

Asia's "Armor-plated" Rhinoceros, Who Carries a Fortune on His Nose, Makes a Last Stand in Sanctuaries Deep in Assam's Rainy Wilds

BY LEE MERRIAM TALBOT

*With Illustrations from Photographs by the Author*

THE Indian Airlines plane glided smoothly past the broad expanse of the flooded Brahmaputra River, bounced in the rough air above the river's forested edge, and settled on the small airstrip at Jorhat, in Assam. The sun, breaking through monsoon clouds, gleamed hotly on wet leaves and pavement.

I had come to this easternmost corner of India in the course of a year's assignment to gather firsthand information on some of the world's rarest animals and to seek effective ways of ensuring their survival. India was the twentieth of some thirty countries I was to visit during the year for the International Union for Conservation of Nature and Natural Resources.

### Uncertainly Relies of Prehistoric Times

"Tomorrow's fossils," species threatened with extinction, are one of the many interests of the IUC, an organization sponsored by the United Nations Educational, Scientific and Cultural Organization.

My objective in Assam was the great Indian rhinoceros (*Rhinoceros unicornis*), a huge relic of prehistoric times, when rhinos were among the more common of the world's land animals. Six feet tall at the shoulders and fourteen feet long, the largest of these Indian rhinos has been estimated to weigh as much as 4,000 pounds.

A horn a foot or more long and a fierce disposition when aroused made him undisputed lord of his Asian domain. And that domain once extended from Indochina to the Khyber Pass, from Kashmir to southern Thailand (map, page 390).

Encroaching agriculture and incessant hunting have brought the Indian rhino to the verge of extinction. Today he survives as little more than a legend over much of his former range. Of the few hundred still in the wilds, the greater number live on five small reserves in India's rainy State of Assam. A few others remain in near-by West Bengal and the isolated Kingdom of Nepal.

Rhinos carry a fortune on their noses.

Prices as high as \$150 a pound are currently offered by traders for their horns—this in a land where a man may earn only a few cents a day. In Sumatra, where the survivors of a closely related species still exist, one Chinese merchant recently offered a new American automobile for a whole rhinoceros!

Many Orientals believe every part of the animal's body to have medicinal or magical values. Properly prepared, rhino is considered a specific for everything from restoring lost vitality to extracting thorns.

The horn commands the highest price. Reduced to a powder, it becomes, especially in Chinese minds, a powerful aphrodisiac. Rhino-horn cups, believed to render poison harmless, were for centuries used by Eastern rulers. Such cups still figure in some Oriental religious ceremonies. Powdered, splintered, or whole, the horn is supposed to have wondrous powers for solving almost any problem, mental or physical—all this with no known scientific basis, but with the unshakable faith of those concerned. So the wonder is not that there are so few rhinos, but that there are any left at all.

### Tea Planter Guards Indian Wildlife

I was met at Jorhat by Mr. E. P. Gee, a leading authority on these ponderous mammals. A British tea planter, he became interested in the beasts nearly 30 years ago. Since then he has served as a protector and spokesman for the rhinos of Kaziranga, and for Indian wildlife in general.

As we drove from the airport to Mr. Gee's estate, the road took us between plantations with their neat rows of flat-topped, three-foot-high tea plants, carpetlike beneath the tall trees that provide shade. It was bazaar day—payday in the tea gardens. The main streets of the villages were jammed. Most of the gay crowd, Mr. Gee explained, were people who had come here from other parts of India to work on the tea estates.

That evening we discussed the objects of my visit. Only about 350 great Indian rhinos are left in Assam, Mr. Gee estimated, most



of them now protected in government reserves. The largest number, about 250, inhabit the Kaziranga Wild Life Sanctuary, 50 miles down the Brahmaputra from the Jorhat airfield where I landed. This was the area the IUC had sent me to visit.

The British established Kaziranga shortly after the turn of the century, when it was thought that only a dozen or so of the animals remained there. Under protection, the beasts have increased at a heart-warming rate. A staff of 40 Indians cares for the area and guards against would-be rhino hunters.

In the early 1930's the forest officer in charge of a neighboring sanctuary discovered poachers in the area; so well organized were they that it required detachments of the Assam Rifles to clear them out.

The Indian Government, I was happy to learn, fully appreciates the value of its unique charges. When I had the pleasure of meeting the Prime Minister, one of Mr. Nehru's first questions was about the rhinos of Kaziranga.

