



Northern California DX Foundation

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Spring 2010

K4M — Midway Atoll 2009

By Joe Pater, W8GEX; Tom Harrell, N4XP, and Janet Pater, W8CAA

MIDWAY ATOLL, LOCATED IN THE mid-Pacific about 1,200 miles north-west of Hawaii, is a U.S. possession administered by the U.S. Fish & Wildlife Service (USFWS). Before this, Midway was a major U.S. military installation with the U.S. Navy occupying the atoll from before World War II. In 1993, the Navy transferred the atoll and its administration to the U.S. Department of the Interior. Once they assumed responsibility for the atoll, requests by Ama-

part, no one knew who had been given a bed; however, it was not long before we all knew who would be going as USFWS e-mailed acceptance letters to all who had applied.

As time passed, the makeup of the team changed and, in the end, the



USFWS increased the total number allowed from 17 to 19. The group consisted of Bruce Butler, W6OSP; John Kennon, N7CQQ; Arnie Shatz, N6HC; Tom Harrell, N4XP; Craig Thompson, K9CT; Max Mucci, I8NHJ; Dave Johnson, WB4JTT; Franz Langner, DJ9ZB;

a backup list they had established. Each time someone dropped out, USFWS added someone from the backup list, maintaining 19 operators.

Soon we were talking on Skype, to those we already knew and meeting those whom we did not, and then discussing how to best make this a success. Unlike other DXpeditions, we were unorganized and, even though USFWS did not want a "team," it was a unanimous decision that we elect a leader and get organized. It

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teurs to activate the atoll were not approved. However, in January 2009, the USFWS unexpectedly announced they would allow a radio operation in the fall of 2009.

In their announcement a set of rules were put forth. Specifically, they would only allow Amateurs to visit Midway based on the number of beds available for lodging and on a first-come, first-serve basis. For the most

Joe Pater, W8GEX; Charlie Wooten, NF4A; Paul Newberry, N4PN; Joe Blackwell, AA4NN; Kimo Chun, KH7U; James Brooks, 9V1YC; Tom Berson, ND2T; Kevin Rowett, K6TD; Art Blank, WA7NB; Charlie Spetnagel, W6KK, and Don Greenbaum, N1DG.

Soon after, we were told no more operators would be allowed and USFWS provided us the names from

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From the President's desk

THIS ISSUE OF THE NEWSLETTER IS DEVOTED ENTIRELY TO K4M, the Midway expedition that took place in October 2009. A fine article has been put together by N4XP, W8GEX and W8CAA. We thank them for this. The Midway expedition was unique in many respects and makes for interesting reading. For those of you attending either Visalia or Dayton, there will be a presentation made about this expedition.

This issue also includes our "Heavy Hitters" list of contributors in 2009. While we appreciate all of our contributors, we want to give special recognition to those who contribute over \$250 annually. It is quite a list and we appreciate it.

We have also added to our website "metallic logos" that clubs and individuals can use to recognize their contributions to NCDXF either on their QSL cards or websites. Just click on the logo and you will be able to download a jpeg file.

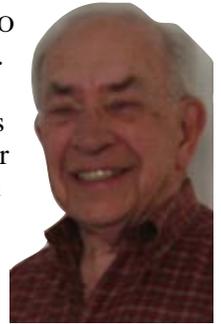
The NCDXF board has approved two \$1,000 scholarships from the W6EEN Memorial Scholarship Fund for 2010. We will introduce you to the scholarship recipients in the next issue. The scholarships are administered and granted by the ARRL.

Since the first of the year we have funded a DXpedition to Iraq, YI9PSE, and a DXpedition to Annobon, 3CØC. Both of these expeditions should bring some new counters to all of us.

If you haven't made note of the change already, our new mailing address (always listed in the masthead at the left) is PO Box 2012, Cupertino, CA, 95015-2012.

We thank all of you for your continued support of NCDXF, particularly during these trying economic times. Your contributions are what allow us to do what we do. Here's to a better Sunspot count in 2010 and the conditions that will prevail.

— Bruce Butler, W6OSP



Heavy Hitters 2009

We sincerely thank these supporters of the Northern California DX Foundation for their generous contributions during the calendar year 2009.



