Panthers in Peril
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Notes

Panthers in Peril: with help from their cat relatives, the endangered Florida panthers are back from the brink.

Three times a week, Mark Lotz, a biologist with the Florida Fish and Wildlife Conservation Commission (FFWCC), hops aboard a small airplane and takes to the skies above Florida's forests. This isn't a leisurely flight. Rather, Lotz is monitoring the population of one of the most endangered species (group of organisms in danger of dying out) in the United States--the Florida panther, or Puma concolor coryi (POO-muh kuhn-KUH-lur COR-ee-eye).

In the early 1900s, hundreds of Florida panthers roamed the Southeastern U.S. (see map, below). But habitat loss and hunting nearly wiped them out. By 1990, the cats had vanished from every place except Florida, says Larry Richardson, a biologist at the Florida Panther National Wildlife Refuge. "We were basically watching this subspecies [subdivision of a species usually based on geographic range] of the mountain lion go extinct [no members of the species remain]," says Richardson.

Time for action: A decade ago, biologists took an unusual step to help the vanishing panthers. They released a group of Texas cougars--the panthers' nearest relatives--into South Florida. They hoped the panthers and cougars would mate, boosting the panther population. Read on to discover how their plan is faring.

TOP PROWLER

Catching a glimpse of a panther in the wild is a challenge. The cat's earthy coloring acts as camouflage, helping it blend in with palm trees and leafy areas. Also, this top predator (animal that hunts and kills other animals for food) is nocturnal. That means it waits until dusk to hunt for a tasty meal.

What's on the menu? Using powerful jaws and teeth, this carnivore (meat-eater) can chow down on 50 deer-size animals in a year.

It takes a lot of land to feed the cat's favorite prey--veggie-loving white-tailed deer, and wild hogs. And since panthers aren't big on sharing their meals--or their homes--with one another, each cat needs its own supersize territory. The home range of a single male boasts an area of about 640 square kilometers (250 square miles). Now that's a roomy pad.

CROWDED CATS

Unfortunately, Florida doesn't have many vacancy signs for panthers. From 1935 to 1990, nearly 5 million people settled in the Sunshine State. With so many newcomers clearing land to build homes and roads, panthers' habitat diminished. "Habitat loss is one of the main threats to the Florida panther," says Lotz.

To make matters worse, the Florida panther didn't become protected as an endangered species until 1967. Before then, the cats were fair game. Hunters killed the panther for its tough skin and tawny-colored coat. And farmers, fearing the predator would harm their livestock, also hunted these cats.

GENE SCENE

By 1990, fewer than 50 panthers existed in the wild. That spelled trouble for the cats. "What started developing was an inbred [too closely related] population, with very little genetic diversity," says Richardson. That means as the number of panthers dwindled, so did their gene pool (total collection of genes, or units of hereditary material, in a species).

Like you, panthers inherit traits, or characteristics, from their parents in the form of genes. Some genes, called recessive genes, are weak and show up only if the offspring gets two copies of that gene--one from each of its parents.

In the past, when the cats' population was strong, there were lots of panther parents. That meant the kittens ended up with an assortment of genes. But as the number of Florida panthers shrank—and the grab bag of genes got smaller--the chances of offspring inheriting two of the same recessive genes increased. Some of these weak genes can be deadly.

The panthers' vanishing gene pool led to heart defects and infertility—both a result of recessive genes. "We were watching the prevalence of genetic inbreeding begin to wipe out this cat," says Richardson.

PURRFECT MATCH

To strengthen the cats' gene pool, biologists turned to the Texas cougar. "In 1995, [the FFWCC] brought in eight female Texas cougars, and released them in different places throughout South

Florida," says Richardson. That way the cougars would mate with Florida panthers, and produce offspring with both cougar and panther genes.

The plan worked. By 2002, five cougars were proud mothers of at least one litter of kittens. The kittens' health: "Immediately, all of the inbreeding problems disappeared," says Lotz.

Following that success, biologists removed the cougars from the panthers' habitat in 2002. "We didn't want them to produce more than [two litters], because it would [overwhelm] the original Florida cats' gene pool," says Lotz. As it is, the panther population has 20 percent of the cougars' genes. That's enough diversity to keep the panthers safe for a while, but not a big enough change that biologists would call the cats Texas cougars.

PANTHER PATH

Today, nearly 100 panthers are on the prowl in South Florida. But they aren't completely out of harm's way. Since the cats are secluded in a small area in Florida, they could face inbreeding problems again in the future. "Even with Texas [cougar] genes, it's still a geographically isolated population," says Richardson.

For now, biologists will continue to protect and monitor the imperiled cat. And they're not just protecting panthers. "If you save the Florida panther, you're also saving what is really essential: habitat," says Richardson. "That's incredibly important to us."