NCDXF newsletter

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Two weeks on Juan de Nova, FT4JA

Seb Poulenard, F5UFX & Flo Moudar, F5CWU
(adaptation Tom Wylie, GM4FDM)

From 29 April to 10 May 2016, a team made up of Seb Poulenard, F5UFX; Flo Moudar, F5CWU; Vincent Colombo, F4BKV; Gil Sauvage, F4FET; Yann Weber, F1NGP; Pat Bittiger, F2DX; Jack Saget, F6BEE; Pascal Roha, F5PTM; Diégo Thobie, F4HAU, and Chris Cabre, EA3NT, went to the island of Juan de Nova, located in the Indian Ocean between Madagascar and Mozambique. The flat, 4.4-square-kilometer island is surrounded by a coral reef that harbors a vast lagoon and Casuarinaceae forests cover about half the island. Named after captain João da Nova who discovered it in 1501 while under the service of Portugal, the uninhabited island was attached to the colonial empire of France in 1896 and, since 2007, has been attached to the administration of the TAAF (Terres Australes et Antarctiques Françaises).

Reflection

The thud of the chain pulling up the anchor of the Antsiva put an end to the last moments of calm prior to our departure for Mayotte (FH). All operators stood quietly on the deck looking at their last view of the island before setting off on the ocean journey ahead. On the shore, the static sky-blue color contrasted with the deep green of the luxuriant vegetation that stretched along the beach. We saluted the solitary gendarme standing on the beach, craning his neck and bidding us bon voyage, watching until we were a mere speck in the distance.

It was only then that we thought about the two weeks on Juan de Nova and the energy spent overcoming the various technical and physical challenges required of such an expedition,

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The team (from left): F5PTM, F4FET, F5UFX, EA3NT, F4HAU, F1NGP, F6BEE, F5CWU, F2DX and F4BKV.

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NCDXF

P.O. Box 2012

Cupertino, CA 95015-2012

USA

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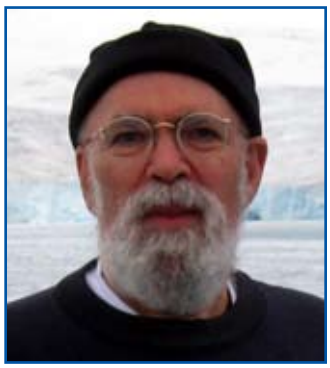
From the President's desk



Once upon a time I waited, impatiently, for the mailman every day after school. He eventually delivered a white window envelope from the FCC. It contained my Novice license. My first call sign was revealed. I could get on the air. The year was 1957.

Flush with youth and inexperience, I had no idea that I was operating near the peak of Cycle 19. Neither did I know that Cycle 19 was a fantastic cycle, with SSN=200, or even 300(!), depending on how you calculate. The bands were clear as a bell. I imagined the DX I was working with 25 watts and a dipole would always be there.

It wasn't. It isn't. Age, and subsequent cycles, brought more knowledge, but also more constraints. I have long thought, however, that it is our constraints that make us great. Action in the face of adversity reveals skill and character. To my mind, rhymed verse requires more skills to write and to understand than free verse. Staying with the example, poems in any fixed verse form, like a sonnet or a sestina, require more skills than poems whose form is unconstrained. Switching examples, and making it relevant to NCDXF, to work DX under the current quiet sun conditions, and there is plenty of DX to work every day, requires many more skills than those few I thoughtlessly brought to bear at the height of Cycle 19.

A constraint that NCDXF is under is the size of our endowment. Thanks to our founders, our contributors and the stewardship of our treasurers over the years, we have about $1 million in the bank. That sounds like a lot, but we try to fund DXpeditions from the income we earn, and interest rates are currently low. Also, DXpeditions, especially large ones to Southern Ocean entities, are getting ever more expensive, so we have set a goal to double our endowment. We established the Cycle 25 Fund to get us there and, thanks to members of the community stepping up and making provisions for us in their estate plans, we have gotten part way. But there is also another way. Our constraints make us great.