\$2,000-plus — Northern California DX Club



\$1,000 to \$2,000 — Rochester Amateur Radio Expo, Central Arizona DX Association (K7UGA), Northern Illinois DX Association, K2PLF, W6EUF, San Diego DX Club, Southern California DX Club, WØGJ, Southeastern DX & Contesting Organization and W6OTC



\$500 to \$1,000 — Hualapai Amateur Radio Club (WB6RER), W6OSP, N4JJ, N7ZA, K6IPV, K6RIM, MDØCCE and W5DNT



\$250 to \$500 — W6RS, W8NF, JA1EM, K7BV, WØYK, NU6T, OX3MC, W7KU, W5ZPA, JQ2UOZ, K4TKM, KI6T, Twin City DX Association (WØTDX), NE1RD, K6TA, K6UM, NW6P, KA8Q, Mississippi Valley DX/Contest Club, WB9Z, N6OX, N6PSE, NN6W and K6ANP



Kimo, KH7U, and Kevin, K6TD, setting up SSB tent.

was agreed that Tom Harrell, N4XP, would serve as the leader, as he had led some large groups, one of which was the highly successful Kingman Reef K5K operation. He also played a major role in the activation of Scarborough Reef, an operation taking five years to come to fruition. Tom agreed to oversee the total operation and then requested Dave, WB4JTT, to be co-leader.

At that point, Kimo Chun, KH7U, contacted the refuge manager, Matt Brown, to talk organization and how it would be of benefit, not only to us, but to USFWS as well. We explained just having a single voice to deal with, in all matters, would be best for them instead of 19 people calling every other day. Matt agreed.

A management team was established for five specific areas: Don, N1DG, would handle IT; Bruce, W6OSP, finance; Kimo, KH7U, and Dave, WB4JTT, would take care of transportation and logistics, and Joe, W8GEX, would oversee radios/amps/antennas and any other area dealing with operations on a daily basis. Dave, WB4JTT, an attorney, would also take care of all legal requirements.

With a management team in place, we started planning for what we hoped to be an outstanding DXpedition. Each manager was directed to bring various other team members into his area of concern to assist, with some individuals serving on more than one team. Over the next six months we had hundreds of Skype

calls and e-mails while all details were addressed and problems were solved.

Our first major goal was the setting of a date for the operation. USFWS had told us the DXpedition had to take place during the period October 5-19, 2009, because of the bird migration, which brings about 1.5 million birds to the island, around October 19. We did not want to be there over a contest weekend but we wanted two weekends. After various suggestions, K4M was selected and reserved.

Now we needed a way to get to Midway. A boat was not an option for

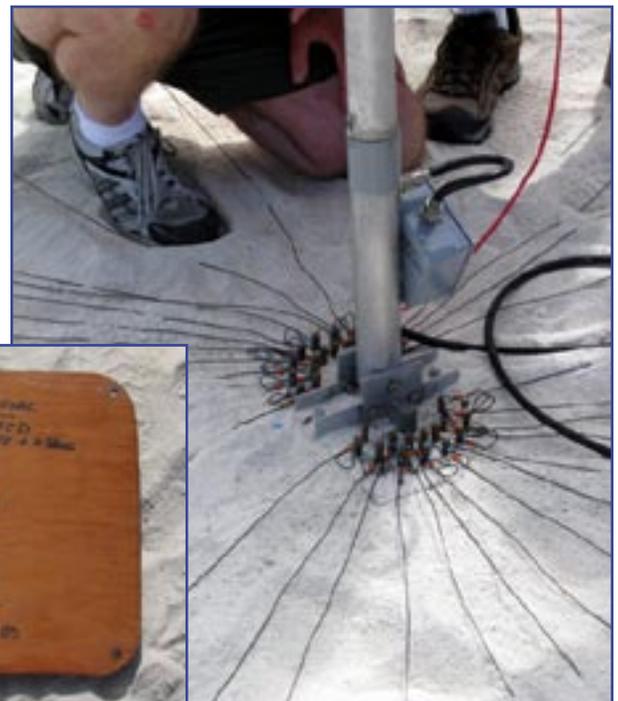
several reasons, so we started looking at airplanes. Research quickly proved only one plane would be available and, as such, is also the aircraft that goes to Midway for the USFWS under a contract agreement. It was small and would not accommodate USFWS assets plus the entire team. Our only choice was to charter this same aircraft when it was not committed elsewhere, or on a day it was in use by the USFWS. A weight restriction meant that all of our personal belongings, equipment and supplies, including the radio equipment, would have to be shipped in a container on a USFWS supply barge to Midway in August.

Division of duties

KH7U served as the liaison between the team and USFWS. Having been on numerous prior DXpeditions, Kimo had amassed a large inventory of equipment and he also provided the staging area in Hawaii and coordinated all logistics.

