

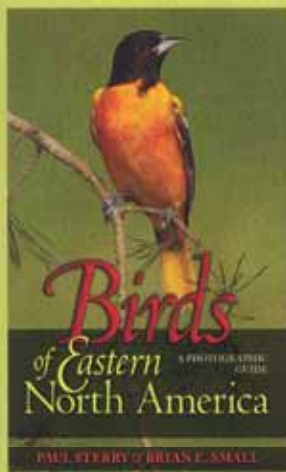
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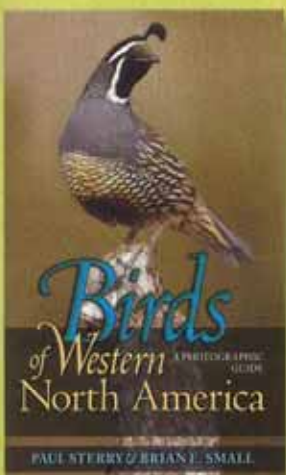
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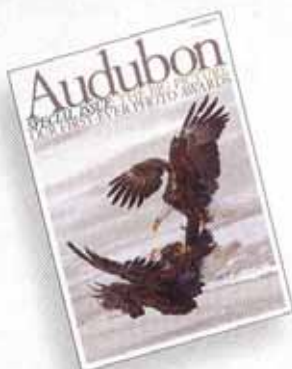
