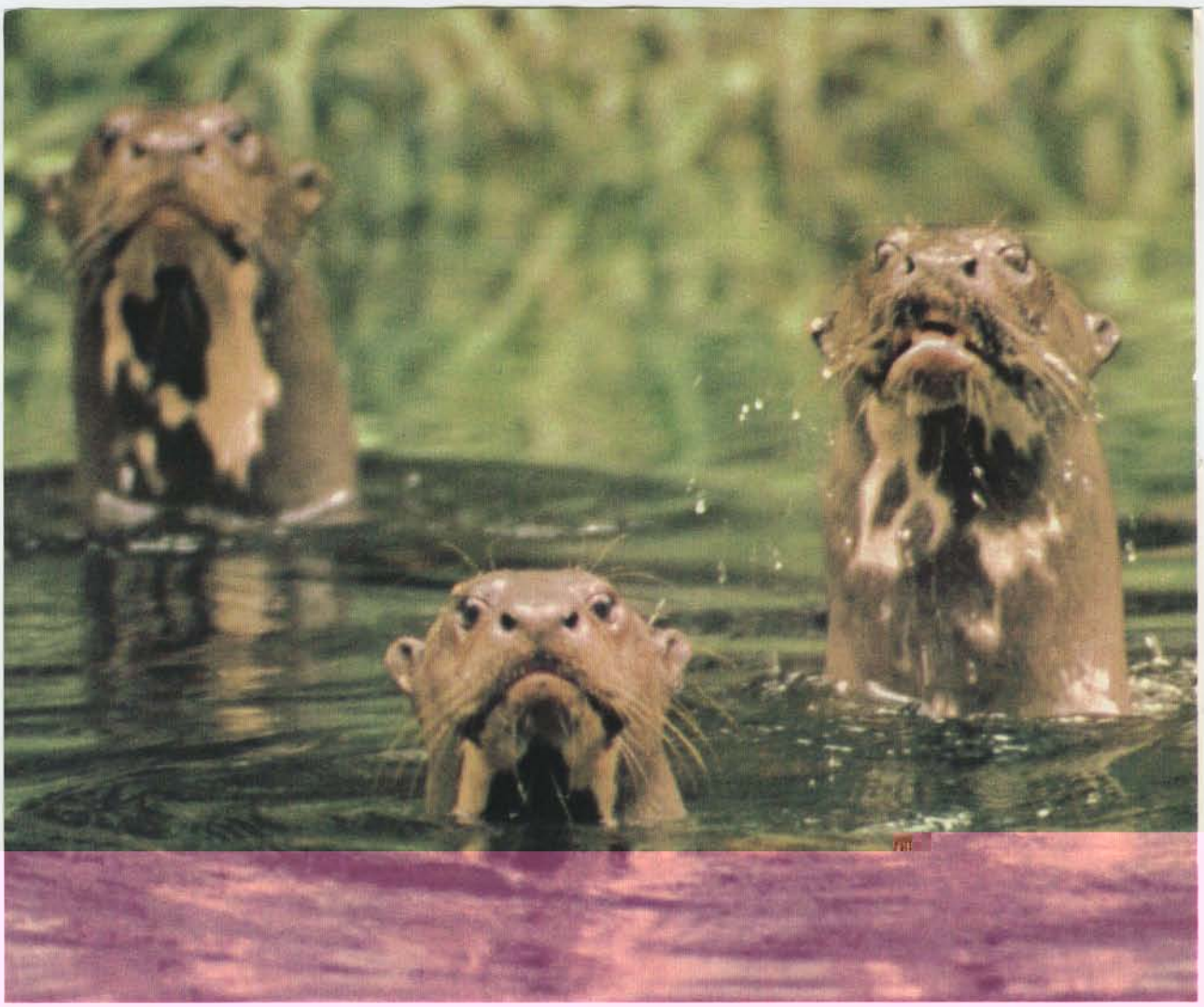


Up periscopes! Giant otters peer warily from a Suriname creek. These likable

Giant Otters: "Big

By NICOLE DUPLAIX Photographs by the author

RIPPLES undulate the lily pads of the creek. Two heads pop up above the cola-colored water. Animals and humans stare at each other, equally surprised and curious. The animals puzzle over this large rubber boat and its occupants; it does not resemble the dugout canoes that they know.

For my part, I can make out dark fur, round eyes, small ears, and tufts of whiskers as the heads bob up and down. One of the animals cranes its neck and opens its mouth, revealing the pink interior. Its companion makes a singsong humming sound, quite loud and persistent. Our boat drifts too close to them, and suddenly, with snorts and splashes, the otters are gone, leaving rings of spreading wavelets.

I have just met the Hummers (as I later called them), a pair of giant otters. As the months passed, I came to regard these animals as friends. More important, for the purpose of my mission to the dense jungles of Suriname in northern South America, the

BATES LITTLEHALES

creatures are vanishing from even their more secluded jungle habitats.