### Rhino Habits Pose a Mystery

Lack of precise information presents a major problem in the preservation of the Indian rhino. In Assam, for example, most of them are swamp dwellers, but no one knows whether this is through preference or because man has left them no other habitat. Beyond the fact that they are herbivorous, scientists have little precise information on the animals; even the exact gestation period remains uncertain.

Since India has few trained wildlife technicians, government officials are not sure how

best to protect the rhino and other vanishing species. The IUC hopes to cooperate with the Indian Government in setting up a research program on the rhino, in which one or two experienced foreign scientists can work with Indian personnel.

### Fifteen-foot Grass Cloaks Sanctuary

At 3:30 the next morning Mr. Gee and I started toward Kaziranga. The sanctuary lies on a low plain on the south bank of the Brahmaputra, bounded on one side by the river and on the other by the steep Mikir Hills. Its 164 square miles are mainly a flat expanse of waving elephant grass, reeds that grow more than 15 feet high although in much of the area they are burned yearly.

Here and there appear open areas, called *bils*, which become lakes in the wet season. Narrow tree-covered ridges standing a few feet above the grass provide the only dry shelter for the animals when the broad river overflows its banks.

Elephants are the only practical means of getting about in the swampy sanctuary. No other form of transport could cope with the alternating open water and virtual jungles of elephant grass, or the aggressiveness of some of the animal life, notably the wild elephant, the rhino, and the water buffalo.

Three elephants were waiting for us at sanctuary headquarters, standing beside the road with mahouts dozing astride their necks. The largest, a famous old tusker named Akbar, towered more than nine feet at the shoulder. Considered the most reliable of the sanctuary's mounts, he had met the

(Continued on page 395)





### Great Indian Rhinoceros Carries a Private Sentinel, the Sharp-eyed Cattle Egret

Marco Polo mistook the rhino for the legendary unicorn and expressed disappointment at its "hideous" appearance. Now the Indian species is nearly extinct, only a few hundred remaining.

Cattle egrets serve the nearsighted rhinoceros as an early-warning system, taking flight before the brute recognizes danger on its own. In payment they glean ticks from the animal's skin and insects flushed underfoot. This feathered sentry, in nuptial plumage, allows an elephant and mahout to approach fairly close in Kaziranga Wild Life Sanctuary, Assam, India. A fresh coat of mud shows the old bull has just risen from his wallow.









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393

#### ↑ Amphibious Tanks Rumble Ashore

Faster than elephants, rhinos have been known to run 35 miles an hour in short spurts. Surprised, these beasts took off when the egrets left their backs.

←Page 392, lower: Battle scars on flanks and shoulders indicate this old bull was whipped by a rival and driven out of the sanctuary. His wounds were inflicted by teeth rather than the relatively soft horn. Myna birds replace egrets on his back.

#### ↓ Bathers Relish Their Mud Packs

Rhinos spend hours at a time bathing in wallows. The mud discourages insects and soothes irritations on their sensitive skins.

Ribs, plainly visible on these two, belie the appearance of armor plating. Hides become hard only after curing. Dried skins have formed war shields and even the clutch plates of heavy trucks. A telescopic lens caught this off-guard moment.







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394

↑ **To Charge or Not to Charge?  
An Irate Wallower Thinks It Over**

A grown male rhino may weigh two tons and stand six feet high at the shoulder. Elephants are terrified by its headlong rush. They must be trained a year or more to stand their ground or move slowly, avoiding any provocation to attack.

↓ **Surprised by an Elephant Party,  
Mother and Calf Make an End Run**

The female rhinoceros devotes her time to raising a single offspring. Twins are almost never seen.

This spot is a *bil*; monsoon rains will turn it from a marshy, flower-covered basin into a lake blanketed with grasses several feet high.





charges of both wild elephant and rhino. An elephant that will stand up to rhinos is highly respected; most are terrified of them.

All three of our animals carried on their backs large straw-filled canvas pads with ropes around the edges as handholds. The passengers arrange themselves on these *gaddies*, or elephant saddles, in any way that seems comfortable. The mahout sits on the elephant's neck and directs him with his feet and a short, hooked metal bar.

The elephants knelt, and Mr. Gee and I boarded another bull, Mohan. The animal stood up, front end first. The gaddi tilted alarmingly, and I had to grip its ropes strongly to keep from sliding back the way I had come. Eventually Mohan gained his feet, the gaddi leveled, and we were off.