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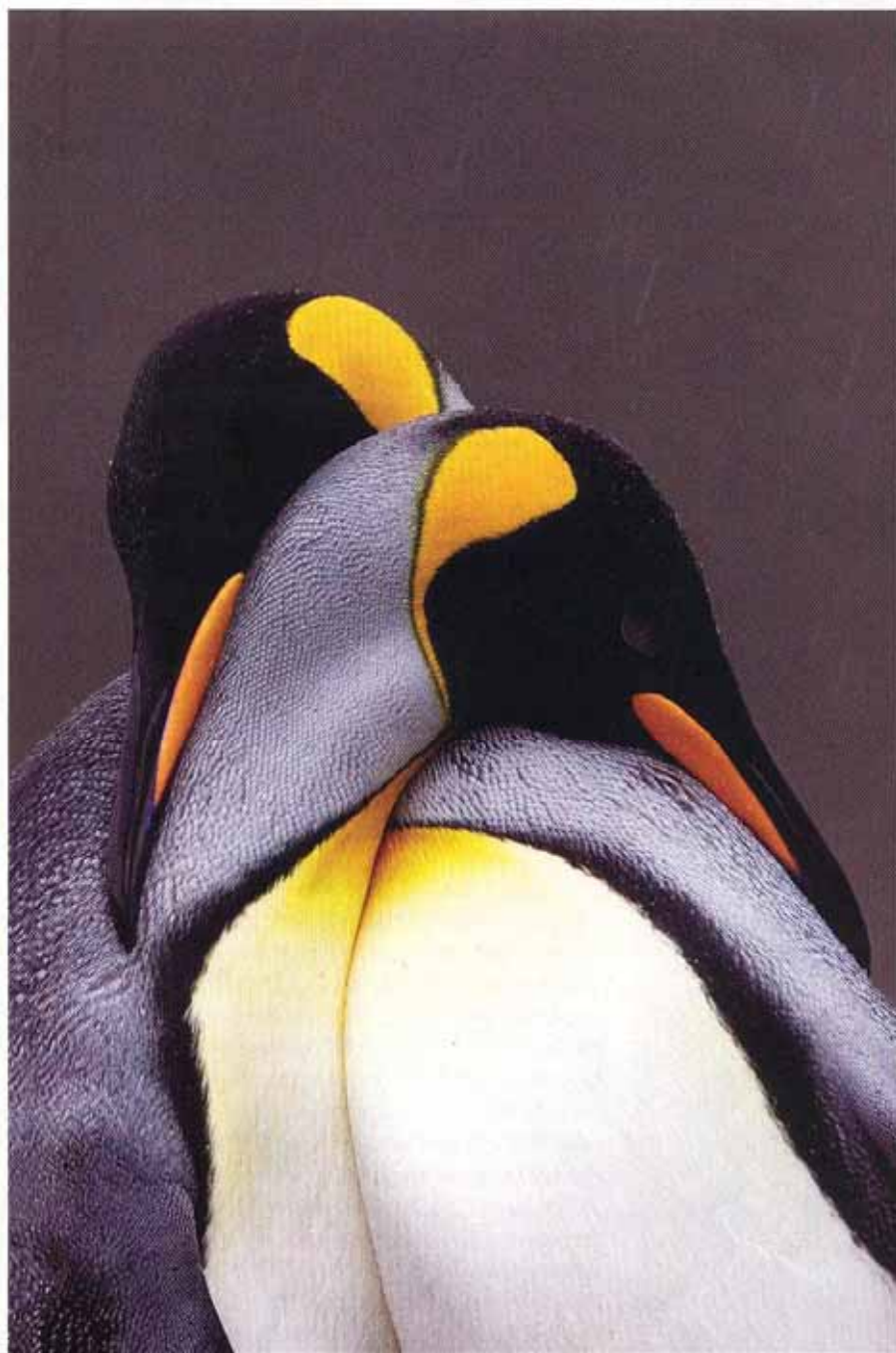
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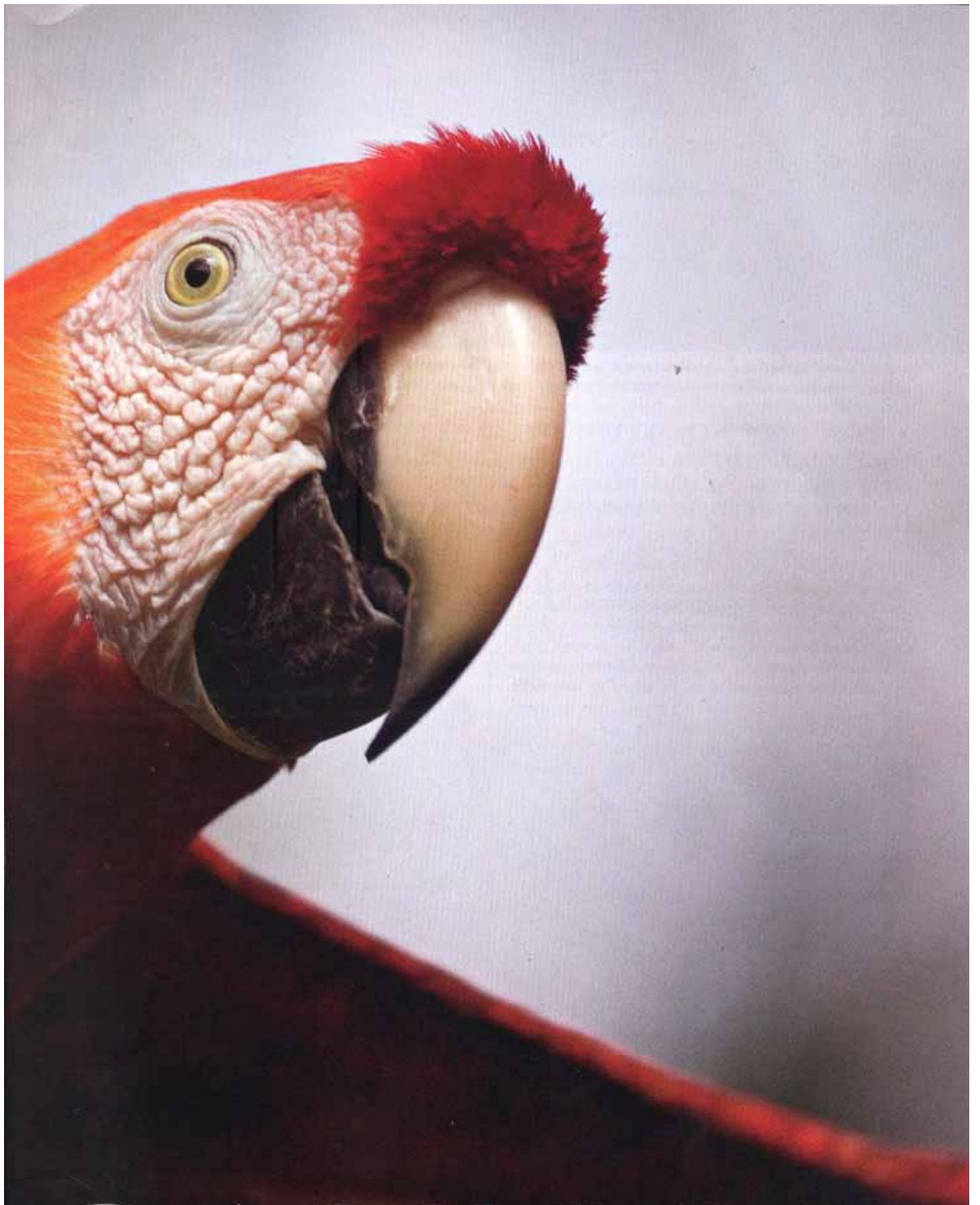
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GREEN TRAVEL