Water Dogs" in Peril

and BATES LITTLEHALES NATIONAL GEOGRAPHIC PHOTOGRAPHER

Hummers taught me much about their kind.

On its sixty-pound body and five- to six-foot frame, *Pteronura brasiliensis,* the giant Brazilian otter, carries a pelt so luxuriant and fashion prized that the animal has largely disappeared from much of its natural range—and today appears on the worldwide list of the 23 most endangered mammals.

Seventeenth-century explorers of the Amazon reported a huge black otter in those inland waters. Biologists thought it might be the Pacific sea otter. Only in 1777 were the world's two largest otters differentiated. The sea otter, also coveted nearly to obliteration for its soft, rich fur, gained protection under the Fur Seal Treaty of 1911 and now, after a strong comeback, can be considered virtually safe from extinction.

A far less promising prospect faces the giant Brazilian otter. By 1969 it was nearly wiped out in Peru. Conservationists postulated that it would disappear throughout its range within the next twenty years. Hardly surprising, since every man with a gun,

from Colombia to Argentina and Brazil to Peru, is still on the lookout for this conspicuous beast that brings the equivalent of three months' wages with one lucky shot.

Lack of knowledge has hampered effective action to save the giant otter. After 300 years the animal's habits remained as much a mystery as ever. To change this, I sought a place where giant otters still survive in good numbers. I would try to record every aspect of their behavior in the wild.

Suriname, where giant otters have been protected since 1954, is probably the only place left where they are still a common sight. Most of Suriname's 402,000 people live along the coast, leaving the inland rain forests virtually uninhabited. The Forestry Department's help in organizing the upriver expeditions was vital to my success.*

Suriname is a melting pot of African and Asian peoples. Most interesting and endearing to me are the people of the hinterland—the shy Amerindians and the extroverted Bush Negroes, descended from 18th-century slaves who escaped to the bush.

For boatmen, my obvious choice was Bush Negroes, expert in maneuvering their long dugout canoes through foaming rapids. But first I had to master Taki-Taki, a pidgin language based on English and Dutch. In 1977 I met Mofo Soiso, and he soon taught me his language and shared his knowledge of the rivers and the bush. *Mofo* means "mouth," and his was always split in a wide grin, although at first he was puzzled by this foreign woman searching wilderness rivers for the *bigi watra dagoo* (big water dog), which wasn't even good to eat.

At the beginning of my study I caught only fleeting glimpses of otters diving into the water, their sunbathing abruptly interrupted. I quickly learned that the animals were active only during the day. Sometimes I stumbled on groups of seven or more as they swam side by side down the river. Once I saw 16 otters together, all charging toward the boat as I imitated their nasal barks. Most of the time only snorts of alarm or wavering screams told me their whereabouts in the thick undergrowth.

Even though the otters easily eluded me, they left signs behind of their presence. Staking out a territory, they deposit single

*Dr. Duplaix's research was funded by the National Geographic Society, the World Wildlife Fund, the Rare Animal Relief Effort, and the New York Zoological Society; the latter cosponsored the project with STINASU, Suriname Nature Conservation Foundation.

BATES LITTLEHALES (BELOW); NICOLE DUPLAIX

Crunch. *The otter dubbed Mr. Hummer by the author takes the first bite of his favorite meal, a large black* pataka ***(above)****. Giant otters pull their larger catches to shallow water, as Mr. Hummer does with a tiger catfish* ***(below)****, or to a convenient log for immediate dining. When the fish migrate into flooded forests during the rainy season, the otters follow, roaming far from riverbank homes.*

droppings on sloping logs or flat boulders at intervals along miles of creek bank. I also found that portions of the riverbanks were stripped bare, contrasting sharply with the dense green vegetation. Churning up the soil with their paws, the animals completely denuded a large semicircle 35 feet long and 20 feet wide.

These campsites, as I called them, announced the presence of a family of giant otters to others passing through. The residents saturated their campsites with urine and with scent from two glands under the tail. We could detect the musky, rank odor a hundred feet away.

Each camp had a communal latrine, set off to one side. Whirling around and stamping their feet, one otter after the other would deposit feces. Almost six feet in diameter, the area was quickly churned into a quagmire. Afterward, the otters would wriggle themselves dry in the peaty leaf litter of the central clearing. Then they would often fall asleep, mated pairs snuggled together.

Every group had a number of campsites on its stretch of river, some sites used frequently, others abandoned after a few visits. Those on territorial boundaries were usually the largest and were visited regularly.

We quickly fell into a routine on the rivers. Every evening Mofo and my other boatman, Jobari Mayodo, would erect a shelter of branches tied with lianas. It amazed me that this frail framework, covered with palm fronds, could support the men's hammocks.

