for being on the leading edge of helping to overcome those financial challenges. Thank you!

The NCDXF made grants totaling \$75,849 in 2013 and supported several operations: FT5ZM (Amsterdam Island), K9W (Wake Island), T33A (Banaba), XRØZR (Juan Fernandez), S21YMD (Bangladesh), VK9MT (Mellish Reef), VU7AG (Lakshadweep), XZ1J (Myanmar), 9M4SLL (Spratly) and 3B9FR (Rodriguez). We hope that you worked some (or all!) of these and that they were new ones for you. Because of your financial generosity in 2013, NCDXF already has been able to make a 2014 grant of \$25,000 to support the FT5TA DXpedition to Tromelin Island planned for later this year.

During the last 12 months, we have uploaded many past issues of the NCDXF's newsletter to our website (www.ncdxf.org, click on "Newsletter"). These contain a wealth of history about DXing in general, and the activities of NCDXF in particular. We hope you will find them interesting and useful. We have not found all the back issues so if you have a personal collection, please compare it with those listed and if you have any we are missing and are willing to scan them, or lend them to us long enough so that we can scan them, please contact me directly via email at w6oat@sbcglobal.net.

January 2014 was a sad month for NCDXF in that Jack Troster, W6ISQ, one of NCDXF's original four founders and past president, and Bruce Butler, W6OSP, another past president, both became Silent Keys. Jack passed away on the 11th, and Bruce, five days later on the 16th. Both men played huge roles in helping develop NCDXF into the organization it is today. We shall miss them.

New England is hosting the 2014 World RadioSport Team Championship (www.wrtc2014.org) the week of 8-14 July 14. Ostensibly this quadrennial event is a "contest," but it's also a hotbed of DX activity. Some of the best DXpeditions in the past two decades got cooked up at WRTCs, and a large percentage of the major DXpeditions in the past 25 years have had one or more WRTC participants on their operator rosters. Several NCDXF Directors plan to attend this year's WRTC, so if you're in the New England area, come join us. This will be a fun event and a great place to meet some of the world's foremost DXpedition ops.

73 and good DXing,
Rusty, W6OAT

A handwritten signature in black ink, appearing to read "Rusty".



Banaba House, our .333-star rated home-away-from-home.

(Banaba). The International Date Line is bent to the east of this island nation so though they share the same day, they span four time zones. This gerrymandering of the International Date Line causes an anomaly in our world clocks. By definition a day is 24 hours in length, but the Line Island Time Zone is actually 14 hours ahead of UTC, giving us days that are 26 hours from the eastern most time zone to the western most time zone. Banaba, itself, has its own time zone that places local time 30 minutes behind the Gilbert Island Time Zone (Tarawa).

Banaba lies about one degree south of the equator and is only about 3.6 square miles in area. Its highest point, the highest in all Kiribati, is 266 feet above sea level. Kiribati has been proclaimed to be in danger of sinking into the Pacific Ocean because of rising sea levels. Excluding Banaba, the highest natural land formation in the nation is reported to be 16 feet above sea level.

Getting situated

On 5 Nov 13, after approximately 40 hours on the catamaran M/V *Tekinati*, an inter-island ferry with no bunking or kitchen facilities, we arrived on Banaba Island. Eight tons of radio equipment, humanitarian sup-

plies, food, water (almost three tons) and cooking and refrigeration appliances were off-loaded from the *Tekinati* and we began to get situated on the island.

Although we had cleared everything with the governing council from Fiji and the Kiribati Member of Parliament, we had to first meet with local officials to discuss the housing situation and obtain permission to use the entire soccer field for one of our sites. After the meeting, locals moved everything from the dock to the prospective sites. We stayed in the island guesthouse, Banaba House, where most previous DXpeditions had operated. In its heyday this was probably a first class facility; today it is little more than a termite ridden, near-empty shell of a house. One team mem-

Jay, AA4FL, sometimes you just run out of steam!

ber's leg went completely through the second story floor and through the ceiling of the room below. Others had their feet or the feet of their cots puncture the rotted floor. Needless to say, there was no electricity except from our generators. Even by the standards of experienced mountain men the plumbing was nasty and, though it existed, water for flushing and bathing had to be hand carried and dumped.

It was so hot and humid that before one could dry off after a shower he was already covered in perspiration.

