

WELCOME TO  
THE 2019 FRPA  
CONFERENCE!

# LEARNING OBJECTIVES

- Learn about FL Panthers, black bears and coyotes in FL, including biology
- Understand state regulations of FL panthers, black bears and coyotes
- Learn the appropriate messaging to facilitate communication with the public reference FL panthers, black bears and coyotes in FL, including urban areas





# Florida Panthers

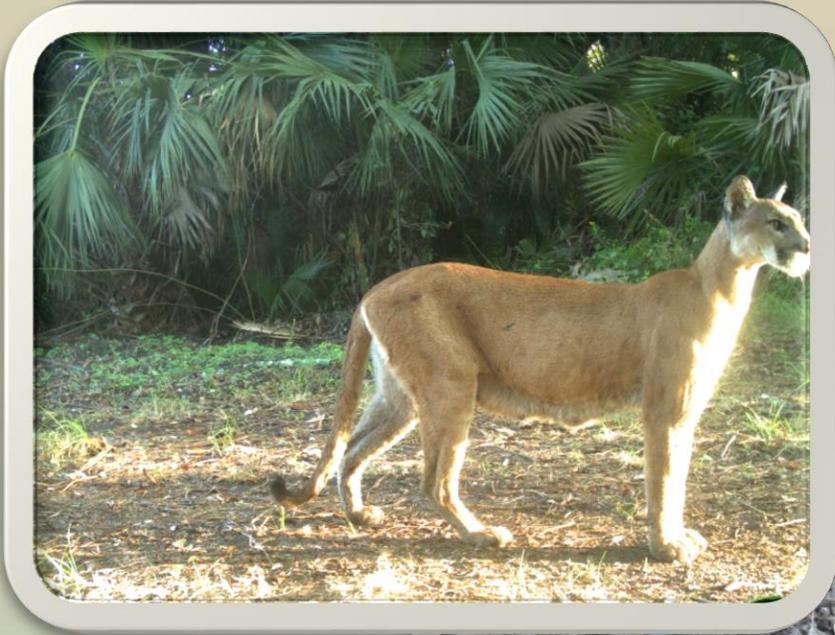
Angeline Scotten

Senior Wildlife Assistance Biologist

Florida Fish and Wildlife Conservation Commission



# What is a Florida Panther?



*Puma concolor coryi*

# Apex Predator

Top of the Food Web

Keystone Species



# Umbrella Species

Habitat  
Protection



Multi-species  
Protection



# Physique

Adults: 60-160 lbs.

Males: ~ 130 lbs

Females: ~ 80 lbs

Length: about 7-8 ft

Tail: 1/3 body length

2 ft high at shoulder



# Coloration

- 🐾 Tan fur (reddish to golden)
- 🐾 Black: back of ears, tip of the tail, face
- 🐾 Kittens: spotted with blue eyes

PANTHER



Back of ears



Smaller spots

BOBCAT





# Identifying Florida's Native Cats



## Florida Panther



Description: uniformly tan, adults not spotted, tail nearly length of body

Weight: 60-160 lbs

Total length: 7-8 ft

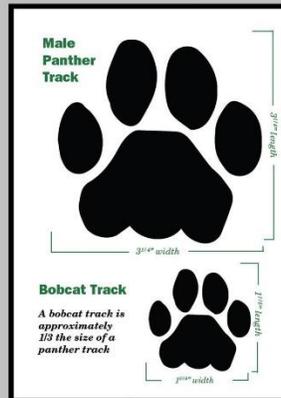
Body Length: 4.5 ft

Tail Length: 3 ft

Shoulder height: 2.25 ft

Back of ears: black

Tip of tail: black all around



## Bobcat



Description: reddish brown, spots evident but variable, tail much shorter than length of body

Weight: 20-30 lbs

Total length: 3 ft

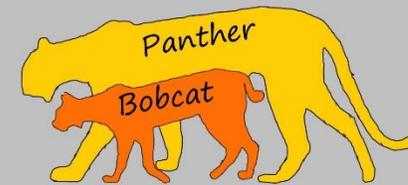
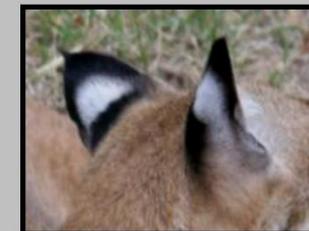
Body Length: 2.5 ft

Tail Length: 6 in

Shoulder height: 1.5 ft

Back of ears: white spot

Tip of tail: white underside



# Mistaken Identities

Jaguars and leopards come in black phases and are commonly called “black panthers.”

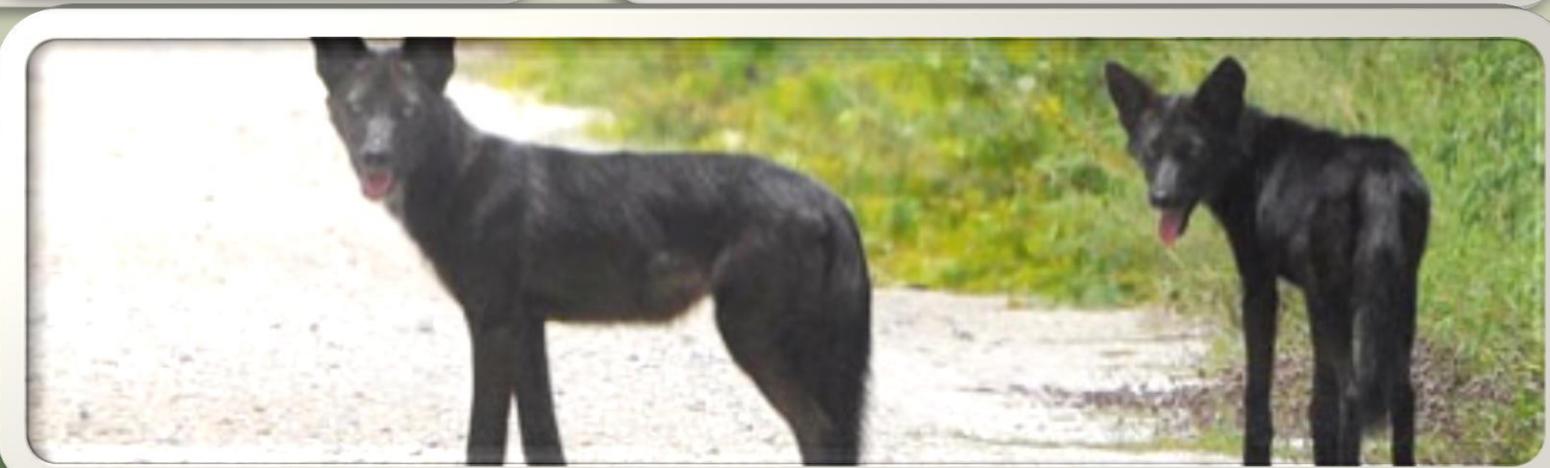
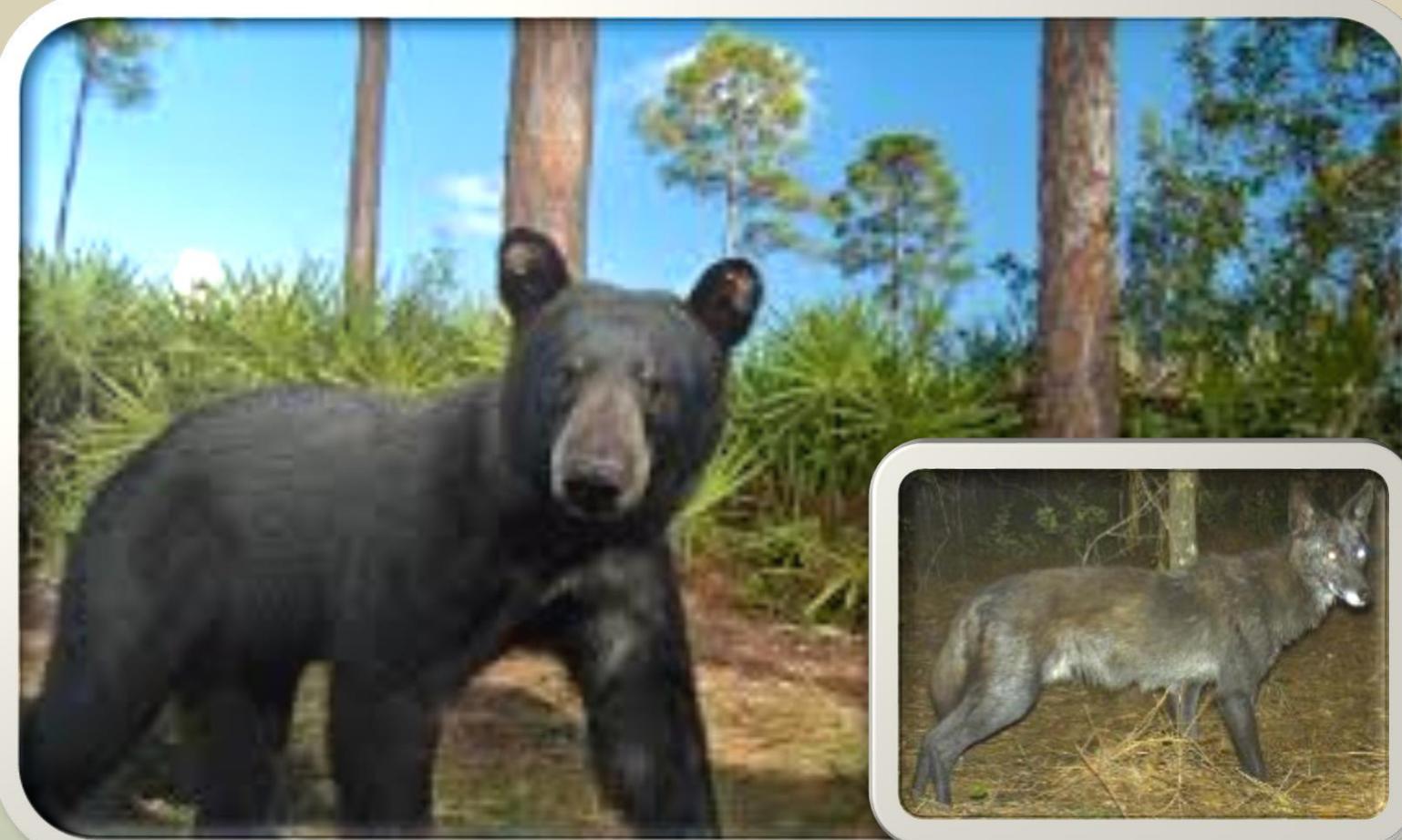


