

# DXing Above the Jungle Canopy

**A junior high school student travels to Guatemala to work DX from an ancient Mayan ruin.**



## **Adrienne Morrill, KG7HYD, and Aaron Morrill, NA7AM**

Every year since 2005, my family and I have been traveling to Guatemala to do mission work. In February of this year, I returned with my dad David, AE7DM, for a 15-day trip. This trip was unlike all the others because I had just passed my Technician class license test the month before. My dad and I brought along his Elecraft KX3 HF transceiver and Buddipole antenna. I was excited to see who I could talk to from Guatemala and, of course, I looked forward to talking to my family and friends back home in Spokane, Washington.

I knew this was going to be a great trip. Mission work and playing on the radio — my two favorite things! My dad had scheduled times and frequencies for talking with my brother Aaron, NA7AM, who attends a boarding school in Canada. There were also some members of the ARES / RACES group that my family is a part of, who wanted to talk to me while I was there. I am the youngest member in the group at age 13, but I really like the excitement of helping with RACES and community events.

### **Why Ham Radio?**

I started learning about Amateur Radio

3 years ago, when everyone in my family was working toward their licenses. My interest increased when Aaron went away to a high school in Canada. The best way to talk to Aaron was over the radio. So if I wanted to talk to him, I had to use my dad's call sign. Now I have my own license, KG7HYD, and I can talk to Aaron any time. We are now a "ham family" with my mom, N7MOM, and sister, KF7WZA, also having gotten their tickets.

Studying for my ham radio license was very hard for me. In the summer of 2013, I went to a Technician license class at a club. To help me study, Aaron put Gordon West's Technician CDs on my iPod. Finally, over Christmas break I passed my first practice exam. One week later, after passing many more practice tests, I went to take my Technician exam. On my first try I missed it by two questions. So I took it again right then and there — and passed!

### **The Long Trip Down**

My dad and I left home on February 12. My dad had packed all the radio gear in a Pelican case, making sure each piece fit perfectly in the foam insert. I was scared every time we went through security because it was a big box with a lot of electronics in it, but everything went okay. On the plane we

put the case under my seat, which worked out well because I could rest my feet on it during the flight.

We had an overnight layover in Guatemala City and arrived late that evening. The next morning, February 13, we had one more early flight to our destination — the island of Flores, where we would be staying for the next week.

The little island of Flores is on Lake Petén Itzá. Petén is one of the states in Guatemala (known as "departments") and Itzá is the Mayan tribe it is named for. The Spanish word "flores" means "flowers," and the island is very flowery with old, brightly colored buildings. The city of Santa Elena is on the adjacent shore with a land bridge running to the island.

### **Radio Red Tape**

In order to get permission to operate in Guatemala, we sent a PDF of both our licenses to the International Amateur Radio Union (IARU) member society in Guatemala, Club de Radioaficionados de Guatemala (CRAG). It was sent about a month before we left, with the dates we would be in Guatemala. We included our call signs and what our locations would be. We sent the information to an e-mail

address we got from the ARRL® website, which said that Guatemala holds a reciprocal operating agreement with the US and there is no fee.

“Perfect,” we thought, “but what about prefixes to use before our call signs?” We still hadn’t received a reply from CRAG, so we found a woman at the mission who spoke Spanish and asked her to call. She explained to my dad that she had talked to the secretary at CRAG. The president of CRAG who deals with foreign licensing was away. She gave us his personal e-mail address and my dad re-sent our information to him.

Finally we received a reply from Jorge Abed, TG9AAJ, who said we needed to fill out an online form, and he provided the link: [www.radioaficionados.ws/visitantes.html](http://www.radioaficionados.ws/visitantes.html). My dad filled it out and submitted it the same day; but in Guatemala, nothing gets done in a hurry. On Wednesday, a week into our trip, my dad sent another e-mail to Jorge saying, “I filled out the online form, when can I start to use my radio and what prefix do I use?” His reply came back right away — which was kind of funny. Jorge’s entire e-mail reply was “is TG7AE7DM.” We took that as a “yes” and set up the radio that afternoon.