Operating

Initially the CW site was on the soccer field, about half a mile up the hill from Banaba house. The SSB/RTTY site was originally set up at Banaba House. By 2311Z on 5 Nov our first contact was made to test the first complete station and we were off and running shortly thereafter. In the next 36 hours we managed to get all six stations at the two sites set up and working. In reality we had everything working except 160M and 75/80M within 24 hours of arrival.

It was mentioned earlier that this was an adventure, a challenge and a learning experience.

The antennas were part of the challenge and learning. Although all the antennas had been used on previous expeditions and tested prior to this trip, we had to do some "MacGyvering" to get them all working. For instance, we had to readjust the capacitive top hats





Left: The football/soccer field operating site (from left) Mike, N9NS; Alan, AD6E; Dom, DL5EBE, and Gerd, DJ5IW. Right: The football/soccer field antenna farm.

for 160M and 80M verticals to achieve resonance or near resonance. On the 80M vertical we could not alter the top hat enough to make it play right. After unsuccessfully trying to wind a base coil for impedance matching, we resorted to taking one of the 40M quarter-wave shorted traps and used it as a matching stub. Sometimes it pays to know a little about transmission line theory!

Propagation was really good for about three of the days. Most of the remaining time we experienced marginal conditions with a solar flare, the usual Pacific static crashes and equatorial mid-day doldrums. At times echoing and phasing occurring from multi-path propagation made copy a bit of a challenge, even on CW. The six stations were kept on the air following propagation as we experienced it.

While we did not meet our goal of 100K, we did make 83,347 QSOs with 22,635 unique call signs. As expected most contacts were with North American and Central American stations followed by Asia (mostly JAs). We did not give those areas priority; their relative physical location and sheer numbers made it impossible for it to be otherwise. We sought other areas of the world, especially Europe, and did our best to make T33 available to all who called. About halfway through the expedition we decided to swap sites by mode, since we were running

almost 2:1 CW QSOs to SSB/RTTY. At that time we shifted the SSB operation up the hill to the soccer field and moved the CW operation down to Banaba house. If you look at the numbers, we still had many more CW Qs than phone/RTTY Qs. We were also disappointed in the 160M numbers, but it was not because we were not there calling. After more than 12 days we went QRT on 17 Nov at 0557Z.

Another mission

This expedition was also a mission of mercy. Jay, AA4FL, is a dentist. In addition to pulling his share of time on the air, he set up a clinic in the local dispensary where he saw over 60 patients and pulled 165 teeth. That represents just over 20% of the island population! There are no dentists on Banaba and medical care is limited to

the equivalent of a RN who does her best to treat the local populace.

We also presented the children with 100 pairs of Croc shoes and a dozen new soccer balls with accessories. Though we had the soccer field tied up while there, you can bet it was being used anew after our departure! Additionally several non-Ham local HF stations were repaired by some of our techies. At least one was a CB radio!

Not over yet

After a 48-hour return boat ride to Tarawa, the adventure was not over, when we learned our return flight to Fiji was canceled. As a result, most of us were delayed at least two days.

Yes, it was more than a DXpedition. It was indeed an adventure, a challenge, a learning experience and

Jay, AA4FL and a local nurse at the dental clinic.



a mission of mercy — something we will remember it for a long time. It is our desire and hope that you enjoyed being on your side of the pileup as much as we did being on our side.

Making it happen

Trips like this don't just happen. DXpeditioners spend time away from their families and since not all are retired, many spend time away from work, using their vacation time so you can put another ATNO or band/mode Q in your log. Very seldom do contributions pay the full cost of these trips and whether you agree or not, these are not vacation excursions taken by a few at the expense of many.

Members dig deep into their own personal funds to make these trips a reality. There is a lot of work that goes into planning what to take, obtaining equipment, testing, loading and shipping tons of material to and fro. While deployed, expedition members are usually on rotating shifts, getting little sleep, eating odd food at odd hours, sometimes contending with an unruly multitude. If it is a Top 50 entity, you can bet the environmental conditions are not idyllic either. Even after the Qs are in the log, the work is not over. Someone has to handle the QSL chores.

No, we are not looking for sympathy; we are just pointing out reality. Non-fly in expeditions are hard work!

Thank yous

In addition to the previously mentioned Anne Corbett, we'd like to thank Timon Aneri from the Kiribati Member of Parliament, Dr. Otem from the Ministry of Health, and Ms. Kabo at the Communications Commission of Kiribati (CCK) for their assistance in getting all the permits and paperwork generated and approved.

We'd also like to thank our sponsors whose logos appear on the QSL card and/or on our website. Of course, NCDXF is one of those sponsoring organizations. Its willingness to spot us the cash prior to when we actually began "radiating rf" was instrumental in making T33A a reality.