**Black jaguar**



**Black leopard**





# Reproduction

🐾 Males: 3 yrs

🐾 Females: 1 ½ yrs

🐾 Breed year round

🐾 3 month gestation

🐾 Saw palmetto dens

🐾 2-3 average kittens

🐾 Leave their mothers  
around 9-18 months



# Natural Life Expectancy

Males ~10 yrs

Females ~ 15 yrs



# Food

*Panthers are carnivores*

**Deer and hogs** make up the majority of a their diet



Will feast on armadillos, raccoons and other small mammals.



Panthers have also been documented eating a variety of domestic animals:

- ✓ Goats
- ✓ Sheep
- ✓ Pigs
- ✓ Donkeys
- ✓ Calves
- ✓ Foals
- ✓ Chickens
- ✓ Turkeys
- ✓ Emus
- ✓ Swans
- ✓ Dogs
- ✓ Cats
- ✓ Alpaca
- ✓ And even wallabies!

# Pumas are an American cat

Historic Distribution in North and Central America.

Current *Puma* distribution, range wide

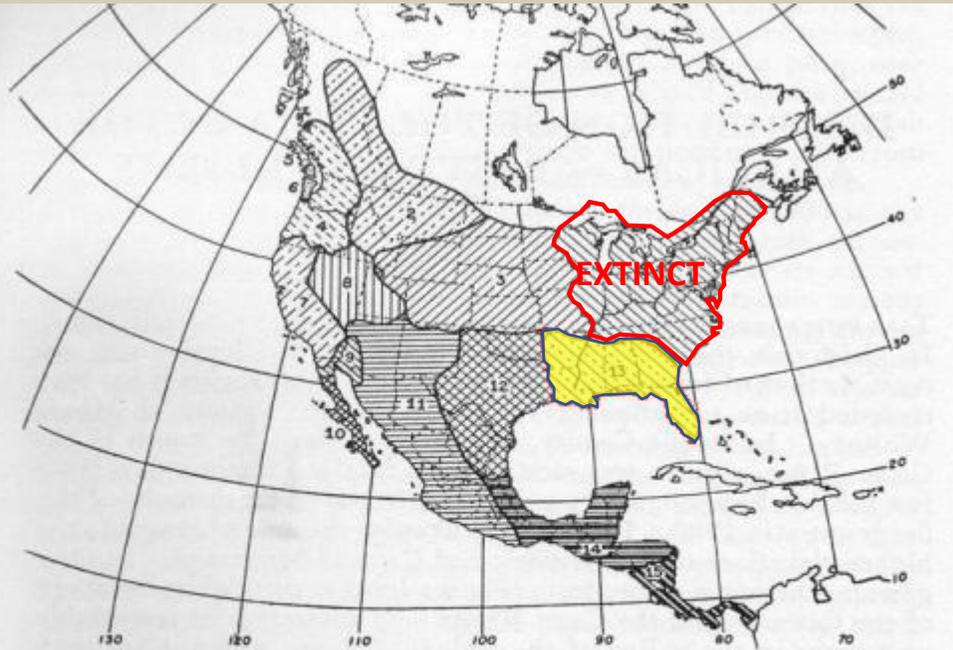


Figure 1. Distribution of subspecies of *Felis concolor* in North and Middle America

- |  |                                |
|--|--------------------------------|
| 1. <del><i>F. c. concolor cougar</i></del> | 9. <i>F. c. browni</i>         |
| 2. <i>F. c. missoulensis</i>               | 10. <i>F. c. improcera</i>     |
| 3. <i>F. c. hipolestes</i>                 | 11. <i>F. c. azteca</i>        |
| 4. <i>F. c. oregonensis</i>                | 12. <i>F. c. stanleyana</i>    |
| 5. <i>F. c. vancouverensis</i>             | 13. <i>F. c. coryi</i>         |
| 6. <i>F. c. olympus</i>                    | 14. <i>F. c. mayensis</i>      |
| 7. <i>F. c. californica</i>                | 15. <i>F. c. costaricensis</i> |
| 8. <i>F. c. kaibabensis</i>                |                                |