[Non-US readers may skip this paragraph. It pertains to US taxpayers only.] One constraint I am under for the first time this year is that I must take the Required Minimum Distribution (RMD) from my Individual Retirement Account (IRA). Those of you who are over 70½ will already be familiar with this constraint; those who are younger will find it in your future. The money I must take from my IRA will be taxed as ordinary income but, as I am advised by my tax advisor *(you must be advised by your tax advisor, and not by me),* the money distributed directly from my IRA to a qualified charity is not income to me. So, I have gleefully arranged that part of my RMD will be paid directly to NCDXF and I won't have to pay tax on that part of the RMD. May I encourage those of you who are constrained to take an RMD to allocate all or part of it to NCDXF. It is simpler than changing an estate plan.

In other news, we have been working hard on controllers and equipment for version 2 of the NCDXF/IARU International Beacon Project. Version 2 beacons are on the air at W6WX and KH6RS. Can you hear any difference between them and the version 1 beacons? I expect the conversion of the entire beacon network to follow at a good clip, starting with VE8AT. Details next time.

Best DX

Tom ND2T

The lagoon at low tide, Juan de Nova in the background.

the culmination of a year of hard work, preparation, planning and sacrifice. We felt extremely fortunate to have had the opportunity to revisit one of the scattered islands. Our time on Juan de Nova passed very quickly and we were all in a good and light-hearted mood, convinced that we had done everything possible to make our endeavor a success.

The beginning

After two days sailing from Mayotte, we arrived at Juan de Nova late in the afternoon and earlier than expected, due to currents in the Mozambique Channel. We could see Juan de Nova's shoreline from nearly a kilometer away and what struck us was the contrast between the immaculate white sand, which seemed to spout out from the water, and the trees that formed a thick, dark layer. The last moments of daylight colored the landscape red before darkness settled. We could see the red lantern of the lighthouse close to the western point of the island; a warning to passing ships of the stretch of land between Madagascar and Mozambique.

Before the first light of dawn, our excitement peaked aboard the Antsiva, a 28-meter-long yacht specializing in adventure cruising and trips such as the one we had set out upon. Although we had spent the night in a calm mooring, the growing excitement did not make sleep easy — it was hard to believe that the fifth rarest DXCC entity was just a short distance away. Alarm clocks weren't necessary as each team member was anxious to make ready for the day ahead. Beds were abandoned and even breakfast was short-lived, as we assembled equipment on the deck in preparation for transport to shore

Aerial view of Juan de Nova from the west point of the island.

Our 28-meter-long yacht, Antsiva.

The radio camp installed on the upper part of the beach.

using the light from our head torches in the pre-dawn hours.

In total we had brought 1½ tons of equipment with us, which had been stowed for the voyage in different parts of the boat— and it all had to be carried to the disembarkation point in a specific order to be transported ashore. The number of rotations ashore depended upon the tide, so there was meticulous planning to get as much equipment to the island in the time available. Every item was numbered to make this task easier and all 10 operators, assisted by the crew, worked effectively to get as much equipment ashore as possible. At 6 a.m. the crew launched Antsiva's tender and two tents, tools and the first of the antennas were loaded. The first trip also included three operators who were met on the beach by the local gendarme and a couple of soldiers along with a tractor and a trailer.

Even on Juan de Nova we had to show our passports and paperwork to the authorities before we could start about our business. As the leading group made their way to the radio area, the tender made its way back to the yacht. We crossed through the military camp and along the edge of the runway before we reached our spot at the edge of the forest. As we drove along, surrounded by our oversized bags and water containers, the excitement continued as we passed places we had studied in photographs during the months of preparation. Our dream, however, slowly changed into reality when the convoy stopped suddenly. Barring our way was a spider as big as my hand; it was very slowly and carefully assisted into the long grass bordering the track.

Eventually, we reached the place we had chosen for our operating positions, but it was much different than we had imagined from the satellite photographs. Admittedly, we did not expect to find the lush grass of a freshly mown golf course, but the area left us speechless. It would not be possible to establish a site in the long, coarse grass, never mind the logistical transport problems. It also would be dangerous for team members to cross the field day and night.

We discussed the problem with the gendarme, who suggested we tour the area to select a better location and in doing so we found a spot without trees and one that satisfied the environmental constraints of our permit, our proximity to the water, to certain types of vegetation and bird-laying areas. We obtained the agreement of the gendarme and also of TAAF.

Setting up camp

Whilst all this was taking place, the tender had been going back and forth bringing more personnel and equipment ashore before low tide. The equipment was then taken to the new campsite and we began to assemble our tents. On that cloudless day, the temperature gradually rose to 40°C and, between the sand and the lack of wind, it was like working in hell. The difficult conditions meant that we had to keep hydrated and, by working hard all day, by the time the sun began to set, the camp was almost complete. We battled against the clock to make the place livable before darkness and the voracious hoards of mosquitoes, which were on constant attack despite being covered in repellant.