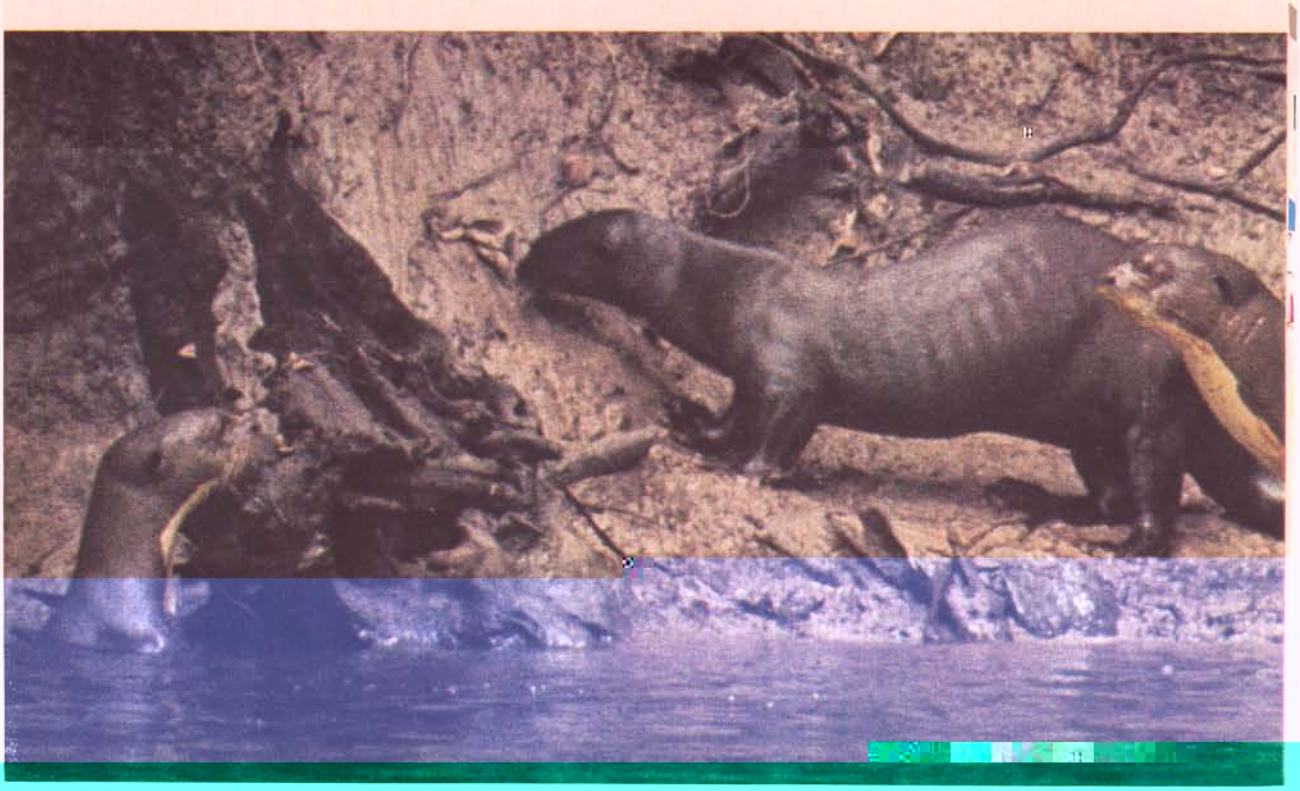
My own tent, just large enough for my Doberman pinscher, Pegs, and me, was a cozy retreat from the bugs and the rain. Before dawn Pegs would nudge my face with her nose, then pace relentlessly until I lifted the tent flap.

Kingfishers Play Paul Revere

I remember a morning on the Zuid River, in southwestern Suriname. We had cut the outboard motor and were paddling along a placid, green-walled corridor, alert to every sound and movement. Kingfishers flew ahead of us, chattering like machine guns. Surely the otters that I hoped were around the next bend would heed their warning.

We examined boulders and logs for droppings. Mofo and Jobari competed to see who would first locate the little pile of fish scales or crab remains. The find was greeted with hearty laughter: Why would anyone want to measure and weigh such material, and then put it in an envelope? But by identifying the scales and bone fragments I could learn what kind of fish the otters were eating.

On larger rivers at the onset of the dry season, I found that giant otters feasted on crabs trapped in shallow pools by the receding waters. Once I saw a group of nine fishing together alongside a sandbank. They



Sleek curves of muscle, *giant otters reach five to six feet in length and weigh sixty pounds. Clumsy on land, they excel in small tropical rivers, where their powerful tails and webbed paws propel them through the tannin-stained waters. Native inhabitants call them "big water dogs."*

Curious yet shy animals, the otters mostly eluded the author during the early months of her research in Suriname, the first time Pteronura brasiliensis *has been studied extensively in the wild. Only after she won the trust of the Kapoeri Creek group she named the Hummers (**below left**) did she closely observe otter family life—how they travel and fish together, patrol territories, groom one another, and cuddle in sleep.*

*She also discovered the habits of otters that make them vulnerable to fur hunters: clearing conspicuous campsites, confronting intruders with loud snorting, and remaining active during the day, when they are most likely to meet humans. One victim of such contact between men and otters, this month-old cub (**below right**) was kidnapped before it had been weaned. It died days later at the Paramaribo zoo.*

Giant otter's habitat

During the past fifty years, fur hunters have nearly eliminated giant otters from major river systems of South America. But in Suriname, game laws have protected the otters since 1954.