# Population Range

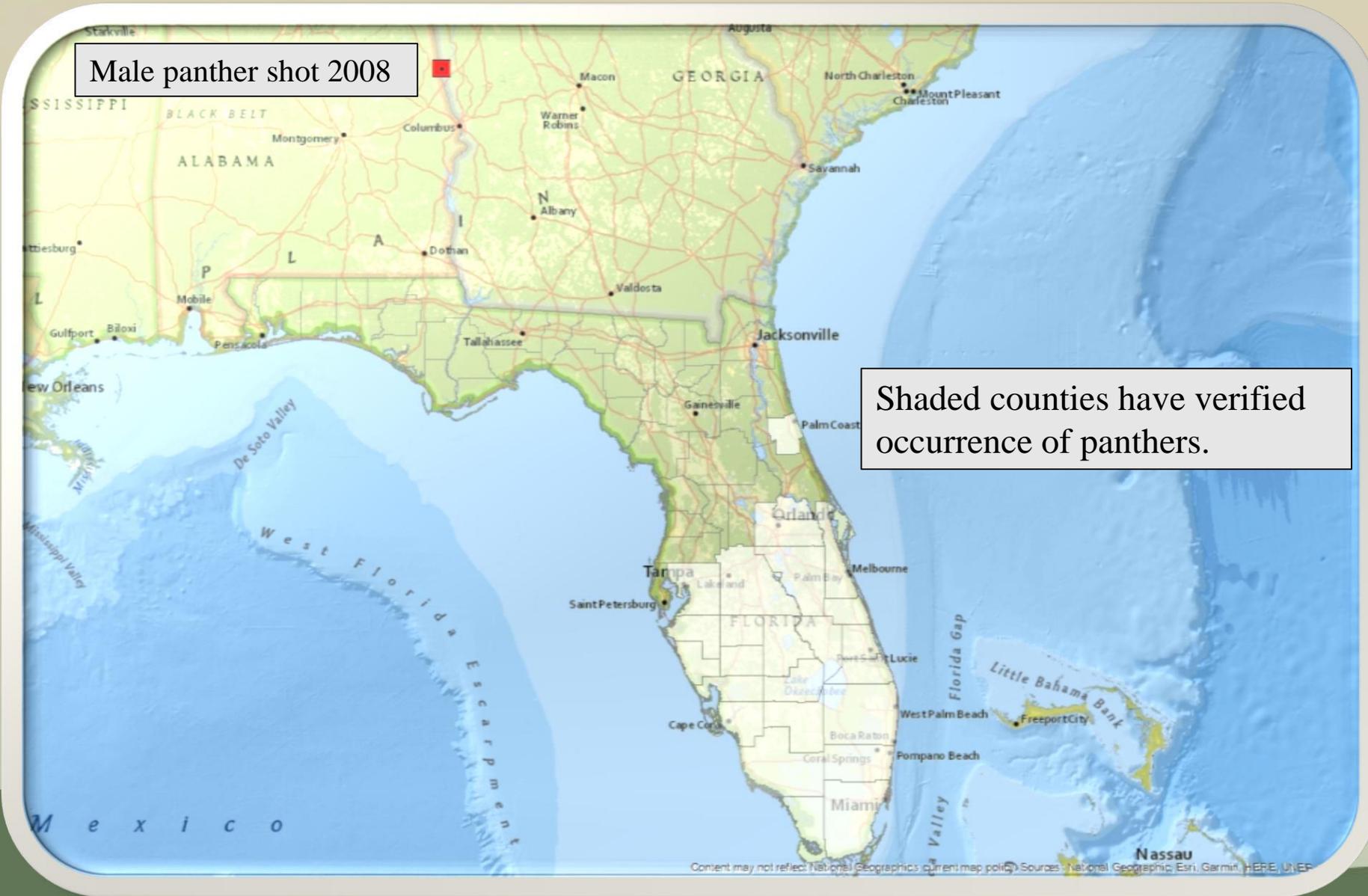
Historic



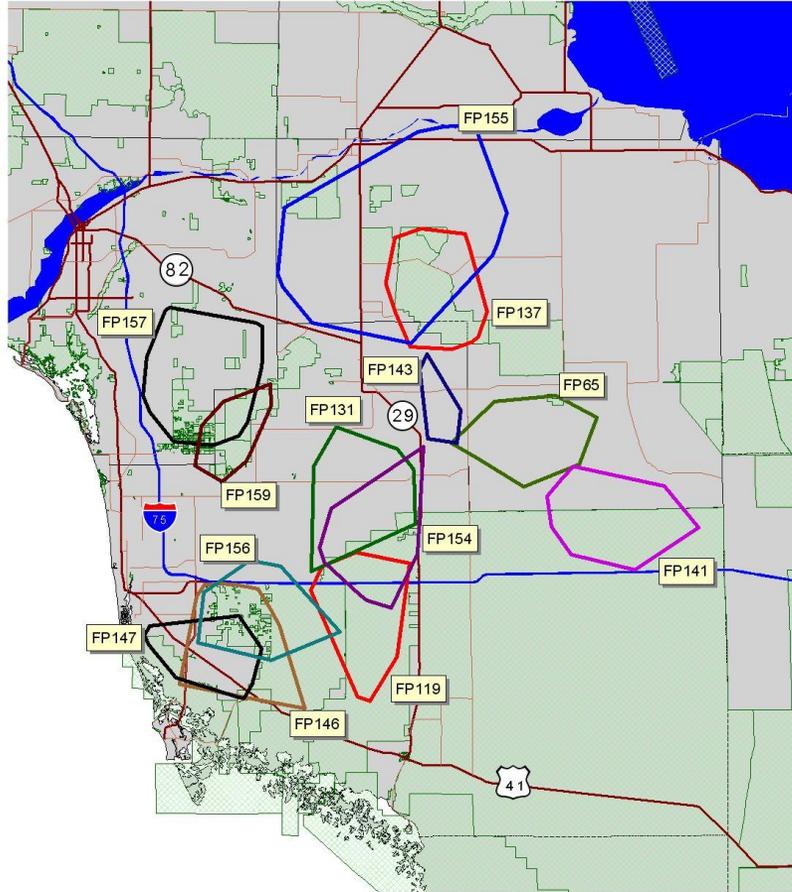
Current



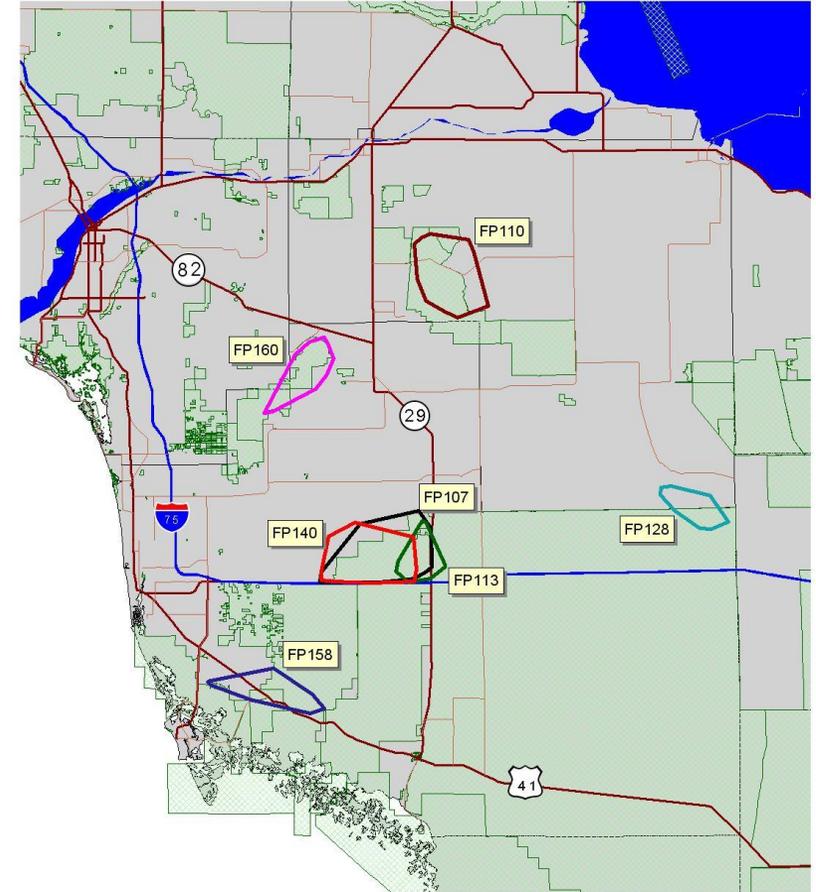
# Florida Panther Occurrence



# Home Range



0 10 20 30 Kilometers



0 10 20 30 Kilometers



Males: 200 sq mi

Females: 80 sq mi

# ENDANGERED

- 1950:** Declared a game species
- 1958:** Listed as endangered by FL
- 1967:** Listed as endangered by U.S.
- 1973:** Protection under ESA