After two days of sailing and a day working under the hot sun, everybody was exhausted. We made our way to the TAAF buildings, where we enjoyed a proper meal before retiring to our camp beds for a few hours of well-deserved rest. We awoke before sunrise at 5 a.m., still exhausted from our previous day's efforts but, fortified by a cup of strong coffee, we set out to complete all that was necessary for the DXpedition.

We needed to install three generators, which, to avoid contaminating the earth, had to be set on large sheets of plastic. This was an important consideration in our plan to safeguard the environment, and in our agreement with TAAF. All machines started with no problem, having been tested prior to our departure and we expected them to work for the duration of our DXpedition without interruption. We laid out 1,500 meters of coaxial cable and 2,500 meters of radials; electrical connections to the operating positions were also set up. Tent one hosted three HF stations whilst tent two had three HF stations plus 6M.

We used 1,500 meters of low-loss coaxial plus an additional 500 meters of 75 ohms coax for receiving antennas.

Formulation of the operating team is a very important consideration on these adventures; the composition of the team is a crucial point, it is the cornerstone. In addition to operator skills, we made a serious point of forming a cohesive group, with strong human qualities. This proved itself in the fact that for the duration of the trip, the motivation and hard work of the party never failed. The core group had previously been to Tromelin and for this trip were joined by new members who met all our criteria. During our mid-day break, we had one final opportunity to gather the complete team to remind ourselves of our plan and goals and discuss matters of operating and general site safety. The world was waiting for us.

On the air

Our first contact was with our chief-pilot station, Cédric Morelle, F5UKW, at exactly 1237z. We were able to get the latest news from France before hitting the airwaves with several stations, soon to be seven in number before the afternoon was over. Operating took on a momentum of its own with many stations having waited for decades to make a contact with Juan de Nova. Pileups were huge and soon a very fast rhythm was established. Those who were not operating worked outside making adjustments and tidying up the installation so that the operators could concentrate on making QSOs.

Our band plan was designed to cohabit with VKØEK, the Heard Island DXpedition taking place at the same time. We designed an easy to read, easy to follow table to try to avoid conflict or, at least, keep it to a minimum. We tried to pay extra attention to those zones which we thought would be the most difficult to contact. Our operating plan was designed so that all regions of the world would have a chance of a QSO with Juan de Nova. It seemed the Amateur Radio community collaborated with our plan without complaining.

One of the five VDAs pointed toward EU/US. The path to most of the directions was clear and directly over the ocean.

After the initial rush, the team split into two so that 24-hour operation was possible. After the first day of operation there are already 10,000 QSOs in the log and we had established a rhythm which we hoped would continue for the duration. Propagation conditions were better than we had hoped, making it possible to make QSOs on the higher bands.

Equipment

Each station was similarly equipped with an Elecraft K3, an SPE Expert 1.3 KFA amplifier and a Microham Microkeyer II. In addition each station had the necessary band pass filters, homemade splitters, RX limiters loaned by DX Engineering and pre-amplifiers by KD9SV. In addition, SDR transceivers (SunSDR Pro 2) completed the setup and were used to experiment, especially on CW (use of panoramical RX + CW skimmer). These tests were successful and very interesting with such difficult working conditions in overcrowded bands.

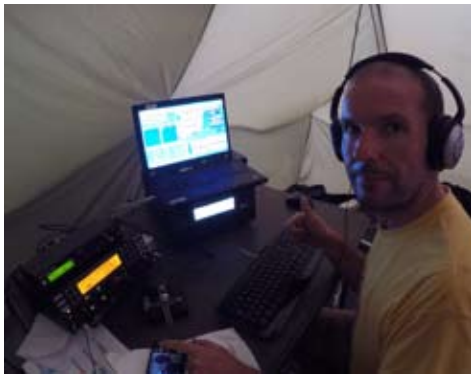
All seven stations were networked with Win-Test logging software. The antennas of choice were two-element

Yann, F1NGP.

Diego, F4HAU.

Pascal, F5PTM.

Seb, F5UFX.