Unless you have been involved in



Dave, NIEMC; Jay, AA4FL, and David, N6HD (back to camera), partaking in kava, the local brew.

planning a major operation of this type, you can't fully comprehend what is involved, especially the expense. It takes a lot of front-end money to charter a boat, purchase supplies, arrange for early container shipment and pay the other costs. More and more, trips to the Top 50 entities would not happen, or would not happen as often, without this type of support.


Not to be forgotten are the equip-

Contributions

The **NORTHERN CALIFORNIA DX FOUNDATION** relies heavily upon the generosity of its members to fund various projects. We urge each member to consider making an annual contribution of US\$50 or its equivalent in foreign currency. However, we do not wish to exclude anyone from the **FOUNDATION** for financial reasons. If \$50 is not within your budget, then please give what other amount you can. Naturally, we welcome contributions in excess of \$50! The **NCDXF** is an organization described in Section 501(c)(3) of the Internal Revenue Code and all contributions are tax-deductible to the extent permitted by law for U.S. taxpayers. Send your contribution to: **NORTHERN CALIFORNIA DX FOUNDATION**, P.O. Box 2012, Cupertino, CA 95015-2012, USA. You may also contribute and order supplies online via our secure server, visit www.ncdxf.org/donate.

ment manufacturers who also provided immense support. These were all top-notch suppliers and most of us use their equipment in our home stations. On operations like T33A, such equipment is used under less-than-ideal conditions and their stuff met the challenge with gusto. Consider buying from them when you upgrade your station.

Lastly, the individual Amateurs who supported us prior to and after our return were vital in making this sojourn possible and we thank you, especially those who gave on the front end.

Where to next? Our DXpedition leader's hint, "There is always another adventure in the works!" 

Complete statistics are available on Club Log. As an aside, we appreciate Club Log making its service available to us and other DXpeditions. Having that service certainly adds a positive dimension to our hobby, don't you agree? If you do agree, you might show it by making a donation to them.

DXPEDITION LENDING LIBRARY

The **NORTHERN CALIFORNIA DX FOUNDATION** has a number of VHS/DVD videos and Microsoft® PowerPoint presentations on CD-ROM

available for loan to organizations wishing to show them at their meetings.

There is no charge to use the programs in the **FOUNDATION's** library, but clubs borrowing materials are responsible for postage in both directions. To view the complete listing of programs available for your club's use, visit our website, www.ncdxf.org, and click on "Videos."





Bruce Butler W6OSP

I am sad to report that Bruce W. Butler, W6OSP, became a Silent Key on January 16, 2014.

Bruce originally was licensed as W5PXM in New Mexico in 1950. Upon moving to Southern California in the early 1970's, Bruce changed his callsign to W6OSP and activated that callsign in Napa, CA, in the mid-1980's.

In 1990, Bruce joined the Board of the Northern California DX Foundation as its Treasurer, and, later, served as the Foundation's President from 2009 until his retirement at the end of 2011. Bruce was a member and past President of the Redwood Empire DX Club, and a member of both the Northern California DX Club and the Northern California Contest Club. He also was a 50-plus year member of the American Radio Relay League.

Bruce operated from a number of DX entities including 3B9, 4O, A6, KH8, H40, HV, KH4, PJ7 and ZF.

Working with Bruce in the NCDXF was a real pleasure for me. His energy was boundless and he was always looking for ways to help activate those "most needed" entities. Amateur radio, and the DX community in particular, has lost a champion; I have lost a great friend.

— Rusty Epps, W6OAT, President, NCDXF



Jack Troster W6ISQ

QST Contributing Editor and Ham Radio humorist John G. "Jack" Troster, W6ISQ, of Atherton, CA, died January 11. He was 93.

Licensed in 1935 at age 14 as W2ISQ in Yonkers, NY, Troster became W6ISQ after moving to California following WWII. Troster, Vince Chinn, W6EE (ex-K6KQN), Lee Shaklee, W6BH (SK), and Don Schliesser, K6RV, founded the Northern California DX Foundation in 1972. Troster served as an NCDXF Board member for 26 years and was the Foundation's third President, from 1975 until 1986.