OVER THE

DEEP IN PERU'S AMAZON, VISITORS ON A STORIED STEAM-
FROM PINK DOLPHINS AND SCARLET MACAWS TO GIANT



RAINBOW

BOAT DISCOVER A BOUNTY OF COLORFUL WILDLIFE,
RIVER OTTERS AND BLACK CAIMANS. BY SUSAN COSIER



A rubber boom relic, the *Ayapua* was refitted with the parts of eight boats, including three Werner Herzog used in his film *Fitzcarraldo*. Those spare parts came together so well, and so quickly, that some say a long-forgotten passenger's spirit haunts the boat. Preceding pages: A scarlet macaw.

AT FIRST THEIR CALLS ARE DISTANT. I GRASP THE IRON RAILING CIRCLING THE BOAT'S DECK AND PEER INTO THE FOREST, DETERMINED TO SPOT BRIGHTLY COLORED RED, YELLOW, OR BLUE FEATHERS AMONG THE DENSELY PACKED EMERALD LEAVES. HARSH CROAKS GIVE THE BIRDS AWAY BEFORE THEIR FLAPPING WINGS AND LONG TRAILING TAILS ARE VISIBLE. TREES RUSTLE, AND ABOVE THE CANOPY THERE APPEAR TWO, NO, THREE MACAWS. FROM WHERE WE'RE STANDING, IT'S HARD TO TELL

which of the five species known to live in this locale are coloring the sky. Then we see their fire-engine-red fronts and electric-blue flight feathers: scarlet macaws. Their strident squawks continue well after distance darkens the departing birds' colors.

We motor farther into the flooded forest. Blue-and-yellow and chestnut-fronted macaws cross from one side of the river to the other. Iridescent Amazon kingfishers wing just above the water's surface, tightly hugging the shoreline.

We are heading toward the Pacaya-Samiria National Reserve. Nearly the size of New Jersey, this five million acres of pristine Amazon rainforest in northeastern Peru is sandwiched between the Ucayali and Marañón rivers, and accessible only by

boat. Our goal is to observe the extraordinary mix of wildlife that can be seen here and almost nowhere else—mythical pink river dolphins, menacing black caimans, giant river otters, raucous red howler monkeys, and an entire rainbow of some 500 bird species, from endangered scarlet macaws to wattled curassows.

In the past few days we have followed the trail that only a few thousand other people will trace this year, flying from points around the globe to Iquitos, the largest city in the Peruvian Amazon, then driving an hour and a half in sweltering heat to Nauta, a small fishing village. There we board a boat that appears straight out of Werner Herzog's film *Fitzcarraldo*. Once a decaying carcass of steel, the restored steamboat used a century ago by rubber companies and now fueled by diesel, is a dead ringer for the ship in Herzog's award-winning 1982 picture portraying Brian Sweeney Fitzgerald (played by the enigmatic Klaus Kinski), a man obsessed with building an opera house in the middle of the jungle.

Our *Fitzcarraldo* is Richard Bodmer, 50, a biologist determined to save this forest. So intent is he, in fact, that with parts from eight different boats, he built a floating research vessel fit for luxury cruising through the heart of Peru's Amazon. For the next five days Bodmer, a British-born bloke fond of gingham shirts, khakis, and loafers, will play the role of gracious host while four traveling companions and I double as tourists and scientists. Our mission: help Bodmer and his six-person crew ply this sunken forest for the scientific clues that will help keep it pristine into the next century.

