THE WORLD'S POISONOUS BIRDS // DUCK ID TIPS

BirdWatching

DECEMBER 2021

ATTRACT • FIND • IDENTIFY • CONSERVE • ENJOY

FAR FROM HOME

16 LIMITED-RANGE NON-NATIVE SONGBIRDS IN NORTH AMERICA

Plus!

A NEW SEARCH FOR IVORY-BILLS

PROTECTING HARPY EAGLES

HOTSPOTS IN MISSISSIPPI AND WISCONSIN

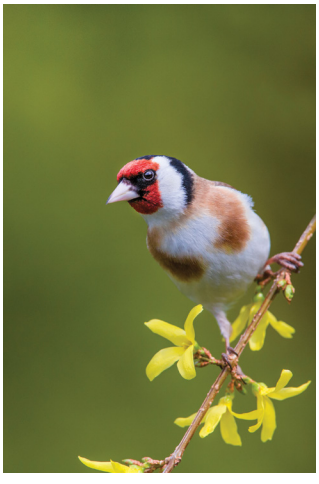
← Learn about European Goldfinch and other non-native passerines found on our shores. **Page 16**

INSIDE

NOVEMBER/DECEMBER 2021 VOL.35 NO.6

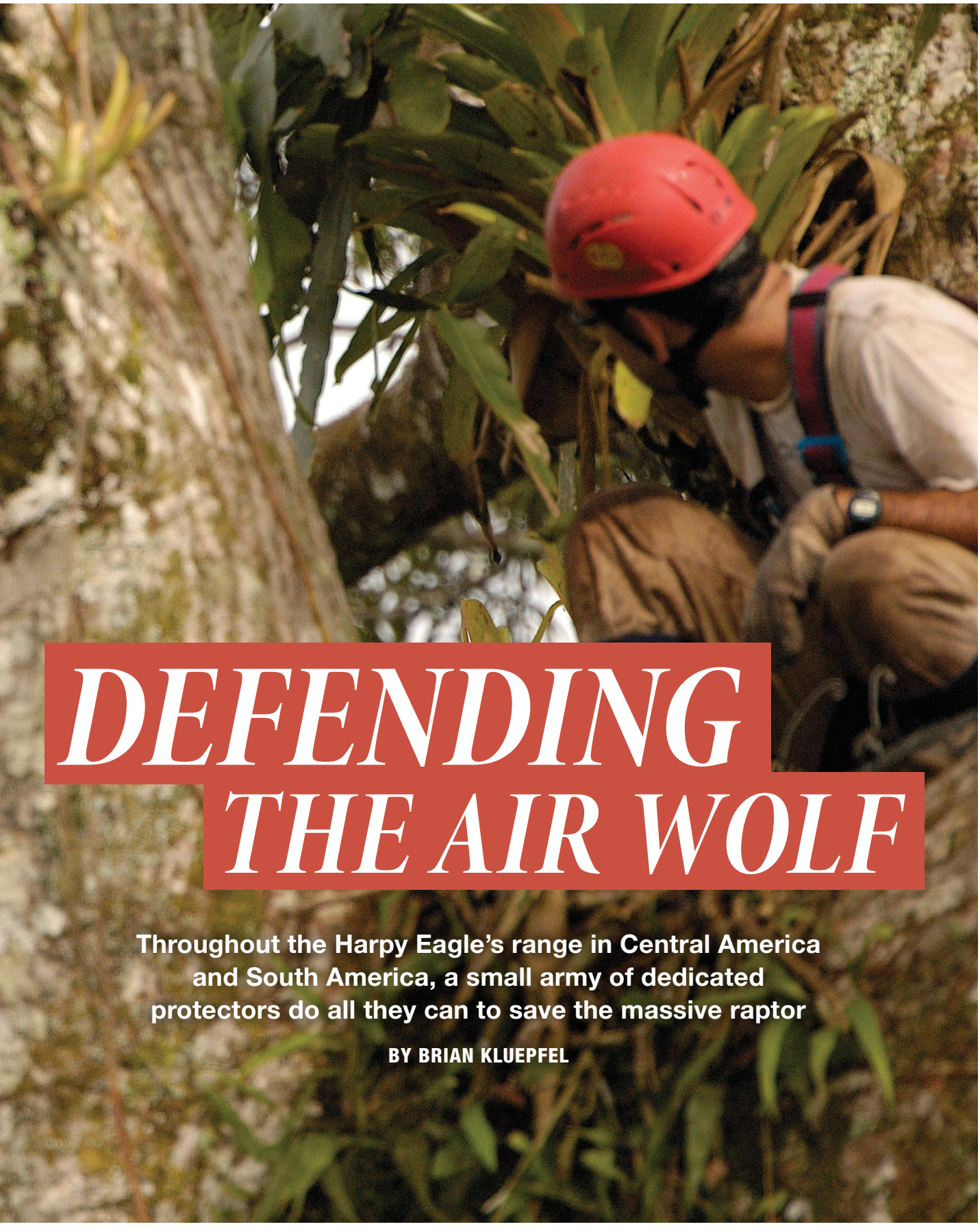
FEATURES

UP FRONT



COVER PHOTO
European Goldfinch
by Godi Photo/Shutterstock

Alexander Blanco of the Venezuela Harpy Eagle Project crouches on a branch of a kapok tree 40 meters above the ground in the Amazon rainforest in Ecuador. He was setting a trap to catch the recently fledged seven-month-old wild Harpy Eagle chick at left to take measurements and attach a transmitter to the bird. Blanco has studied at least 90 nests and has won awards for his dedication to protecting the threatened species.



DEFENDING THE AIR WOLF

Throughout the Harpy Eagle's range in Central America and South America, a small army of dedicated protectors do all they can to save the massive raptor

BY BRIAN KLUEPFEL

Alexander Blanco shouts in panic, "hold the back rope!" Yet it is too late — a mistake with the cables has been made, and the researcher crashes through the canopy of the Venezuelan rainforest, 115 feet (35 meters) to the ground. Twisted in the rope with Blanco is a Harpy Eagle chick that he was bringing down to receive a tracking transmitter. Blanco suffered several broken bones in the January 2014 fall, but the eagle was unharmed. The fall and his recovery, he hopes, will mirror the fate of the species.

