

Seven Years of Parrot Conservation in La Moskitia, Honduras

Author(s): LoraKim Joyner, DVM, MPVM, MDiv, and Héctor Orlando Portillo-Reyes, MSC

Source: Journal of Avian Medicine and Surgery, 32(2):144-151.

Published By: Association of Avian Veterinarians

<https://doi.org/10.1647/2017-301>

URL: <http://www.bioone.org/doi/full/10.1647/2017-301>

BioOne (www.bioone.org) is a nonprofit, online aggregation of core research in the biological, ecological, and environmental sciences. BioOne provides a sustainable online platform for over 170 journals and books published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/page/terms_of_use.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

Notes From the Field

Seven Years of Parrot Conservation in La Moskitia, Honduras

LoraKim Joyner, DVM, MPVM, MDiv, and Héctor Orlando Portillo-Reyes, MSC

Abstract: The population of the Central American scarlet macaw (*Ara macao cyanoptera*) and other parrots have and continue to decline throughout the region largely from poaching to supply the illegal wildlife trade. Conservation efforts address this issue through protection efforts, including community patrols and government engagement, as well as nest monitoring, rescue and release operations, capacity building, and education and consciousness raising programs, all of which rely on long-lasting relationships and commitment. Using these principles, in 2010, a coalition of people came together, including the authors, to build a conservation program against overwhelming odds and with surprising success.

Key words: wildlife trade, poaching, conservation, conservation medicine, community patrols, avian, parrots, scarlet macaw, *Ara macao cyanoptera*

NOTES FROM THE FIELD

In 2009, I was looking to expand my conservation work to areas that most needed support, and my parrot conservation friend Dr Donald Brightsmith suggested La Moskitia in eastern Honduras. This region is the most isolated in all of Honduras, only reachable by boat or small plane, and it is the last place in Honduras where the once far-ranging National Bird of Honduras, the Central America scarlet macaw (*Ara macao cyanoptera*), still exists. No one was currently doing any parrot conservation there, and the status of the macaws were unknown, although we suspected it was dire, as it was in other parts of Central America. Estimates are that only 1500 or fewer individual birds remain of this species in their natural range from Mexico to Costa Rica.

Dr Brightsmith put me in touch with Héctor Portillo-Reyes, a biologist in the capital city of Tegucigalpa, Honduras, who might be interested in working with me. Héctor was interested, and over the next months, we arranged for an exploratory trip during the breeding season in the spring of 2010. Our goal was to see what the indigenous people might need from us and to investigate

whether research and conservation might be possible. I thought arrangements were fairly well set when Héctor called a few months before the trip and said he had news that might change my desire to work in Honduras. My heart sank to hear a conversation start like that, because Honduras, as one of the poorest and most violent countries in the Americas, needed conservation support.

Héctor told me about the instability in Honduras since the coup in 2009 and how Tomás Manzanares, an indigenous leader of the Rus Rus, had nearly been killed by assassins in December. Tomás had reported the names of land invaders and illegal loggers to the authorities in hopes of clearing them from his ancestral lands. As a scare tactic for other villagers and as revenge for Tomás' reporting, 4 men waited for him at the river where he took his daily bath, and each shot him. Tomás nearly died of his wounds, but after many surgeries, he survived. The villagers of Rus Rus where he lived had to flee, and Tomás' parents' home was burned. Other nearby villages had been abandoned, and leaders were murdered. I was undeterred, especially as we would travel with a group of soldiers who would protect us.

I flew to the capital city of Tegucigalpa, and then we took a small plane to Puerto Lempira. There, we hired a military escort for the 4-hour, dirt-road drive to the village of Rus Rus. Tomás accompanied us against everyone's advice. It had only been 5 months since the shooting, he was still in pain,

From One Earth Conservation, 82-52 211th Street, Hollis Hills, NY 10427, USA (Joyner, Portillo-Reyes); and the Instituto en Ciencias Para el Estudio y Conservación de la Biodiversidad (INCEBIO), Tegucigalpa, Honduras (Portillo-Reyes).