NICOLE DUPLAIX (BOTH)

would porpoise methodically side by side, and if one surfaced with a crab or small fish, it would tread water while eating.

Each fish, grasped firmly between the forepaws, was eaten head first, crunched like an ice-cream cone. The favorite prey was a black fish with large scales called the *pataka*. It furnished the otters more than half their diet. The pataka lies on the bottom, showing only its eyes as it awaits a meal passing its leafy lair. Unwary minnows vanish in a swirl and a puff of silt.

Learning to Hate White Water

Two problems constantly dogged my efforts: rapids and outboard motors. With 600 pounds of fuel and supplies, the boats had to be dragged and pushed during the dry season and guided through roaring torrents in the wet. Once, as we hauled across shallow rapids, waist deep in swirling water, my foot slipped when one of the boats swung out of control. It crashed against the rock I was clutching, inches from my head—and my loathing of white water increased.

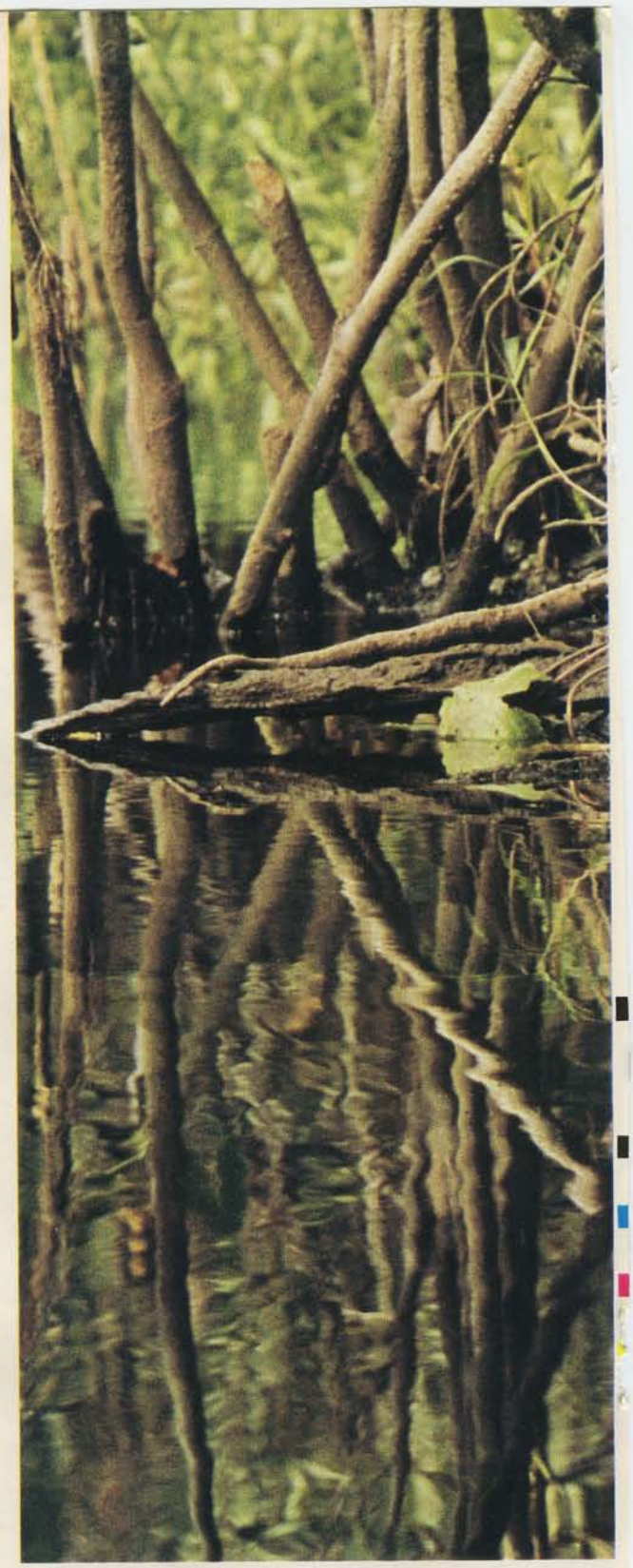
Our outboard motors repeatedly broke down, and I learned of necessity to repair them. Whenever an engine sputtered back to life, Mofo would proudly say to Jobari, *"Dati Mama Watra Dagoo a sabi ala sani*—That Mrs. Otter knows everything."

After visiting one lake, 21 rivers, and 41 creeks all over Suriname, I had observed 102 otters for a total of less than five hours. I needed to study them for much longer periods and at closer range to understand fully their biology.