The Harpy Eagle — named for the half-human, half-bird wind spirits of Greek mythology who bore evil-doers to just punishment — is a massive and awe-inspiring bird that has fascinated humans since long before European arrival. Across the Americas, the Harpy has been venerated as a god by Mexico's Olmec people and the Chavín of Peru. The Huaorani of Ecuador's Amazon consider themselves descendants of the jaguar and Harpy. The Ye̦nomamö and Pemón of Venezuela simply called it *Wajari*: goddess of the wind.

The largest raptor in the Americas and one of the world's largest eagle species, it can measure as long as 3.5 feet and weigh up to 20 pounds. The bird is a silent apex predator that glides through the canopy like a stealth drone and swiftly dispatches lingering monkeys and sloths (among 40 other species) with talons as long and lethal as a grizzly bear's. It's a cipher; one researcher who has studied the bird for three decades said, "It's very difficult to observe Harpies, let alone find their nests." In fact, one bird, tracked to a specific tree in Belize by its radio collar, still eluded a team of researchers.

American TV viewers were likely shocked by the pair of Harpies that Jim Fowler, later to star on the popular *Mutual of Omaha's Wild Kingdom*, brought onto the New York set of Dave Garroway's *Today* show in 1961. (A falconer, Fowler studied the Harpy in Guyana and brought three back, which he had trained.) Those eagles starred in the pilot for *Wild Kingdom,* which had a successful three-decade run. How much did America's longest-running nature program owe to the Harpy Eagle?

Named for a myth, the bird has, in turn, inspired popular culture, including the immortal Fawkes the phoenix in Harry Potter and a 1971 TV film, *Harpy*. The Colombian Air Force features the bird as its symbol, and there's a "Harpie" series in the wildly popular Yu-Gi-Oh! manga-inspired card game.

