



... AND THE GAMES BEGIN

# TIME

# SAVING THE BIG CATS

THE WORLD'S **WILD FELINES** ARE THREATENED WHEREVER THEY ROAM. WHAT WILL IT TAKE TO **RESCUE** THEM?

The jaguar is just one of the species at risk



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# NOWHERE TO ROAM

**WILDLIFE RESERVES ALONE  
CANNOT PROTECT BIG CATS. A  
LOOK AT NEW WAYS TO SAVE THEM**

By **TERRY MCCARTHY** LAIKIPIA. With **ANDREA DORFMAN**

**I**N THE THICK GOLDEN LIGHT OF A SETTING AFRICAN sun, under the speckled shade of an acacia tree, three young lions are feasting on a baby giraffe. The hindquarters are gone; the chest is laid bare. Dry, snapping noises can be heard across the grasslands as the animals crack the ribs of their prey to get to the vital organs. Coolly, with utter confidence, a mature lioness—the oldest of the seven-member pride—approaches. A 3-year-old male tries to scare her off with a snarl, but she lunges at him, baring her teeth and biting at his neck. After a modest show of resistance, he retreats and, in a final display of submission, turns tail and slinks off into the sunset. She takes his place at the kill, tearing chunks from the giraffe's neck. A jackal watches from a distance, hoping for a few scraps when the lions are done. Farther away, by a clump of trees, four adult giraffes wait in vain for their young one to return.

Photographs for TIME by Gideon Mendel—Corbis



**LET US PREY** Young lions dine on a baby giraffe that they killed on Mugie Ranch in Kenya. Ranchers coexist with big cats







## ● LION

(*Panthera leo*)

**LENGTH** 1.37 m to 2.18 m (excluding tail)

**MAXIMUM WEIGHT** Males, 225 kg; females, 168 kg

**EST. POP.** 23,000

**STATUS** Vulnerable

**THREATS** Killed by livestock owners to protect herds

**HABITAT** Grassy plains, dry forests, scrub, semideserts

**MAN EATER?** Yes

■ Roar measures up to 114 db (a jackhammer is just 100 db)

■ The only big cat to live and hunt in family groups (prides); lions sleep as much as 19 hr. per day

■ Once found in Europe, Asia and the Americas; the only wild lions outside Africa now are 300 in the Gir Forest sanctuary in India



■ Current range

■ Historical range\*

\*Indicates the species' probable historical range, which did not change much until the past 200 years

Sources: Justina Ray, Wildlife Conservation Society; IUCN, Cat Specialist Group

This is no photo op in a wildlife park for tourists on safari. This is Mugie Ranch, a commercial livestock operation in Kenya's Laikipia district, about six hours north of Nairobi. Some 14,000 sheep and 1,000 cattle graze here on the open grasslands, tended by 200 ranch hands. Barely a kilometer from the feasting lions, herders are bringing cattle and sheep into their nighttime pens, raising clouds of red dust. The herders whistle at their dogs, which are on the alert for lions—and for leopards, which go to the nearby water hole at night to feed on antelope and gazelles. On the plains of Africa, predation is a prominent part of the daily rhythm of life.

Livestock owners around the world generally kill predators, but the 18,000-hectare

Mugie Ranch is trying something new. It is part of the Laikipia Predator Project, run by wildlife biologist Laurence Frank of the University of California, Berkeley, who is seeking better ways for big cats and humans to coexist. Adapting techniques from Masai tribesmen, who have herded cattle amid predators in this region for centuries, he is teaching ranchers to build taller, stronger bomas—traditional livestock pens made of thorn branches—to stop night-time raids by lions. When the herds are let out to graze during the day, they are accompanied by guards, some armed with rifles, which they fire into the air to keep the lions at a distance. Frank has calculated the cost to the ranchers for each lion on their property, including the

guards' pay, the dogs, the extra fencing and the inevitable loss of some livestock: it comes to \$350 a year per lion. On its property, Mugie has 10 lions, which have begun to attract tourists, as Frank hoped. If the big cats bring tourist dollars to Mugie Ranch, then both humans and lions come out ahead.