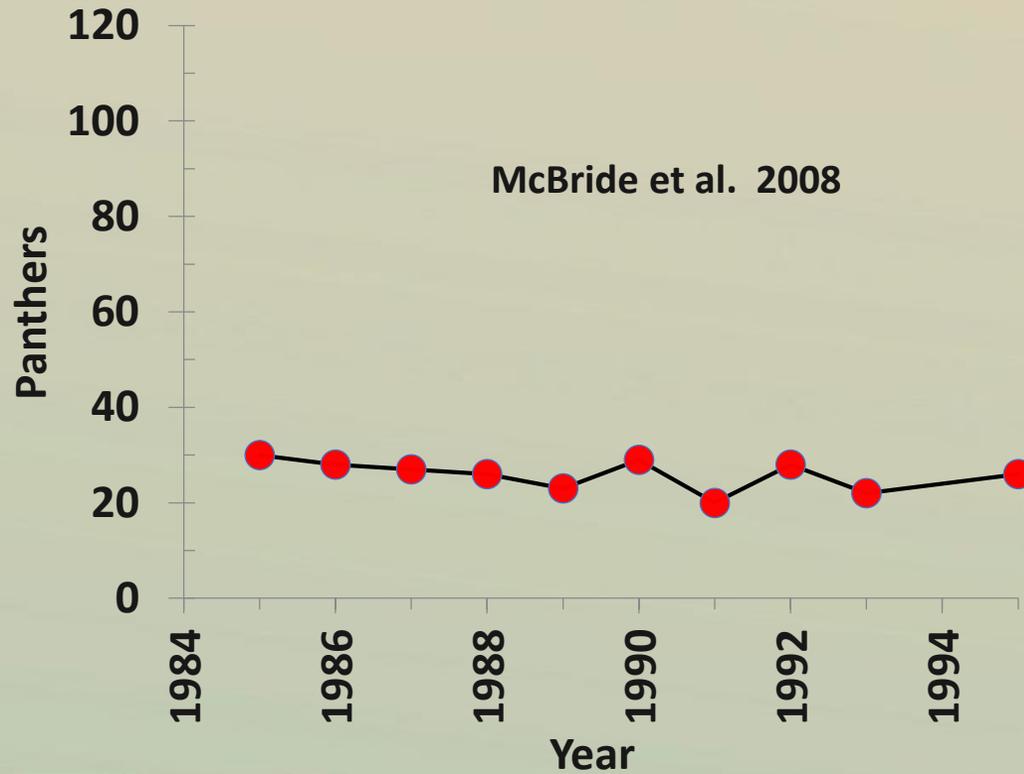


# Florida Panther

- FWC Research Initiated 1981

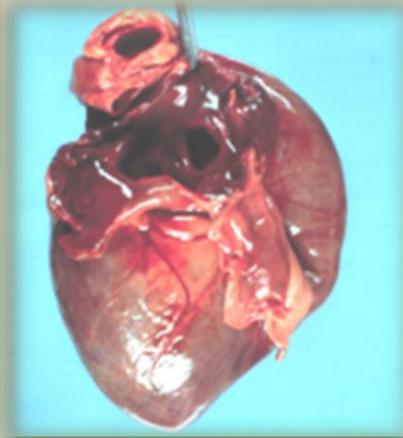


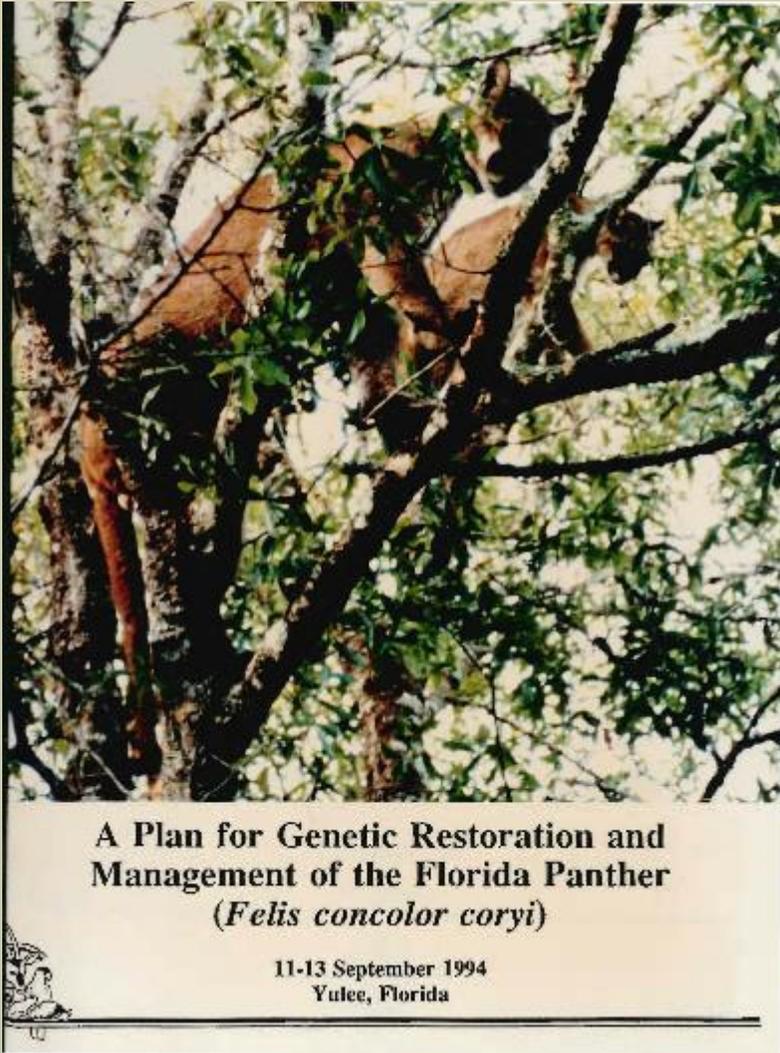
Panther Minimum Count 1985-1995



# Extinction of the Florida Panther?

- Inbreeding depression- loss of genetic variation
- Extinction?



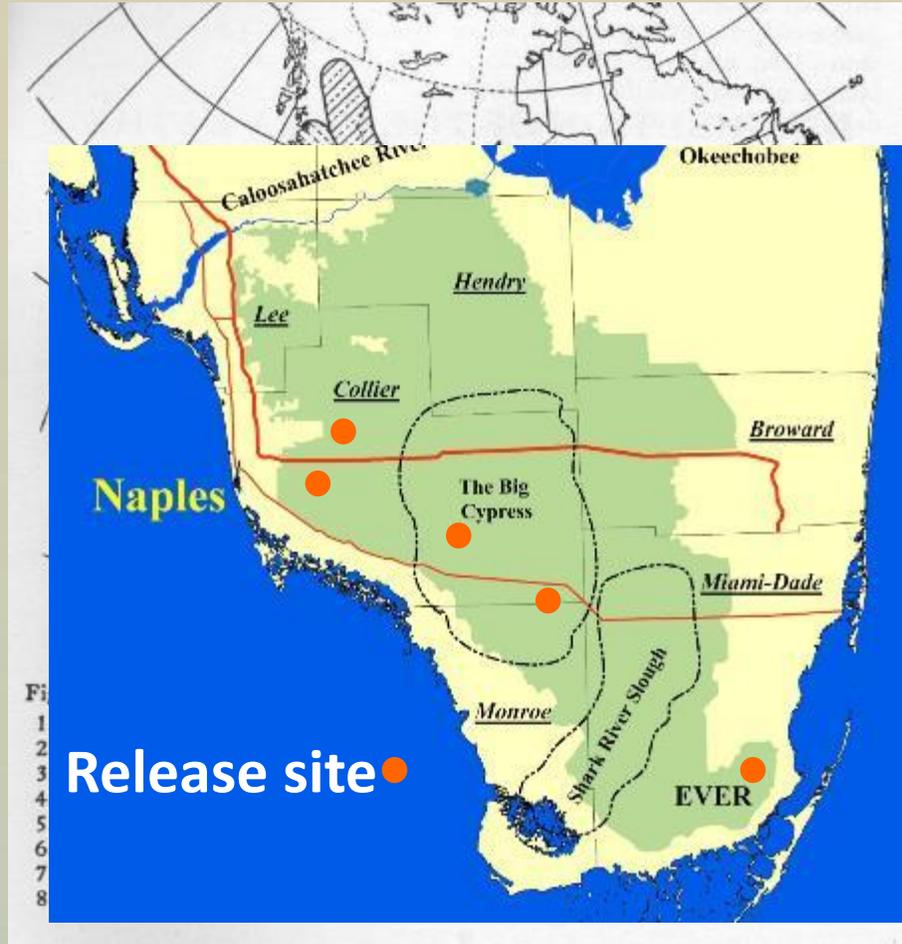


# Genetic Restoration

- Quick response
- Avert extinction
- Conservation ramifications
- **Criticism**
- **Wild population**