Figure 1. Miskito conservationist climbs a suspected nest tree, finding it empty. All the entrances pictured were made by axes, so the poachers could extract the chicks. If poachers don't have the equipment to climb the tree, they cut the tree down, often injuring or killing the chicks inside.

and the area was dangerous. With Tomás, some forestry officials, 4 soldiers, Alicia (Tomás' spouse), Héctor and other biologists from his group (INCEBIO; Instituto de Ciencias Para el Estudio y Conservación de la Biodiversidad, Tegucigalpa, Honduras), and our driver, we pulled into Rus Rus in the evening. We had to break open the doors that had been nailed shut to keep out intruders that might prey upon the mostly abandoned village. We slept on floors and in tents, unable to go to the outhouse without a soldier escorting us.

The next morning, we packed into the truck, with pistols bulging from day packs and pockets, and went to Mabita, Alicia's home village. Tomás took us for a walk to the Rus Rus River, where I asked him to share what had happened. He took off his shirt to show us the still-pink scars where bullets had torn his flesh and where some remained. I asked him why he was willing to risk his life to save the parrots. He answered, "Doctora, everything is at risk. I am willing to risk

everything. If the parrots don't make it, neither do my people."

During the next 4 days, the indigenous people took us on a tour of known scarlet macaw nests, all in towering Caribbean pines in the savanna. Frankly, I had not totally believed Héctor when he told me the scarlet macaws nested in pine trees, the only place in the world where they do so. Some of the people from the village, once poachers, climbed 3 active nest trees, and then lowered 3 chicks so that we could examine them. They appeared slightly thin. We determined that poaching was probably a serious threat because many of the nest trees had their entrances widened with axes so chicks could be extracted (Fig 1). Often, natural cavities are too deep to reach the chicks otherwise.

We determined that we needed another trip to see what was needed in the area, so we returned in 2011 for 12 days. Our accommodations were still foam pads, tents, and wood floors, and again, we had soldiers accompany us. During this visit, we examined 20 trees the villagers identified as nests in



Figure 2. The Conservation and Research Center on a foggy morning in the pine savannah.

previous years. We confirmed 11 active nests with 13 chicks. I took a medical field kit so we could record biometric measurements of all chicks, including weight. We also conducted full physical exams that showed us that these macaws were generally like those in other countries, with some chicks having external parasites, low body weight for their age, and stress patterns in their feathers (Fig 2). We documented that 85% of the nests showed evidence of past poaching, and because of that, the villagers decided to protect the remaining nests until the birds fledged. We supported their efforts by matching 50% of their volunteer time with stipends for the remaining 4–5 weeks of the breeding season. As soon as we left the site, 7 chicks were poached. Those chicks were recovered by the villagers, who raised them with little support or training and then successfully released them. This was the beginning of an informal rescue-and-release project.

No outside conservationists visited this area for >2 years because of personal and economic concerns, although the government agency in charge of wildlife control, the Instituto Nacional de Conservación y Desarrollo Forestal, Áreas

Protegidas y Vida Silvestre (the ICF), did continue to bring confiscated parrots to the village. When I finally got to Honduras in the fall of 2013, I was met by many hungry, liberated birds and anxious villagers. The entire village had been robbed that year, and they desired more support for their conservation efforts. Asking them how our organization could help, they suggested that we assist them in building a Conservation and Research Center, which I agreed to fund (Fig 2). They finished the building, mostly, by the spring of 2014, when we returned with 2 truckloads full of biologists, students, and film producers for 12 days during the breeding season. Now, with better facilities, I was able to set up a field laboratory with centrifuges, microscopes, and, even better, refrigeration to store blood samples for later testing. The goal was to test birds at the Rescue Center and in the wild, and also to teach students and the villagers (Fig 3). Unfortunately, we only confirmed one active nest, which later failed. All other nests had been poached, which meant that in our conservation area, not one chick escaped the illegal wildlife trade. It seemed we had stayed away too long.



Figure 3. In the Conservation Center, villagers observe and learn how to process blood samples, and later how to perform necropsies.