The future of this spectacular species may depend on such experiments. Last year animal conservationists were caught catnapping when a new survey revealed a sharp and unexpected drop in Africa's lion population. While the cat-conservation world was worried about the fate of Asia's endangered tigers, lions—considered vulnerable but not endangered—were quietly slipping toward oblivion. Ten years ago, the species was



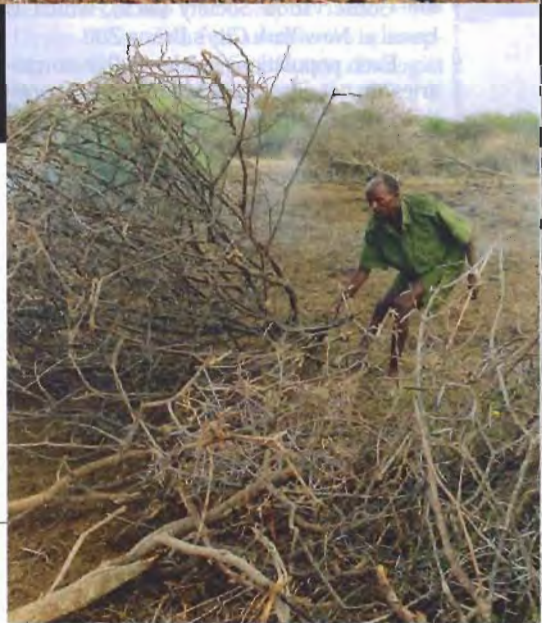
thought to number as many as 100,000. But the new appraisal, made public last September and published in the journal *Oryx* in January by Hans Bauer of Leiden University and Sarel van der Merwe of the African Lion Working Group, was a paltry 23,000. More than half live in six protected areas, which is why tourists in Kenya's Masai Mara or South Africa's Kruger National Park can still see plenty of lions. But outside these megazoo, lions appear to be in alarming decline.

Why? For the same reasons that virtually all the world's big cats—tigers, cheetahs, snow leopards, jaguars and, to a lesser degree, cougars—are in trouble, reasons that have to do with the very nature of be-

**KEEPING WATCH** Mugie herders look out for lions. Some carry a rifle or a bow and arrow. Pens made of thorn branches, right, shield cattle at night

ing a top cat in a world dominated by the top primate. Moreover, the reasons point to the limits—and ultimate failure—of the traditional strategy for safeguarding big cats: protecting them in wildlife reserves.

Big cats, by nature, are territorial, live in low densities and hunt their prey over vast stretches of land (a tiger in the Russian Far East roams over 1,000 sq km, and a cheetah in Namibia will traverse 1,500 sq km). A wildlife reserve has to be huge to support such animals, and even large parks can con-





TIGER: THOMAS MANGELSEN—MINDEN PICTURES; LEOPARD: JOE McDONALD—DRK PHOTO

tain just so many of the fiercely territorial creatures. Big cats that roam or live outside reserves increasingly find themselves on turf staked out by farmers, herders and loggers, especially in parts of Africa and Asia where the human population is booming. Wild prey and cat-friendly habitat are scarce. Instead, the cats encounter humans who don't hesitate to use guns and poison to protect themselves and their livelihoods. Poachers only add to the cat catastrophe. "Clearly, protected areas alone are not the solution," says Joshua Ginsberg of the Wildlife Conservation Society (WCS), which is based at New York City's Bronx Zoo.

Even populations inside wildlife sanctuaries are not necessarily secure. In 1994 one-third of the lions in the Serengeti died from an outbreak of canine distemper, a viral infection transmitted by feral dogs. Inbreeding, a problem on small, isolated reserves, makes big cats more vulnerable to disease. African lions, says Frank, who is also funded by WCS, "are heading toward the tiger situation in Asia—small populations in widely separated national parks. Inbreeding, disease and political instability [which has sometimes disrupted management of parks] will soon destroy those populations."