Despite human admiration for the eagle, the bird has regularly been shot with rifles, even by scientists. Noted ornithologist Helmut Sick wrote in *Birds in Brazil*, that the Harpy had long been a "prized trophy" for Indigenous people and colonizers. Eduardo Alvarez, who monitored the species over six years for his 1996 doctoral thesis at the University of Florida before founding the Harpy protection group Earth Matters, reported at least seven shootings during his study in eastern Venezuela, including one bird presented to him by a farmer who kept the "trophy" in a refrigerator for 10 years, hopeful of its value. Two Caracas museums hired to do environmental studies for a bauxite mine also shot and killed "specimens" in that era. Betraying the traditional non-emotion of academia, Alvarez's rage practically jumps off the page: "I could not think of any valid scientific reason for a biologist to be collecting Harpy Eagles in the 1980s," he wrote.

Harpy pairs are slow to reproduce, raising a single chick every two to three years. So, humans with rifles pose as much of a menace as those with chainsaws. Although Harpies don't prey on people, they don't

Previous spread: Pete Oxford/Minden Pictures

Alexander Blanco (above) descends from a kapok tree in Ecuador with a seven-month-old fledgling Harpy Eagle. At right, he and researcher Ruth Muñiz examine the bird after attaching a GPS transmitter to its back. The ornithologists complete their work with each fledgling they trap in 45 minutes or less.

Pete Oxford/Minden Pictures

hesitate to unleash their fury on those who approach a nest. During a 2010 nest-camera placement in Venezuela, for example, veteran documentary climber James Aldred — in full riot gear, helmet, and flak jacket — was pummeled in the kidneys, head, and neck and was left dazed and bleeding.

Award-winning cinematographer Neil Rettig made the first pioneering films of a Harpy's nesting tree in Guyana in the 1970s. "When we approached the blind or departed from it, the female attacked dozens of times," he reported.

To reach a nest requires a perilous climb. The eagle's massive nests, the size of a double bed, can be 30-50 meters (100-165 feet) from the ground, and researchers scramble to complete their analysis of a chick in 30-45 minutes, including attaching a transmitter.

On Broken Wing

Acres of forest are lost daily in Venezuela's Orinoco delta as the country slashes and burns itself in Mad Max-like fury. But the logging of one particular ceiba tree in January 2018 set the stage for a tale of derring-do and intrigue involving tourists, machete-bearing poachers, Indigenous protectors, and the Venezuelan national guard in the ultimate salvation of a 3-month-old Harpy Eagle chick dubbed Lise Orinokia that fell out of its nest.

Lise was simply a by-catch of an illegal process — the loggers knew she could be sold, so they left her with an Indigenous Warao man, who kept her well-fed on fish.

A price for Lise was haggled on the nearby island of Trinidad — a cool $5,000 in a land where black-market birds are still an alluring way to make a buck. But Lise's destiny would not lie in a life of bondage.

While the poachers were away, two Canadian birders spotted her and sent a photo of the already-imposing chick to Ben Rodriguez of tour company Osprey Expeditions, who set a plan in motion. Staff from the Orinoco Queen Lodge boated four hours to the remote locale, paid the Harpy-sitter a "finder's fee" of $100, and returned with the eagle. Meanwhile, Rodriguez sped to the lodge from Caracas on a 400-mile, 12-hour bone-jarring ride to transport the bird to the "safe house" of a local guide.

Even under grilling and threats from the poachers who followed the trail back, the guide did not reveal that he was hiding the eaglet, and after a request for local assistance, eventually Lise was spirited away under the watchful eye of a colonel in the Venezuelan national guard.

A juvenile Harpy takes flight in the Amazon in Brazil. The bird's wingspan can measure up to 7 feet 4 inches (2.24 meters) from wingtip to wingtip, and it can weigh from 8.8-19.8 pounds (4-9 kg). From crest to tail, the species measures up to 3.5 feet (about 1.1 meters).

She stayed for weeks at the Puerto Ordaz home of Alexander Blanco, of the Venezuela Harpy Eagle Project, until she was brought for rehabilitation to the project's field site in the shadow of the Imataka Mountains. Lise's feathers were a matted mess, her right wing fractured and the left one sprained, not unlike the condition of Blanco himself after his fall in 2014.

The eagle's eventual return to the humid forest canopy was painstaking. Blanco, a veterinarian by trade who is enraptured with raptors, mended the broken bird, and by late 2019, Lise was making "test flights" and eventually capturing her own prey: sloths as well as howler and capuchin monkeys.

