

# Florida's Panther Population: A Struggle for Survival



# 1. The Florida Panther Population Over Time

- What different opinions do people have about wildlife?
- In what ways might these interactions be negative or positive for the wildlife?



## 2. The Florida Panther Population Over Time

### Key Questions:

- What factors have affected the population of Florida panthers over the last 500 years?
- How has the panther population changed?
- What might future population trends look like?



# The Florida Panther Population Over Time

Watch the video [“Threats to the Panther”](#) (2:19).

Reflect: How have humans impacted the panther’s population over time?







**1500 - 1800**

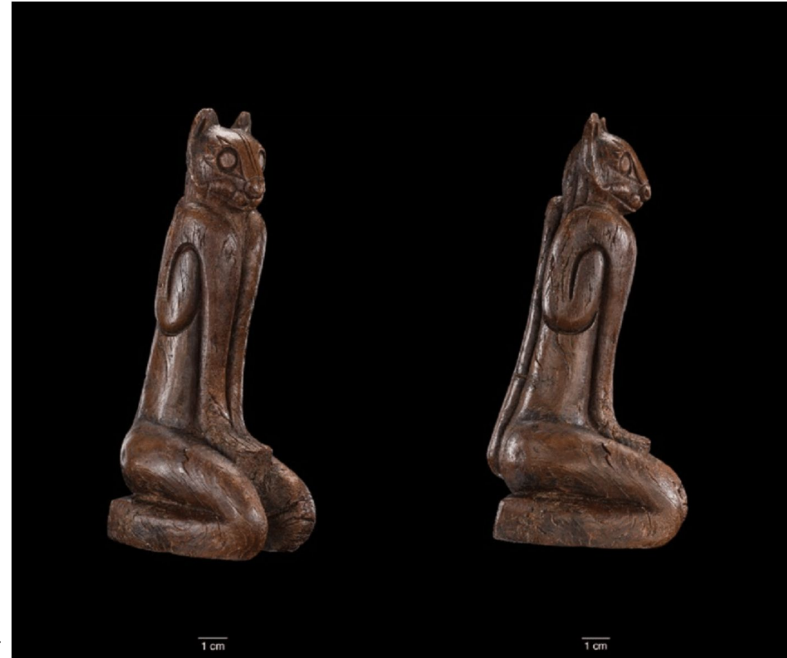
Florida Panther  
Population



# 1500 - 1800: Florida Panther Population

In the early 1500s, an indigenous community known as the Calusa lived in the southwestern portion of Florida. They relied on the rich biodiversity of Florida's aquatic ecosystems and traveled its intricate waterways, which included what we now know as Marco Island. The Calusa lives revolved around the Gulf of Mexico, fishing, and trading with neighboring communities.

In 1896, more than 300 years after their demise, archaeologists unearthed an artifact on Key Marco that provided a glimpse into the Calusa's rich history—now called the Key Marco Cat. This meticulously carved wooden sculpture shows a crouching feline-like creature, thought to be inspired by the Florida panther. The Key Marco Cat was a testament to the Calusa's skilled craftsmanship and their reverence for the natural world.



1. The Key Marco Cat statuette or figurine recovered at Key Marco (present day Marco Island) on the southwest coast of Florida in 1895 by Frank Cushing (Cushing 1896). Described by Cushing (1896) as a mountain lion or panther god, the statuette was carved from local dense tropical hardwood and is attributed to the Calusa people inhabiting the island between 300-1500 AD. Catalog number A240915, Smithsonian Institution, National Museum of Natural History, Department of Anthropology.



# 1500 - 1800: Florida Panther Population

Within the Calusa culture, the Florida panther represented a powerful and mystical being, embodying balance in the natural world. Its presence symbolized the intricate connection between the physical and spiritual realms. The Calusa, like many indigenous cultures, admired and respected the panther for its prowess and beauty.

The arrival of Juan Ponce de Leon in 1513 forever altered the course of Florida's history. Ponce de Leon, a Spanish explorer, embarked on a quest for territory and gold. In his quest, he brought diseases, slavery, and warfare, which took a heavy toll on indigenous communities, transforming their way of life. In 1521, Ponce de Leon and his men attacked the city of Calusa. He was wounded by a poisoned arrow loosed by a Calusan warrior defending his home. This injury ultimately led to the demise of Ponce de Leon.