He served as president of the NCDXC and the Northern California Contest Club. An ARRL Charter Life Member, he held DXCC #1 Honor Roll (Mixed, CW, and SSB) as well as 5BDXCC, 5BWAS, and the USA Counties Award (all CW). He was a member of the CQ DX Hall of Fame, the First-Class CW Operators' Club and the A-1 Operators Club, and he was the Pacific Division representative on the ARRL DX Advisory Committee. Troster also was a member and director of the Quarter Century Wireless Association and for years wrote the monthly "QCWA" column in *WorldRadio*.

"He was the consummate gentleman," said Rusty Epps, W6OAT. "He was warm and welcoming to everyone he met, and many Amateur Radio operators today enjoy the hobby as a direct result of his nurturing, encouragement and enthusiasm. Jack was known for his quick wit and encyclopedic knowledge of Amateur Radio history. His passing leaves a huge void."

Survivors include his wife of 65 years, Marguerite, KC6NFE.

— ARRL Letter



Raleigh 'Lee' Shaklee W6BH

Raleigh "Lee" Shaklee, W6BH, of Newport Beach, CA, died 23 Sep 13 following a brief illness. He

was 91.

Lee was a successful businessman (Shaklee Corporation), investor, humanitarian, philanthropist, and a lifelong Amateur Radio operator.

First licensed in 1937 as W6PQW, Shaklee got interested in DX and contesting the following year and began experimenting with Yagi-Uda antennas. WWII broke out while Shaklee was attending UC Berkeley; he joined the Navy and became involved with the then-cutting edge radar systems.

After the war, he resumed hamming, experimenting a lot on 10 Meters with various antennas that combined driven and parasitic elements and with new AM techniques. He obtained W6BH in 1968.

He was one of the four founders of the Northern California DX Foundation, and one of its major funders. He was also most generous to a number of other Ham Radio organizations including the ARRL.

Lee was a spirited and deeply ethical man who was very loving and generous. He and his wife, Claire, who preceded him in passing, passionately supported numerous causes, organizations and individuals. Their support continues through a number of charitable trusts and endowments.

Lee realized his lifelong dream of building a Ham Radio facility, second to none, on a mountaintop he acquired in Anza, CA (www.w6bh.com). He was able to control and operate the complex facility from his home in Newport Beach. He enjoyed many hours of communication with other Hams all over the world.

Lee loved life and reflected this in all he did. He will be deeply missed by his family and many friends. On a personal note, Lee was my friend and mentor for almost 50 years. I will miss his humor and wise counsel. May he rest in peace.

— Donald Schliesser, K6RV

TX5K THE 2013 DXPEDITION TO CLIPPERTON ISLAND

Robert W. Schmieder, KK6EK

DARK. ABOUT 1030 26 FEB 13. THE skipper of the Shogun announced that we had arrived at Clipperton. In theory, the island lay directly in front of us, but with the full moon diffused through a tenuous overcast, all we could see was the glowing spray from the violent surf pounding every foot of the periphery of this remote coral atoll. The team was quiet, introspective, anxious. We spent the night in the belief that the next evening we would be sleeping on the island.

Arrival

With first light, the Shogun started moving clockwise around the island, studying the surf and searching for a suitable landing. In the crystal-clear morning, the island lay stretched out before us, far bigger than we had expected. The clumps of palm trees seemed denser and greener than we expected. Now and then the skipper sent a Zodiac off to assess the surf, but invariably it returned with the news “Nope. Not here. Not now.”

The skipper made a tactical decision and selected a very handsome grove of trees, announcing that they would take some boxes ashore. Quickly, I selected the containers with emergency food, lights, radios, medical supplies and a small generator. The Zodiac was away and our spirits soared. But soon they returned with bad news: no more boxes or people, it was too rough. The



Location of the landing/campsite on Clipperton Island.



radio operators were not happy; their pre-defined goal of 150,000 QSOs had just been dashed. I thought of Apollo 13: “We just lost the moon.” But there was nothing we could do, we just had to wait until the next day.

Landing

With first light the skipper judged the surf to be workable and we began to move equipment and people to the island. By 0500 the first load of cargo was on the beach and I began to offload the team members according to the sequence of work we had planned. With two Zodiacs working in push-pull, we were able to take almost 10 loads in an hour. By 0800 the major equipment was on the island, and we were transferring tables and chairs, large generators and antennas. By 1100 the team on the island already had two main tents erected: the GEM (greeting, eating, meeting) and COM (communications) tents. The team would live and work in these tents when not operating. One item not transferred was the ATV and the large wagon it pulled. Frankly, I didn’t know how to do it, and I was relieved when the skipper delayed it until the next day.