In his recent book on large predators, *Monster of God*, naturalist David Quam-



Sources: Ullas Karanth, *The Way of the Tiger*; Wildlife Conservation Society, World Wildlife Fund

## TIGER

(*Panthera tigris*)

**LENGTH** 1.45 m to 2.9 m

**MAXIMUM WEIGHT** 260 kg

**EST. POP.** 5,000 to 7,000

**STATUS** Endangered

**THREATS** Hunted for body parts used in Chinese medicine; habitat and prey depleted

**HABITAT** Forests and woodlands, tallgrass jungles, mangrove swamps

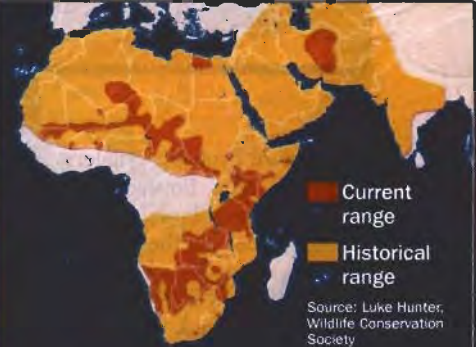
**MAN EATER?** Yes

■ Can consume 40 kg of meat in one day

■ Favors attacking from behind; Indian farmers in tiger country wear masks with eyes on back of their heads to prevent attacks

■ Three subspecies—Caspian, Balinese and Javan tigers—became extinct in the past century





## CHEETAH

(*Acinonyx jubatus*)

**LENGTH** 1.12 m to 1.4 m

**MAXIMUM WEIGHT** Males, 55 kg; females, 40 kg

**EST. POP.** 12,000 to 15,000

**STATUS** Vulnerable (critically endangered in Iran and North Africa)

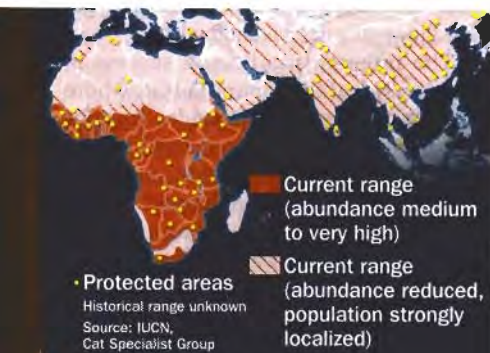
**THREATS** Depletion of prey species by human hunters; shot by ranchers

**HABITAT** Grasslands, woodland savannas, semideserts

**MAN EATER?** No

■ Fastest land animal; can run 105 km/h (top speed of humans is 37 km/h); can go from 0 to 80 km/h in less than 3 sec.

■ Flies through air; during 50% of its stride, no paws touch ground



## LEOPARD

(*Panthera pardus*)

**LENGTH** 1 m to 1.5 m

**MAXIMUM WEIGHT** 60 kg

**EST. POP.** More than 300,000

**STATUS** Abundant in eastern and southern Africa and parts of Asia; critically endangered in North Africa, parts of West Africa, the Middle East and some Asian countries

**THREATS** Poisoned and shot by farmers

**HABITAT** Almost anywhere except true desert and mountains above 5,000 m

**MAN EATER?** Yes

■ Females can mate up to 100 times a day

■ Stealthy and secretive. Three leopards were found living in a train station in the city of Kampala in 1990

■ Each leopard can be identified by its unique pattern of spots

men is equally pessimistic: “The last wild, viable, free-ranging populations of big flesh eaters will disappear sometime around the middle of the next century.” Quammen argues that as the world’s population continues to rise, alpha predators will be squeezed out.

Conservationists like Frank and Ginsberg and many others have become convinced that the only way to forestall this disaster is to use new strategies that go beyond setting up sanctuaries. Perilous though it may sound, these strategies involve allowing lions, tigers and other big cats to live—or at least pass—among us. Scientists are moving toward a new model of mixed landscapes in which big cats would move from core protected areas through land shared with humans—tea plantations in India, ranchland in Laikipia or, in the case of the cougar (a.k.a. mountain lion), suburban parks in California—giving them more space to hunt and disperse their genes. “We need to think big, to save entire landscapes,” says Alan Rabinowitz, director of science and exploration for the w.c.s. “They may not all be areas where big cats can live, but they are areas big cats can use.”

Despite the man-eating lore and the big headlines that follow attacks by tigers

or lions that are kept as pets or performers, wild cats are generally able to live in close proximity to humans without disturbing them. Leopards are seen in the suburbs of Nairobi and Kampala. Mountain lions in Waterton, Alta., have been observed using the angles of buildings and even the beds of pickup trucks to conceal themselves when hunting. In the San Diego area, these animals tend to hang out within 100 m of trails used by hikers, though they are rarely noticed, according to a study of radio-collared cougars conducted by researchers at the University of California at Davis. “They do a remarkable job of keeping away from humans,” says biologist Walter Boyce, who led the study.

