

# The **LOGGER** and the **TIGER**

**In a remote valley in Russia's Far East,  
the Siberian tiger and the timber industry face off  
in what may be the rare cat's last stand**

By **KEVIN SCHAFER** and **MARTHA HILL**

**A** YEAR AGO, A LOAF OF BREAD IN THE RUSSIAN CITY OF VLAD-  
ivostok sold for 16 kopeks. Today, that same loaf of bread  
costs 20 rubles, more than 100 times as much. On that sim-  
ple statistic may rest the fate of one of the world's most  
magnificent and endangered creatures, the Siberian tiger.

In the economic crisis that confronts the new Russia, the Siberian tiger is rapidly becoming an innocent victim. Once an infrequent occurrence, poaching is suddenly a serious threat and, in a desperate bid for hard currency, the Russians are poised to sell off their old-growth forests—and prime tiger habitat—as timber. What happens in the coming months may decide whether the Siberian tiger has a future left in the wild.

The largest of its kind, the Siberian tiger is the northern race of a species normally associated with the humid forests of tropical Asia. At home in the deep snow and bitter cold of the Russian winter, it thrives in a world far different from those of its southern cousins. Some scientists believe that it was here in the boreal forest, not in



MAURICE HORNDOCK (LEFT); ROO WILLIAMS/BRUCE GOLDMAN (RIGHT)

**SNOW CLUES:** Russian conservationist Viktor Varonin (left) and American wildlife biologist Howard Quigley measure tiger tracks (above); a thick-coated, female Siberian tiger (right).

the steaming jungles of southeast Asia, that tigers evolved.

Whatever their origin, tigers everywhere are in trouble. Half a dozen races were once widespread across Asia. Today, they are rare throughout their range and in some places, already extinct. Tigers stalked the forests of Java as recently as 1979; now they are gone. The Bali tiger was probably already extinct by the time World War II decimated that island's native forests.

Even in India, where the writers Rudyard Kipling and Jim Corbett made the Bengal tiger a legend, the estimated tiger population of 4,000 is far from secure; here, poaching and habitat destruction continue to take a devastating toll. In India's Ranthambore National Park, where tigers are strictly protected, poaching last year claimed the lives of eight, half of that park's population. Far to the northeast, the Siberian tiger faces a similar fate.

At one time, the Siberian tiger rarely encountered humans and had little reason to fear them. The animals ranged throughout the forests of Korea and China, north along the eastern coast of Russia, to the edge of Siberia. But in the late nineteenth century, during the construction of the Chinese Eastern Railway, and the ensuing influx of Russian settlers to the Far East, Siberian tigers were deliberately eradicated. A Russian census in the late 1930s found evidence of only 20 to 30 animals.

Protected by law in Russia since the 1950s, Siberian tigers today probably number 300, a minor miracle in population restoration. But the story elsewhere is not so bright. The animal is probably already extinct in Korea, and only a handful of tigers remain in the most isolated corners of China.

For decades, the last viable population of wild Siberian

tigers has inhabited a remote mountain enclave, the Sikhote-Alin range, in a region of Russia known as Ussuriland. In fact, the term Siberian is misleading because this race of tigers does not range as far north as Siberia. The Russians, and many scientists, prefer to call it the Amur tiger, referring to the Amur River that drains most of the western slope of the Sikhote-Alin.

**N**OT HIGH IN ELEVATION (the highest peak reaches only 6,000 feet), the Sikhote-Alin are rugged and largely inaccessible mountains that rise steeply from the shores of the Sea of Japan. Cloaked in ancient forests, they are still inhabited by a dwindling population of indigenous non-Russian people.

The forests of Ussuriland, which were not glaciated during the last ice age, are unique in Russia. They mark the northernmost extension of Asian species, forming a natural boundary between the vast boreal forests of Siberia—the legendary “taiga”—and the humid tropical forests of the south. The mixture has resulted in the creation of one of the most diverse ecosystems in

Asia. Birds more typical of southern Asia thrive next to northern species, along with several kinds of mammals that live nowhere else in Russia—the Amur leopard, the Sika deer, and the Amur/Siberian tiger.