That night we were thrilled to see flashlights floating back and forth on the island as the onshore team worked into the night constructing our camp. To our surprise, we also saw several other lights across the island from boats at anchor. We had expected Clipperton to be a remote and lonely place, but it felt like a busy resort.

The next morning the skipper simply decided to load the ATV onto a Zodiac and drive it to shore. As he zoomed away, I thought, “Be still my soul.” On the beach, tiny but clearly visible, one of the crewmembers jerked

his arms skyward in the “touchdown” gesture, and we applauded: the ATV was safely on the beach!

The camp

By the end of the morning every load of cargo and every other team member was on the island, so I took



Aerial photo looking north over the TX5K campsite.

the last Zodiac ride and stepped onto Clipperton Island. What I beheld was breathtaking: a village of eight tents surrounding a pristine, fine, white-sand yard immediately in front of an extraordinarily handsome grove of palm trees. Two solitary trees, much taller than the grove, stood between our village and the beach, providing a prominent marker, like a flag on a golf course. At the camp’s entrance, the team had



One of the operating tents — from the outside and filled with operators inside.

established a kind of corporation yard: the various shipping cases and gasoline jerry cans were arrayed in rows, providing a kind of open-air warehouse. Most of the team members were busy completing the two radio operation tents, designated Site A (SSB operation) and Site B (CW). Even the sleeping tents had been erected and populated by cots, air mattresses, blankets and pillows. I took the last one, and posted my callsign on the doorway.

It was immediately obvious that the decision to bring the ATV was very wise. The ATV and its wagon trailer moved back and forth between the main camp in the remote radio operating sites, carrying equipment, supplies and, sometimes, people. The area near our camp was covered in a deep layer of very fine, unconsolidated coral sand making walking difficult and pushing a wheelbarrow, of which we had three, would have been exhausting.

Through the rest of this day and the next, antennas were erected. We brought exclusively vertical antennas, some connected into four-square arrays especially for 80M, 40M and 30M. Altogether, the team put together 10 complete HF stations on the two main sites. In addition, one team member put up a 6M/EME station about a kilometer away. Because he was essentially self-contained and not connected to our local WiFi network, and because of the special needs of the 6M EME operation, he had very little interaction with the rest of the team and was not updated on DXA.

Going QRV and DXA

That night the radio operators assembled in the GEM tent and, after

a very short discussion, it was determined we would go on the air at 2300 hours.

I queried Ed Cox, KE3D, about the WiFi network, which was crucial, not only for the redundancy it provided, but because one computer had been reserved exclusively for DXA, our real-time online log server. DXA would listen to all of the HF stations, capturing the individual QSO data, packetizing it, and uploading it every 60 seconds through the Inmarsat satellite link to a server on the U.S. mainland. Anyone on any computer anywhere in the world could go to www.dxa2.org and see information about the DXpedition, including the total number of QSOs logged, the band modes on which TX5K was active at that moment, and the map of the world showing flags and call signs of the location of each station entered into the TX5K log within the last minute. While not formally part of the stations and the radio operation, DXA was an essential part of the DXpedition, providing an important aid to DXers wanting to make a valid contact with Clipperton. Ed set about getting the WiFi working. I was optimistic, and excited.

In spite of our year-long preparations to implement DXA, we discovered that there were multiple problems, both in hardware and

The ATV was essential for transporting supplies.

software. The radios went QRV on schedule, but DXA was not working. I was frantic, and bounced back and forth between the various people who had created various components of the system, some there on the island and some at home. It wasn't until late the next day, perhaps 18 hours after the radios started logging QSOs, that we succeeded in updating the data in DXA and getting it to correctly display the QSOs logged in each minute interval. From that time forward, the DXA system worked flawlessly, and it received universal compliments and appreciation.

The best thing

Once DXA was working, I carried out my secret operation, planned months before but not shared with the team. I loaded several cases into the ATV wagon and drove to a solitary palm tree at the edge of the lagoon, about 500 feet from our camp. There, undetected, I extracted and assembled various components: a small generator, a 12-volt water pump, a three-stage filter bank, two long hoses and a nozzle on the end of a six-foot pole stuck in the ground.

Wading into the lagoon, I placed the hose with its intake filter in a sub-





The GEM tent, where we ate our meals (right), and the COM tent next to it.

merged bush, and returned to shore. Expectantly, I started the generator, and waited anxiously for about two minutes. Then, with several burps, fresh cool water came squirting out of the nozzle! I let out a triumphant whoop. The shower worked! I stripped down and easily spent 20 minutes luxuriating in this fresh, cool, clean shower. Because of the intense heat on the island, especially in the morning, every member of the team was suffering, and I figured, correctly, that the shower would be very popular. Indeed, for the rest of the time we were there, a continuous parade of men went to and from the little tree. At the end of our operation, even the most vociferous complainer spontaneously dubbed it “the best thing on the island.”