Smith, Ryan P., Smithsonian Magazine. This hand-carved Panther statuette embodies a lost civilization's harmony with nature. Smithsonian.com.  
<https://www.smithsonianmag.com/smithsonian-institution/hand-carved-panther-statuette-embodies-lost-civilizations-harmony-nature-180969711/> (2019, January 7)



# 1500 - 1800: Florida Panther Population

The death of Ponce de Leon did not prevent further European colonization. As the Spanish colonized Florida, they introduced domesticated animals, such as cattle. The panther, respected by indigenous cultures that chose to live with it in harmony, became a source of conflict as it preyed on the cattle of the colonizers.

These colonizers received encouragement from Spanish authorities to hunt panthers. The majestic creatures that once coexisted in an ecological balance with the indigenous people of Florida were now in danger. Before European colonization, it was estimated that as many as 3,000 panthers lived in what is now the southeastern United States.

Smith, Ryan P., Smithsonian Magazine. This hand-carved Panther statuette embodies a lost civilization's harmony with nature. Smithsonian.com.  
<https://www.smithsonianmag.com/smithsonian-institution/hand-carved-panther-statuettes-embodies-lost-civilizations-harmony-nature-180969711/> (2019, January 7)







**1800s - 1960s**

Florida Panther  
Population



# 1800s - 1960s: Florida Panther Population

By the early 19th century, Florida witnessed a significant turning point in its relationship with the panther. In 1832, the state passed its first bounty law for panthers, marking the beginning of an era where these magnificent creatures would become hunted and feared.

In 1887, Florida authorized a \$5.00 payment for panther scalps, further incentivizing the hunting of the already decreasing population. During the late 19th and early 20th centuries, Florida saw extensive agricultural land clearing and lumbering, the first dramatic habitat destruction and fragmentation the state had seen. The once expansive southern forest was reduced by nearly 40 percent between 1850 and 1919. Pine forests, covering an astonishing 36.4 million hectares, were considered destroyed by 1920.



# 1800s - 1960s: Florida Panther Population

Simultaneously, the white-tailed deer, a primary source of prey for the panther, saw its population plummet from approximately 13 million in 1850 to less than one million by 1900 due largely in part to this habitat destruction. In 1900, biologists estimated there were merely 500 panthers left in Florida, a stark contrast to the once-thriving population of 3,000 or more.

Panthers, with their imposing size, ranging from 75 to 160 pounds, struck fear into the hearts of many. Stories of panthers entering towns in search of food further fueled these fears. In March 1919, the Ocala Evening Star featured a front-page account of a panther invading the streets of Perry, Florida, where it attacked two dogs, fatally injuring one. Such incidents were rare but contributed to human anxieties and led to farmers joining forces with hunters to protect their livestock by eliminating wild cats, including panthers, and supporting a bounty system.



# 1800s - 1960s: Florida Panther Population

Panthers remained classified as game animals until 1958. However, as the years went by, human-related factors took their toll on panther populations. The Florida Fish and Wildlife Service reported that roadkills became the most common human-related cause of panther fatalities in the wild.

Throughout Florida's history, panthers have endured hunting, habitat destruction, and shifting perceptions. From being revered by indigenous cultures to becoming hunted and feared, these remarkable creatures have played a complex role in the state's ecological and cultural narrative.





1970 - 2010

# Florida Panther Population





# 1970 - 2010: Florida Panther Population

In 1967, before the Endangered Species Act of 1973, the Florida panther was designated as an endangered species. To have this conservation status removed, there must be three established and self-sustaining populations of at least 240 individuals each for a minimum of twelve years, with adequate long-term habitat preservation. By the 1960s, panther numbers had dropped to fewer than 20, and fluctuated between 19-30 individuals until 1995.

In an experimental effort to enhance the genetic health of the Florida panther, the U.S. Fish and Wildlife Service collaborated with other organizations. In 1995, scientists and experts helped eight female panthers from a Texas subspecies immigrate into Florida. The introduction of new genetic material through immigration aimed to bolster the panther population, bringing the population from about 25 individuals in 1995, to 50 individuals in 2000, 80 individuals in 2003, and about 118 individuals in 2008.