#### Villagers Fish in Flooded Fields

Between the Mikir Hills and the sanctuary proper lies a mile-wide strip of farmland. Our elephants' long, swinging strides took us quickly across this and through flooded rice fields; past sleepy water buffaloes with Assamese youngsters, bare except for large, round straw hats, sitting on their backs; past other equally bare villagers fishing small crabs out of the flooded fields and proudly holding their catches aloft. Showy adjutants and black-necked storks watched us ride by; herons and lapwings took to the air momentarily, to settle again a few yards away.

As we swept across the grassland, a jackal bolted virtually under Mohan's feet. Then came two little hog deer, beautiful brownish animals with gracefully curving antlers. A disturbance in higher grass turned out to be a *dolharina* or swamp deer, a large animal almost the size of a sambar, called barasingha, or twelve-point, elsewhere in India because of its fine antlers.\*

A couple of hundred yards into the grass, Akbar's mahout pointed to our right. All three elephants swung off in that direction. Ahead, in a mud wallow, lay a large rhinoceros showing indistinctly through the grass.

It made no move until we had approached to within some thirty yards. Standing on our mobile observation tower, we seemed to be almost on top of the animal. It was lying in the muddy water with two or three feet of its back and head showing.

Suddenly the rhino came out of the water with startling speed and stood dripping at the edge of the grass, eying us. Its skin

hung in great folds at the neck, shoulders, and hindquarters, giving the appearance of armor plate. The flanks and legs, wet and gleaming in the sun, were studded with tubercles that looked like rivet heads. Small, deceptively sleepy-looking eyes watched us from behind the thick, blunt horn. Here was really a most improbable creature, a relic of ancient days.

The rhino interrupted my thoughts with a loud snort and wheeled off through the grass. For an animal of such size and weight it showed amazing agility, appearing to trot along lightly and effortlessly, yet leaving tracks two feet deep in the mud and passing easily through stands of reeds that our elephants parted with visible effort.

Mr. Gee beamed proudly. "Five years ago at twice that range he would have charged every time. There's your proof of the effect of protection."

In the next two hours we saw nine more rhinos, nor did we ever know from one moment to another what else would erupt from the tall grass. Splashing along, our mounts flushed deer, wild pigs, swamp partridge with their young, water birds, and many smaller creatures.

#### Tiger Fells a Water Buffalo

At one point near the stream a patch of flattened grass revealed a trail leading up the ridge where something heavy had been dragged. At its end lay the carcass of a water buffalo, freshly killed by a tiger. Dragging a full-grown buffalo more than a hundred yards uphill was striking evidence of the big cat's strength. The kill was too recent for comfort. Our mahouts turned the elephants and, continually glancing over their shoulders, looked much relieved when we left the area behind us.

As has happened in many other parts of the world, water hyacinths have invaded the inner areas of the sanctuary; the beautiful blue flowers clog many of the streams and bils. Where they were thick, passage became impossible. To cross the open areas, gaddi and passengers were delicately balanced in a long, narrow dugout canoe, which was poled across the water ahead of the elephants. The big animals seemed to enjoy the swim, following with only a small part of their heads and

\* See "Antlered Majesties of Many Lands," 23 paintings by Walter A. Weber, NATIONAL GEOGRAPHIC MAGAZINE, October, 1939.

trunk tips above water. The mahouts standing on the animals' shoulders resembled water skiers (page 398).

I had been hoping for a look at India's wild buffalo, relative of both the tame buffalo found throughout this part of Asia and the not-so-tame African buffalo prized by hunters. So far all those we had seen were do-

#### Camouflage Gives Way, Pit Yawns, and Behemoth Drops In

Laws protect the great Indian rhinoceros against hunters and trappers. Only an occasional specimen may be taken, usually for a zoo. These Assamese villagers dug a pit across a trail and concealed it with grass. Their heavy noose helped transfer the animal to a cage.

E. P. Gee



mestic. Unfortunately, the villagers' animals are permitted to graze in the sanctuary, and diseases carried by them, including anthrax, have a disastrous effect, not only on their wild cousins but also on the deer, elephants, and, most important, the rhinos.

"There are your wild buffalo," Mr. Gee said quietly, as we emerged from a 15-foot wall of grass. Mohan stopped; across a bil we counted 32 of the animals nervously watching us. In front of them stood a great bull with horns curving far out and back. He snorted, and, in a sudden confusion of rolling backs and waving grass, the entire herd disappeared.