In these deciduous-coniferous forests, tigers stand at the top of a simple food chain that links trees, seeds, and pigs. One of the primary food sources is the seed of the Korean pine, known in Russian as *khleboye*, or bread of the forest. The seeds are nutritious and rich in fat; for elk, deer, wild boar, and most of the forest herbivores they are a vital staple that enables them to survive the harsh winter. These animals, in turn, sustain the tiger (especially the boar, which makes up more than half the tiger's diet).

All tigers are predators, stealthy and solitary hunters of the forest. In summer, Siberian tigers hunt from the dense cover of primary and secondary growth, ambushing their prey. In winter, they track boar and deer through deep snow, approaching silently to within a few yards before springing for the kill. Rarely seen near civilization, tigers have been spotted prowling coastal beaches when deep snows force hungry elk to feed on kelp.

Tigers require an enormous home range, or hunting area, to find prey. Research by Russian wildlife biologists has shown that a female Siberian tiger may use from 125 to 250 square miles of habitat. Males range over a much wider area of from 500 to 620 square miles. These large home ranges make tigers intensely vulnerable to habitat loss; if forests are reduced to smaller parcels, and their prey species dwindle, tigers cannot survive. Until very recently, the forests of the Sikhote-Alin range offered tigers both extensive habitat and isolation. But in the chaos that is contemporary Russia,





**KEEPING TABS:** To monitor a Siberian tiger's whereabouts, a researcher fits the animal with a radio collar (above); a tiger thrives in the bitter cold winter (right).

even that final haven of the tiger may be threatened.

Inevitably the problem reduces to economics. The 100-fold increase in the price of bread is only one sign of the extent of Russia's troubles. Salaries have not kept pace with rampant inflation, and the incomes of working people are stretched to the breaking point.

People across Russia, for whom Communism represented economic security more than political ideology, are suddenly desperately poor. Unemployment, unknown in Russia for 80 years, is now epidemic. Those lucky enough to have kept their jobs, even within the government, often find there is no money to pay them. While Boris Yeltsin strives to maintain control in Moscow, issues like civil war and a return to Communism are debated daily in homes and on the streets in the far-flung corners of his struggling nation. Under these conditions, wildlife conservation has become a luxury in many people's minds. Getting cash has become a singular obsession,

both of the nation and of the men and women on the street.

No surprise, then, that the poaching of tigers shows signs of becoming epidemic. Last fall, we accompanied a group of Western scientists visiting some of the most remote reserves in the former Soviet Far East, including the Bikin River. While we were there, Sergei Smuchin, a biologist with the Far East Institute in Vladivostok, told us of five tigers killed in the past year in his study area on the Iman River, just north of the city. When asked what happened to the dead animals, he shrugged his shoulders. "Tiger skins sell for as much as 200,000 rubles, and the Japanese have the money to buy them. To a Russian, that equals four years' salary—or two new cars."

**I**N SOME CASES, POACHING TAKES PLACE WITHIN established reserves. Maurice Hornocker, director of the Wildlife Research Institute of Moscow, Idaho, and Howard Quigley of Maryland's Frostburg State College, are in the second year of the first long-term study of Siberian tigers. Recently, they returned from Sikhote-Alin Biosphere Reserve with the grim news that one of their radio-collared animals had been killed. Hornocker says, "The second of the two tigers we collared last year, a big female, had been shot by poachers along a road within the reserve. Her signal had not moved in some time; when we followed it, we found just the collar, sliced in half."

The story is repeated in many parts of the region. According to another report, more than 20 tigers were poached in 1992 in the Lazo preserve in the southern Sikhote-Alin, more than half of the animals thought to inhabit the area.

Legal restraints are nearly useless in stopping the carnage. On the books, tigers are strictly protected; but if caught, a poacher faces a fine of only 3,000 rubles. While a year ago this might have been a daunting sum, today it is less than ten dollars, hardly enough to dissuade a would-be hunter from looking for a way to feed his family.

