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Out of the Shadows, the Wildcats You've Never Seen

Elusive, obscure, and eclipsed in popularity by their larger cousins, small cats are amazing, high-performance predators.



CARACAL CARACAL CARACAL Consummate predators, some small wildcats can take down larger prey. The caracal of Asia and Africa is less than two feet tall but

has been filmed leaping over nine-foot fences to prey on sheep.

PHOTOGRAPHED AT COLUMBUS ZOO AND AQUARIUM, OHIO

By **Christine Dell'Amore**

Photographs by **Joel Sartore**

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“She’s very close,” Germán Garrote whispers, pointing to a handheld receiver picking up Helena’s signal. Somewhere in this olive grove beside a busy highway in southern Spain, the Iberian lynx and her two cubs are probably watching us. If it weren’t for her radio collar, we’d never know that one of the world’s rarest cats is crouching among the neat rows of trees. At five years old Helena has learned to meld invisibly into the human landscape, even hiding with her newborns in a vacant house during a raucous Holy Week fiesta.

“Ten years ago we couldn’t imagine the lynx would be breeding in a habitat like this,” says Garrote, a biologist with the Life+Iberlince project, a government-led group of more than 20 organizations working to bring the spotted predator back to the Iberian Peninsula. Standing in the scorching heat with traffic rushing at our backs, he tells me that the cat’s future is to live in fragmented areas. “Lynx have more ecological plasticity than we thought,” he says.



PALLAS'S CAT *OTOCOLOBUS MANUL* A famously grumpy expression made this Central Asian species an Internet star. Conservationists hope the cat's celebrity will help save its habitat from encroaching farms and other threats.

PHOTOGRAPHED AT COLUMBUS ZOO AND AQUARIUM, OHIO



IBERIAN LYNX *LYNX PARDINUS* One of the world's rarest cats, the Iberian

lynx is slowly increasing in number as scientists release captive-raised cats and boost populations of rabbits, the lynx's staple food.

PHOTOGRAPHED AT MADRID ZOO AND AQUARIUM, SPAIN

Indeed, the amber-eyed, bushy-bearded feline has finally started to land on its feet after decades of decline. When Iberlince stepped in to rescue the lynx in 2002, fewer than a hundred of the cats were scattered throughout the Mediterranean scrubland, their numbers chipped away by hunting and a virus that nearly erased the region's European rabbits, the lynx's staple food. The lynx population was so depleted that it was suffering from dangerously low genetic diversity, making it vulnerable to disease and birth defects.

Luckily for the scientists, lynx breed well in captivity, and 176 have been reintroduced into carefully selected habitats since 2010. Four breeding centers and one zoo raised most of the cats, all of which were outfitted with tracking collars. Sixty percent of the reintroduced lynx have survived, and a few have surpassed expectations.

Two lynx made "a spectacular trip across the whole Iberian Peninsula," each walking more than 1,500 miles to new territory, says biologist Miguel Simón, director of the reintroduction program. The team works closely with private landowners to earn their trust and persuade them to welcome lynx on their property. In 2012, when the population hit 313—about half of which were old enough to breed—the International Union for Conservation of Nature upgraded the lynx's status from critically endangered to endangered.



A captive Iberian lynx hunts a live rabbit at the La Olivilla Breeding Center in Santa Elena, Spain. Each cat gets one rabbit daily to hone their hunting prowess and prepare them for eventual release into the wild.

Not far from the olive grove, I duck thankfully into the coolness of a drainage tunnel that runs under the highway. Cars and trucks are the leading killers of lynx, so Simón and his team are working with the government to widen these tunnels into wildlife underpasses. Simón crouches, pointing to animal tracks in the sand. One belongs to a badger, he says, but the other is a paw print—a lynx! Helena could have trotted through here minutes ago.

Back in the sun, I ask Simón what the Spanish think of their native cat. He pauses, surprised at the question. Everyone knows the Iberian lynx, he tells me. It's a beloved national figure.

That's not the case for most of the lynx's relatives. Of the world's 38 wildcat species, 31 are considered small cats. Ranging in size from the three-pound rusty-spotted cat to the 50-pound Eurasian lynx, they inhabit five of the world's seven continents (excluding Australia and Antarctica) and are superbly adapted to an array of natural—and increasingly unnatural—environments, from deserts to rain forests to city parks. Unfortunately, these lesser members of the family Felidae also live in the long shadow cast by their

larger cousins, the big cats: lions, tigers, leopards, jaguars, and their kin.

These celebrity species attract the lion's share of attention and conservation dollars, even though 12 of the world's 18 most threatened wild felids are small cats.

Jim Sanderson, a small-cat expert and program manager at the Texas-based Global Wildlife Conservation, estimates that more than 99 percent of funds spent on wild felids since 2009 have gone to help jaguars, tigers, and other large cats. As a result, many small cats are vastly understudied or not studied at all. Their skill at eluding attention also contributes to their obscurity.