Don Greenbaum, N1DG, who had also worked on the Scarborough Reef operation with Tom, coordinated the shipping of supplies to Arnie, N6HC, in California who served as a central receiving point for equipment that would travel to Midway on the

Right: Base of the Battle Creek Special. Below: The board with the Battle Creek. This is not the first time many of the members on the team have handled this antenna. We were members of many of the operations listed here.





Well-marked antennas as required under our terms of entry into Midway Atoll. Colorful, too. We are pleased to report that no locals were harmed in the making of this DXpedition.

USFWS supply barge. Arnie oversaw the collection and organization of the equipment before it was put in a container to Hawaii. Once in Hawaii, Kimo picked up the equipment, added his items, tagged and inventoried everything and then loaded it on skids and finally arranged for shipment via container to Midway.

It was agreed that our equipment should be standardized and interchangeable. All six positions were then set up identically, with each position capable of CW, SSB or RTTY. Equipment was Icom IC-7600s and ACOM amps using Rig Experts interfaces. Computers were also standardized for ease of use. We had several standby amplifiers in case needed.

Bruce, W6OSP, was responsible for financial aspects and was assisted by Margaret Blackwell, XYL of Joe, AA4NN. Janet Pater, W8CAA, also assisted Bruce with fundraising efforts and contacted clubs and associations for financial assistance.

WB4JTT was responsible for the physical plant, which was any and all requirements for the physical configuration of the operation, in addition to legal responsibilities.

The management team asked Vrata

Vaverka, OK1KT, to assist with the QSL requirement and serve as the team liaison with Beda of ELLI Print, who would be supplying QSLs.

W8GEX was in charge of daily on-island operations dealing with any and all areas concerning transmitting and receiving, i.e. radio position setup and tear down, cable requirements and needs dealing with positions, on-going maintenance once on island, antennas, propagation, radio prep prior to shipment, etc. For the operating scheduling, Don and Joe worked together to assure the positions were properly manned as required.



The Titanex going up required everyone, but the results were worth the effort. We put up two.

Operational plans

It was decided K4M would use two separate main operating positions to include separate antenna fields, one for CW and one for SSB. Planning included deciding where each station would be set up, where the antennas would be placed to include coax runs, amounts of 12V control cable, connectors needed, plus the electric service and other logistics.

With two separate antenna fields required, Paul, W8AEF, would provide one set of SVDA's (switchable vertical dipole arrays) and John, N7CQQ, would have Paul build a set for him that he would loan the operation. This would provide SVDA's for each operating site. Kimo provided two Titanex verticals as well as the loan of a Battle Creek Special from the Battle Creek Group. A vertical for 30 Meters would complete the antenna requirements for 10 through 160 Meters.

With 9 October 2009 set as the departure date, the team began descending on Hawaii with the arrival of WB4JTT, W6OSP and N4XP on 5 October. It was then that we quickly learned our plans had already started to unravel: the aircraft that was to take us to Midway was in need of repairs.

Several others arrived on 6 October and the remaining members arrived by the following evening; however, the plane wasn't going anywhere and we were thrust into a holding pattern, although we were told the aircraft would soon be fixed! At least the equipment had reached Midway and

was waiting for our arrival, and we were together as a team.

Because of the problem with the plane, our scheduled departure did not happen, and since there were no other acceptable aircraft available, it was our only option.

At our team meeting to finalize the operation, scheduled the day before we were to supposed to leave, we discussed our plans for staging, unpacking and repacking of equipment, set up, flagging of the antennas, lodging, scheduling and, most importantly, teardown and clean up.

While waiting, in one of our many calls to Midway, Matt indicated there was room for one more person who could be added to the team. The aircraft still held only 17 and we knew that would be an issue, but we moved ahead and went to the list for the next available operator. The first person available off the list was Charlie, NF4A, and he was on site in 23



A look back at Midway Atoll from our plane.

behind; the initial crew departed without difficulty at 3:30 p.m.

K4M gets underway

During the flight, Art, WA7NB;

equipment from storage and moved it to the staging area just off the beach from where we would be operating. We were also issued bicycles for our personal transportation.

As planned, the operation was separated for the CW and SSB camps, with the stations being about 500 feet apart. The SSB station was set up in a tent, and the CW station was located inside the tavern used by the Midway staff. The CW station was put there so



One of the last remaining WWII pillboxes on the beach.

hours! We were glad to have him.