We also saw direct evidence that villagers still poached macaws, as well as smaller parrots. Many households had parrots and parakeets in them. One man had died stealing parrots the week before we arrived in April. He had grown up in Mabita and had defied the decision of the village to quit poaching scarlet macaws (*apu pauni* in Miskito). He had climbed a towering macaw nest tree where he made a mistake and fell. He crashed to the ground, killing one of the macaw chicks he'd stolen. The other survived, but was emaciated and ailing when I examined the bird a few weeks later, having been fed only bananas. The villagers were distraught that poaching of the macaws was continuing, that the poacher's family wouldn't produce the remaining macaw chick to be released, and that they had lost a community member.

As we were leaving the village and the field site in 2014 to return to Pt Lempira, our truck convoy passed the nest tree where the man died. At its base was a memorial of stones, a cross, and flowers. The villagers who rode with us piled out of the trucks and began wailing and crying. The elderly leader of the village, Mamatara, nearly blind, was guided to the tree base, where she moved her body in a mournful dance as she cried and chanted. I looked

out at these people, up at the top of the tree where a family of scarlet macaws should have been flying free, and wept myself, for the people, and for the parrots.

In 2015, we returned again for 12 days, earlier in the breeding season, so we would have chicks to sample and because we wanted to get an earlier start on deterring poaching with our presence. We confirmed that 20 nests had been active that year, 9 of which had already failed or been poached by the time we arrived. Eleven nests were active with 19 chicks. We conducted full physical exams and took blood and fecal samples. Of the 25 chicks examined from 2011–2015, 64% ($n = 16$) had mites, 0% had internal parasites, and 1 chick (4%) had myiasis. During that same period, 23 chicks (92%) had their body weight and body scores evaluated; 6 (26%) of which were within reference intervals, 13 (57%) had low body weight, and 4 (17%) were very thin. In 2015, of the 12 chicks examined for their feather condition, 1 (8%) had slight levels of stress bars (a few stress bars that were faint), 5 (42%) had moderate levels, and 6 (50%) had severe stress bar formations (Fig 4). Other physical conditions included chicks that were hungry, dirty, wet, dehydrated, and had small wounds and scabs.



Figure 4. Severe wing-stress bar patterns on an 8-week-old macaw chick.

Hematological exams of 12 chicks in 2015 revealed 7 (58%) with anemia, 5 (42%) with leukophilia, 10 (83%) with yeast in fecal Gram stains, and 8 (67%) with negative rods in fecal Gram stains. Based on that preliminary health information and the 4 short field seasons, we determined the greatest threat to this population of scarlet macaws was

poaching. The plan for the rest of 2015 was to implement nearly 2 months of community patrolling to protect the 11 active, remaining nests, of which only 1 was poached, with 17 chicks successfully fledging. The village had continued to receive confiscated birds, so we also decided that the community patrols needed to be augmented with an official Rescue and Release Center (Fig 5). This would encourage the governmental authorities to escalate their engagement in wildlife protection, and we could also take better care of the birds.

Because it seemed that nest protection with community patrols could possibly deter poaching and because we had more support for the Rescue and Release Center, we changed our conservation plan to include increased efforts on our part in 2016. I stayed at the site for 2 months, coordinating community patrols, conducting health exams, and processing blood and fecal samples during the entire period (Fig 6). I also trained 2 veterinary students in the field, who came from the Universidad Nacional de Agricultura (the UNA), where I had been teaching conservation medicine



Figure 5. Feeding time for the liberated flock and growing chicks at the Rescue and Release Center in Mabita, Honduras.



Figure 6. Nest-monitoring team and community patrols show off our new “Apu pauni fly free” (scarlet macaw fly free) uniforms and wristbands.



Figure 7. Veterinary students at the National University of Agriculture, Catacamas, receiving instruction on conducting health exams from Dr Joyner.



Figure 8. Miskito nest-monitoring team performing health exams and taking biometric measurements (of a wing cord in a 2-week-old macaw).

the previous several years (Fig 7). We needed more veterinary assistance because the government agencies were bringing more and more birds, and many were in compromised condition. Unfortunately, the Rescue Center efforts had lost birds for a variety of reasons: suspected toxicosis, infectious disease, theft, raptor and grackle attacks, and one with a slingshot wound.