Flo, F5CWU.

vertical dipole arrays from 10M to 20M. In addition to their compactness, their performance was undeniable, particularly so when placed at the ocean. On 30M and 40M, we utilized a four-square, with verticals on 80M and 160M using the well-known Spiderbeam poles. A multiband Yagi comes in support, in particular to make in-band traffic. This configuration enabled us to have, at certain hours, two stations on the same band. The 6M antenna was a six-element Yagi made by DXBeam.

All antennas were connected with low loss and extremely lightweight coaxial cable manufactured by our Italian partner, Messi and Paolini (Airborne 10). To improve our reception on 160M and 80M, two 200-meter beverage antennas and phased pennants antennas were used. Cases lent by DX Engineering and KD9SV enabled us to adapt to the configuration.

Island life

Every day was different, but we managed to maintain our rhythm of almost 10,000 QSOs per day. We realized that with tiredness setting in, this would be difficult to replicate during the second week. Rest periods were difficult as it was hard to nap in 40°C and nighttime sleep was interrupted as we had to be back in front of the radio for the sunrise openings on the low bands.

As well as operating, there were also many other things to be taken into consideration. For example, the site and the antennas had to be maintained, meals had to be prepared, press releases and articles for schools needed to be written, video reports had to be filmed and the like. Every team member was fully occupied and played their part in the success of the mission. It was the cohesion and integration of all team members that allowed this to take place with good humor and hard work.

We exchanged messages with our pilot station via sat-phone and information received allowed us to adjust our operating plan, taking into account the differences in propagation. At the same time, we had to remain inside our published strategy. Once per day, the log was uploaded to Clublog, placing considerable strain on our data consumption on the sat-phone but online logs are a must-have function for DXpeditions and it seems it is no longer possible not to go down this route.

As the days passed our routines and habits became almost automated. Each day we received a visit from the gendarme who enquired about our contact total and if we had any problems for him to solve. It was good humored and his visits were always friendly and appreciated. He was always there to help out and, on more than one occasion, mobilized the soldiers to carry water and remove waste for recycling. We were happy for him to watch our activities and he was intrigued and amazed at how we could communicate with the world using only pieces of wire.

One morning, we accompanied him on his daily tour of the island. His passage checked on pollution, traces of intrusion or anything out of the ordinary, which he reported to the Prefect. He would also check on the island's turtles and count the number of tracks left by them on the beach overnight. It was an enjoyable way to pass the time.

The operating positions were approximately 1½ kilometers from the sleeping tent and to get from one to the other we had to pass one of two cemeteries and the lighthouse. Near the lighthouse on the beach is the wreck of the Kwang Myong, a 45-meter Korean ship that foundered in the '70s; its hull was beaten with each high tide while the filao branches seemed to swallow its prow.

The last 500 meters of our journey were on the beach where it was necessary for us to climb over dead trees lying on the sand. We were allowed to use a TAAF building near the airstrip that once housed the weather station (La Goulette) and the gendarmerie, which had been relocated to the main area. The building had toilets and two showers, fed by a tank on the roof. This allowed us a little comfort. Our camp beds were set out in the main part of the building intended to lodge scientists during their missions. Rainwater is collected and stored in the tanks and, in an effort to save this invaluable resource, we did our best to collect water from the showers to use in the toilets or for the laundry.

Weather worries

One night, the low band operators made contacts under epic conditions, disturbed by the thunderstorms that burst over the ocean each evening. The high bands, almost dead for a few nights, were exploited almost until the morning. The stations of the west side of the USA had incredible signals on 20M and 17M. From the start of the expedition, 6M was disappointing with only very short openings to southern Europe (EA, SV, I) and Middle East countries making few QSOs possible. A 6M beacon was running each day and we still hoped it might be possible to work stations on EME.

In spite of the adrenalin brought by monstrous pile-ups, tiredness was never far and always won in spite of regular coffee breaks to push back the limits. As a last resort, we would lay down on the ground for a 20-minute nap before going back to the pileup. It was necessary to hold on! What a relief it was when fresh operators showed up at the first gleam of sunrise. Instructions were exchanged and seats were given over allowing the night-shift operators to return to the sleeping area. Before leaving, however, generators were refu-

Inside one of the tents with the same setup — radio, laptop, amp and interface — for each operating position.

eled and the fuel stock checked.

On our walk back, the tide was low and water had receded to the coral reef located more than a kilometer away, exposing an immense sand field. Enormous grey clouds filled the sky and in the west, a double rainbow.