### Time vs Airtime

My dad and I had fun setting up the radio on the shore of the island (see Figure 1). I tried to contact a few stations, but the combination of low power and low elevation on the sidewalk did not help my signal. On Thursday we set up the radio on the other side of the island, but bad propagation left 10 meters dead.

Finally, on Friday, we set everything up on the hotel balcony. My dad had packed a Powerwerx switching power supply and a 100 W Elecraft amplifier to boost our signal. We operated off of the hotel’s power, but the antenna situation was not the best (see Figure 2). My dad said he could hear a few people on 10 meters. Unfortunately, that was the last day of my mission work with the local kids and I had no time for playing radio.

Saturday afternoon we packed everything up for our drive to Tikal, which is an ancient Mayan city northeast of Lake Petén Itzá. It is part of the Tikal National Park and the location of many Mayan ruins.

After a day and a night in the park DXing and enjoying the ruins, we drove south for



Figure 1 — Adrienne, KG7HYD, operating from the flooded shore on the island of Flores.

Poptún, a small town in the northeastern part of Guatemala near the Belize border. Poptún has a larger mission and is also the headquarters for the organization “Water for Life.” We stayed in an apartment there for 3 days and set the radio up with the 100 W amplifier and the Buddipole on the roof.

This was the downtime of the trip and the radio was set up permanently. I had as much time as I wanted to operate for 2 days. With 100 W and the Buddipole on top of the apartment’s tin roof, I was able to reach Canada to talk to my brother both days with a 55 signal report. Even my friends from the ARES / RACES group in Spokane gave me a good signal report, and I talked to many other stations. I really liked putting on headphones and entering the radio world, where everyone wants to talk to a TG7 station.

### The Misty Morning

At 4:00 in the morning on Sunday, February 23, the air was saturated with water and I had to use a flashlight to climb the 180 wooden steps to the tallest pyramid in the ancient Mayan city of Tikal. I was only up that early because our tour guide was taking us to see the sunrise from Temple IV. The view was supposed to be spectacular and he told us we could see for miles above the jungle canopy. He also said we should be able to see the other temples poking up out of the jungle like little mushrooms.

When we made it to the top of Temple IV,

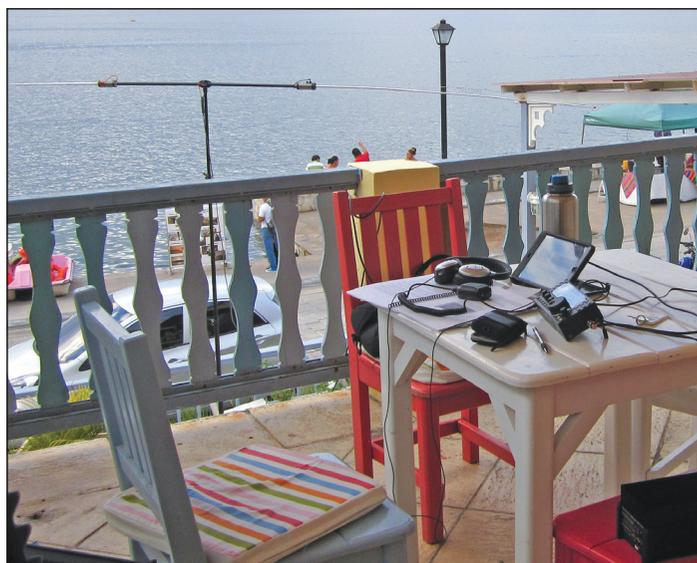


Figure 2 — The KX3 and amplifier set up on the balcony at the hotel on the island of Flores. Luckily the hotel had power available.



**Figure 3** — David, AE7DM, checking the SWR on the Buddipole, Sunday afternoon on Temple IV. [Adrienne Morrill, KG7HYD, photo]

we waited half an hour for sunrise. When it started to get light, there was a thick fog that covered the top of the jungle canopy. I couldn't even tell I was above the jungle, except my legs told me I was — from climbing up the 180 wooden steps! The fog was a little disappointing, but I found the perfect spot to set up our KX3 and Buddipole later in the day when it was warmer.