In June 2020, Lise's return to the wild came full circle. She was seen by locals, perched on a big tree, looking healthy and vocalizing — and another eagle was responding. Indeed, Lise has paired up with a male of similar age, and they have established a home territory in the Imataka zone.

In a rather miraculous turn of events, the chick that survived a 100-foot fall and was nearly stolen away may soon be rearing her own nestling.

Will the Air Wolf Survive?

The Harpy's status across its historic range — from southern Mexico across the Central American isthmus and as far south as northern Argentina — is dubious at best. Dubbed "Wolves of the Air" in one documentary, their survival is as perilous as that of their canine namesake. In some places, Indigenous lands may be their last stronghold in a range that's swiftly being reduced.

The bird has hardly been seen for decades in Mexico, Guatemala, or El Salvador. A handful of sightings dot the map in Honduras and Nicaragua; in general, eBird data reflects the paucity of Harpies in Central America.

Little better can be expected in Belize, where The Peregrine Fund released 14 captive-bred birds between 2005 and 2008. Though the released birds ranged far afield — one across nearly the breadth of Guatemala — they weren't out of the range of guns: Five were shot.

"I think it is going to be very difficult for Harpy Eagles to survive in the region," said Marta Curti of The Peregrine Fund. "While there are likely pockets of forest where some pairs are surviving, the only known self-sustaining breeding population in Central America is in Panama."

Even in eco-friendly nations, the bird's future is gloomy. As far back as 1996, Alvarez wrote, "In Costa Rica, the feeling is the Harpy is doomed, if not already extinct." A handful of sightings have been reported in the past 15 years, but there's no photographic evidence to back them up.

In Mexico, the northernmost point of its range, a Harpy was recorded in 1998 in a coffee plantation within Selva El Ocote Biosphere Reserve in the southern state of Chiapas. However, a scientific report from Chiapas in 2003 noted a "lack of respect for the species due to misunderstanding and superstition." That is a good summary of the Harpy's relationship with humankind throughout its range.

Luke Massey/NPL/Minden Pictures

Panama's Harpy Hopes

Panama's relatively recent patriotic connection — the Harpy was named the national bird in April 2002 — has raised awareness and vigilance. The Peregrine Fund sent a charismatic Idaho-born eagle named Luigi for education programs before moving its captive breeding program here, and it has monitored more than 60 nests nationwide since 2000. As of 2012, there were an estimated 227 Panamanian pairs, most in the rugged Darién peninsula near Colombia's border.

There's an annual Harpy Festival each April 12, attended by thousands in Panama City's main park. Karla Aparicio leads nonprofit Fundación Naturaleza y Ciencia 507, which heads up studies in the Darién and in Chagres National Park just 40 miles north of Panama City. Generations of Harpy experts cross paths here: Aparicio, who studied with pioneer Alvarez, who in turn has mentored Ruth Muñiz in Ecuador.

Camera traps and drones are aiding in knowledge of the bird called *sulubagi* by the Kuna of this small isthmus nation. "Technology helps us learn and conserve this species," said Aparicio. Interesting events take place, too: During a COVID lockdown in June 2020, a single Harpy was seen circling Panama City, alighting in two urban parks.

An overall focus on birding tourism may help change the landscape. "The Darién is great for seeing a ton of different species, not just Harpies," said Aparicio. By donating binoculars to the community, Aparicio and her colleagues are building a conservation consciousness among rural farmers and others who may once have viewed the eagles as a predatory menace.

The Indigenous are crucial to the work in Darién. Some Emberá-Wounaan are trained as guides and in fieldwork such as mounting transmitters on the eagles. They're also invaluable sources for finding new nests (seven in total). "For me and my team, it's not hard to work here — it's just the opposite!" said Aparicio.

Public awareness is incomplete, though: A recovering wild juvenile eagle was stolen from Summit Municipal Park — the very site of Harpy Fest — one night in early 2020. Beyond Panama, to paraphrase a recent book about Harpies, it's a bit of a wing and a prayer.