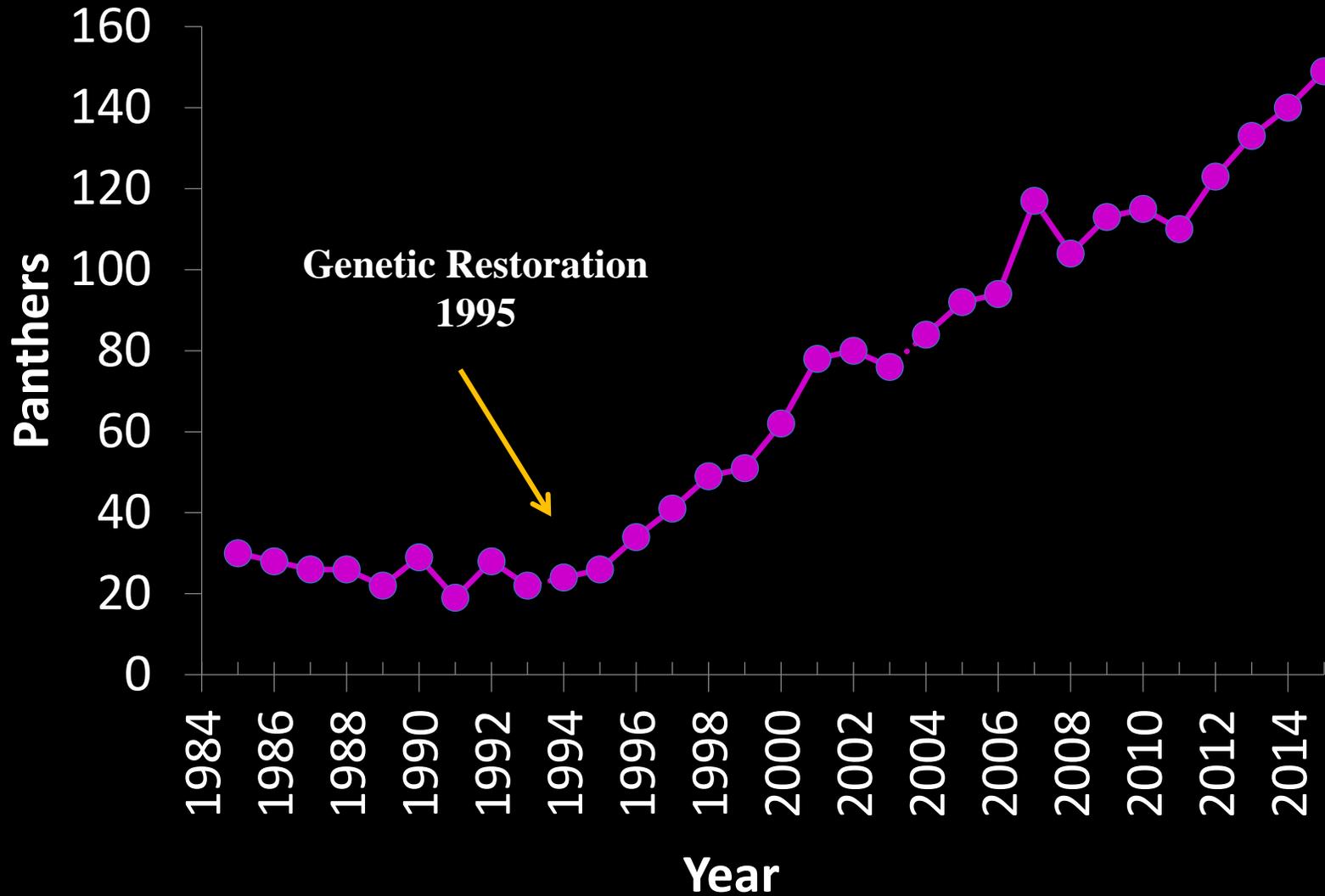
# Genetic Restoration



- Release of 8 ♀ Texas pumas
- 5 of 8 produced at least 20 kittens
- All ♀ Texas pumas removed 2003



# McBride Panther Minimum Count 1985-2015



# Florida Panther Response Plan

## Interagency Florida Panther Response Plan

Florida Fish and Wildlife Conservation Commission  
620 South Meridian Street  
Tallahassee, FL 32399-1600

U.S. Fish and Wildlife Service  
1875 Century Blvd.  
Atlanta, GA 30345

National Park Service  
100 Alabama St. SW  
1924 Building  
Atlanta, GA 30303



➤ Interactions and Conflicts

➤ Promote Education and Safe Practices



# What's impacting panthers today?

- Habitat loss
- Vehicles
- Inbreeding
- Poaching
- Introduced diseases (FeLV)



# Safety for People and Panthers

1. Observe posted limits
2. Spend an extra minute
3. Be aware when driving



**Slow Down  
You're in Florida Panther Country**



***Watch Out for Panthers While Driving***  
[www.MyFWC.com/Panther](http://www.MyFWC.com/Panther)



Additional Information Available: [MyFWC.com/panther](http://MyFWC.com/panther)

Submit photos of Panther Tracks and Panthers:  
[MyFWC.com/PantherSightings](http://MyFWC.com/PantherSightings)

Report Wildlife Incidents to:  
(888) 404-FWCC (3922) or [Tip@MyFWC.com](mailto:Tip@MyFWC.com)

Support panther conservation?  
Purchase the panther plate or donate to the  
Florida Panther Research and Management Trust Fund through the Fish  
and Wildlife Foundation of Florida



**Thanks!**





# Florida Black Bears

Janelle Musser

Florida Fish and Wildlife Conservation Commission



# Introduction

- Florida Black Bear (*Ursus americanus floridanus*)
- The only species of bear in Florida.

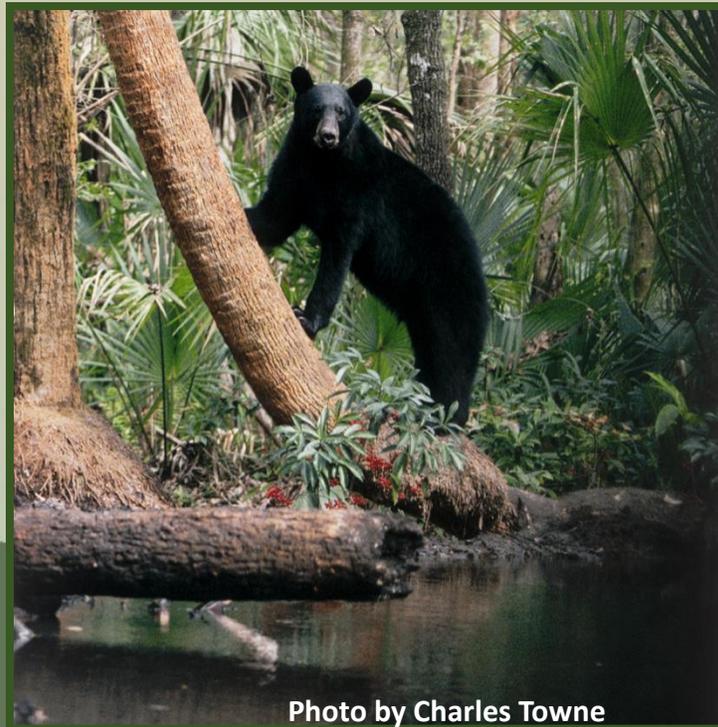
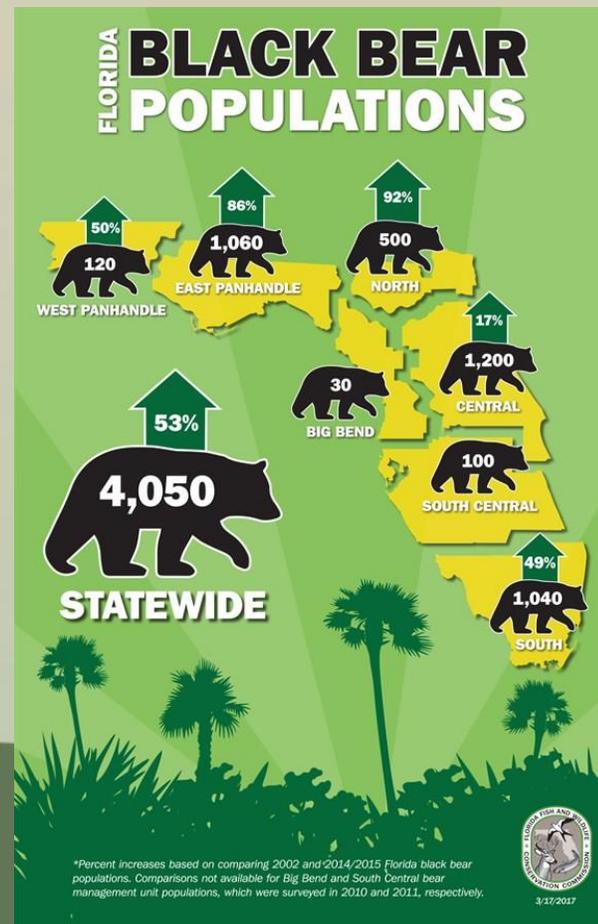