Turning a bend in the river, our boat ripples the forest's perfect watery reflection at flood stage, revealing to us why locals call this swath of forest "the jungle of mirrors." More than 10 million years ago the Amazon basin we're cruising through formed when the Andes rose to sky-piercing heights, trapping the water to create an inland sea. As the salt water drained, fresh water rained down, filling rivers and the low-lying jungle. "The result of that is these huge areas of flooded forest," says Bodmer. "It has a very unique ecosystem in terms of the birdlife, the fish, and other wildlife."

Beginning with the rubber boom in the 1880s, foreign barons steamed deep into the forest and, for a minimal fee, hired



OPENING SPREAD: INGO ANNOT/MINDEN PICTURES. MAP BY MIKE REAGAN

Indians to etch small channels in the bark of rubber trees, forcing them to weep the white sap that would form rubber. By the early 1900s the barons were making the equivalent of \$2 million on each trip, and since the rubber tapping didn't kill the trees, they returned to their leased lands again and again.

After the rise of rubber plantations in Asia ended the South American boom, the logging and mining industries moved in, filling the void. Trees were cut down, oil was sucked out of the earth, and the workers joined the local people in living off of wild game and plants, driving down wildlife populations. Although much of the forest remained intact, development was steady.

In 1984 Bodmer saw an opportunity to work with Peruvians to reverse the destruction. While earning his doctorate in zoology, he began studying Amazonian peccaries. He met and fell in love with Tula Fang, a local Iquitos woman who was also studying biology, and they married in 1986. Today Bodmer, Tula, their son, William, 22, and their daughter, Carolina, 19, split the year between Kent, England, where Bodmer teaches at the university, and Peru's jungles, where he conducts wildlife surveys and hosts students and volunteers.

In the same forests where Bodmer met Tula, he also encountered Pablo Puertas, a sharp-witted Peruvian primatologist with a wide smile and a shoulder-shaking laugh who was one of the first to document the reserve's 13 primate species. Today the two of them work with the 21 local Cocama-Cocamilla Indian communities in Pacaya-Samiria to preserve the wildlife. Puertas serves on the reserve's management committee, and both he and Bodmer lead trips into the jungle for Earthwatch, a group that organizes volunteer trips, and AmazonEco, Bodmer's own expedition company.

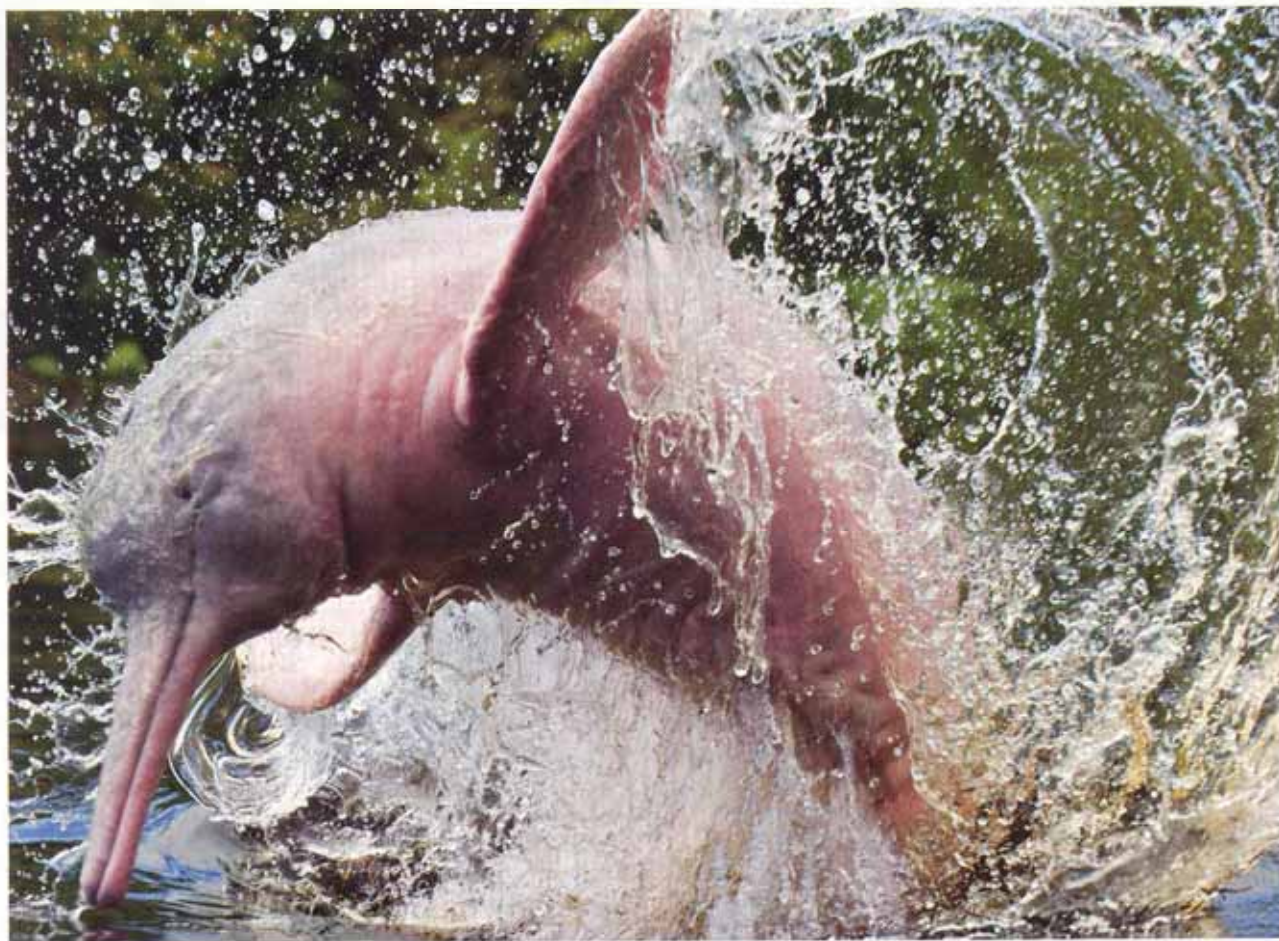
So far their research is yielding good news in Pacaya-Samiria. "Most of the key wildlife species are recovering, including paiche,



