

I CHARTERED A HELICOPTER to reach the nest site in Chagres National Park, on Panama's Atlantic watershed. As we flew deep into the tropical forest toward the landing area, it seemed as if we were looking for a needle in a haystack. Clouds and mist weaved through the thick, 150-foot-high canopy. A storm was rolling in. We were about to turn back when we spotted a finger of smoke in the clearing where members of the expedition team were waving white towels.

The team was headed by Rafael Alvarez, of The Peregrine Fund, and Karla Aparicio, a field biologist with the Panama Audubon Society. A Venezuelan, Rafael is one of the world's fore-



NEIL RETTIG PRODUCTIONS INC. (PAGE 42)

trees played host to bromeliads and mosses that seemed to erupt from every nook and cranny. Bird calls and insect sounds drowned out our rustling of leaves and my heavy breathing.

After climbing several steep ridges, blindly following the Indians through trackless, dense forest, we arrived at the nest tree—a 12-story-tall silk cotton tree, which the Panamanians call a bongo. These trees can grow 200 feet high and have extremely wide buttress roots that can exceed 30 feet at the base. We couldn't see the nest easily from the ground, but clusters of eagle droppings littering the lower plants indicated that it was up there and it was occupied.

Rafael anchored the climbing ropes

Where EAGLES Dare

most authorities on harpy eagles, having looked at 29 of their nests. We were joined by Norma Ponce, the park game warden; one of her associates; and three local Indians, who served as our guides.

After landing at the base camp, we hiked for about an hour to the nest site, making our way in hiking boots over river rock and leaf litter spiked with thorns and spines. The guides carried much of the gear in 40-pound packs, and one of them walked barefoot. It was a humbling experience for me.

Even more humbling was the overwhelming amount of wildlife. Massive

EAGLE AERIE: Harpy eagles build their nests (left) in the canopies of silk cotton trees (above, the author—who is six feet, seven inches tall—standing at the base of a nest tree) in tropical America.

Climb
to the
top
of the
Panama
rain
forest

Story and photos by Ron Magill

by shooting a line over the nest branch with a modified crossbow. He took out the slack, fastened the safety lines, and quietly headed up to the nest. I watched with growing anticipation, knowing that I would soon join him. Once he reached the top, he secured himself, then signaled for me to climb up.

Harnesses and couplings double-checked, I started my ascent. The rain forest could be called nature's high-rise condominium, with each floor occupied by different tenants all living in their own special worlds and depending on the unique balance for survival.

At one level, a hummingbird drew nectar from a bromeliad flower. At the next level, a toucan stared at me and screeched. Higher up, a howler monkey in another tree gave a guttural cry that sounded prehistoric.



As I reached the nest, the altimeter indicated that I was dangling at 120 feet. Adrenaline surged through me and I could feel my heart pounding in every part of my body. Suddenly, there it was, within arms' reach—a baby harpy eagle.

About ten weeks old, the chick was already the size of an adult rooster. Flight feathers, in the juvenile white

color phase, were just beginning to erupt, along with signs of the adult harpy eagle's characteristic crest. The beak and talons, which would grow to the size of bear claws, were already impressive looking.

I sat beside the nest, which was about six feet wide and two feet deep. About 20 feet away on a branch of the same tree, the female harpy kept close



STAGE SET: While the juvenile bird watches (top and right), Rafael Alvarez readies a trap for one of the adults. By monitoring the eagles' movements and examining their regurgitated pellets, called casts (above), the team learns about the eagles' needs.

vigil over us. She issued a series of piercing calls that made me nervous, but she never showed any other signs of aggression. I had read reports of adult harpy eagles attacking people at nest sites. Rafael explained calmly that, although he was aware of the reports, he had never experienced an attack and reassured me that we weren't in any immediate danger.

With one hand, Rafael distracted the chick and then grabbed it by the legs with the other hand. The most important thing was to immobilize the talons, the eagle's primary mode of defense. Rafael carefully wrapped the youngster's talons in an ace bandage. Contrary to popular belief, these eagles rarely use their beaks in a defensive manner, though an occasional peck will get your attention.

While up there, we collected bones—including the skulls and mandibles from several sloths and a skull from a kinkajou—and casts that had accumulated in and around the nest. Casts are regurgitated pellets that contain hair, bones, claws, and other non-digestible parts of the prey. These items, when identified, would provide a wealth of information about the eagles' prey species and feeding behaviors.