We settled into a waiting game and finally, on Sunday morning, 11 October, we got a call that the problem was fixed and, if the test flight was successful, we could depart that afternoon. Once we were at the airport and the team was assembled, we discovered that we exceeded the weight limit of the aircraft. Fortunately, a USFWS charter to Midway was departing two days later and we could have two seats. Bruce, W6OSP, and Charlie, NF4A, volunteered to remain

Don, N1DG, and Kevin, K6TD operated K4M aeronautical mobile. This was our opportunity to let the DX community know we were airborne, and that the DXpedition was definitely going to happen.

Upon arrival, Matt Brown, the refuge manager, and several of his staff, met us. After an orientation to familiarize us with the island's infrastructure and, most importantly, about the wildlife, we headed to the barracks for the night.

Early the next morning, we got our

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.



The team proudly waving their flags. Pictured from left to right (top row) Joe Blackwell, AA4NN; James Brooks, 9VIYC; Don Greenbaum, N1DG; Tom Berson, ND2T; Craig Thompson, K9CT; Kevin Rowett, K6TD, and Charlie Spetnagel, W6KK. (middle row) Tom Harrell, N4XP; John Kennon, N7CQQ; Bruce Butler, W6OSP; Arnie Shatz, N6HC; Art Blank, WA7NB, and Charlie Wooten, NF4A. (front row) Kimo Chun, KH7U; Max Mucci, I8NHJ; Franz Langner, DJ9ZB; Joe Pater, W8GEX; Paul Newberry, N4PN, and Dave Johnson, WB4JTT.



they wouldn't bother any customers when they were open.

While Don, Kevin and Kimo started station set up, the remainder of the team worked on assembling two separate antenna fields. To make this happen, all boxes had to be unpacked and the antennas prepared for assembly. In the meantime, Peter, W8GEX, and several others surveyed the beach area to compare our planning versus the reality of what we really had to work with. In the meantime, Dave, WB4JTT, started putting up the tents and checked the electrical source. This all happened simultaneously and went smoothly and quickly. It was not perfect, but pretty close. We did a lot of coordinating using handheld radios, saving us many steps.

Because of concerns for avian wildlife, USFWS restricted the antennas to verticals only. The SVDAs proved to be sturdy, but because they were guyed, ribbons were added

to alert the birds. We also had two SteppIR verticals, a DX Engineering 30/40M vertical, two Titanex E160E verticals and the Battle Creek Special, all of which required ribbons.

Because of the large number of antennas and the extreme heat, the antenna fields were not fully erected till late the next afternoon.

In our planning, we knew that the antennas should be placed on the water line for best performance, but the USFWS would not permit this because of the seal population, so most were placed 100 to 200 feet from the water line and worked extremely well. We ended up getting outstanding signal reports and had no trouble receiving.

Because there was no electric service outside the buildings that we could use, Kimo had worked with USFWS prior to our arrival for the installation of both 110V and 220V junction boxes. Large electric cords were run from these boxes to our stations. This electric up-

grade was paid for by the DXpedition and left intact, so that future DXpeditions would have it available. It was an excellent setup for our needs, and we give credit to Kimo for the engineering, and working with USFWS to be sure it was installed correctly.

On the air

The first CW Q was 13 October at 06:07 with Gary Hinson, ZL2IFB on 20 Meters and the first SSB Q was 13 October at 06:33 with JE1AON on 20 Meters. Five stations were operational within the first 13 minutes of operation and, once we were up and running, everything went smoothly. Each operator worked three-hour shifts, with six hours off.

In addition to CW, SSB and RTTY our operating plan called for 6M and EME. Sponsors provided all the equipment and it was on site, but we quickly learned the antennas were not bird friendly and we were not allowed to set them up. It was a disappointment, as we knew there were lots of



Above: Baby terns.
Right: Sea turtles relaxing on the beach.



people waiting to work those bands.

Before the trip, Jose, AB6RM, contacted Bruce, W6OSP, about setting up a schedule with the San Diego-based USS Midway Museum. The USS *Midway* was named for the battle that became the turning point in the Pacific during World War II. This would commemorate the historic linkage between the namesake Battle of Midway in June of 1942 and the USS *Midway* Museum. For this occasion, Amateur Radio operators who are Midway Museum volunteers would man their station.

That turned out to be a wonderful opportunity.