Primatologist Pablo Puertas (left) and Richard Bodmer, a biologist, began their research in the Pacaya-Samiria reserve 26 years ago. Now they use the *Ayapua* as their lab. A pink freshwater dolphin (below), one of the world's four freshwater dolphin species, jumps for fish.

the giant freshwater fish," says Puertas. "Giant river otters, manatees, macaws, river turtles, woolly monkeys, howler monkeys, and caimans are also coming back. The results show that we're succeeding."

The setting sun tints the clouds a vivid pink that darkens with each passing moment. Powder-scented flowers perfume the night air. Silhouettes of macaws show against the darkening sky, and a lone toucan flies in the distance. Leaf-nosed bats appear out of nowhere, flying erratically over the river, feasting on insects. We hear a strong roar through the trees; it's a troop of howler monkeys, which have the loudest call of all New World animals. Though



THIS PAGE AND OPPOSITE TOP: PABLO CORRAL VEGA; RIGHT: KEVIN SCHAFER

they weigh only as much as a small terrier, their vocalizations can travel three miles through the dense forest.

Bodmer invites us to the boat's canvas-covered upper deck before dinner, as the rubber barons would have done. In the small bar Enrico Caruso's scratchy voice sounds from a gramophone speaker. Bodmer pours Iquiteña, a locally brewed beer, and we clink glasses. "I've always been interested in history, so what better way than to link biology and biodiversity and culture and history all in one?" he says. "I wanted to do something more real, not just academic. That's what conservation is."

Soon he summons us to the formal dining room outfitted with a long carved table that's topped with lace and surrounded by 20 red velvet-covered chairs, each with the name of our ship, *Ayapua*, carved in the back of its heavy mahogany frame. Mouth-watering smells of salted fish, pan-seared plantains, and fried manioc, a starchy tuberous root, whet our appetites.

After dinner we pile into a small wooden motorboat to explore nocturnal wildlife. Soon Magalay Rengifo, a 28-year-old biology student at the University of Iquitos, switches on a spotlight and scans the shore. Slowly sweeping from left to right, the beam illuminates the forest at the water's edge. Rengifo is looking for reflective points the size of marbles.

With her long black hair kept in check with a bandana, she scribbles notes on paper secured to her clipboard. "Alli!" she shouts, pointing to a snag jutting from the water like a broken bone.

Our captain, Odilio Recopa, a Cocama-Cocamilla Indian villager from the area, points the boat in the direction of Rengifo's finger. We pitch to the right. Near shore, Recopa cuts the motor, keeping the light trained on an eye just inches above the water's surface. Slowly we drift toward the caiman. Recopa readies a lasso-like wire and leans precariously over the bow. With a quick pull he snares the foot-long primordial reptile.