As we returned to the TAAF building, we were hit with violent gusts of wind mingled with heavy rain. Water poured off the roof in torrents. Under the courtyard, we had breakfast but were concerned about the wind and cloudbursts. Was the radio camp flooded? Did the tents resist the gusts? What about the generators? We imagined the worst! Maybe this means the end of the DXpedition.

In a lull, and in spite of our tiredness, we ran up to the radio camp — that kilometer and half felt like 10. We feared how the "battleground" would look; however, midway there we perceived the humming of a generator and saw the silhouette of some of our verticals. Once we arrived at the camp, we discovered the team running the pile-up peacefully. They managed the crisis very well. There was no damage except to the capacitive hat of the 160M vertical. Reassured and happy to have escaped that incident without serious consequence, we returned for a few hours of rest, benefiting from the freshness brought by the rain, which continued to fall, filling the island's water reserves.

Wrapping up

As we got toward the end of the second week, we were looking to break the 100,000 QSO mark — an all-consuming target. We activated all seven stations whenever possible and the QSOs were fast and furious. There was at least one station on 15M throughout the 24-hour period in order to maximize QSOs, especially the uniques.

6M EME proved disappointing and did not lead to a complete two-way contact. However, it was all the more infuriating, that our signals were heard and we received several reports, without ever having the time necessary to complete the contact. The density of the filaos and the obstacle formed by the lighthouse placed exactly on the azimuth of the moon certainly did not play in our favor. It was a challenge worth taking on! Except for some small fixes, there were no problems with equipment and it showed incredible reliability in spite of difficult conditions of operating — heat, salt air, operating around the clock, etc.

Three days before the end of our mission, we needed to complete reports and interviews that would be used for the DXpedition video, so, with this in mind, we left the camp at dawn to take advantage of the exceptional light.

With that task finished, we returned to camp to replace our comrades who ensured the morning radio operation. Along the beach, birds escorted us in silence, rather than their normal loud chatter. We were surprised by the calm of the island. The terns, which we had had the chance to see and live alongside throughout our stay in Tromelin, had already left the island after their nesting period — two million mated sooty terns. Only some small red fody were seen during our stay, perched in trees, secure from wild cat attacks — introduced to fight against the proliferation of rats but it is mainly in the population of terns that suffer. An eradication campaign of the wild cats is in progress.

We did not have the chance to see turtles leaving water to lay their eggs in the sand, not even a single opportunity of seeing the characteristic tracks in sand. Our authorization only permitted us to erect our tents up to the first line of vegetation so as not to disturb the turtles. We had to follow a similar instruction with our antennas and had to attach colored ribbons to all guy wires to make them visible to the birdlife.

Packing up

In the same way as we had to plan our arrival, we had to carefully plan our departure from the island, taking into account the state of the tide and the height of the swell. One by one we removed the antennas and carefully loaded our tender one generator at a time. By the final afternoon, we had only one generator, four HF stations, five VDA and a vertical for 40M and 30M; everything else was back on the yacht.

During the last evening we each took a turn at operating to allow us all to experience the pileup one last time. We had already surpassed our target of 100,000 contacts but our enthusiasm did not waver. Our last QSO took place at 2100z on 10 April after 12 days and eight hours. In total, we had 105,600 QSOs in our log.

The following morning it was a race against time to dismantle everything that remained and have it back to the yacht before the turn of the tide. We were fortunate that there was no wind and the conditions were good. As the last load of equipment left on the tender, we examined our site very carefully to ensure we left everything as we found

Storms can be severe as evidenced by this rusting wreck of a Korean fishing vessel that has been beached for decades.

it. It was very difficult to tell that we had even been there. This had to be done to comply with our landing and operating permit.

The tide had now turned and the team had to wait for the next tide to leave the Island. They made use of their last moments on the island to make a final meal using the leftover food. It also gave us the opportunity to have a look at the logs and our statistics. Our initial look showed that we made 60% of all QSOs with Europe, 21% with North America and 16% with Asia. We were happy to have achieved our objectives and allowed many Amateur Radio friends all over the world to make at least one contact with this very rare and remote island.

We were also very proud that it was an entirely French DXpedition with the exception of Christian, EA3NT, but after two weeks of being with the team, he became almost French, and that we were able to overcome some very complex and difficult problems. We were also able to demonstrate that it is possible for Amateur Radio and wildlife conservation to co-exist without detriment to the environment.