Around the world, the incidence of big-cat attacks on people is low compared with other natural perils. In India, tigers kill 30 to 40 people annually, while 20,000 Indians die each year from snakebites. Jaguars, cheetahs, snow leopards and clouded leopards have never been known to attack humans. In the U.S., 17 people have died from mountain lion attacks over the past 100 years; many more are killed by lightning in a single year. This year, however, California has had three attacks by mountain lions on humans—one fatal. All involved hikers or bikers in cougar country; their rapid move-

ments were probably triggers for attack. Says Boyce: "It is simply humans being in the wrong place at the wrong time."

Wild felines don't hesitate to attack livestock and pets, and unless those costs are addressed, people will continue to kill the cats. That's why Mugie's lions must earn their keep. "The great tragedy here is that wildlife has absolutely no value except in national parks," says Frank. "To many Africans, lions are simply pests."

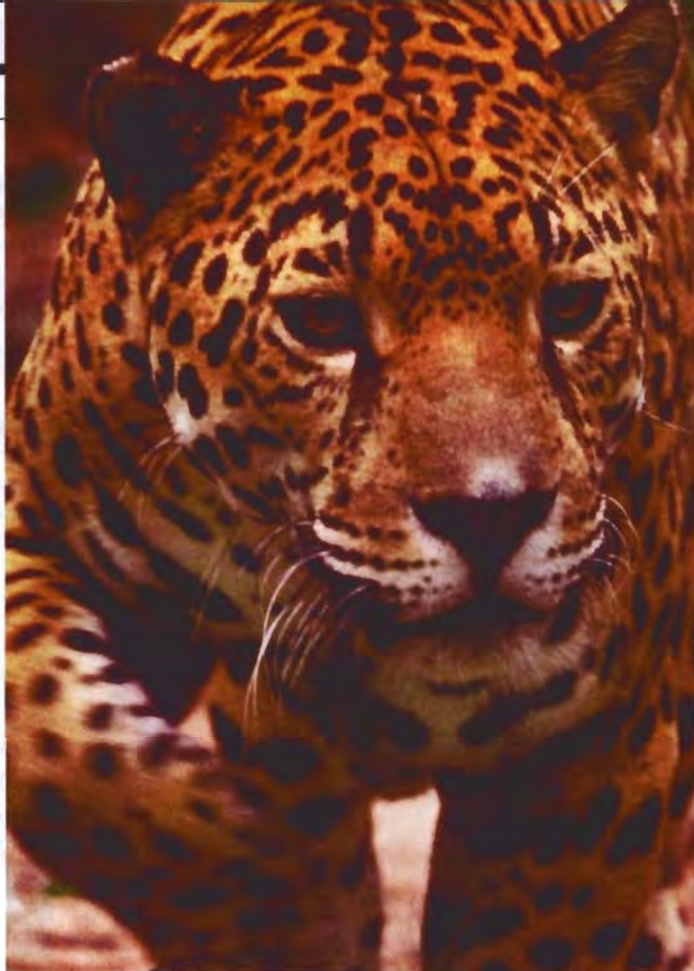
Saving cats in an ever more crowded world is a complicated task. Scientists have devised what Rabinowitz calls a "toolbox of strategies" to deal with threatened cats in different parts of the world. Here are some of the tools that offer the most promise:

#### PATCHING HOLES IN HABITATS

IT WAS INDIA THAT PIONEERED the use of sanctuaries to save big cats. In 1973, Prime Minister Indira Gandhi became the toast of the conservation community when she launched Project Tiger, setting aside nine wilderness areas for tigers. Now India, with its neighbor Nepal, is leading the way in the next big phase in cat conservation: building links to turn isolated preserves into one continuous habitat. Scientists call this approach landscape conservation, and many believe it's the best hope for saving the world's tiger population, which, despite decades of effort, remains in peril: only 5,000 to 7,000 animals survive in the wild.

Some 200 of these massive cats live in the grasslands and forests along the India-Nepal border at the foot of the Himalayas. The area used to be sparsely populated, but after malaria was eradicated in the 1950s, farmers and loggers moved in. Today it is South Asia's Rice Bowl: there are 3.6 million people, vast paddies and 3.3 million head of livestock in the 49,000-sq-km area. As land was cleared, tiger turf disappeared. Because the animals won't cross what they consider hostile terrain, they became separated into three isolated populations.