The alligator-like black caiman tries to escape, thrashing water in every direction. Within seconds, Rengifo's skilled hands have taped the dark-skinned juvenile's four-inch jaws shut. Its tiny, scaly legs helplessly wave in the air until Rengifo secures them with a piece of rope.

She places the caiman on the boat's seat, and measures it. Even though it's so small, this reptile belongs to the largest species in the Alligatoridae family, and individuals can top 12 feet. After she weighs the caiman, she peels the tape off his snout and eases him back into the murky water.

Catching even one black caiman is more than researchers could have hoped for less than 20 years ago. "They were over-hunted because of the pelt trade," says Bodmer. "Now we see very large ones quite frequently." Researchers find nearly two black caimans every two-thirds of a mile on surveys, which makes them almost as familiar as their cousins, common caimans, which compete for the same food and habitat. The black caiman's resurgence is now helping scientists to learn more about how the ecosystem can support both species.

The air around us fills with the distinct stench of rotting flesh. A dead caiman, floating belly up, appears in the beam of our spotlight. Rengifo explains: In spring males will fight to the death over a female, creating a floating cemetery of beaten caiman corpses.

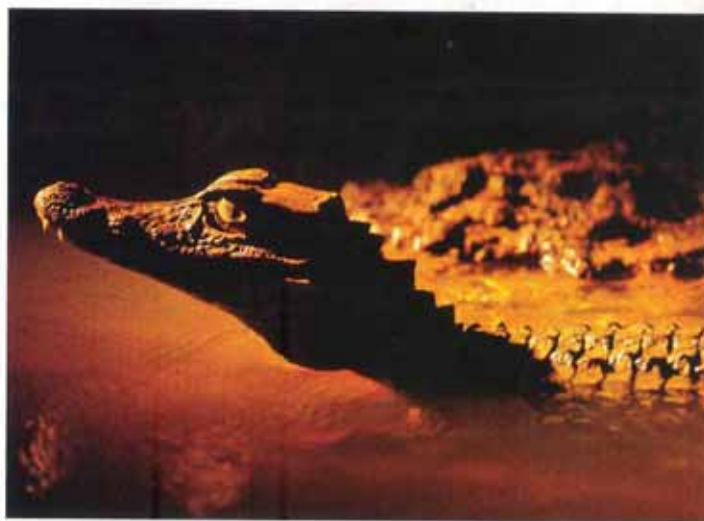
After counting dozens of eyes glowing in the dark and another carcass, Rengifo turns off the spotlight and tells Recopa it is time to head back to the *Ayapua*. We are engulfed by darkness and the heavy smell of night-blooming jasmine. The flooded forest's shadows creep in and several light-colored branches take flight: great egrets flapping into the darkness.

Daybreak's cool turns muggy by mid-morning. On shore, we're eager to explore shading palm fronds and buttressed ceiba trees covered in twisted vines. Clearing a path with a long machete, our scout, Recopa, leads Puertas and me into the jungle. With each step, thick mud slurps at my boots. Recopa points toward the high branches of a kapok tree, and Puertas whispers: "brown capuchin." In the next several hours we spot 10 of the 13 primate species found in the reserve, including spider, uakari, and titi monkeys. Without Recopa's expertise, we might have missed them all.

Cocama-Cocamilla Indians' experience and knowledge wasn't always so respected; in fact, they were once considered outlaws in their own land. The Peruvian government first protected the area now known as Pacaya-Samiria National Reserve in the 1940s, establishing it as a fisheries reserve in an attempt to save the endangered paiche. But the government's designation of the region as a full reserve in 1982 actually amounted to a defeat for the local people dependent on the land for survival.

Anybody caught hunting—even for food—was declared a poacher. Rangers from outside the area manned guard stations, confiscating fishing poles, nets, hunting spears, and knives. Hostilities mounted between those living on the land and those managing it. As a result, the Indians were forced to sneak into the reserve, hunting what they could. Wildlife populations plummeted. "We saw much less in the 1990s. And much more of the smaller species," says Bodmer. No one knew how the wildlife would fare in the long term.