Photo by Charles Towne



# Black Bear Distribution

- There are approximately **4,050** bears in the state, the majority of which are on public lands.



Orland

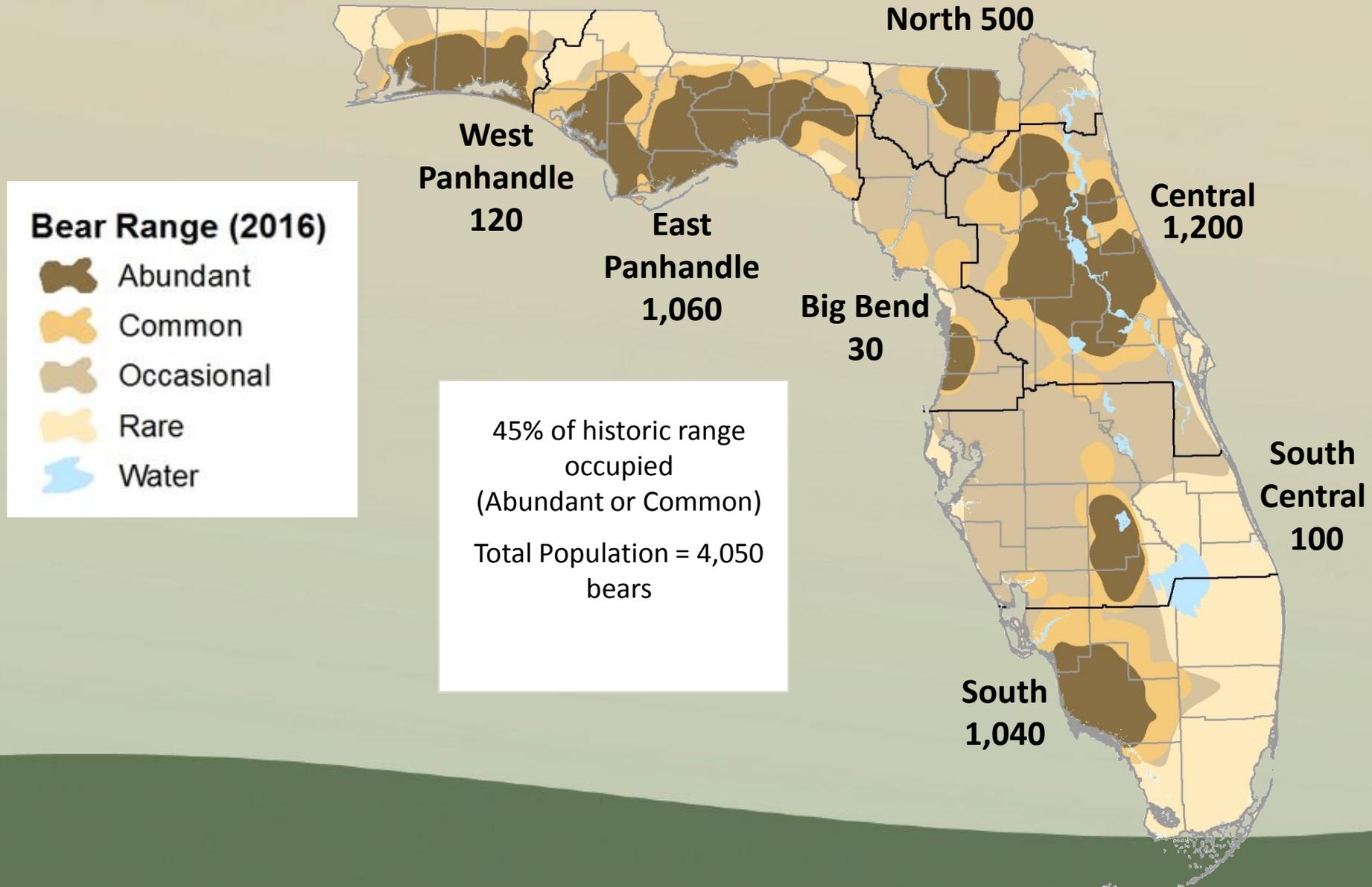
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Sentine

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# Bear Range and Population Estimates



# History

- The Pre-Columbian bear population estimate was 11,500. (Big Guess!!)
- In 1974 the Game and Fish Commission listed the Florida Black Bear as threatened and closed the hunting season except in Apalachicola National Forest and Baker and Columbia Counties.
- In 1994 GFC closed bear hunting state wide.
- De-listed by FWC August 2012.
- Not listed by USFWS.
- Reinstated hunting season October 2015



# Florida's Conflict Wildlife - Bears



Abundant

**Little or no management**



Sustainable coexistence



Over-exploited



**Conflict management**



**Recovery management**

Rare

More numerous

Rebounding



# Weight

- Adult males normally weigh between 250 and 450 Lbs. Largest documented male bear is **760** Lbs.
- Adult females normally weigh between 125 and 250 Lbs. Largest documented female bear is **383** Lbs.

Boar  
350 lbs



Sow  
150 lbs



# Weight

- Florida's largest documented bear is 760 Lbs.



# Generalists

- Black bears have habitat requirements similar to humans.



Credit Orlando Channel 6 News



# Home Range

- Male bears typically have a home range of 50 to 120 sq miles.
- Females typically have a home range of 10 to 25 sq. miles.



# Breeding

- Breeding occurs in June to July.
- Bears experience delayed implantation, and have a 7 month gestation period.



# Fall Hyperphagia

- Preparing for winter
- Normally eat 5,000 calories a day to 20,000 calories a day in the fall.



# Cubs

- Bears are typically born in late January to early February.
- The cubs are very small at birth, 10-15 oz.
- Litters range from 1-5 cubs, but 2 or 3 are most common.