# 1970 - 2010: Florida Panther Population

Despite these conservation efforts, the primary cause of mortality for Florida panthers remains vehicle collisions, killing nearly 30 every year. One way to mitigate losses is building wildlife crossings where busy roads intersect the Florida Wildlife Corridor. Before transportation agencies will make the investment in wildlife crossings, habitat corridors on both sides of the road need first to be permanently protected. The land can be protected as a public preserve or through a permanent conservation easement on a working farm or ranch.

The next largest mortality cause is intraspecific aggression. Florida panthers live alone, with the exception of breeding and raising young. Male panthers will fight and attempt to kill other panthers that enter established territories, which can range up to 250 miles. Kittens are also at risk from male panthers since their deaths will allow their mothers to breed again. Intraspecific aggression is estimated to be around 90 deaths between 1990-2012, about half of its current population size.

This persistently high death rate, and low birth rate, suggest that the Florida panther population is far from carrying capacity, the maximum number of individuals an ecosystem can support without degradation.



## 1970 - 2010: Florida Panther Population

This 14-month-old panther was displayed at the Florida House of Representatives on the day the legislative body passed a bill naming the Florida panther the state animal in 1982.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (p. 30). National Geographic.



“Scientists hatched an unprecedented rescue plan: In the mid-1990s they hired Texan Roy McBride, arguably the world's best mountain lion tracker, to capture eight of the cats in Texas, all females, then release them into South Florida. Five of them bred, and this infusion of genetic diversity reversed the panther’s downward spiral.”

- Douglas Main, a senior writer and editor for National Geographic.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (p. 28). National Geographic.

Roy McBride, right, helps an associate unload a panther from a Texan sub-species population. This “assisted immigration” of genetically healthy panthers into South Florida led to a steady rise in the population.

Source: Florida Fish and Wildlife Conservation Commission





# 2010 - Present

Florida Panther Population





## 2010 - Present: Florida Panther Population

Betty Osceola, a member of the Miccosukee tribe of Florida, is committed to restoring the panther's habitat. She wants to rectify the consequences of the Tamiami Trail's construction in the 1940s, which resulted in habitat destruction of the tribe's dwellings and ceremonial grounds and a significant portion of the panther and its prey's habitat, due to a 70% reduction in water flow.

In 1973, the same year the Florida panther was listed under the U.S. Endangered Species Act, the last female panther was documented north of the Caloosahatchee River, until 2016. The Caloosahatchee flows from Lake Okeechobee to Fort Myers and had been the northern boundary to the Panthers known breeding range for 43 years. Male panthers, escaping lethal competition with other males in the south, had been swimming North across the river to migrate in search of their own territory. One male born in South Florida was hunted in 2011 halfway to Tennessee. Before 2016, any male migrating north of the Caloosahatchee would not have found a mate. News of the female panther north of the Caloosahatchee river is the first sign that the panther population might be able to naturally expand beyond South Florida.



## 2010 - Present: Florida Panther Population

Currently, the panther population has rebounded to nearly 200, but the population is still isolated to South Florida.

Furthermore, panthers' mortality and natality rates have been impacted by an unknown toxin referred to as feline leukomyelopathy (FLM). This disease has likely afflicted 35 panthers and 42 bobcats throughout the state since spring 2017. Scientists are unsure of the cause, but suspect neurotoxins, or a combination of factors, such as a nutritional deficiency combined with a neurotoxin. Since the disease is found in at least two feline species, it's not a genetic condition that's passed down from parent to offspring.

With the Florida panther population on the brink of recovery, it is vital to reclaim more of their historic territory to help expand their numbers into northern Florida.





Betty Osceola, a member of the Miccosukee Tribe of Indians of Florida, sits on an ancestral tree island in the Everglades. Tree islands once provided substantial habitat for terrestrial wildlife including panthers, as well as dwellings and ceremonial grounds for Osceola's people. But since the construction of the Tamiami Trail across the Everglades in the 1940s stopped the flow of water, the tree island' area has been reduced by 70 percent, something that Everglades restoration is working to help change.

Source: Osceola, B.  
(2023, February 3).  
<https://pathofthepanther.com/about/>



## The Cat that Crossed the River

Triggering a camera trap on Babcock Ranch State preserve, this is the first female Florida panther documented north of the Caloosahatchee River since 1973. Now, the ability to reestablish a breeding population farther north will be vital to the recovery of the species.