The days in 2016 were long. Birds in the Rescue Center had to be treated by 7 AM or after 7 PM, sandwiched between the 12 hours of hot field work, which, on most days, included our rental truck breaking down or getting stuck somewhere. The team's efforts were paying off, however, for we now had registered 27 active nests, and not one chick entered the illegal wildlife trade in our core conservation area. One nest had been poached, but with quick and aggressive tactics on the part of our patrollers, the government agencies, and the indigenous federation, we got the 2 poached chicks back 5 days after they were stolen. They were

eventually released, joining their free-flying family members.

The success of our conservation strategies continued into 2017 when we worked in 4 villages with 35 active and protected scarlet macaw nests and 3 yellow-naped Amazon parrot (*Amazona auropalliata*) nests. We simply did not have the resources (time and funds) to protect more yellow-naped Amazon parrot nests. Our priority was, instead, the great green macaw (*Ara ambiguus*), whose nests we hope to monitor and protect this year. We could do this because finally, after nearly 7 years, the area in which they occur had become peaceful enough for us to camp in the area, conduct parrot counts, and at long last, for me to see 1 great green macaw flying free. Our window for safety, however, closed shortly thereafter, and we were unable to return this season and protect any nests. Next season for sure!

Closer to the base camp in the village of Mabita, we had to increase our community patrols, not only because we had doubled the protection area but also because we experienced a longer-than-usual breeding season, extending 1.5 months later than usual. Nonetheless, in monitored nests, we lost no chicks to poaching. The villagers too had completely refrained from poaching the smaller parrots. We were saving chicks, even under continued challenging circumstances. Murders were happening along the road from Pt Lempira, drug lords were maneuvering throughout the area raising alarm, we had to increase our reliance on the military for protection, and intercommunity conflicts persisted. This mirrored what was happening throughout much of Honduras, which was reported in 2016 as having the highest murder per capita rate of all nations and to be the deadliest place for environmentalists. Despite receiving threats, the worse that happened to me was a case of refractory giardiasis, and for our project, a difficult-to-repair field truck, meaning that all nest monitoring and patrolling happened by foot, bike, horse, or motorcycle. Because nests were so distant and the motorcycles could only take the climbers and gear, the villagers were now doing the health monitoring on their own without me (Fig 8).

I was only on site for 6.5 weeks in 2017, which meant that communication had to be handled from afar. That has always proven difficult because we can only relay information when a villager gets a ride into Pt Lempira, hours away. This year, we solved the problem by supplying a cellular phone that could pick up a signal from Nicaragua from a hill outside the village. I could pay for an internet package from the comfort of my own home office

in the United States (which was, thank goodness, close to a bathroom for my lingering case of giardiasis), and our on-site conservationists could video conference with me on Facebook (Menlo Park, CA, USA).

With an apparently successful conservation strategy, we have made big plans for 2018. We will now work with 10 villages, greatly expanding our core conservation area. We will also increase our education, publicity, consciousness-raising, and capacity-building activities throughout La Moskitia and in the urban areas in other parts of the country. We are very excited about our home health program, Brigadas de Bienestar (Welfare Brigades). Brigades are groups of students or educators who visit homes with parrots, conduct welfare assessments, make suggestions on improving the well-being of the bird, and deliver a strong conservation message.

This particular program, like all our programs, relies on relationships and demonstrated care for the people, the birds, and the relationship between the two. Persistence is also fundamental, requiring commitment despite the setbacks and challenges. Successful conservation plans extend for at least 20

years, providing time for the inclusion of 2 generations. This means we are just getting going in La Moskitia, and that there is still time for others to get involved. There isn't a lot of time left, however, to ensure the survival of the remaining macaws. Although we have had success, it could fall apart at any time. The pressures for the land and the underlying corruption and violence threaten these people and their parrots. So, please don't wait too long to join us or some other conservation project. You are needed, and you can make a difference.

Acknowledgments: This field work was largely supported by Lafeber Conservation (through Lafeber Company), One Earth Conservation, the Vincent Coates Foundation, and the Winley Foundation. Many smaller donors have also made this project possible. Thank you all! We thank past and present volunteers, Honduran biologists, ICF staff, and professors and students of the national universities (UNA and the Universidad Nacional Autónoma de Honduras). More than anyone, this work could not be accomplished without the Miskito people, whose commitment, passion, and skills will be the saving of themselves and their lands.