To reconnect them, the World Wildlife Fund (wwf)—with the Indian and Nepali governments, Save the Tiger and other groups—launched the Terai Arc Land-



FRANS LANTING—MINDEN PICTURES

scape Program in 2001. The plan, which is projected to take 50 years to complete, aims to unite 11 reserves into one functioning ecosystem—providing habitat for tigers as well as elephants, rhinos and deer but without displacing farmers or herders. "The future of conservation in Asia is about zoning," observes Eric Dinerstein, chief scientist for the wwf. "We have to figure out how agriculture can coexist with wildlife."

In a paper published in the June issue of *Conservation Biology*, Dinerstein and his colleagues describe how they used a computer model to identify gaps larger than 3 km in tiger-friendly habitats and work out ways to bridge them. The Terai Arc program gives local people incentives to plant trees or tall thatch grass, which they can harvest and which tigers can use as cover. As forests and grasslands recover, deer, wild pigs and other tiger prey return. "Big cats can handle a modest amount of

disturbance," observes wcs's Ginsberg, "but what they really need is cat food."

The program has been a success in southern Nepal's Bagmara Forest, where the wwf and the King Mahendra Trust for Nature Conservation helped local people set up a tree nursery. Tigers returned to the area, and locals are able to harvest timber, fuel wood and grasses according to a strict management plan. Local people also benefit directly from the return of wildlife. They collected about \$73,000 last year from tourists who came to see tigers, elephants and rhinos in their forest.

Scientists working in other places with other cats are devising similar plans to stitch together patches of wilderness with corridors to provide havens for big cats seeking prey or a mate. In the Americas, Rabinowitz of the wcs has proposed a 3,200-km-long chain of public and private lands to link the disparate populations of jaguars. It would extend from Mexico through Central America to northern Argentina. Jaguars have lost half their habitat in the past century, and much that remains has been fragmented by logging and ranching. Experts have identified 51 conservation areas in 16 countries that they deem essential for the long-term survival of the largest American cat. One potential break in the corridor—the Panama Canal—



## JAGUAR

(*Panthera onca*)

**LENGTH** 1.19 m to 1.7 m (including tail)

**MAXIMUM WEIGHT** 90 kg

**EST. POP.** Less than 50,000 (uncertain)

**STATUS** Near threatened

**THREATS** Loss of habitat and being shot by cattle ranchers

**HABITAT** Tropical and subtropical forests, swampy grasslands, scrub, woodlands

**MAN EATER?** No

- Preys on fish and can swim well—even across the Panama Canal
- Believed extinct in the U.S. until one was photographed in New Mexico in 1996
- Associated with thunder and rain in totemic religions across Latin America



turned out to be no problem at all: paw marks showed that jaguars can swim across the canal in both directions.

**SAFEGUARDING LIVESTOCK**

**I**N THE MOUNTAINS OF LADAKH IN NORTH-ern India, pashmina-goat herders keep their animals outside at night in the cold so that they develop the soft, thick wool prized around the world. But doing so makes them prime targets for snow leopards, which are particularly hated by the herders because of their tendency toward mass slaughter. “When snow leopards get into a pen, their predatory instincts are repeatedly triggered, and they go on a killing frenzy,” says Rodney Jackson of the Snow Leopard Conservancy. “Killing 20 or more animals at a time is not uncommon. One hundred and seven sheep is the record we’ve seen.”

Like Laurence Frank in Kenya, Jackson focuses much of his work on teaching people how to better husband their flocks in cat country. The methods are simple and inexpensive. His organization provides goatherds with 10-cm by 10-cm wire mesh and poles over which it can be hung to keep the snow leopards out of goat pens. The cats may stalk goats by day while they are grazing, but then the leopards kill only once, which is less financially ruinous than multiple mayhem at night.

Predation on livestock is the biggest reason for human-big cat conflict around the world. The solution is to make it harder for the cats to capture domesticated animals than wild prey. Cats are opportunistic hunters and will generally not go out of their way to kill a sheep if it is easier to jump a deer or an antelope.