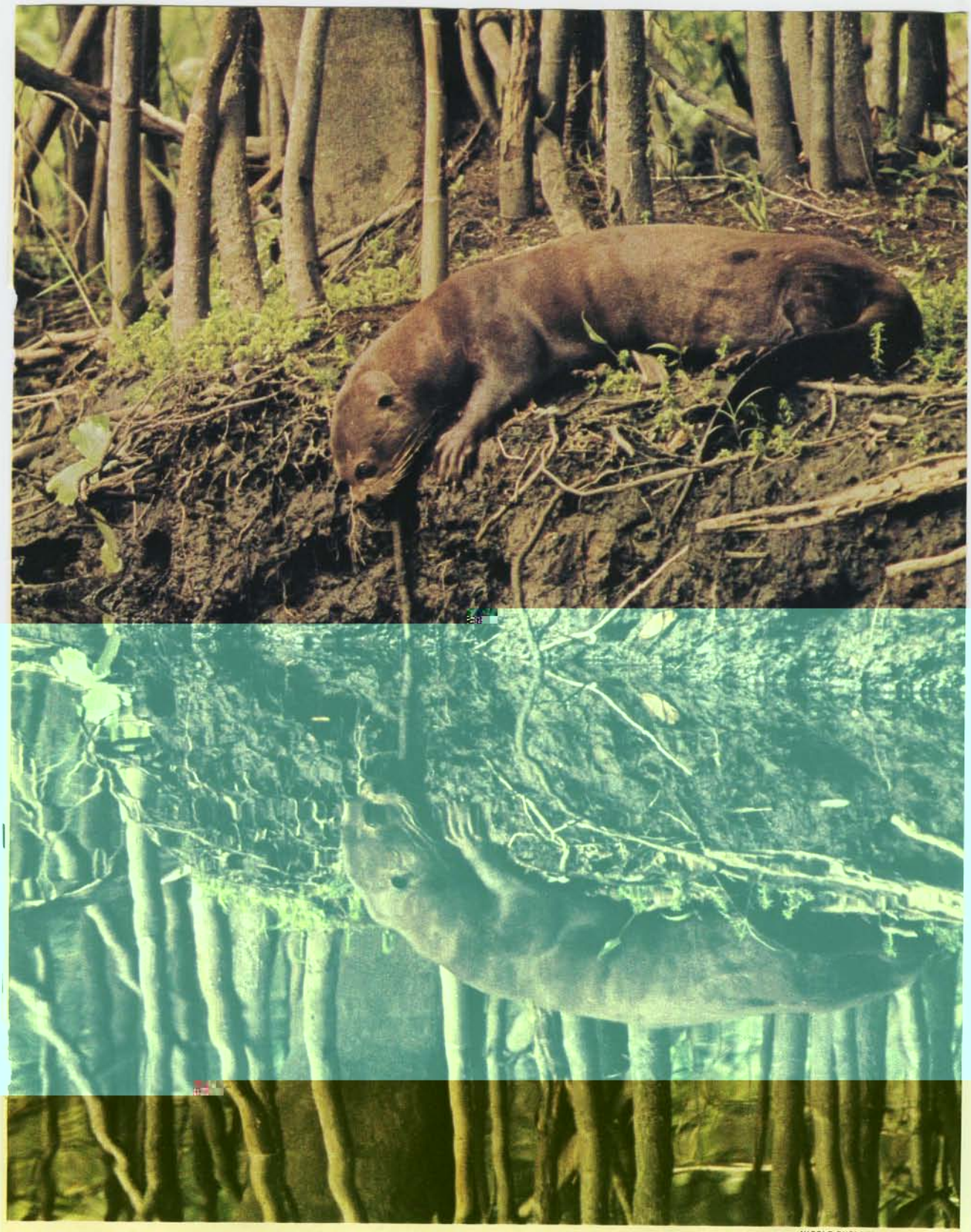
I kept looking for the right spot—and finally found it on Kapoeri Creek, a tributary of the Corantijn River that forms the western boundary of Suriname. On my initial visit I saw ten otters and numerous campsites, more than I had ever found on one creek. Because the stream was narrow, I could watch the animals, and here they seemed less shy.

It was on Kapoeri Creek that I encountered the family of giant otters I came to call the Hummers. The first day of observation I was able to follow the two—and their cub—for an hour and 35 minutes.

The female was more skittish than the male, and the cub stayed close to her, while the mother "hum-growled" for minutes on