Dubi Shapiro

A juvenile Harpy looks down from a tree in Guyana. Juvenile eagles have a white head, a pale gray band across the breast, and dark brown eyes. Adults have a gray head with black crest, a black breast band, and pale gray eyes.

Across the Great Divide

In Colombia, the air force's tacit support doesn't guarantee safety: A 2015 study confirmed nests in the country's northern Boyacá and Aragua states, between the Andes foothills and Orinoco River basin, but also reported two birds killed within a six-month span by shotgun. Researchers at Bioparque rescue center near Bogotá are desperately hopeful that two injured eagles, a male and female, take a liking to each other and produce young. So far, no go on the romance front.

Another ecotourism project named Soy Harpia Caquetá launched in 2019 in Colombia's southern Amazonas region. The local ornithological society enthusiastically protects a nesting pair of Harpies and their offspring, Chairá, now age 2. As of summer 2021, Chairá was hunting her own prey but wasn't entirely independent. While the project is encouraging, in Caquetá, human-eagle conflict is also a problem, as is deforestation (see sidebar).

Bolivia reports only "tiny populations in remote areas," and Brazil's population is no doubt suffering due to a 30 percent increase in deforestation in just the last few years. In Ecuador, the west of the country has been practically ceded, with one known nest. But in the east, Muñiz and the Programa de Conservación del Águila Harpía en Ecuador hold out hope, although ongoing development and historic fears haven't gone away. In a 2011 study by Muñiz, five of nine eagles found dead had

been shot, an echo of the rifle reports farther north in Central America.

The reasons listed in Muñiz's report read like a history of the Harpy's interaction with people: "Shot in fear. Close to vegetable garden. Shot because eagle approached domestic animals. Shot for trophy. Shot, conflict with human community." Muñiz said this is the result of ever-increasing human encroachment and "outsiders" who don't know the region or the bird and is not done by the Indigenous.

Notably, a paper published in March 2021 in the *Journal of Raptor Research* documented no fewer than 132 cases in which Harpies were killed or captured between 1950 and 2020, including 21 cases from Colombia and Panama that had never been published in scientific journals. And in August, a report in the journal *Animal Conservation* summarized interviews with landowners in the Amazon who "admitted killing a combined total of 181 Harpy Eagles." The main reason for killing the birds, according to the researchers, "was simple curiosity, and many interviewees reported later regretting their acts."

Interviewees who said they may kill the birds in the future were more likely to have experienced livestock predation by eagles. The authors argue that "education, compensation, and tourism activities should be directed to [small landholders] to mitigate unnecessary persecution and mortality of Harpy Eagles."

Those who love the bird will do nearly anything to return one safely to the wild. Both Otto, a Panamanian Harpy almost lost to Hurricane Otto, and Tueri, an Ecuadorian eagle shot near Lago Agrio, the old Texaco company town, were returned to the jungle in Indiana Jones-like operations involving planes, boats, trucks, dugout canoes, and, ultimately, long treks on foot to get them safely (for the moment) situated.

A new generation of Harpy-ists has fledged, too: Muñiz takes her two children on Harpy-tracking expeditions in the Amazon, where they collect bones and other detritus at the bottom of Harpy-inhabited trees.

Back to Venezuela

Count Blanco as one of the Harpy's true believers. Like Lise Orinokia, Blanco himself fell from the jungle canopy and crashed to the ground, 35 meters below. As with Lise, many bones were broken, but Blanco survived.

Blanco, the winner of two Whitley Fund for Nature Awards for his dedication (he's studied 90 different nests), has a guardedly optimistic outlook for his team of people and his adopted bird. "Without the involvement of the local community, our program would be nothing," he said. The program has turned everyone from a former hunter to local children into protectors of the eagles. Blanco's experience as a veterinarian attending to the majestic bird awakened an environmental consciousness. "To protect the eagle is to protect the forest is to protect humankind," he said.

But scientific study isn't a priority in a nation in political and economic turmoil. "Money is difficult," said Blanco. "Everyone works for free, so they work for months, not years. What we need is not research (necessarily) but personal dedication."

Whither the Harpy?

The Harpy has been respected and feared since its interactions with humans began. Imagine coming upon this huge raptor staring you down, raising its forked crown of feathers and tilting its disc-faced head (like an owl's, an optimization for hearing) back and forth as if tracking your every movement?