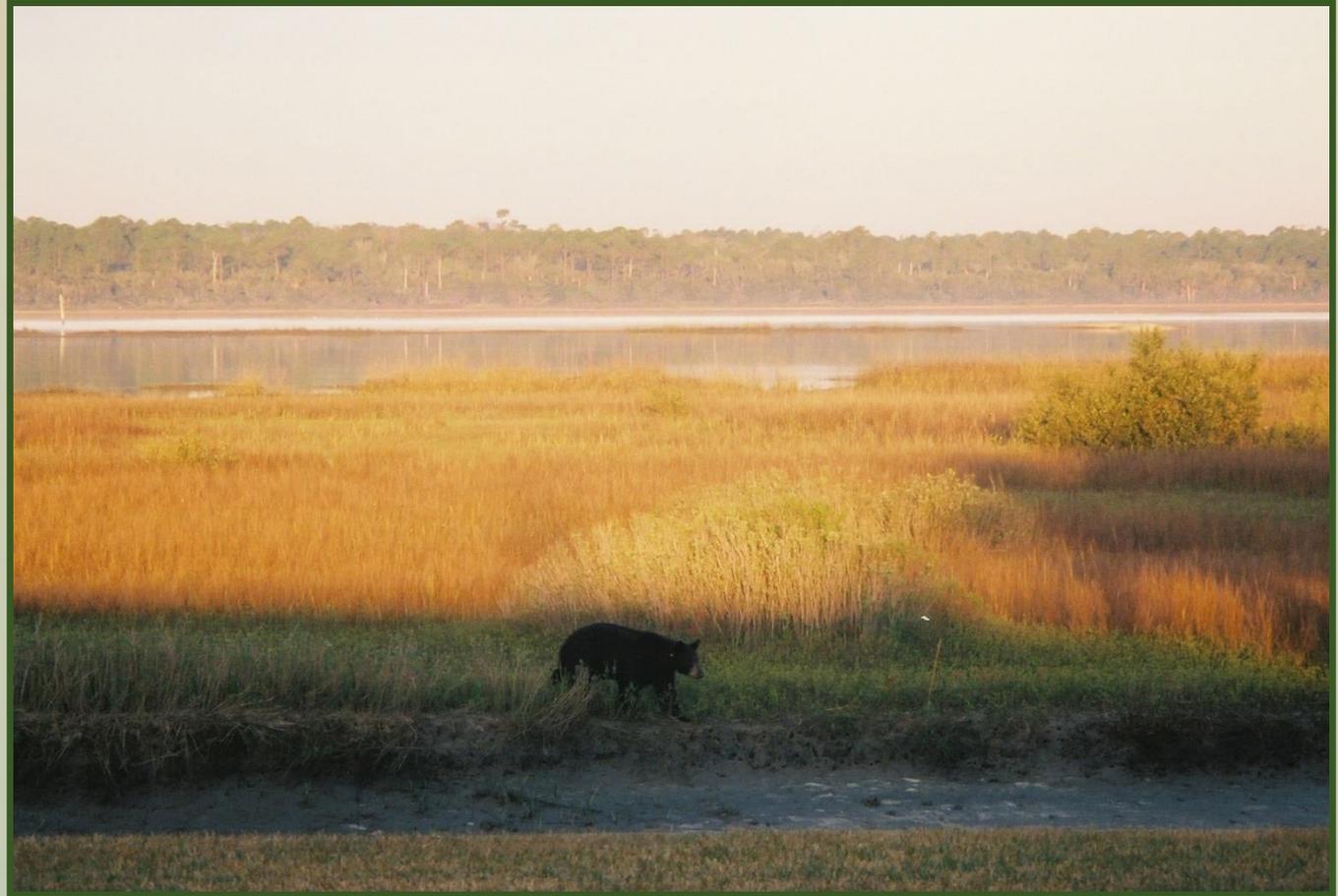
# Yearlings

- Young bears are separated from the sow at two years of age, and disperse to find their own home range.



# Black Bear Behavior

- Normally Crepuscular
- Nocturnal in neighborhoods
- Active 18 hours/day in Fall



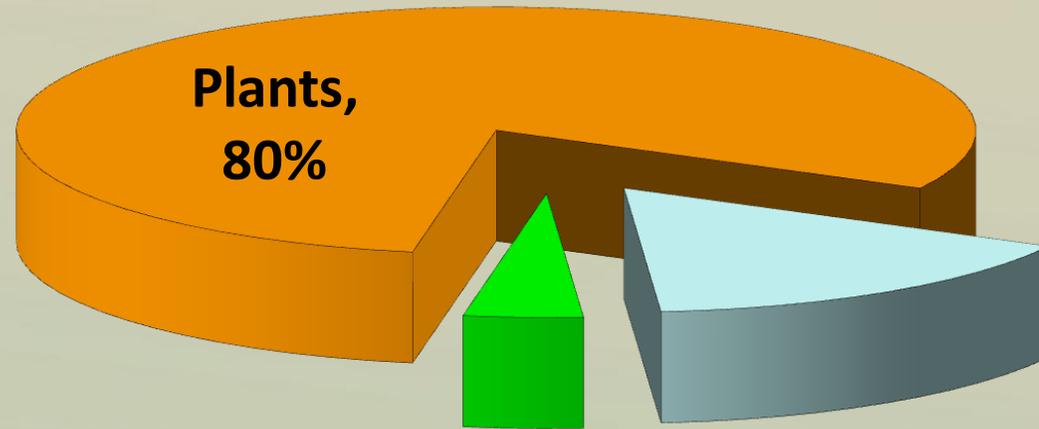
# Black Bear Senses

- Black bears have ok eyesight, not as good as humans. Recent research indicates bears have color vision.
- Bears have acute hearing and an excellent sense of smell.
- Bears have a strong “homing” instinct.

Additional information can be found at [www.MyFWC.com](http://www.MyFWC.com)



# Diet



**Animals,  
4%**



**Insects,  
16%**



**Good bear**



**Bad cat**



# Black Bear Behavior

When confronted by other bears and humans their behavior can be displayed in many ways.

Avoidance

- Runs



# Black Bear Behavior

## Curiosity

- A bear that stands straight up on two back legs is usually trying to get a better look or smell of something. It is NOT an aggressive posture.



# Hot aggression - Defensive



# Bear approaches you



- If Defensive
  - = Stand ground
  - = Slow movement
  - = Arms up
  - = Hey Bear
- If Predatory
  - = Be aggressive
  - = Yell
  - = Swing arms
  - = Fight back



# Residential Garbage

- Secure in building until morning pickup
- Retrofit cans
- Build caddy
- Buy bear-resistant cans

Bear resistant containers  
and plans for building at:  
[MyFWC.com/Bear](http://MyFWC.com/Bear)



# Bird Feeders

Calories in 1 pound of black sunflower seeds = 458 acorns



# Camping in Bear Country

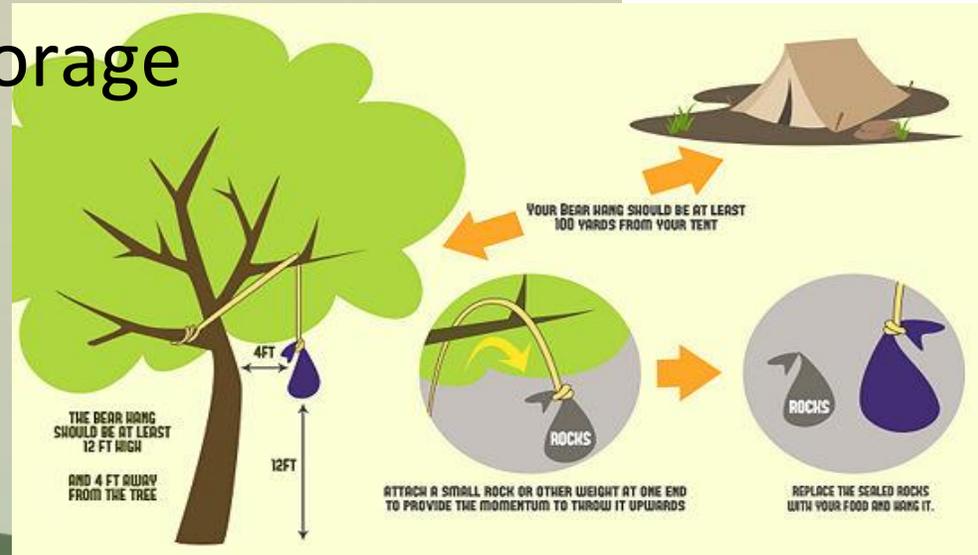
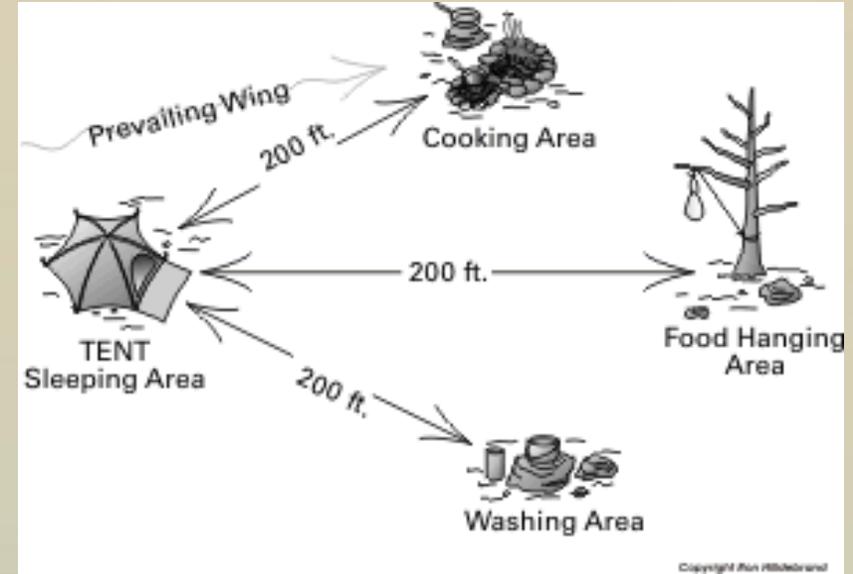
- Do your homework
  - Laws
    - Most campgrounds have some rules about food storage or feeding.
  - Requirements
    - Have the proper bear resistant equipment if required.
  - Where are the bears
    - Stay away from heavy bear use areas, trails, and open garbage sources.