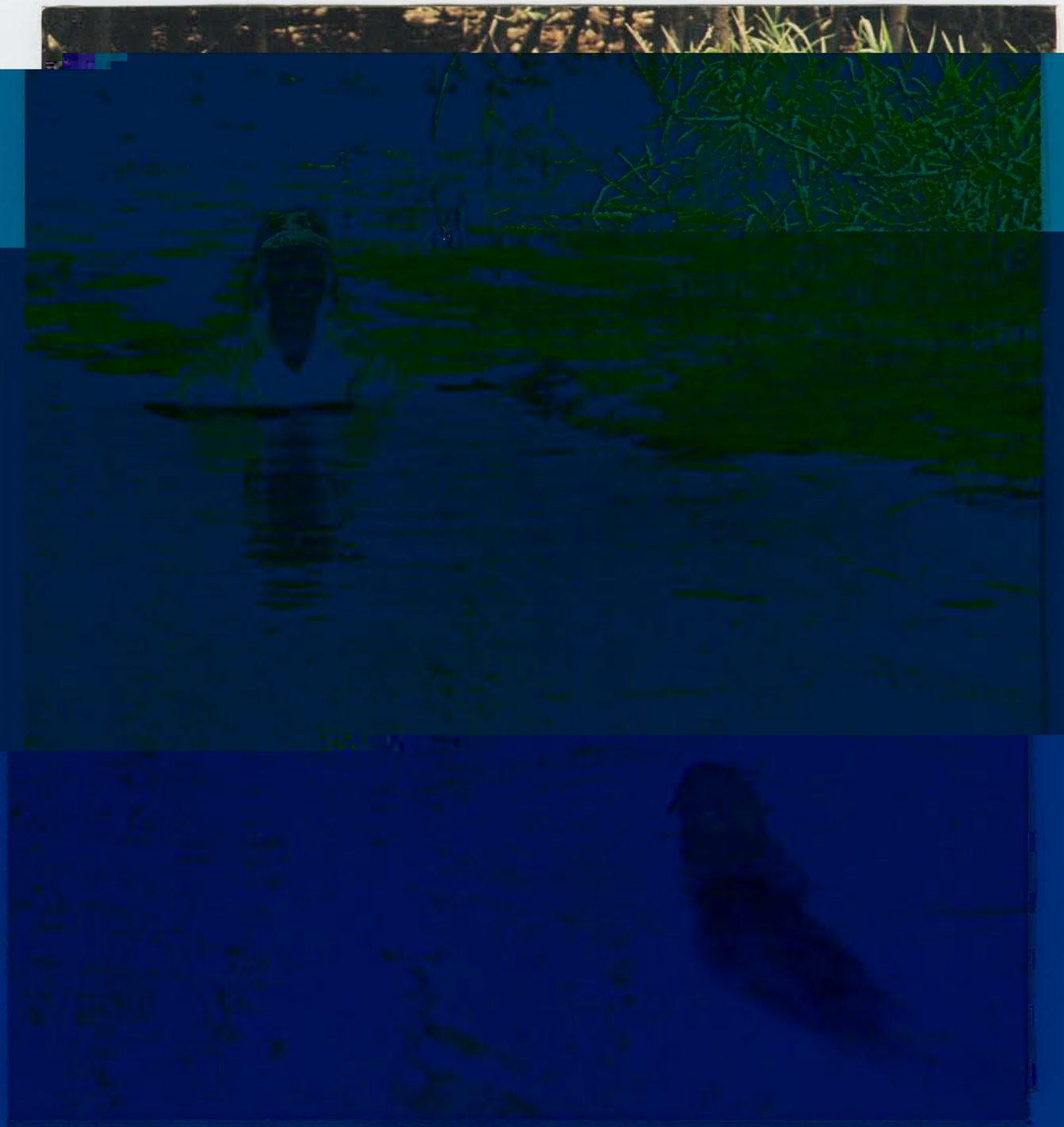


Alone with his reflection, *Mr. Hummer lost his spunk when his mate and cub vanished after a larger otter family invaded*



NICOLE DUPLAIX

their territory. The new group had been pushed upstream from the mouth of Kapoeri Creek by the commotion of crews of workers who were building a road to a government project in bauxite mining, lumbering, and hydroelectric power.



end, as if muttering under her breath. Gradually they accepted me and came to know me by sight.

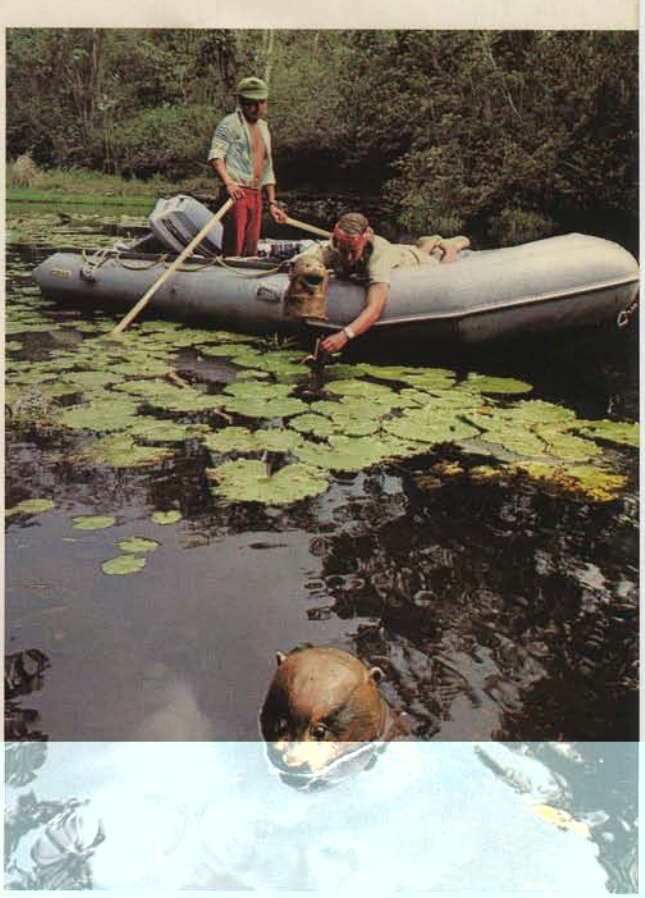
Moli Benanoo, another boatman, and Mofo set up our camp at an old Indian hunting site, and I began otter-watching, using a rubber boat for ease of handling.