The rarely seen bay cat, for example, is native only to the forests of Borneo and remains as opaque to science as it was in 1858, the year of its discovery. All that's known of Southeast Asia's marbled cat comes from a study of a single female in Thailand. "We have no idea what it eats," Sanderson says.





TOP: FISHING CAT *PRIONAILURUS VIVERRINUS* The cat may look peculiar, but it's perfectly adapted to its lifestyle: Big eyes help snare prey underwater, double-coated fur keeps out the wet, and partially webbed feet and a muscular, rudderlike tail aid in swimming. **BOTTOM: EURASIAN LYNX** *LYNX LYNX* The largest of the four lynx species, the Eurasian lynx also has a huge range, including most of Europe and parts of Central Asia and Russia. Unlike many other small cats, its population is stable and threats are relatively low—although some isolated subgroups are critically endangered.

PHOTOGRAPHED AT POINT DEFIANCE ZOO AND AQUARIUM IN TACOMA, WASHINGTON (TOP) AND PHOTOGRAPHED AT COLUMBUS ZOO AND AQUARIUM, OHIO (BOTTOM)



JAGUARUNDIS *HERPAILURUS YAGOUAROUNDI* With long, squat bodies and tiny ears, jaguarundis are otterlike in appearance. Thanks to their huge range—parts of Mexico, Central America, and South America—and lack of widespread hunting, the cat is considered a species of least concern.

PHOTOGRAPHED AT BEAR CREEK FELINE CENTER, FLORIDA

Small cats suffer another disadvantage: people’s tendency to view them as simply wild versions of their own pets. (The domestic cat—considered a subspecies of the wildcat—evolved from wildcats in the Fertile Crescent about 10,000 years ago.) The public isn’t as “awe-inspired” by small cats as by more exotic beasts, says Alexander Sliwa, a curator at Germany’s Cologne Zoo. “This perpetuates the situation that little is known about smaller cats, and if you can’t tell people about a cat’s biology or lifestyle, then people are not hooked.”

They should be. Small cats are lean feats of evolution, high-performance predators that hit their stride millions of years ago and have changed little ever since. What they lack in stature, they make up for in grit. The black-footed cat, for example, is the smallest cat in Africa, weighing less than five pounds. But it's nicknamed the anthill tiger because it lives in abandoned termite mounds and fights tooth and claw if threatened, even jumping in the face of the much larger jackal. The resourceful fishing cat of South Asia is a denizen of swamps and wetlands but can scratch out a living wherever fish are found. Cameras in downtown Colombo, Sri Lanka, once caught a fishing cat stealing koi from an office fishpond. It was a "shocker to all of us," says Anya Ratnayaka, the primary researcher at the Urban Fishing Cat Conservation Project. "There's not a wetland anywhere near this place."

Small wildcats have adopted other clever ways to coexist. In Suriname, Sanderson and his colleagues photographed five cat species living in the same rain forest: jaguar, puma, ocelot, margay, and jaguarundi. They do this by "dividing space and time," he says. Each animal has its niche, whether it's hunting on the ground during the day, like the jaguarundi, or hunting in the trees at night, like the margay.

Though some small cats are capable of killing goats and sheep, they pose no threat to humans. On the contrary, as predators often at the top of their food chain, they help keep ecosystems running smoothly and prey populations—including many rodents—in check.

Of the five continents roamed by wildcats, Asia has the most to lose. Not only is it home to the greatest number of small-cat species—14—it's also where the animals are least understood and under the greatest threat.

Much of Southeast Asia's forestland has been developed or turned into

sprawling plantations for palm oil, a common food ingredient whose production has doubled worldwide since 2000. This is likely devastating for the flat-headed cat and the fishing cat, both animals that typically rely on lowland wetlands for the fish they eat.

The spread of palm oil plantations is such a concern that Le Parc des Félines, a zoological park outside Paris that houses the most species of small cats in the world, has put two shopping carts on display—one filled with products made with palm oil, the other with products that don't have it. The items in both carts—ice cream, cookies, cereal—look basically the same.

“We don't ask people to donate money but to eat less palm oil,” says Aurélie Roudel, an educator at the leafy, 175-acre park.

Another threat facing small cats is the illegal wildlife trade, particularly poaching for skins, furs, and other animal parts, Roudel says. China is a hub for such criminal activities. In large cities merchants sell clothing and gloves made from the skins of small cats. In the 1980s China exported the skins of hundreds of thousands of leopard cats, a species that ranges throughout Asia. Though demand for skins has dropped considerably, leopard cats in China are still hunted and killed for preying on domestic animals.