Acknowledgements

We would like to thank everybody who helped in one way or another to make this adventure possible, for their advice, for their benevolence in helping us around the various complicated issues of visiting such a remote wilderness.

We cannot finish this long story without warmly thanking all those who supported and helped us starting with companies Elecraft, SPE Expert, Spiderbeam, DX Engineering, KD9SV, Microham, Messi & Paolini, DX Avenue, GMØOBX Cables, SunSDR. eu, ExpertElectronics, Antlion Audio, F5JRC Print Shop.

On all the continents, the clubs and foundations have been reactive in spite of a complicated season for their finances because of many expeditions in search of sponsors. An immense thank you to Northern California DX Foundation, as well as the International DX Association, German DX Foundation, Network of the French Transmitters, Clipperton DX Club, Colvin Award, Southeastern DX Club, Chiltern DX Club, Twin City DX Association, Eastern Iowa DX Association, NIDXA, Danish DX Group, European DX Foundation, Mediterraneo DX Club, OHDXF, Carolina DX Association, Willamette Valley DX Club, Swiss DX Foundation, Lone Star DX Association, Northern California DX Club, the U.K. Six Meter Group, ORCA, CQ Hamradio JA, Western Washington DX Club, F8ATS Stamp fund, ETDXA, the DX Group, GMDX Group, FEDXP, WVDXA, eQSL, Ehime DX, Utah DX, Tokyo 610, TDXS, SEMDXA, Lynx DX, GSDXA, Shizuoka DX, Delta DXA, RemoteHamradio.com, UFT, LIDXA, 599DX, NWIDXA, NOHDXA, ADXA, Nara DXA, Mile-Hi DXA, OKDXA, SEDCO, Passau DX, FWDXA, Mulan DX, GMDXA, KC5WXA, Spokane DXA, Madison DX, NADXC, SDXG, WNYDXA, GPDX, BARTG, DX Hogs, Most Wanted DX, Yokohama DXC, ARAN59, VADXCC, Six Italia.

We wish to underline the exceptional help of the amateur radio community through all the people who took part in the project. Thanks to F6AGM, K1QX, F4ERS, F6BKI, F5VHJ, K6TU, N5FG, JA4DND, F5JRC, our pilots F5UKW, JJ3PRT, WØMM, ON9CFG.

In conclusion, we wish to thank cordially the staff of the French Southern Lands and Antarctic (TAAF) and its Prefect, the administrator of the TAAF, Mrs. Cécile Pozzo di Borgo who authorized us to carry out this mission and provided constant support during all the preparation.

While we are writing these last lines, Juan de Nova is nothing any more but a dot on the horizon. We leave with a head full of memories, the SD cards of our camera boards crowded with photographs and videos and 100,000+ contacts in the log. There is no doubt that the actions of conservation done by the TAAF will make it possible to protect this marvelous island, and that one day perhaps, we may have the opportunity to visit again.

What a sight! Our radio camp below the arch of a rainbow — 20 minutes later, however, the storm was on the island with high winds and heavy rain.

Not Giving Up Iran, EP2A

Yuris Petersons, YL2GM

For me, the idea of a DXpedition to Iran was born in 2011 when I met with Natig Gasimov, 4J5T, in Azerbaijan. He was fluent in Farsi and we thought it would help us organize and carry out the DXpedition; however the situation changed when Natig got very ill and he had to travel to the USA for treatment. Sadly, Natig passed away in 2015 and never had the chance to see EP2A become a realization.

The beginning of EP2A

In 2015 we were outrun by EP6T, but I didn't give up on the idea. Later that year, after correspondence with Mohammad Azimi, EP2LMA, and cooperation with a Latvian-Iran friendship association, I visited Iran for the first time and I met with Mohammad Mobini, EP3MIR, and Mohammad, EP2LMA, and we agreed on organizing a common DXpedition.

After analyzing slips from EP6T, we decided to look for a location outside the highly populated and industrialized areas. Mohammad, EP3MIR, was responsible for acquiring necessary permits from the *Communications Regulatory Authority* (CRA) and government institutions. My responsibility was to complete the equipment and team.

The team, from left: Oleg, US7U;, Dmitry, UT7UJ; Sasha, UT7UV; Yuris, YL2GM; Valery, YL3CW; Mohammad, EP3MIR; Mohammad, EP2LMA, and Jack, YL2KA.