Indeed, the one-way fear in this relationship is a key factor in its diminishing numbers. The birds are diurnal (daytime) hunters — increasing the likelihood of attacks by people.

"They are intelligent, very curious, and generally not afraid of humans. These traits can get them into a lot of trouble," said Curti of her Belizean birds. "They often ended up in areas with human activity, and we had to intervene, either by doing a

CANOPY HABITAT IS CRITICAL

Although the shooting of Harpy Eagles by humans is certainly a problem, new research points to habitat loss as the greatest threat to the birds' long-term survival. A study published in *Scientific Reports* in June 2021 of 16 Harpy nesting sites in Brazil's northern state of Mato Grosso, by a 13-member scientific team, clearly showed that the raptors could not adapt their diets to non-canopy prey once the surrounding forest was eliminated. Cattle ranching and soybean farming are the primary land uses in the area.

The eagles consume 800 grams (1.75 lbs.) of food per day and require trees of 40-45 meters in height for their nests. Harpies "could not switch to open-habitat prey in deforested habitats," concludes the report. The team estimated that a minimum of 50% intact forest was needed for the species' breeding viability. Frighteningly, a scale-up of the statistics indicated that 35% of the Amazon's 428,000 square km "Arc of Deforestation" is unable to support breeding pairs of Harpies.

Since 93% of the birds' range is now in Amazonian forests, the rapid leveling of these "lungs of the earth" augers poorly for the massive raptors. (The Amazon touches nine separate countries, so the problem extends beyond Brazil.) While predators like jaguars and Golden Eagles can vary their eating habits with habitat change, Harpies seem less flexible, and three canopy-dwelling species (two-toed sloths, capuchin, and wooly monkeys) comprise 50% of the birds' diet, even in highly deforested areas.

Simply put, adult birds, much less fledglings, have problems feeding themselves in this situation. During the study, three fledglings in areas deforested by more than 50% died of starvation.

An adult Harpy Eagle watches over its chick in a nest in Ecuador. Female Harpies perform most of the incubation of the eggs and feeding of the young. Juveniles fledge up to six months after hatching and remain within 100 meters of the nest for up to a year.

lot of education in the area, or trapping the birds and relocating them, or both."

The birds don't reach sexual maturity until age 4 or 5 and then only reproduce every two to three years. In the nest, botfly infestations, other birds, and predatory mammals can kill the chicks. Only one eaglet of two eggs survives and often depends on the parents for up to two years.

They are adaptable, though. Alvarez, who tracked them in Venezuela and Panama from 1989-1996, found a "broad geographical and ecological range, and a wide array of forest environments" for the bird, from the mesa-like *tepuis* to sea level, and from the hilly forests of the Imataka range and Guyana Highlands to swampy mangrove forests of the Orinoco delta. They also use at least seven different nesting trees, including cuipo, frijolillo, ceiba (silkcotton), and Brazil nut (collectors of the cash crop are helpful to scientists in locating nests).

Yet even in less-wild areas, like the construction zones around a dam, said Alvarez, "eagles (were) quite tolerant of human landscapes as long as the forest matrix remained." But the degree and rapidity of habitat degradation make their situation more perilous.

While they have "guardians" of all ages in Venezuela, and the nominal protection of the Colombian Air Force, the Harpy is still a victim of random human violence and encroachment on its Amazonian stronghold. Harry Potter's Fawkes was immortal and rose from the ashes to fight again. The real-life eagle doesn't have those magical powers, but it does have an army of humans throughout its range willing to protect it at great risk. May that be enough.

Brian Kluepfel is the editor of the newsletter for Saw Mill River Audubon in Westchester County, New York, and a contributor to Lonely Planet and Fodor's travel guides. In past issues of *BirdWatching*, he has profiled Ecuador's Black-breasted Puffleg, Bolivia's Blue-throated Macaw, and Costa Rica's Great Green Macaw.

Scan this QR code with your smartphone camera to watch a YouTube video narrated by Sir David Attenborough about Alexander Blanco's dedication to the Harpy Eagle.

feathercollector/Shutterstock