Namibia has 3,000 cheetahs—the single largest remaining population in Africa—but ranchers shoot them for attacking cattle. Laurie Marker of the Cheetah Conservation Fund has been importing Anatolian shepherds, 75-kg dogs bred in Turkey to protect livestock from wolves. She trains the Anatolians and then gives them to ranches, where they will stand their ground against the much smaller cheetah. Problem cheetahs that kill cattle are sometimes captured and fed an alternating diet of wild game and beef laced with lithium chloride. The beef sickens the cheetahs, persuading them to stick to wild meat.

**A ROLE FOR TROPHY HUNTING?**

**T**HE SELOUS GAME RESERVE IN SOUTH-east Tanzania is the largest in Africa. Established in 1905 and stretching over 55,000 sq km, it is bigger than Switzerland



**SNOW LEOPARD**

(*Uncia uncia*)

**LENGTH** .86 m to 1.24 m

**MAXIMUM WEIGHT** 52 kg

**EST. POP.** 4,500 to 7,500

**STATUS** Endangered

**THREATS** Hunted for its thick coat

**HABITAT** Steep, rocky slopes; alpine steppes above tree line

**MAN EATER?** No

- Tail is as long as 90% of its body length; the leopard will wrap itself in its tail for warmth
- Wide paws help the animal walk on soft snow
- Its tracks have been spotted at altitudes higher than 5,800 m



GERRAY ELLIS—MINDEN PICTURES



KONRAD WOTHE—MINDEN PICTURES

**COUGAR**

(*Puma concolor*)

**LENGTH** 1 m to 1.68 m

**MAXIMUM WEIGHT** 80 kg

**EST. POP.** 30,000 in the U.S.; fewer than 50,000 total

**STATUS** Near threatened

**THREATS** Habitat encroachment by humans

**HABITAT** Forests, savannas, scrub, high mountains, semideserts

**MAN EATER?** Yes, but rarely

- Cougars, or mountain lions, can leap 12 m on long hind legs and favor attacking prey from above
- Prey species range from mice to moose
- Cannot roar but can whistle and make long-range shrieking sounds



and chock-full of wildlife: 4,000 lions, 110,000 buffalo, 50,000 elephants. But because it is hard to access, covered with dense scrub and lacking in the spectacular vistas found in the Serengeti to the north, it draws fewer than 5,000 visitors annually—less than 1% of tourists who visit Tanzania. To pay for the upkeep of the Selous and for antipoaching patrols over its vast area, the reserve's managers rely on another source of funding: big-game hunters. In Tanzania, hunters will pay up to \$80,000 to shoot a lion. In 2002, 226 trophy lions were shot in Tanzania, many in the Selous reserve.

Conservationists used to choke on the topic of hunting, but increasingly they are prepared to accept some limited and tightly controlled hunts when they generate revenue for locals who might otherwise kill off the predators. "It seems counter-intuitive that killing animals can be good for conservation," says Frank. "But trophy hunting is extremely lucrative, and in order to produce a few trophy males, it is a necessity to preserve vast ecosystems."

Lion hunting also provides revenue in Zambia, Zimbabwe and South Africa, though Kenya banned the practice in 1975. Most countries operate on a quota system. They estimate the lion population and set a sustainable quota for hunting. A study published this year by wildlife experts at the University of Minnesota has raised new in-

terest in trophy hunting. Based on 40 years of data from northern Tanzania, the study showed that if hunters confined themselves to shooting male lions at least 5 years old, after they have bred and their cubs have matured, there's no noticeable long-term effect on the overall population. Researchers attribute this to the fact that male lions, while necessary for reproduction, do little to help raise their cubs. (Indeed, males typically kill the youngest cubs when they take over a pride.) Mature males also happen to be what trophy hunters prize, since a male's mane reaches its full glory after age 4. Lions 5 years or older can be identified by their noses, which are at least 50% black. Already the Tanzanian Wildlife Division and some professional hunters are advising clients to take aim at the older lions.

Still, many conservationists remain wary of trophy hunting in any shape or form. It works only with strict enforcement, says ecologist Craig Packer, who led the Minnesota study. "The temptation is to raise quotas to unsustainable levels because of the profit motive."