Before we descended, Rafael set a trap of nylon cords baited with chicken. One of the things the team wants to learn about the eagles is how much rain-forest habitat they need to survive. Rafael hoped to catch one of the parents in the trap and equip the bird with a small ARGOS transmitter that would beam signals of the bird's movements to a system of French satellites and NASA computers. The chick watched our actions with a bewildered look.

Shortly after we were on the ground, the mother returned to feed the youngster. Unfortunately, she positioned herself so that Rafael could not spring the trap successfully. We decided to wait until the next day.

I took a much-needed bath in the clear river and lay in my hammock, too pumped up to sleep. A whole new group of sounds, from the haunting screams of a spectacled owl to the repetitive peeps of frogs, serenaded me all night.





The following morning, we were disappointed to see that, except for the chick, there wasn't an eagle in sight around the nest. Apparently, the mother had fed the youngster the chicken from the trap and then gone away to hunt. When a chick is this big, the adults must hunt for several days to find suitable prey. All we could do was reset the trap and wait.

Just as I was getting caught up in the parade of insects around me, the male harpy returned to the nest and headed right for the trap. Rafael looked through the spotting scope, and when he was sure the bird was positioned correctly, he gave the signal to activate the trap.

We had it. As the eagle attempted to fly away, he ended up hanging upside down, attached by the leg to the cord of the trap. Rafael quickly rigged a second line and climbed up to the bird. Once he untangled the eagle and immobilized its talons, we safely lowered the eagle to the ground.

The male was of average size, weighing in at 11 pounds. Like most birds of prey, female harpy eagles are significantly larger than the males, weighing half again as much. The male's overall condition was excellent, and we collected several gnat-sized flies that live on the eagles and provide a beneficial service by eating stray food particles left on the feathers.

We outfitted the bird with the special satellite transmitter to monitor how the eagles use the surrounding forest habitat. My hope was to link the transmitter signal to a computer at the Harpy Eagle Center at Summit Gardens (see "Opening Soon," page 47), so visitors can enjoy a connection to a wild bird as they observe the captive ones. Powered by a solar battery, the transmitter should work for at least five years. A second transmitter, glued to the unit, would be activated to provide a local radio signal to help team biologists visually locate the eagle. Attached with a harness and weighing only a few ounces, the whole package looks like a small backpack and should



ON TOP OF THE WORLD: After climbing 120 feet to reach the nest, the author gets his first look at a harpy eagle chick (left). Team members (above) measure an adult bird's wingspan. Just over six feet from tip to tip, this compact wingspan helps the harpy eagle maneuver in the dense rain forest.

bird took one hop and then, with an incredible *whooooosh*, it began to rise skyward until it vanished into the soaring canopy.

I closed my eyes and recalled the experience of sitting in the eagle nest, next to the chick. I had lived a dream

and it had touched me in a way no words can describe. I had sat in a very special place where, normally, only eagles dare to fly.

◆
Ron Magill is communications manager at Miami Metrozoo.

Opening Soon

AT SUMMIT GARDENS, just outside Panama City, Panama, a pair of harpy eagles will soon take up residence in a large free-flight aviary—the first exhibit of its kind in Latin America. The aviary is a major component of the Harpy Eagle Center, which was designed to heighten awareness of the region's tropical rain forests. The Miami Metrozoo worked closely with the mayor's office of Panama City, with the endorsement of the Presidency of the Republic of Panama, to construct this state-of-the-art Harpy Eagle Center. As visitors enter the building, they will be surrounded by the sounds of the Panamanian rain forest, and in the aviary, they will be able to view the inhabitants from both ground and canopy level. Besides the eagles, other Panamanian species such as toucans, pacas, coatimundis, and tortoises will be featured in their natural habitats.

The Harpy Eagle Center is sponsored by Sony Corporation of Panama and American Airlines. Eduardo Alvarez coordinates the Harpy Eagle Conservation Program, which is administered through The Peregrine Fund of Boise, Idaho.

— R.M.

not create any problems for the bird.

The team also applied an aluminum leg band, with the bird's name and date of capture engraved on it. This male was named Chagre, after the national park in which it resides.

Next, we carefully lifted the bird to measure the wingspan. Just over six feet from tip to tip. For an eagle as large as the harpy, that is surprisingly modest. The compact wingspan serves an important function in the rain forest, where the bird depends on short, broad wings and a long tail to maneuver in close quarters.

Finally, it was time to return the harpy to the forest. With one gentle push, Rafael released the eagle. The