But poachers are unlikely to get caught; federal budgets for reserve management and vital poaching patrols have been cut by as much as 80 percent. Meanwhile, in unprotected areas, anti-poaching enforcement has ceased altogether. "We don't even know the full extent of the poaching," explains Hornocker, "but there are certainly plenty of monetary inducements for it. As long as that is the case, it is unlikely to stop."

It is particularly unlikely to stop as long as there are markets for tiger products. Despite a ban on selling tiger parts by CITES (Convention on International Trade in Endangered Species), the trade continues, particularly in China, Taiwan, Korea, and Japan. The eyes, bones, and teeth of tigers are considered by many Asians to have potent medicinal and spiritual properties. As in the case of rhino horn, these sorts of persistent beliefs are deadly to wildlife.

Meanwhile, the port city of Vladivostok, closed to the outside world until 1992, is now filled with Chinese traders and street merchants dealing in wild ginseng, currency, cheap clothing, and—almost certainly—tigers. In addition, the nearby Russia-China border is increasingly porous, making illegal traffic easy for black marketeers.

In China, Siberian tigers have been captive-bred for commercial use since 1986. But because of the CITES ban, China



**ORPHANED CUB:** Viktor Varonin cares for a Siberian tiger cub whose mother was killed by poachers.

has not been able to legally export their products. According to the IUCN (World Conservation Union), however, China has asked for a change in the Siberian tiger's status that would allow such trade. But a move like that, many fear, would doom any tigers remaining in the wild.

Even if poaching were not enough of a threat, the forests that constitute the tigers' last refuge are succumbing to the same economic pressures. To attract foreign investment and the hard currency that accompanies it, the Russian timber industry has begun selling off the logging rights in the forest reserves to Oriental and Western companies. To foreign timber companies facing depleted reserves at home or restrictions on where or how they can cut, the extensive forests of Russia's Far East look inviting indeed.

Already a timber gold rush has begun. In 1991, the Hyundai Corporation of South Korea signed a 30-year joint venture agreement with the local Russian forest authority and began cutting a half-million-acre tract of virgin forest on the Pacific slope of the Sikhote-Alin range. By the end of 1992 the area had been logged, and Hyundai began moving

its operation across the divide and into the Bikin River basin.

The Bikin is one of the last pristine river valleys in Ussuri-land, a wild 600,000-acre watershed that drains the western slopes of the Sikhote-Alin. For most of its 310 miles, the Bikin is relatively untouched, its forest filled with game. According to Howard Quigley, "The Bikin River basin probably represents 10 percent of the entire range of the Siberian tiger, perhaps more."

But in the Bikin, Hyundai found more to contend with than tigers. A small population of indigenous Asiatic people who live along the river's forested banks—the Udegei—drew a line in the sand. Hunters and fishermen, the Udegei lived in these mountains for hundreds of years before Russian settlement. They subsist mostly on the meat and furs—of sable, otter, squirrel, and deer—that they hunt in the forests and trade up and down the river. They revere and respect tigers and do not take enough game to threaten the cats' survival. The Udegei know that their livelihood depends on protecting the forests, which in turn protect the watershed and the quality of the whole ecosystem.

**I**T FOLLOWS, THEN, THAT IN THE MAIN UDEGEI settlement of Krasny Yar, feelings about logging run strong. Having watched other Udegei settlements die out as their river watersheds were logged, the people of Krasny Yar have threatened to shoot at any logging trucks trying to get past their village. Last August they began armed patrols along the road that leads past their village into the upper Bikin. Udegei hunters have been arrested for removing markers from trees slated for cutting. The Udegei do not take armed struggle lightly, according to Yuri Vozniok, a community spokesman. "We can either die slowly, like our other communities," says Vozniok, "or we can die quickly on our borders, defending our land."