**LAST RESORT: BREEDING PROGRAMS**

**I**N DOÑANA NATIONAL PARK IN SOUTHERN Spain, scientists are attempting one of conservation's most difficult

feats: breeding predators in captivity to reintroduce them to the wild. Reintroduction is generally regarded as a last resort by biologists, but in the case of the Iberian lynx, there's no choice. Severely overhunted for decades, the species has been declining rapidly since the 1950s, when the rabbit population it dines on was decimated by disease. Today the lynx is the world's most endangered cat, down to fewer than 200 in Spain and probably extinct in Portugal. "There are only two reproducing populations left in southern Spain," says Urs Breitenmoser of the Institute of Veterinary Virology in Bern, who co-chairs the IUCN/World Conservation Union's Cat Specialist Group. "We need a breeding program in order to recreate a viable population that is genetically diverse." Eight wild lynx are now in captivity and, with luck, will start having offspring next year. Within a few years, scientists hope to begin the delicate task of repopulating areas that have lost the species. While that sort of intervention has worked with black-footed ferrets in parts of North America, it has never been done with cats.

What has worked before, however, is noncaptive breeding programs. In the mid-1990s the Florida panther, a subspecies of the mountain lion, had been reduced to 30 to 50 animals that were

**BIG CATS AS FRIENDS**

**Biting the Hand—Or Worse**

**T**heir predatory prowess notwithstanding, big cats were not born to be man eaters—mostly because they were never intended to bump up against humans. But take them out of the wild and into civilization, and bad things will happen, as a handful of messy recent episodes have shown.

The most notorious man-vs.-cat calamity happened last October between Montecore, a 7-year-old white male tiger, and magician Roy Horn, half of the team Siegfried & Roy. Montecore turned on Horn during a performance, severely mauling him. Both man and tiger have retired, though they recently had a careful rapprochement at the magicians' wildlife exhibit in Las Vegas.

More surprising was the incident in New York City that same month involving Antoine Yates, a public-housing resident who kept a 195-kg tiger in his apartment. The city caught wise when Yates showed up at a local hospital with an injury he claimed was caused by a pit bull. Police closed in on his apartment and found the tiger. The animal was sent to an Ohio sanctuary, and Yates was evicted, having manifestly violated the public-housing rule allowing him one pet—under 18 kg.

Just last month, another tiger shook up New York City after it escaped from a circus in Queens. The animal caused a multicar crack-up but no serious injuries when it strolled down the Jackie Robinson



Parkway and lay down on a nearby street. A handler lured the tiger back into its cage and returned it to the circus.

Things did not work out so well a couple of weeks earlier when Bobo, a 275-kg declawed tiger, escaped from a

compound in Florida, where it had been kept by Steve Sipek, 62, who played Tarzan in movies in the 1960s and '70s. Wildlife officials shot and killed the animal. More tragically, last December a 10-year-old boy in Millers Creek, North Carolina, was killed by a tiger owned by a neighbor. The boy's uncle shot and killed the tiger.

Last year President George Bush signed a bill limiting interstate trafficking of large

predators. Only 20 states ban private ownership of big cats outright. With as many as 7,000 pet tigers thought to be living in the U.S., it is certain that at least some of them will cross paths with humans again. —By Jeffrey Kluger

REUTERS

showing hallmarks of inbreeding, including kinked tails and deformed sperm. In 1995 eight female cougars from Texas were transported to Florida and let loose. They began breeding with their endangered Floridian cousins. Last April, Florida Fish and Wildlife Conservation Commission officials declared the program a success, estimating the genetically healthy population at 80 to 100 animals. Alas, the Iberian lynx has no suitable relative to reinvigorate its stock.

## PRESERVING CAT FOOD

**I**N THE PARCHED LANDSCAPE OF SOUTHERN Iran where the desert runs into the foothills of the Zagros Mountains lives a small population of 50 to 60 Asiatic cheetahs. They are the last cheetahs outside Africa. Despite the diplomatic chill between Tehran and Washington, Iranian officials recently invited George Schaller and Luke Hunter of the WCS to come and help prevent the cats' extinction.