### Breakfast at the Lodge

The hike down was fast and the trail through the jungle did not seem as creepy in the morning light. We had breakfast waiting for us back at the lodge where there were lots of little souvenir shops. After a breakfast of black beans and tortillas (classic Guatemalan food), we were free to roam around. I had fun looking at the scale model of all the ruins and I could see the one I would be calling CQ from later in the day — I couldn't wait!

### Packing for the Pyramid

My dad packed 25 feet of coax, the Buddipole antenna, the Elecraft microphone, the Bose headphones, and the KX3. We made the trek up the wooden stairs again, this time with the sun shining and the temperatures warming up. At the top I help my dad set up the Buddipole (see Figure 3). He used a compass to find north

and oriented the antenna for a clear shot to the US.

There wasn't any power on top of the temple, so we left behind the power supply, 100 W amplifier, and the extra coax. I ran the radio at 5 W using its internal AA batteries, which worked just fine.

I started calling CQ as TG7/KG7HYD, low power portable on top of the jungle in Guatemala (see Figure 4). Soon I made a contact in Georgia and another in Rhode Island. The sun was shining right down on me and the radio was getting quite hot from the sun and from me using it. I used an umbrella for shade and kept making contacts (see the lead photo).

Lots of the English-speaking tourists talked to my dad and couldn't believe that I had a license at my age. Even the local Guatemalan tour guides asked if this was radio equipment similar to that from World War II. I informed them this was state-of-the-art Amateur Radio equipment.

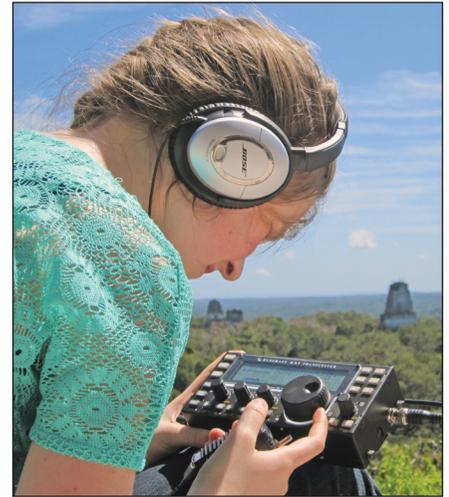
After an hour of listening and making contacts on 10 meters, I was starting to get sunburned through my shirt and the batteries we getting low. I made a few more contacts to the East Coast and closed down. I would really miss that spot — the beautiful view and the good propagation.

### Adios, Amigos

Our last day was mostly filled with goodbyes and not a lot of radio. We took the antenna off the roof and put the amplifier and radio back in the box for the trip to Flores. On Wednesday, February 26, my dad booked our last night in the hotel in Flores. Our plane left early the next day.

Our room was on the fourth floor of the hotel and had a balcony. My dad was dying to set up the radio to see if having the amplifier would get our signal out from the island. When he had everything set up and plugged in, he turned on the radio but the batteries were too low from our day at Tikal. What did it matter? We had power — at least we thought we did! I tried every plug in the room, but none of them worked. By that time the radio was dead. We sadly packed up the radio and went to bed.

We boarded a plane early the next morning and started the long trip home. When we entered the states, I caught myself saying, "TG7" in front of my call sign on a handheld, while talking to my dad in the airport.



**Figure 4** — Adrienne, KG7HYD, making contacts from the top of Tikal Temple IV with other Mayan temple ruins in the background.

I'm really going to miss the good food, good weather, good friends, and great operating locations in Guatemala. I definitely have to go back!

All photos by David Morrill, AE7DM, except where noted.

Adrienne, KG7HYD, received her Technician license earlier this year. She comes from a ham family, which is what sparked her interest in obtaining her license. Adrienne's main motivation was that she enjoys talking to new people and thought that through ham radio she could get to know people around the world. Adrienne is already working toward her General class license so she can get into DXing.

Aaron Morrill, NA7AM, an ARRL member, started out in ham radio when he was a sophomore in high school. He is a Volunteer Examiner, a member of his local ARES® group, and also of RACES. Aaron went to high school in Canada and while there obtained his Canadian Basic class license with Morse code and operates as VA7AMO. Aaron's interest in radio and wireless technology has him working toward an Electrical Engineering degree. His main radio activities are digital modes and activating SOTA peaks.

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