Florida panthers bound back thanks to Texas mates

September 23 2010, By LAURAN NEERGAARD , Associated Press Writer

This July 2009 handout photo provided by the journal Science shows a three-week old Florida panther kitten in the Picayune Strand State Forest. In the quest to save the endangered Florida panther, their Texas cousins were the cat's meow. Fifteen years ago, Florida imported some wild panthers from Texas as fresh blood for the dwindling Florida cats. Now scientists have created an astonishingly in-depth family tree of today's Florida panthers, and found the program not only boosted the population _ it left a group of cats who are genetically hardier. (AP Photo/Science)

In the quest to save the endangered Florida panther, their Texas cousins were the cat's meow. Wildlife biologists moved eight female panthers from Texas - close relatives yet genetically distinct - into south Florida 15 years ago in hopes of boosting reproduction, and the immigration paid off.

Now scientists have created an astonishingly in-depth family tree of today's panthers to prove the genetic mixing not only left a bigger population but a healthier one - offering support for this type of conservation as biologists struggle save pockets of rare species the world over.

"Our results have shown you can have a positive impact on these endangered populations by doing this genetic restoration," said study co-author David Onorato, a research scientist with the Florida Fish and Wildlife Conservation Commission.

Indeed, many of the world's remaining lions and tigers live in very small groups where inbreeding may threaten their health just like it threatened the Florida panthers, and might benefit from similar "genetic rescues," said Stuart Pimm, a conservation biologist at Duke University. He wasn't part of the new study but has separately tracked the panther program.

"What this remarkable experiment ... has shown is that as long as you don't leave it too late, you can rescue some of these populations," Pimm said.

But it's a big decision to try to supplement habitat preservation with moving animals around, he noted.

"Moving panthers isn't easy. Moving lions and tigers is going to be really, really hard," he said.

The study was published in Friday's edition of the journal *Science*.

Thousands of these panthers once roamed the southeastern United States, but their habitat gradually shrank until today. They hang on between Miami and Naples.

By the 1990s, there were only 20 to 25 adults left. The small numbers, cut off from any possible contact with other panther species that roam the West, meant inbreeding that was causing genetic defects: Low testosterone levels, poor sperm quality, holes in the heart, undescended testes, even kinked tails and cowlicks between their shoulders.

In short, they needed fresh blood - and South Floridians already knew the 1995 Texas importation helped. There now are an estimated 100 Florida panthers, still endangered and struggling on shrinking habitat but an important improvement.

The new study for the first time details the genetic diversity that accompanied the population rebound.

Onorato's colleagues and geneticists at the National Cancer Institute compared samples taken from 591 panthers between 1978 and 2009, to track changing genetic heritage.

Five of those eight Texas panthers that were imported in 1995 quickly bred to produce 15 kittens, the first of generations of Texas-Florida hybrids responsible for recolonizing the area - and those increasing numbers of hybrids have proved hardier, the study found.

While many panther kittens don't survive to adulthood, more of the hybrid kittens do. The hybrids even proved better at escaping capture by the scientists, with high jumps from trees. And the birth defects haven't disappeared but have significantly dropped, Onorato said.

Still, the study said there seemed to be a slowing of the population growth after 2004 - and the big question is how long the improvements will last.

"Over time, the genetic variation will start to decline again," said

Onorato.

Beyond Florida, a park in South Africa tried a similar importation of 16 lions into a dwindling pride, resulting in some improved reproduction although not a big population jump right away, Craig Parker of the University of Minnesota noted in an accompanying article.

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Citation: Florida panthers bound back thanks to Texas mates (2010, September 23) retrieved 24 April 2024 from https://phys.org/news/2010-09-florida-panthers-bound-texas.html

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