The Caloosahatchee cuts from Lake Okeechobee to Fort Myers and had been the northern boundary to the Panthers known breathing range for 43 years. Male Panthers escaping lethal competition with other males in the south, had been swimming North across the river in previous decades. One male born in South Florida, was killed by a hunter in 2011 in western Georgia, halfway to Tennessee. But before 2016, any male wandering north of the Caloosahatchee would never find a mate. News of the female panther at Babcock Ranch is the first glimmer that the panthers' breeding population might be able to naturally expand beyond South Florida.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (p. 25, 70-71). National Geographic.



“ONCE RANGING THROUGHOUT the southeastern United States and Florida, panthers nearly went extinct from habitat loss and unregulated hunting. By the 1980s, 20 to 30 were left. Though the endangered cats have rebounded significantly in the last couple decades, with a total population around 200, their future remains tenuous. That's why scientists are concerned about a newly discovered neurological disease in Florida panthers and bobcats that causes hind limb weakness and, in severe cases, partial paralysis. Affected animals often have trouble walking, which can lead to starvation and death. Known as feline leukomyelopathy (FLM), the disease has likely afflicted 35 panthers and 42 bobcats throughout the state since spring 2017. What's causing the disease is unknown, but the prevailing theory points to the involvement of neurotoxins. Although a pathogen such as a virus might also be responsible, it's considered less likely. Ultimately, the illness could be due to a combination of factors, such as a nutritional deficiency combined with a neurotoxin. Since the disease is found in at least two feline species, it's not a genetic condition that's passed down from parent to offspring.”

- Douglas Main, a senior writer and editor for National Geographic.  
Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (p. 48). National Geographic.



Florida Fish and Wildlife Conservation Commission veterinarian Lara Cusack (left) and biologist Mark Lotz take blood samples before returning one of the affected kittens to its mother in the wild.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (p. 51). National Geographic.





VEHICLE COLLISIONS ARE the leading documented cause of death for panthers, killing nearly 30 every year. One way to mitigate losses is building wildlife crossings where busy roads intersect the Florida Wildlife Corridor. Before transportation agencies will make the investment in wildlife crossings, habitat corridors on both sides of the road need first to be permanently protected. The land can be protected as a public preserve or through a permanent conservation easement on a working farm or ranch. One model of success is a section of Interstate 75 known as Alligator Alley. This is where the interstate crosses the Everglades between Naples and Miami and where most of the photos in this section were taken.

A Florida panther crosses safely beneath Alligator Alley from Picayune Strand State Forest to the south onto Florida Panther National Wildlife Refuge. The combination of wildlife underpasses and tall fencing along the road has nearly eliminated deaths of panthers and other large animals on this stretch of interstate highway.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (pp. 202-203). National Geographic.

# 2020s - Future

Florida Panther Population



# 2020s - Future: Florida Panther Population

The Florida panther, a symbol of the state's unique wildlife, faces a precarious future due to habitat loss driven by rapid urban development. Florida's growing human population, with nearly a thousand new residents arriving daily, leads to the construction of new roads, houses, and commercial structures. These developments destroy approximately 100,000 acres of wildlife habitat annually, far exceeding conservation efforts.

As human communities expand into panther territories, conflicts arise. Residents in areas like Golden Gate Estates in the Everglades have lost pets and livestock to panthers, but are committed to coexisting peacefully. Some residents have taken proactive and precautionary measures to coexist, using enclosures and livestock guardian dogs.

Conservationists like Cary Lightsey stress the compatibility of cattle ranching and wildlife preservation. Cattle need birds to help remove flies and insects from their hides; cattle graze and clear out areas of dense forest where deer and turkeys can roam. Those birds that eat insects on and around cattle are a source of food for panthers.



# 2020s - Future: Florida Panther Population

Cary Lightsey and others dedicate land to conservation easements, protecting Florida's heritage for future generations. However, many ranchers face obstacles in securing conservation easements due to limited state funding and competing interests from real estate developers.

Additionally, the number one cause of death among Florida panthers continues to be vehicle collisions. As of November 2023, 12 panthers, or 5-10 percent of the estimated population, died as a result of to vehicle collisions injuries.