Soon I learned to tell the sexes apart and recognize individuals. The males had large heads and thickset necks; the females were of slighter build. Each otter bore a different pattern of creamy blotches on its neck, quite visible as the animals bobbed in the water. I made quick sketches in my notebook. The Hummers had distinguishing white bibs.

Checking campsites, I discovered each group's territorial limits—usually a mile or so on both sides of the creek. The Hummers traveled the length of their 1.5-mile strip every other day, cub in tow. Altogether I

***Face to face** with Mr. Hummer after watching him quietly for many months, Nicole Duplaix breaks her rule against close contact with animal subjects to share a farewell swim in Kapoeri Creek (**left**). Earlier attempts to lure otters into view with rubber decoys (**right**) had failed miserably. "The otters were not fooled in the least bit," she said.*

*On a creek bank she examines one of the dens (**below right**) where parents share the work of tending cubs. Litters of one to three cubs are born between early August and late October.*



ALL BY BATES LITTLEHALES

counted 23 otters living on Kapoeri Creek.

Giant otters, like other otter species, dig dens in the stream banks. Located if possible near good fishing sites, dens usually have a single entrance on the stream bank and a rear exit used to escape into the forest.

Access to dens is by short tunnels usually a foot in diameter and two to eight feet long. They open up into a denning chamber just wide enough for a family to curl up together. Even during birth and care of new cubs, no nesting material is brought into the den.

Cubbing dens usually are situated away from campsites. Except during cubbing season, the otters prefer to sleep out on their larger riverbank campsites.

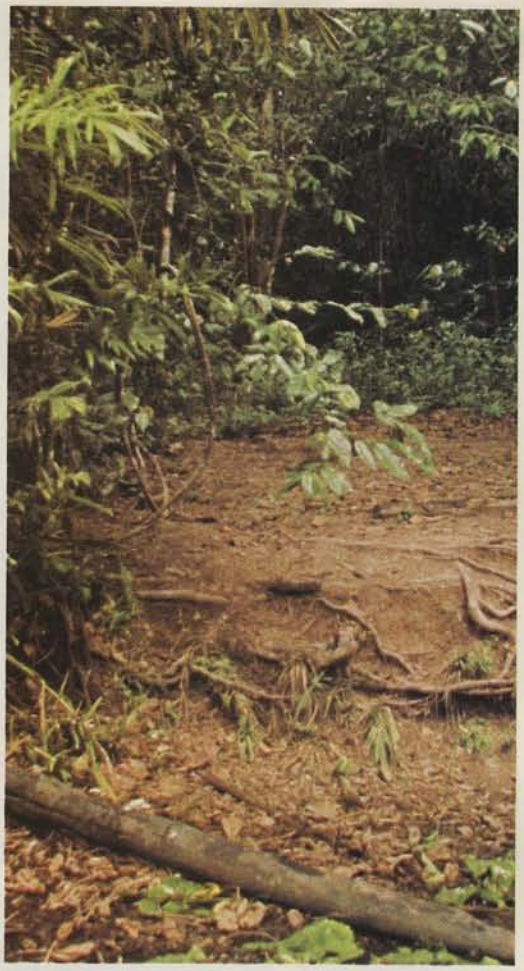
Otter Cub Lost and Found

A giant otter family, which often includes cubs from the previous year, forms a tight-knit group; members do everything together. The Hummers never allowed their cub to stray very far. One afternoon, while Mr. and Mrs. Hummer swam near my boat watching me, the cub wandered off downstream on its own. The parents gave sharp cries, answered with increasing urgency by the cub. All three craned their necks, trying to locate each other. Spying their youngster at last, the parents dived and surfaced downstream as a family again, uttering reassuring coos and chortling noises as they touched noses.

After the start of the rainy season in early April 1977, Kapoeri Creek rose nearly eight feet in as many weeks. Banks were flooded, campsites submerged, and the otters vanished into the forest, which had become a vast green swamp.

There they pursued fish among buttress roots, thorny palms, razor grass, and other tangled undergrowth. The otters mate in the swamps during this high-water season.