Working with Behzad Rahgoshai, deputy project manager of Iran's Conservation of Asiatic Cheetah Project, they have discovered that although some cheetahs are shot, the main reason for the animals' decline is that their favorite foods are disappearing from the landscape. Both the goitered and jeeber gazelles have been virtually wiped out by nomadic hunters. Cheetahs have been forced to survive on urial and ibex—mountain sheep and mountain goats—which are impossible to chase on steep, stony slopes. "Cheetahs have to wait for them to come down to the foothills in search of water holes," says Hunter. "It means they have a narrow hunting window, and that is depressing their population." To rehabilitate the prey, which are all protected species under Iranian law, the scientists are pushing the government to better enforce protection against the nomads' poaching and restrict the ownership of firearms in the region.

Lack of cat food has also been a problem for tigers in the Russian Far East. After the collapse of the Soviet Union, government controls on hunting practices evaporated, unemployment soared, and villagers in the region began to overhunt the boar and red deer that tigers depend on. "It's like Montana in the '20s. Everybody has a gun, and they're poaching on prey, and occasionally on tigers too," says John Seidensticker, chairman of Save the Tiger. With the help of \$2.2 million from ExxonMobil, the group targeted local hunters as well as poachers



## IBERIAN LYNX

(*Lynx pardinus*)

**LENGTH** .66 m to .81 m

**MAXIMUM WEIGHT** 16 kg

**EST. POP.** Fewer than 200

**STATUS** Critically endangered

**THREATS** Illegal hunting and trapping, depletion of rabbit prey by disease

**HABITAT** Forests and scrubland

**MAN EATER?** No

■ The world's most endangered wild cat

■ Relies on rabbits for 85% of its diet

■ The Spanish government paid a bounty as recently as the 1950s for killing lynx, considered vermin



seeking tiger parts for the Chinese-medicine market. (Parts of a single tiger go for about \$70,000 today.) The WWF meanwhile is working with hunting societies to devise management plans that enable communities to hunt the deer and boar yet sustain the tigers' food supply. "The prey populations should come back quickly if the females are protected," says Sybille Klenzendorf, who runs WWF's tiger program in the region.

## CAT-FRIENDLY COMMUNITIES

**I**N 1999 RUSSIAN BIOLOGIST EUGENE Koshkarev hiked through the snows of Sarychat Ertash Park, a 3,700-m-high reserve in the Tien Shan mountains in southern Kyrgyzstan, looking for snow-leopard tracks. He found none but spotted five traps for the animals. The snow leopard is another creature that suffered after

the breakup of the Soviet Union. As the economy and law enforcement deteriorated, poaching shot up in Kyrgyzstan. The snow leopard population declined 80% in the 1990s. Sadly, most of the poachers in Sarychat Ertash were park rangers, whose monthly salaries of \$14 were not enough to feed their families.

In response, the International Snow Leopard Trust (I.S.L.T.) set up a handicrafts project with the women villagers in Ak-Shyirak and Inilchek, the two gateway communities to the park. The women, many of them married to park rangers, make felt bags and hats that are sold in zoo stores in the U.S. The proceeds supplement the wages of the rangers. In addition, if an entire year goes by without a snow leopard being killed, the villagers receive a bonus. Last year each family received \$97 from the I.S.L.T., including a \$22 bonus. Although the solitary cats are rarely seen, the rangers are finding regular scrapes and tracks, and the I.S.L.T. estimates there are six to 10 snow leopards in the 717-sq-km park.

If people in poor countries can be enlisted in saving big cats, so can cat lovers in wealthier lands. Laurie Marker of the Cheetah Conservation Fund has borrowed the idea of "dolphin friendly" tuna to help protect cheetahs in Namibia. This year ranchers who raise their cattle without harming the speedy cats will begin exporting "cheetah friendly" beef to the European Union. The beef will be certified by the Conservancy Association of Namibia as coming from farms that use cat-smart management.

THERE IS NO SIMPLE WAY TO RECONCILE expanding human populations and the territorial requirements of large predators. Whenever a choice has to be made, the needs of humans will trump those of big cats. Even on Mugie Ranch, where tolerance for lions is high, ranch manager Klaus Mortensen recently had to shoot a female lion he knew by name after she took to killing sheep. "If you don't move quickly, they teach the other lions [to do the same]," says Mortensen. Big cats cannot help themselves; they are natural-born killers. To keep them in a world where wilderness areas are shrinking will require all the innovative strategies that conservationists can muster. Otherwise these majestic creatures will end up living out their days in zoos—banished forever from the wild where they belong.

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