Operating

As we progressed into the next few days, the DXA counter ticked off the rise in total QSOs logged. Now and then, we actually had all 10 HF stations working simultaneously. The average rate at which TX5K logged QSOs was slightly over 14,000 per day. I spent my time monitoring DXA and filling its generator every few hours, day and night. Next to me in the COM tent, Ed, KE3D, set up a remote video camera and recorded some of the interesting behavior of the masked boobies that nested on the ground around our camp. Ed even captured images of a rat, which was significant because it was the accidental introduction of rats about 10 years earlier that caused the precipitous decline in the crab population and the explosive growth of the ivy-like ground cover.

On most days, the Shogun crew arrived in the morning with supplies of food, water and gasoline. The food — steaks, hamburgers, pork chops, lasagna, macaroni salad, green salad plus desserts of various kinds — was superb. When hamburgers arrived, with all the trimmings, we opened up the gas-fired barbecue and the team was treated to freshly grilled, hot, juicy burgers.

Exploring

Many of the team members hiked the entire circumference of Clipperton, some seven miles, and returned with many interesting observations and photographs. In particular, they documented the 2008 site of the TX5C DXpedition, which was recognizable because some items were abandoned when the high surf limited their departure. Another interesting sight was the stacks of artillery shells on the ground with birds blithely roosting among the potential bombs. Some people have reported hearing these explosives detonating, and we gave them as wide a berth as possible, consistent with getting good photographs.

Thinking about leaving

As the days progressed, the radio operators kept up an extraordinarily energetic regimen, and the total number of QSOs rose above 90,000. About four days ahead of schedule, some members of the team were discussing the strategy and procedures for shut-down and leaving. I was a bit surprised, since I assumed they wanted to extend the operating time to the maximum. In fact, some members apparently were making extremely tight schedule

arrangements for our return to Cabo San Lucas and were nervous about our departure. From experience, I knew that such plans were very dangerous, because it is the weather that determines your movement on the ocean.

I consulted with the boat’s skipper, who was in direct contact with the home office in San Diego and had all the available information about the current weather and predictions for the next few days. His input was that we would probably experience increased winds for two more days and then the winds would subside. However, it is the state of the surf, not the wind, that would determine whether we could get off the island, and the surf was determined by major weather patterns hundreds of miles away. And although it was my role and responsibility to keep everyone informed with the best information available, when I brought this information to the team, I was not popular.

100,000 QSOs

On 8 March, a little over a week after we began, the DXA counter displayed exactly 100,000 QSOs. Quite a few people around the world anticipated this moment and took pictures of the screen.

Then, without warning, DXpedition co-leader Chris Janssen, DL1MGB, decided to stop the CW operation and dismantle the Site B tent. The next day Chris told me he was going to stop operations altogether and dismantle the Site A tent. I marveled at the efficiency and speed with which they dismantled the camp and moved the bundles and containers to the beach. Already the



Aerial photo of the TX5K campsite.

Flying the flags of the countries and sponsors.

Shogun's crew was running shuttles and the whole operation reminded me of a colony of leaf-cutter ants decimating a bush and carrying it down a trail where the pieces would disappear into the nest.

In an amazing replay of a week before, the team simply lifted the ATV into a Zodiac and the skipper drove it through the rising surf safely back to the boat. Soon, team members themselves were being transported back to the boat, and the number of people and amount of gear waiting on the beach diminished.

I took the opportunity to walk back to our campsite, now completely bare, and systematically inspect and photograph the entire area. I was extremely impressed with what the team had done; it was completely clean. I didn't find a one single scrap of paper, piece of wire, fragment of food or any other evidence of our stay there.

Departure

Around noon, the *Shogun* left Clipperton, about 12 hours earlier than originally scheduled, bound for Cabo San Lucas, Mexico. The trip back was surprisingly quiet. Only a fraction of the team showed up for meals, and there was relatively little socializing. The team was physically tired from the exertion and much of the team spent their time napping. The gentle rocking of the boat was conducive to relaxing, remembering and writing. The *Shogun* ran due north on the calmest seas the crew had ever seen.