To save the Florida panther, it's essential to expand their range within the Florida Wildlife Corridor. Eight million vulnerable acres within the 18 million-acre corridor must be protected to reduce the risk of vehicle collisions, habitat loss, and human encounters. This requires strong commitments from public and private leaders.

Wildlife corridors are gaining recognition, with several U.S. states enacting corridor legislation. These corridors offer a unifying framework to preserve Earth's biodiversity and ensure the survival of iconic species like the Florida panther.







Habitat loss from expanding development is one of the leading threats to the panther survival. Florida's human population has been growing by nearly a thousand new residents a day. New roads, houses, and commercial buildings are consuming an average of 100,000 acres (40,470 ha) of wildlife habitat every year, far outpacing the recent rate of land conservation. This aerial photo shows new homes on the periphery of Orlando, configured into a mega-subdivision that encroaches on the Florida Wildlife Corridor. Parts of the Corridor are protected then; others are yet to be protected.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (pp. 6-7). National Geographic.





A mother and two kittens move through the side yard of a home in Golden Gate Estates, a low density development east of Naples where losing hobby livestock or pets to panthers is not uncommon. As people move into panther territory, the chance for conflict increases. The owners of this house move their pets into enclosures at night and bought a livestock guardian dog to help them peacefully coexist with panthers and other wildlife.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (p. 137). National Geographic.



Cowboys move a herd of cattle across Otter Slew on the way to cow pens on the Lightsey Ranch near Lake Kissimmee. The Lightsey family has been ranching in Florida since the 1850s, and they have recently protected more than 90 percent of their land with conservation easements, benefitting the Florida Wildlife Corridor and protecting the Everglades Headwaters from development.

Source: Ward, C., & Hiaasen, C. (2023). In *Path of the Panther: New Hope for Wild Florida* (pp. 171, 174). National Geographic.



## Panther Pulse

**2023**

### Deaths

#	Date Discovered	Panther ID	Age	Sex	Cause of Death	County	Location
12	11/12/2023	UCFP448	4	M	Vehicle	Collier	Immokalee Rd
11	11/12/2023	UCFP447	3	M	Vehicle	Hendry	CR833, South of SR80
10	11/07/2023	UCFP446	3-5	F	Vehicle	Glades	CR74, west of CR731
9	11/06/2023	UCFP445	2-3	M	Vehicle	Hendry	Keri Rd.
8	09/18/2023	UCFP444	2-3	M	Vehicle	Collier	75 N. west of toll plaza
7	08/29/2023	UCFP443	2-3 mo	F	Vehicle	Collier	Desoto Blvd. N
6	06/12/2023	UCFP442	3-4	F	Vehicle	Collier	SR29, South of Oil Well Rd.
5	06/09/2023	UCFP441	5-7 mo	F	Vehicle	Collier	SR29, south of Oil Well Rd.
4	05/26/2023	UCFP440	4	M	Vehicle	Collier	Oil Well Rd.
3	02/26/2023	UCFP439	1	M	Vehicle	Hendry	Josie Billy Hwy
2	01/30/2023	UCFP438	3-4	F	Vehicle	Collier	Golden Gate Blvd.
1	01/09/2023	UCFP437	2-3	F	Vehicle	Collier	CR846 1.6 miles west of county line

At stake is the survival of the Florida panther; it will not rebound from endangered status without expanding its range throughout Florida and beyond. Of the Florida Wildlife Corridor's 18 million acres (7.3 million ha), eight million acres (3.2 million ha)—mostly working farms and ranches—remain vulnerable to development.

Conservationists know land protection must happen quickly. Recent studies suggest that Florida must accelerate the pace of conservation to keep up with habitat losses to residential and commercial development and to ensure that more parts of the corridor are connected. The immediate goal: protection of just under a million acres (400,000 ha) of corridor land by 2030. Rising to the challenge will require robust commitments from public and private leaders.

Fortunately, wildlife corridors are growing in recognition, nationally and globally. In the past few years, nearly a dozen U.S. states have adopted wildlife corridor legislation. And as the story of the panther shows us, wildlife corridors can become a shared framework that brings people together around the common ground of sustaining life on Earth.

*- Tori Linder, conservationist and impact producer, Managing Director of the Path of the Panther project*



## 9. Panther Population Through Art and Data

- How has the Florida panther population changed over time?
- What factors have affected the population?