Tensions exploded in 1997 after a ranger confiscated an ex-



pensive new net from a fisherman. Enraged, the fisherman attacked a guard station. "Three people were killed, two of them biologists," says Bodmer. In response, the government, with some convincing from Peruvian and American researchers, changed its policies and began involving locals in the reserve's management.

"If we don't work with local people, we're going to fail in our conservation," says Puertas. When the Indians are included in managing the forest, he adds, they take responsibility for protecting the wildlife, plants, and resources within it.

The government permits communities to take a certain number of animals each year to eat and sell, which curtails excessive hunting. "What the locals want are their resources for their future," says Bodmer. "They don't have a mortgage, they have a canoe; they don't have an income, they have a forest. The key to conservation is to find ways to help people, to find ways to help guarantee that the use of the forest will continue for a long time."



Titi monkeys chatter from high in the jungle canopy. Pablo Puertas was one of the first scientists to record the primate species found in the forest's protected portion. Opposite: Active at night, caimans ply the river for prey. This dwarf caiman is one of the varieties found in the reserve.

The next day we head toward a pocket of the Samiria River where we hope to see the reserve's holy grail: the pink freshwater dolphin. Across the Amazon, indigenous people regard these dolphins as humans who live below the muddy water's surface and revere them more than almost any other animal. "When one was killed accidentally," offers Bodmer, "the fisherman gave it a human burial." Robust dolphin populations show scientists that the Amazon's rivers are healthy.

Anhingas perch on branches with their wings open, drying their feathers. Wattled jacanas with their bright-yellow beaks creep along the shore. We're scanning the surface for dolphins, straining our eyes to see deeper into the water. Minutes pass. Then we hear it: *boonnkkk*. A bubblegum-colored dolphin breaks the surface. We hear a forceful sigh behind us and turn in time to see the bulbous head, beady eyes, and long, thin beak of a second pink dolphin.

Soon the arching backs of five gray dolphins, a smaller freshwater species, join them, shining in the sun as they crest. They dart through the water, chasing fish. "At first it was hard to tell between pink and gray dolphins," says William Bodmer. Following in his father's footsteps, the quiet, dark-haired young man is tallying the aquatic mammals we see. "Now I think it's easy."

Last year researchers counted more than 220 pink and gray river dolphins per square mile, more than ever before and double the tally for 2008. Bodmer says good fisheries management is boosting numbers, and oil exploration in the nearby Tigre River may also push some dolphins deeper into the reserve, possibly increasing the count. "Nearby rivers haven't been conserved in the same way, so we've seen a real increase," he says. "It's a very top predator in the aquatic system, a very intelligent animal, and there's a very

strong tradition around it because of the strong taboos."

The greater the leeway the government gives energy companies operating in the Amazon, the greater the threat to the forest. "[Pacaya-Samiria] acts as a refuge for these important species that you don't find in those numbers in other places," Bodmer says. "It's a huge flooded forest, with great diversity."

Back on the boat, Bodmer discusses his plans to expand his operations. This spring he opened a restored rubber baron's house in Iquitos and is currently in the midst of setting up a rubber-tapping community. He envisions forest managers extracting the resource and selling it to high-end carmakers at a premium. Automobiles with those tires could receive an environmental credit, while companies could prove that they're contributing to conservation.

Although the idea is still just that, it seems more realistic than Fitzcarraldo's vision of building an opera house in Iquitos. Herzog's hero and ours are both visionaries in their own ways. One was fixated on bringing music to the jungle. The other simply chooses to listen to those refrains while steering his ship through a landscape that he hopes will always feature the live soundtrack of birdsong and howling monkeys. ■

PACAYA-SAMIRIA: MAKING THE TRIP

Pacaya-Samiria National Reserve is accessible only by boat. A number of different tour companies offer trips, ranging from \$300 to \$2,550 for one week to nearly \$4,000 for two weeks. Richard Bodmer leads expeditions for Earthwatch (earthwatch.org/expeditions/bodmer.html) and Amazon-Eco (amazoneco.com/), organizations that arrange scientific voyages. Boats launch from Nauta, which is about an hour and a half by car from Iquitos. Flights to Iquitos, via Lima, are available from New York, Washington, D.C., Atlanta, Miami, Fort Lauderdale, Houston, Los Angeles, and Toronto. Visitors to the reserve will need a valid passport and \$33 entrance fee.