After four days of sailing, we were

in Cabo, and the majority of the team left the boat to make their scheduled flights. The remaining nine of us continued another four days to San Diego, where we were greeted by wives, sweethearts, and a wonderful sign that said "Welcome home *Shogun*."

The captain and crew of the *Shogun* did a fantastic job.

Luis, XE1L

It was decided that we would unload the boat the next morning, so we walked across the street to our hotel with our suitcases. Luis Charitarifsky, XE1L, rolled his suitcases across the street on a hotel cart and down the hallway to his room, chatting with his two roommates. Without so much as a word or a wince, he suddenly crumpled to the floor. Instantly, his teammates realized something was seriously wrong, and while one started CPR, the other dialed 911. In minutes, the fire department was there and began resuscitation, but after a half hour it was obvious that Luis was gone. Not everyone on the team knew what had happened, but for those who did, the shock was profound.

The following day, in spite of our feelings, the boat had to be unloaded and the gear packed to be returned to Germany and northern California. By midday, with assistance from people who just showed up to help, it was done. As my wife and I drove north out of San Diego, I finally succeeded in connecting with Luis' family, and had the unenviable task of explaining to his wife what had happened.

Post-expedition

For some, the expedition isn't over, even after returning home. For me, there were the tasks of unloading and processing the equipment, returning borrowed items, correspondence, fielding urgent questions from DXers who were concerned about their QSOs, updating the webpages, catching up the financial records and writing reports and articles for our sponsors. The logs were uploaded to ClubLog and most of DXers requested their QSO cards using OQRS, which were distributed in early May. Two weeks after I returned, I wrote a full-length book about DXA, including more than 150 pages about K7C and TX5K, and had copies available at the DX convention in Visalia. TX5K is now part of the history of Clipperton and DXpeditions.*

Acknowledgments

The Clipperton Island Expedition TX5K was carried out under the title of Cordell Expeditions, a nonprofit research group I founded in 1978. I also served as expedition leader with Chris Janssen, DL1MGB, who served as co-organizer for radio operations.

The onsite TX5K radio team consisted of Jef Claes, DD2CW; Markus van Bergerem, DJ2EO; Mathias Mueller, DJ2HD; Gerhard Richter, DJ5IW; Chris Janssen, DL1MGB; Dietmar Casper, DL3DXX; Andreas Paulinck, DL5CW; Tom Koglin, DL5LYM; Heye Harms, DJ9RR; Ed Cox, KE3D; Rick Royston, KF4ZZ; Robert Schmieder, KK6EK; Walt Wilson, N6XG; Carlos Nascimento, NP4IW; Yann Weber, F1NGP; Giovanni Bini, I5JHW; Ken-

neth Hemstedt, OZ1IKY; Robert Lusnia, SP5XVY; Igor Lazarev, USØVA; Roman Granovych, US5WDX; Lance Collister, W7GJ; Michael Shapiro, WA6O; Dave Farnsworth, WJ2O, and Luis Chartarifsky, XE1L.

Our event webmaster was Rich Holoch, KY6R, who also maintained the blog. Technical support was provided by the other developers of DXA: Pete Bourget, W6OP, and Dean Davis, N7XG. Technical support was provided by Alan Maenchen, AD6E; Dean Straw, N6BV, and Felipe Ceglia, PY1NB. Pilot stations included Gary Jaeger, DF2RG (chief); Bill Horner, VK4FW; Marcus Dornach, DL9RCF; Craig Manning, XE2HWJ; Col McGowan, MMØNDX; Andre Pretorius, V51B; Cesar C. Rodrigues, PY2YP; Stan Schwartz, KH66CG; Rex Turvin, NR6M; Deepak Pathak, VU2CDP; Andy Moiseev, UAØBA, and Yasuyuki Inuoe, JR1AIB. QSL managers were Bob Schenck, N2OO (direct mail) and Dean Davis, N7XG (OQRS).

Support

The TX5K team is very appreciative of the sponsors and donors who made this project financially possible. Zorro, JH1AJT, made an extraordinary financial donation to the project. Major support was provided by the ARRL (the Colvin Grant), FlexRadio, the International DX Association (INDEXA), the German DX Foundation, the GM DX Group, the Swiss DX Foundation and the Northern California DX Foundation (NCDXF).

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Equipment support was provided by Heil Sound, OM Power, Spiderbeam, microHAM, Alpha Amplifiers, Elecraft, Outfitter Satellite Phones and San Francisco Kites.