I returned later in the week for a closer study of the sanctuary area. One morning I was riding Sher Khan, a tuskless bull elephant about the size of Akbar. With an Assamese forester, who rode a smaller tusker, I had been looking over a remote area newly added to the sanctuary. In the infrequent openings we had seen hog deer, swamp deer, wild pig, and sambar, as well as three big rhinos—two of them females with their several-hundred-pound babies beside them (page 394).

#### Face to Face with an Angry Rhino

As we headed home, the elephants striding along parted the towering grass with powerful sweeps of their trunks. Unexpectedly we burst into a small open space. Both elephants stopped dead.

In the middle of the clearing a few yards away lay a young rhino. In front of it, with tail raised and eyes glittering





### Charge! Ears Erect, Nostrils Flaring, Mother Thunders into Battle

Surprised, this cow attacked. The author snapped a close-up just as his panicky elephant bolted. The speedier rhino caught up and gashed the elephant's flank. Her offspring stayed behind as a noncombatant.

balefully, obviously ill-disposed toward this intrusion, was the mother.

Suddenly there was an awesome amount of noise; both elephants trumpeted and the huge rhino, grunting and snorting, plunged back and forth several times, throwing mud in all directions. Then she turned and came straight for us. At the risk of being thrown from the swaying gaddi, I managed to focus my Leica and snap a picture of the angry animal (above).

Sher Khan coiled his trunk high and squealed in terror as he wheeled and bolted through the grass. Mother rhino, tail still up and mouth open, grunting at each step, was right behind us.

It was bedlam, the rhino making noises like an amplified cross between an angry pig and a bear, both elephants trumpeting, and the mahout and I shouting in the hope of discouraging our pursuer.

My nine-foot-high perch seemed far too

close to the rhino. We parted the tall grass like a scared bulldozer, and the gaddi pitched wildly. I wondered which would give first: Sher Khan, the ropes, or my grip, and if so, how far into the grass I should jump to avoid the ton or so of angry determination behind us.

### Rhino Gashes Sher Khan's Flank

The rhino overtook us with little apparent effort and tried to get a tooth into Sher Khan's hindquarters. Failing that, she pulled alongside and with a toss of her head opened an 18-inch gash on the elephant's flank.

Sher Khan squealed again, lurched to one side, and took off even faster in another direction. The rhino, apparently satisfied, arrogantly held her course, tossing her head and snorting, for another hundred yards, then disappeared into the grass.

I could imagine her returning to the young rhino and telling it proudly, "There, you see? That's how it's done."





Elephants Swim with Mahouts Aboard. The Author Chose a Dugout to Keep Dry

Unlike the African rhinoceros, which uses his horn as a weapon, the great Indian rhino relies mainly on the enlarged incisors in his lower jaw, and in fighting apparently bites and swings his head to scoop with them.

When we returned to the sanctuary, I measured the height of Sher Khan's wound. It was a full seven feet above the ground!

**Outcast Bulls Mellow with Age**

Later the same day, riding another elephant, I saw further evidence of the effects of the rhinos' teeth. We came upon a battered old bull rhino in a rice field just outside the sanctuary. Apparently he had just lost an argument over a lady rhino, and had been driven out of the area (page 392). He was still dripping and clean—unusually so, as the animals normally are caked with steel-gray mud from their wallows. He carried fresh gashes on his neck, shoulders, side, and hind leg. When we rode up, he paid little attention to us.

With most wild animals, when an old male

has been defeated, he becomes an outcast, a danger to both man and beast. But when an aging rhino is driven away by its fellows, it may take up a new residence near people, become extremely docile, and live peaceably in its wallows, bothering nobody. There have been several such instances at Kaziranga, the most celebrated of these living in that state for more than 14 years.

On my last evening at the sanctuary I rode in after dark. Lightning flickered here and there in the angry sky, and cooking fires glowed as orange points against the dark mass of the Mikir Hills. I thought again of the huge, improbable beasts I had been sent here to study. What a loss if they should ever be allowed to vanish completely.

I hated to leave the rhinos—or any of the wildlife, the beauty, and adventure of the sanctuary. But it was good to know that, thanks to the farsighted efforts of the Indian Government and the IUC, it will be possible to return again and again to enjoy Kaziranga and its rich and varied inhabitants.

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INDEX FOR JULY-DECEMBER, 1956, VOLUME READY

Index for Volume CX (July-December, 1956) of the NATIONAL GEOGRAPHIC MAGAZINE will be mailed upon request to members who bind their copies as works of reference.