Leopard cats, I soon discover, are impressive enough creatures on their own. On this drizzly June day, most of the French park's residents are huddled in their boxes, but the two leopard cats are out and about, their coats a glossy tapestry of brown and black. One balances expertly on a log, licking its front paw, while the other chews tall blades of grass, reminding me of my Maine coon cat back home.

Then I check myself, remembering what Alexander Sliwa, the Cologne Zoo curator, had said: Small cats are very different from house cats, particularly because they're always on the go. The black-footed cat, for

instance, can walk nearly 20 miles and eat one-fifth of its body weight in food every night. Unlike Fluffy on the couch, “it cannot afford to lie around.”

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LEOPARD CAT *PRIONAILURUS BENGALENSIS*

PHOTOGRAPHED AT ANDERSON, INDIANA

Neither can conservationists, who’ve begun to lift some species out of obscurity in hopes of saving them. In 2016 they launched an international effort to study and save Central Asia’s Pallas’s cat, a species in decline but largely hidden in the shadow of the famous snow leopard.

“A lot of our work is putting the Pallas’s cat on the map,” says David Barclay, coordinator of the European Endangered Species Programme for the Pallas’s Cat. He’s got some help, thanks to the cat-crazy Internet. The round, fluffy feline has become a hit online because of its grumpy expression and its

odd manner of scuttling about its mountainous home. Though people are “laughing their way through the videos,” Barclay says, “they’re becoming subconsciously aware.”

A long-term conservation program in Japan has stabilized the population of the Iriomote cat, a critically endangered subspecies of the leopard cat that lives only on Iriomote Island. Cartoon cats plaster the sides of buses, and the animal even has a brand of sake named in its honor.



RUSTY-SPOTTED CAT *PRIONAILURUS RUBIGINOSUS* The smallest of the small cats, the rusty-spotted cat, a native of India and Sri Lanka, can weigh as little as two pounds. Not much is known about the speckled feline, but destruction of habitat, hunting, and hybridizing with domestic cats are threats.

PHOTOGRAPHED AT EXMOOR ZOO, ENGLAND



AFRICAN GOLDEN CAT *CARACAL AURATA* Inhabiting the rain forests of West and Central Africa, this species is threatened by forest loss and bush-meat hunters. This seven-year-old male, Tigri, is likely the only cat of its kind in captivity.

PHOTOGRAPHED AT PARC ASSANGO, LIBREVILLE, GABON

And in Spain's Sierra de Andújar Natural Park, near where Helena and her fellow lynx live, ecotourism involving lynx-watching has sprung up in recent years alongside rabbit and deer hunting, traditional mainstays of southern Spain.

"We are business partners," Luis Ramón Barrios Cáceres, owner of the Los Pinos resort, says of the lynx, laughing. "They pay the bills." Lynx-watching tour groups often base their operations at the country hotel, whose gift shop brims with tchotchkes inspired by the local star.

On the nearby San Fernando Ranch, Pedro López Fernández allows both rabbit hunters (when rabbit numbers are plentiful) and lynx on his nearly 700-acre property. López, whose family has ranched in the region for four generations, is clearly proud of his land, where cows wander hilly forests

of holm oak and cork, accented with blooms of pink oleander.

The lynx is “one of the most valuable species, because it only comes from here,” López tells me. Not all landowners agree that the cats should be protected. Some are wary of government interference and don’t want lynx on their land. But López believes that the lynx is part of Spain’s heritage and the country should make sure it thrives.



MARBLED CAT *PARDOFELIS MARMORATA* A supersize tail likely helps this house-cat-size species balance as it navigates the forests of Southeast Asia at night. Due largely to its secretive lifestyle, it is one of the least known small wildcats.

PHOTOGRAPHED AT PRIVATE ZOO

At La Olivilla Breeding Center in Santa Elena, scientists are working around the clock to do just that. Sitting in front of an array of computer monitors, keepers record behaviors of their 41 Iberian lynx on the hour, 24/7. On this hot afternoon, the animals—a mix of breeding females, cubs, and

juveniles being readied for reintroduction—are mostly resting indoors.

The center’s veterinarian, María José Pérez, explains the painstaking lengths taken to prepare young lynx for release into the wild: surrounding their enclosures with black barriers so they don’t see people, feeding them rabbits through vegetation-covered tubes, scaring them with horns so they learn to fear cars. “I feel privileged to contribute to the lynx not going extinct,” Pérez says.

At his desk, keeper Antonio Esteban clicks over to a video feed of a mother lynx and her four cubs sprawled on the ground, paws tucked close to their tiny faces. Someday these animals will be crucial to the survival of their species. But for now they’re doing what felines do best: taking a catnap.

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The **National Geographic Society’s Big Cats Initiative** supports scientists and conservationists working to save big cats in the wild. Learn more at [NatGeoBigCats.org](https://natgeobigcats.org)

Christine Dell'Amore is the online natural history editor for National Geographic News; she also founded the popular blog **Weird & Wild**.

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