The Clipperton expedition is dedicated to the memory of Conrad Limbaugh. Honorary expedition leader was Dan Gotshall, who, for decades, was a prominent marine scientist and expeditioner. The TX5K DXpedition is dedicated to the memory of Chod Harris, VP2ML, a champion of DXpeditions and editor of DX Magazine. Honorary DXpedition leader Yasuo "Zorro" Miyazawa, JH1AJT. 🌐

** The book "DXA: The Real-time Online Radio Log Server" (282 pp., 16 pp. full color, perfect binding, 7½"x10"), includes the inside stories of K7C (Kure Atoll 2005) and TX5K (Clipperton 2013) DXpeditions and is available for \$20 plus postage (\$3 U.S./\$16 foreign). Order online at www.tx5k.org, or send your payment to KK6EK, Dr. Robert W. Schmieler, 4295 Walnut Blvd., Walnut Creek, CA 94596 USA.*

Continent By Mode

Band	PH	CW	JT65	RTTY	Total
AF	405	326	0	83	814
AN	0	2	0	0	2
AS	5,593	9,533	0	1,185	16,311
EU	10,694	20,841	28	3,427	34,990
NA	25,387	27,812	19	3,696	56,914
OC	816	701	4	100	1,621
SA	1,800	987	3	159	2,949
Totals	44,695	60,202	54	8,650	113,601

Band/Mode breakdown

Band	PH	CW	RTTY	JT65	Total
160	423	3,662	0	0	4,085
80	771	5,485	0	0	6,256
40	7,508	5,347	9	0	12,864
30	0	7,412	3,171	0	10,583
20	6,048	6,843	2,429	0	15,320
17	6,812	7,428	2,815	0	17,055
15	8,686	9,280	226	0	18,192
12	7,366	8,317	0	0	15,683
10	6,873	6,375	0	0	13,248
6	208	53	0	54	315
Totals	44,695	60,202	8,650	54	113,601

DXCC by Band/Mode breakdown

Band	PH	CW	RTTY	JT65	Total
160	10	79	0	0	80
80	33	90	0	0	93
40	115	101	4	0	125
30	0	112	89	0	117
20	118	116	88	0	136
17	117	120	79	0	136
15	118	126	32	0	136
12	119	129	0	0	138
10	112	113	0	0	128
6	12	9	0	23	33
Totals	154	150	109	23	166



Continent By Band

Band	160	80	40	30	20	17	15	12	10	6	Total
AF	5	15	53	47	150	130	118	128	168	0	814
AN	0	0	0	0	1	1	0	0	0	0	2
AS	326	1,070	2,686	1,811	1,875	2,155	2,399	2,299	1,690	0	16,311
EU	994	1,835	4,198	4,451	4,365	5,178	5,918	4,922	3,101	28	34,990
NA	2,709	3,230	5,586	4,048	8,190	8,944	9,044	7,729	7,403	31	56,914
OC	29	70	191	146	322	237	234	183	205	4	1,621
SA	22	36	150	80	417	410	479	422	681	252	2,949
Totals	4,085	6,256	12,864	10,583	15,320	17,055	18,192	15,683	13,248	315	113,601



At their July 20, 2013 picnic, the Northern California DX Club presented a check for \$8,000 to the Northern California DX Foundation. NCDXF President Rusty Epps (W6OAT) stated, "This donation, the largest ever received from a Club, will help to provide critical funding to DXpeditions high on the Most Wanted List. "Often without support such DXpeditions would not be possible. We are very grateful for this donation and value our partnership with NCDXC."

Left to Right: Paul Ewing (N6PSE), Bob Lanning (W6OPO), Russ Bentson (K6KLY), Ross Forbes (K6GFJ - NCDXC President), Rusty Epps (W6OAT - NCDXF President), John Miller (K6MM), Steve Merchant (K6AW), Ken Anderson (K6TA), Tom Berson (ND2T), and Jim Sansoterra (K8JRK).

Show your support for NCDXF

NCDXF offers several ways for you to show your love for DXing! Impress your friends with a gold lapel pin (\$7), show up at your next hamfest sporting the NCDXF hat (\$12) or don a NCDXF T-shirt (\$15) to set up your Yagi on Field Day. Send out your QSLs with an NCDXF label (roll of 500, \$7). Mail in the attached form or visit www.ncdxf.org to order today.



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(indicate size M / L / XL / 2XL / 3XL)

___ Hats @ \$12 each \$ _____

___ Lapel pin @ \$7 each \$ _____

___ Roll(s) of labels @ \$7 each \$ _____

Total contribution & supplies \$ _____

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