Meanwhile, the Udegei have filed suit to stop the logging, and the Hyundai expansion has been tied up in the courts. But the logging throughout the Far East has hardly diminished. Hornocker reports that forests all around the Sikhote-Alin reserve are now being cut, the trees sold to the highest bidder. And Weyerhaeuser, the embattled American timber company, has been negotiating an enormous timber contract to the north of the Bikin—an area roughly the size of Delaware. "Logging per se will not kill off the tiger," says Hornocker, "but without a home, there isn't going to be any wildlife at all. What is needed is long-term conservation of the entire ecosystem. This can be accomplished through sustainable forestry practices. Otherwise, the Siberian tiger may become the spotted owl of far eastern Russia; it may simply be logged out of existence."

In the months and years to come, the painful economic transformation of the Russian republic will have a crucial impact on the future of many endangered species, not the least of which is the Siberian tiger. If poaching continues unabated, and the forests fall recklessly to the chainsaw, one of the world's last great carnivores may vanish.

*Photojournalists Kevin Schafer and Martha Hill are a husband-and-wife team based in New York City.*



## Save the Tiger!

IF THE SIBERIAN TIGER, THE WORLD'S LARGEST AND MOST spectacular cat, is to be saved, poaching and forest destruction must be controlled. Security in Russia's reserves and surrounding areas can be increased with very small investments, by Western standards, in new vehicles and reliable, better paid guards. The problems of excessive cutting and attendant environmental destruction are more difficult to solve. The Siberian forest, with a fourth of all the world's standing trees and an even higher percentage of the Earth's old growth forests, is of immeasurable global significance. The world community has a stake in its continued existence as a viable ecological and biological entity. Western expertise should provide modern demonstration mills with all the infrastructure in place—cutting, transporting, milling, and marketing—to show how the forest can be harvested in a sustainable manner to support the regional economy. This is the key to long-term wildlife—and Siberian tiger—conservation.

In February, NYZS/The Wildlife Conservation Society issued a policy statement on tigers, stating that while captive breeding programs will be necessary to preserve some of the remaining tiger populations, commercial exploitation of tiger parts should not be sanctioned by the conservation community, by CITES (Convention on International Trade in Endangered Species), or by any government regulatory agency. This statement came in response to China's interest in selling the bones from tigers raised in its captive-breeding facilities. The Society urges that greater efforts be made in convincing governments to protect and manage their wild tiger populations more effectively. (As this issue went to press in early March, an emergency conference on tiger protection was to take place in Khabarovsk, Russia.)

While the situation is critical, there are things that you can do to protect tigers. You can urge Russian President Boris Yeltsin directly, or his Environmental Advisor, Alexei Yablokov, to beef up anti-poaching security on the three existing Siberian tiger preserves in Sikhote-Alin, and to protect the timber resource by insisting that logging companies use sustainable forestry practices.

Write stating your views to: Boris Yeltsin, President of Russia, The Kremlin, Moscow, Russia; and to Professor Alexei Yablokov, The Environment Ministry, The Kremlin, Moscow, Russia (FAX: 7-095-258-6877); and to Governor Vladimir S. Kuznetsov, Primorsky Regional Administration, Leninskaya str 22, Vladivostok 690110, Primorsky Krai, Russia (FAX: 7-423-222-1019).

Officials at Hyundai and Weyerhaeuser can be urged to use long-term, sustainable forestry practices, conserving both the tiger and its forest ecosystem, rather than the usual clearcut method, which leaves the environment devastated and local people permanently impoverished.

At Hyundai, you can write to S. S. Chae, Senior Executive Vice President, Hyundai Resources Development Co. Ltd., 140-2 Kyedong, Chongro-ku, Seoul, South Korea.

At Weyerhaeuser, you can address correspondence to Scott Marshall, Vice President, Timberlands, Corporate Headquarters, Weyerhaeuser Co., Tacoma, WA 98455.

And for information on the conservation efforts of the Cooperative Russian-American Siberian Tiger Project, write to Maurice Hornocker, Director, Hornocker Wildlife Research Institute, Inc., P.O. Box 3246, University Station, Moscow, ID 83843. Or write to Howard Quigley, Frostburg State College, Frostburg, MD 21532.



**BEASTLY BEHAVIOR:** Fear—or hunger—can transform the Siberian tiger (top) into a lethal predator (below).