The team

I faced my first difficulty when I started to gather the team. I called on my friends but they each rejected the idea for different reasons, so I posted information on the contest.ru forum, where I met Alex Pavlenko, UXØLL, a Ukrainian amateur. He helped find additional team members, completing the Ukrainian part of the team; however, two members had to call off their participation for personal reasons. From that point we were an eight-man team that didn't change: three Latvians, three Ukrainians and two Iranians.

Operating licenses in Iran are issued individually and to receive them we had to send individual applications with additional information, but not everything went as planned. After collecting all the necessary information, the documents were sent to Iran via Latvian post in one package. The package was lost during in transit and it took us a month or so to find this out. We again had to collect the information and that took some time, but all the documents were dispatched once more — using a different postal service — and they were delivered safely. That was one reason the DXpedition was postponed by eight months, but we all received licenses and we were granted our desired callsign: EP2A.

During the whole DXpedition our team was supported from Latvia by Agris Belasovs, YL2VW; Ziedonis Knope, YL2GN, and Kaspars, and from the USA, Herbert Anderson, K7GEX.

Our welcome committee at the Tehran airport.

Equipment and antennas

I contacted Andrei Fedorishev, RA6LBS, and he helped us to provide the DXpedition with six Perfo Box-1500 band pass filters and two four-square antenna switch relay units. (For more detailed info about this equipment, visit http://lowbandsystems.com.)

Regarding power amplifiers, I talked to Martti Lane, OH2BH, and he suggested that the best option would be to use Expert amplifiers with antenna tuning. Then, after writing a personal message to Gianfranco Scasciafratti, IØZY, his company, SPE, manufactured two Expert 1.3k-FA amplifiers especially designed for EP2A. We received those just one week before

Left: Mohammad, EP3MIR; Yuris, YL2GM, and Mohammad, EP2LMA, in Iran in 2015. Right: Yuris, YL2GM and Natig, 4J5T in Azerbaijan in 2011.

the DXpedition started. Eugene Mosiychuk, EA5HPX, provided a third (homemade) amplifier.

As for transceivers, we used two K3 (mine and YL2KL) and one TS-590 (UT7UJ).

I accomplished the antenna construction and testing, together with Jack Shahov, YL2KA, in the field next to my home. Altogether we completed seven antennas: two five-band Spiderbeams, two four-square arrays (30M and 40M), one 160M/80M vertical and two RX antennas from Hi-Z. For the 160M/80M and 30M, 40M we used fiberglass poles from Spiderbeam.

For equipment and antenna transportation to Iran we used ATA carnet services, who I recommend because of low costs, reliability and it was an easy way to deal with Customs. This service, however, is not available for every country, and some restrictions may apply based on origin and destination. For more info, visit *www.atacarnet.com/what-carnet*.

Getting there

Our airline tickets from Riga to Tehran via Kiev were reserved in advance without any problems. Early on a Saturday I met Larry and Jack at the Riga airport where we flew to Kiev and met our Ukrainian friends for the first time before continuing on to Tehran. Although it was after midnight when we landed in Tehran, local amateur friends and fellow DXpedition members, EP3MIR and EP2LMA, greeted us. After couple of hours dealing with Customs, we were off to Gilan Province, our DXpedition location 420 kilometers away.

Spiderbeam antenna.

Setting up

After quick survey of our surroundings, we started to set up our first Spiderbeam in the yard and the first QSO was established on 15 April at 15:09 local time. Later the same day, we managed to set up a 30M four-square antenna and the second station was operational.

After couple of hours operating, however, our plans were interfered by a neighbor who, using an axe, started to take down our 30M four-square antenna. The local amateurs negotiated with him and, with the assistance of the police, the problem got resolved.

The following day, the second Spiderbeam and 40M four-square antennas were completed by noon, after which other neighbor arrived with complaints about electricity usage. After presenting papers and a friendly chat, that problem was resolved and a third position was operational.

The rest of the day was spent setting up GP 160M/80M. We had some problems with noise levels (59+10db) and it was nearly impossible to hear anything. The fault lie with the power supply unit and, after changing two of them, the noise levels went down.

By the third day we were finished setting up the antennas. The computers were connected through Wi-Fi but the connection frequently broke down and required a restart each time. We resolved that problem using cables.