When the waters receded in September, I found the Hummers back patrolling the familiar stretch of Kapoeri Creek. However, the bond between parents and cub was weakening. Several times I saw the pair emerging by themselves from a den, or



NICOLE DUPLAIX (ABOVE AND LEFT); BATES LITTLEHALES (BELOW)

Otterly indifferent *to observers, Mr. Hummer reclines lazily on the bottom of Kapoeri Creek* ***(below)*** *after abandoning his campsites.*

Otters strip the vegetation from such sites, which average thirty-five feet long and twenty feet wide, to mark their territorial boundaries. This vacant site ***(left)****, overgrown during the rainy season, was later reclaimed and denuded* ***(far left)*** *by otters returning to the river.*

Campsites are also marked with feces, urine, and a musky scent. Otters patrol and re-mark sites so vigorously that at Nanni Lake several generations of otters have worn away a 45-foot "bite" in the bank at the tip of a small island ***(above)****.*

A noisy species, otters vocalize constantly. Pairs hum, coo, or chortle to their cubs as they swim. Adults and cubs alike scream in frustration when another family member catches the fish they were chasing.

And Mr. Hummer hummed even in his sleep. In all, the author distinguished nine basic otter sounds, from a startled "Hah!" to the squeaks of newborn cubs.

New wildlife preserves in Suriname may give additional protection to these attractive animals, whose numbers are dwindling elsewhere.

glimpsed the nearly full-grown cub taking a shortcut through the forest.

On October 2 Mrs. Hummer came out of a den with a very small cub crosswise in her mouth. It squeaked as, to my horror, she dived into the water. The cub spluttered as its mother surfaced but seemed not to suffer from its baptism. In fact, there were two new cubs, and Mr. Hummer shared the rearing chores. Both parents would enter and leave the den together, and I could hear them underground, purring as the infants mewed during suckling. At three months, while still nursing, otter cubs begin eating fish caught by their parents. Within weeks they are catching fish themselves and dragging them to the shallows for eating.

In November I had to leave Suriname for six weeks. When I returned in January, Mr. and Mrs. Hummer recognized me enthusiastically. But the younger cubs were gone. I later learned that a local Arawak Indian had impulsively taken them as pets. When he discovered that it was illegal, he released them, but they were never seen again.

Land-grabbers Invade Hummer Home

A road had been cut through the forest in September, and now a bridge spanned the mouth of Kapoeri Creek—construction that is part of the Western Suriname Development Project, a huge bauxite-mining, lumbering, and power complex based at Apoera on the Corantijn River. The noise of trucks, generators, and graders must have disturbed four otters and their three cubs living at the creek mouth. The Seven, as I called them, moved upstream, invading the Hummers' territory.

Otters—in captivity at least—are known for their playfulness. Not so with the Seven. Engrossed in expanding their territory, they spent their days in visits to new campsites and forays deeper into Hummer land. I only saw their cubs playing once, rearing up and falling down on each other in mock battle. With the Seven I never established the mutual trust developed with the Hummers.

Late in January the inevitable happened. The Hummers surprised the Seven marking a Hummer campsite. To my astonishment, the Hummers turned tail and dashed into the forest, while the Seven swam away in the opposite direction. I never saw any direct confrontation, but shortly afterward Mrs. Hummer and her year-old cub vanished.

I could only conjecture what happened to them: Did they flee to the swamps deep in the forest? Were they killed by a jaguar, the only predator strong enough to overpower an adult otter ashore? Could one of the Seven have killed them? I'll never know.

Now alone, Mr. Hummer no longer patrolled his dwindling territory or visited his campsites. I found him lying under a tangle of bushes or on the edge of a bank. As his last retreat, he took Arawaboo Pond. Arawaboo (Arrow and Bow) was a favorite Arawak fishing ground. Pataka were abundant under the floating reedbeds, and Mr. Hummer never had to venture far for a meal.

At the sound of a paddle dipped into the water, or at the distant hunting cries of the Seven, he would silently vanish into the forest. He seemed deprived of energy, and his eyes lacked sparkle. One day I was horrified to see a deep eight-inch wound on his flank, probably inflicted by the machete of a fisherman who resented competition. The acid water and diligent grooming kept the wound clean. It healed within three weeks.

I found it hard to leave Kapoeri Creek knowing that Mr. Hummer and the other otters were more and more threatened. In six months the development project had tripled the population of the village of Apoera, and plans envisage a city of 60,000 people!

So far only Arawaks and a handful of Europeans visit the creek, but more people are bound to infiltrate the jungle. Yet I am hopeful. Suriname already has nine nature preserves and an excellent nature-protection system established by STINASU (the Suriname Nature Conservation Foundation). Plans are afoot to protect other areas, including Kapoeri Creek. The giant otters are a symbol of this small country's concern for its wildlife: Suriname leads where other countries have failed.

For almost two years my life was one with the otters of Suriname—a period that strengthened my determination that giant Brazilian otters as a species must survive. International awareness can buttress Suriname's efforts to save these attractive, intelligent animals. To that end, I have pursued my research and dedicate this account of the life-style of the imperiled giant otter. □