The schedule was set for K4M on Midway Island to make contact with the museum at 2200z on 14.325, with Bruce, W6OSP, a former U.S. Navy Communications Technician as our operator. At that time, the regular operation working the pileups went QRT and moved to the assigned frequency and established contact with NI6IW, the USS *Midway*. This QSO made for a lot of happy operators on both ends. After a handful of exchanges with the operators aboard the ship, we went back to our main pileup, but we repeated the process the next day to give more of their operators the opportunity to get in the log. We were glad we were able to make this possible, as it was quite meaningful for both the *Midway* Museum volunteers and ourselves.

Island life

Our sleeping quarters were in a former Navy barracks that had been

renovated from the military days.

All meals were served in the island cafeteria, Clipper House, only open for 1½ hours per meal and you had to eat during that time or you didn't eat. We relieved the five on duty during "dining time" so they could eat, then go back and finish their shift.

In addition to the cafeteria, facilities included a bowling alley, a grocery store, an Internet café, the "Midway Mall," a movie theater and a tavern. These facilities remain from when the Navy was there and are still operational today, but with reduced hours. Many of the outbuildings were in disrepair with no plans to restore them; however, several key facilities are maintained as offices and work areas. The runway was repaved in 2009 and was in good condition.

Matt Brown offered us a tour of Easter Island, the original "Midway," and several team members went, reporting that virtually all buildings are gone, but the runway, albeit in poor condition and overgrown, is still there.

Our weather on Midway was pleasant, though hot at times. The first two days it was extremely hot while we erected antennas, then it cooled off with sunny weather the remaining time. The morning before we started to tear down, the wind took down one of the Titanex verticals and, as luck would have it, the day we tore down was windy with warm rain.

Our operating plan called for tearing down one station at a time so we would be on the air as long as possible. The last CW Q was 19 October

at 19:00 on 30 Meters with Msaaimo Mucci, NH7CU with I8NHJ the operator. The last SSB Q was 19 October at 19:10 on 17 Meters with Donald Mikes, AA1V and N1DG the operator.

In the end, 60,729 QSOS were made with over 18,465 uniques. QSOS by continent were:

Africa	171	.3%
Asia	17,449	28.7%
Europe	12,677	20.9%
North America	28,251	46.5%
Oceania	1,348	2.2%
South America	833	1.4%

We departed for Honolulu on schedule, Monday, 19 October, with 17 team members; two stayed behind for the USFWS flight on Friday. This time, John, N7CQQ, and Dave, WB4JTT, remained behind to close out the operation and arrange all the equipment for return, either on an upcoming flight, or on the USFWS supply vessel.

Our three-day delay reduced the on-air time to 6½ days, but even so, over 60,000 QSOS were made. Propagation proved to exceed all expectations, with conditions open to many areas of the world 24 hours a day. Much emphasis was put on working Europe, and afterward, we were very happy with the number of European contacts.

This operation came about like no other that has ever taken place. With no leader and no team already selected, it developed into an effective operation with highly skilled

operators using good solid planning and proven operating practices and reliable equipment. The backgrounds and DXpedition experiences of these operators reads like the ARRL Country list. One cannot beat experience and this operation was fortunate to have available the skills to make it a success.

One of the goals of the Midway 2009 team was to ensure that those entrusted with the preservation of Midway Atoll were left with a positive feeling toward Amateur Radio, thus hoping to assure future operations. This operation produced no problems for the local birds, and many positive comments were received while we were there. We are confident Amateur Radio will be heard again from Midway Atoll.

With much gratitude

We thank the DX community for their patience and their financial support; without your help, this trip would not have been possible and we are most grateful to you. Of course,

our gratitude also goes to the U.S. Fish and Wildlife Service and especially, Midway Refuge Manager, Matt Brown, and his staff for the support in making the operation happen. We also thank the principal sponsors of this DXpedition: NCDXF, the Colvin Foundation, INDEXA, GDXF, SWODXA, SEDXC, the Swiss DX Foundation, EUDXF, the Lone Star DX Association, OZDXF, RSGB, the Carolina DX Association, the Clipperton DX Club, ICOM, ACOM, Rig Expert, Heil Sound, WXØB, Davis RF, WriteLog, Vibroplex, Autek, the Battle Creek Group, ELLI print, W8AEF and W6SZN.

There were other clubs, associations and many DXers who provided additional financial support to help make this operation a success. And lastly, the team thanks those who provided IT, electronic, financial, logistical and QSL support throughout the operation: AA1V, DL9RCF, W5DNT, W6XA, Margaret Blackwell, W8CAA, OK1KT, AH6NF, WH6GS and AH6OZ.

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, please visit our website, www.ncdxf.org, and click on "Videos."

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