Four-square on 40M and 30M with the relay switch unit from RA6LBS were a perfect combination, and the transmitting antenna for 160M/80M was also a RA6LBS design. Both the Spiderbeams were set up in the yard next to the house very close to each other and because of limited space, we

Perfo Box 1500 bandpass filters and four square relay switch units.


One of the Expert 1.3k-FA power amplifiers.

could not set them farther apart, which caused some minor interference, but other than that, they worked good.

Lessons

The first lesson we learned from this DXpedition was that it is necessary to have more powerful computers. Moreover, it is mandatory to connect and test their network capability before the DXpedition to avoid experiencing the networking problems we had.

Another lesson was about the log software. We are now planning to switch from N1MM to Win-Test or similar, as N1MM took too much time to make call corrections and it didn't support DXpedition recording feature.

Regarding transceivers for EP2A, we used K3 and TS-590. For next DXpedition, however, we will use K3 and, in the interim, we are planning to test new SDR IC-7300. As for power amplifiers, we will use only Expert 1.3k because they proved to be very good and reliable. In our opinion, there aren't better alternatives.

Gratitude

I want to thank everyone on the EP2A team for your devotion, involvement and participation in this DXpedition. It was an honor to work with you and I`m looking forward to future DXpeditions. Thank you to the EP2A support team for their help and support, and thank you to the EP2A families for their patience and moral support.

Thanks to all the clubs, associations, cooperates and radio amateurs for their financial support.

For more on the EP2A DXpedition, there is a movie posted on YouTube *(www.youtube.com/watch?v=fsPrvtfi3xo)*, or you can visit our website, *www.lral.lv/exped/ep2a*.

DXCC by Band/Mode

Band	PH	CW	RTTY	Total
160	1	66	0	66
80	17	73	0	73
40	80	105	42	111
30	0	112	77	115
20	109	114	59	125
17	90	103	28	109
15	97	105	49	119
12	25	66	0	69
10	24	53	0	58
Totals	127	133	84	151

Band/Mode breakdown

Band	PH	CW	RTTY	Total	Total %
160	2	1,765	0	1,767	2.6%
80	42	2,007	0	2,049	3.0%
40	2,522	5,593	310	8,425	12.3%
30	0	9,209	2,527	11,736	17.2%
20	8,207	10,694	796	19,697	28.9%
17	4,565	6,833	334	11,732	17.2%
15	4,137	5,796	527	10,460	15.3%
12	223	1,116	0	1,339	2.0%
10	148	879	0	1,027	1.5%
Totals	19,846	43,892	4,494	**68,232**	

Continent by Mode

Band	PH	CW	RTTY	Total	Total %
AF	126	144	12	282	0.4%
AN	0	1	0	1	0.0%
AS	2,813	8,203	1,080	12,096	17.7%
EU	14,745	28,531	2,901	46,177	67.7%
NA	1,880	6,452	445	8,777	12.9%
OC	118	242	33	393	0.6%
SA	164	319	23	506	0.7%
Totals	19,846	43,892	4,494	**68,232**	

Continent by Band

Band	160	80	40	30	20	17	15	12	10	Total	Total %
AF	1	7	23	37	65	54	71	12	12	282	0.4%
AN	0	0	0	0	0	1	0	0	0	1	0.0%
AS	141	125	910	1,810	2,517	2,997	2,929	488	179	12,096	17.7%
EU	1,610	1,782	6,048	7,372	13,188	7,480	7,080	809	808	46,177	67.7%
NA	9	122	1,314	2,379	3,696	1,105	152	0	0	8,777	12.9%
OC	1	0	20	54	144	54	90	22	8	393	0.6%
SA	5	13	110	84	87	41	138	8	20	506	0.7%
Totals	1,767	2,049	8,425	11,736	19,697	11,732	10,460	1,339	1,027	**68,232**	

CONTRIBUTIONS

NCDXF relies heavily upon the generosity of its contributors to fund various projects. We ask you 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! **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: **NCDXF**, 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.*

At their annual picnic held on 23 July, NCDXC presented their $4,000 donation to the Northern California DX Foundation. Pictured are members of both the NCDXC and the NCDXF (from left): K8JRK, KK6WJZ, W6OPO, K6GFJ, AA7A, K6MM, K6TD, K6MKF and K6YP.

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NCDXF has a number of VHS/DVD videos and Microsoft® Power Point 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."

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