# Setting up Camp

## Do Store attractants:

- In vehicles
- Hung in trees away from camp sites
- In bear resistant storage products



# Setting up Camp



# Securing Attractants

## Do Not store attractants in your tent:

- Any type of food
- Toothpaste
- Candy
- Snacks
- Dirty baby diapers
- Pet food



**Declare your camp site a food free zone**



# Attractants and Precautions

- Cook food away from tent.
- Store clothes that you cooked food in away from tent.
- Glean grill, don't throw scraps in the fire.
- Secure coolers, in vehicles or trailers.
- Never sleep without a tent in bear country.



# Feeding Bears is Illegal

- [68A-4.001](#) “(a) Intentionally feeding bears is prohibited except as provided for in this Title.  
(b) Placing food or garbage, allowing the placement of food or garbage, or offering food or garbage that attracts bears and is likely to create or creates a nuisance is prohibited after receiving prior written notification from the Commission.”



# Warning Signs

Actual signage posted by officials



# Warning Signs

- Bear Scat
- Tracks



- Maintain awareness
- Clear the area or avoid sites with warning signs



# Pets



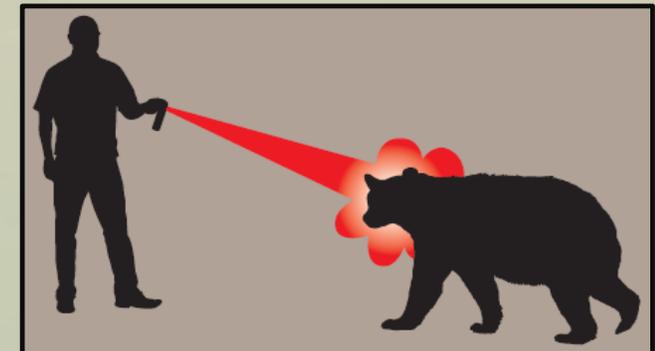
Photo by Charles Towne

- Coyotes, foxes, bobcats, bears and panthers can attack pets.
- Pet food is also food for wild animals, keep it secure.
- Pets left unattended outside are more prone to attacks.
- Walk pets on a leash.
- Carry a stick or bear spray when walking pet.
- Do not break up a pet/wildlife fight using your body.



# General Awareness

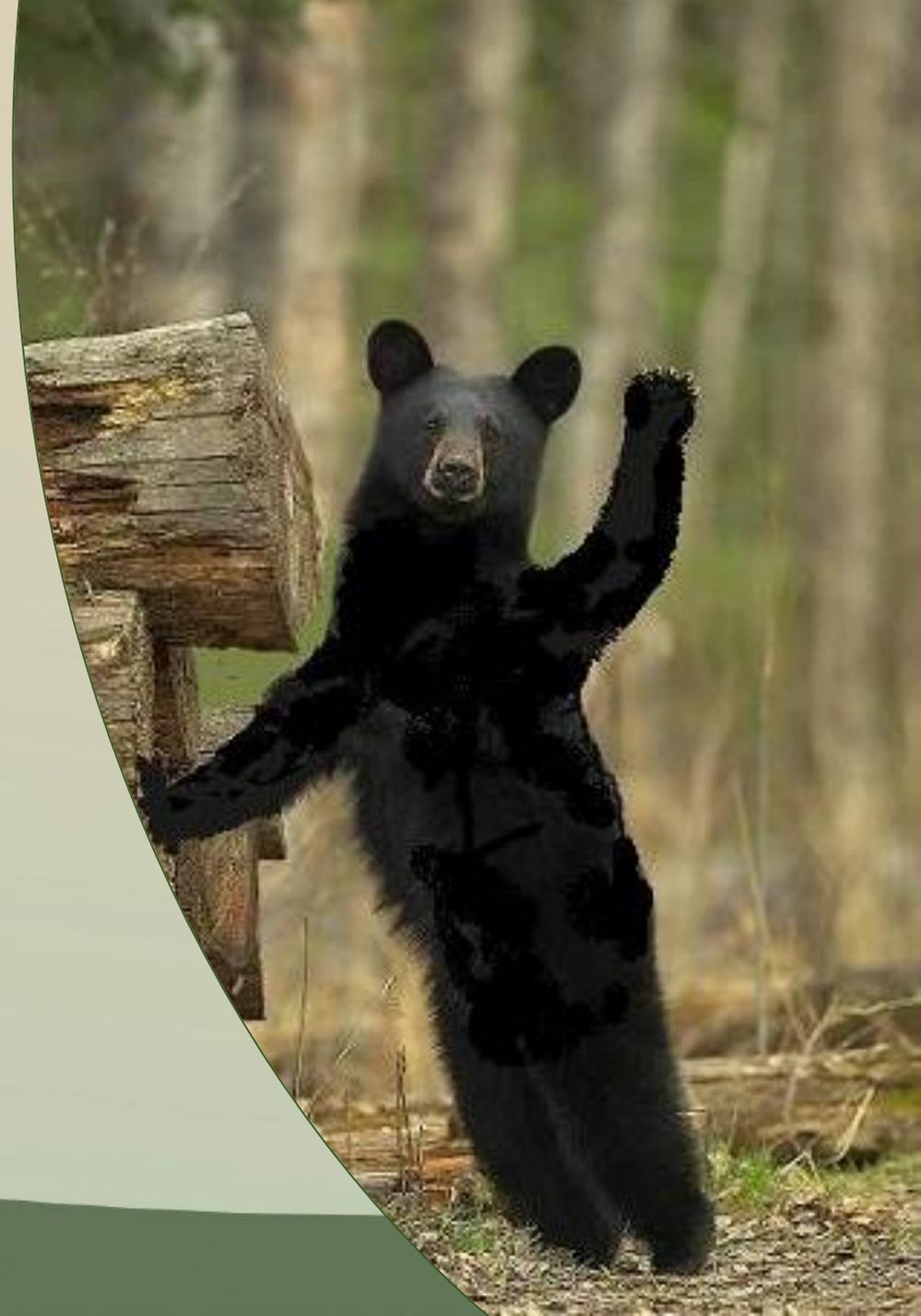
- **Always hike or explore in groups...**you are less likely to have an encounter when there is more than one person.
- Pick up small kids and small pets.
- Stay calm, do not run.
- Fight back if the bear is attacking you.
- **Carry bear spray**, and know how to use it.
- Pay attention to the warning signs.



Thank You



Questions?



# Coyotes (*Canis latrans*) in Florida



Presented by:  
Angeline Scotten  
FL Fish and Wildlife  
Conservation Commission



Produced by: Martin Main, PhD  
University of Florida, IFAS  
mmain@ufl.edu

# Coyote range expansion- eradication of wolves



Red wolf; photo courtesy of B. McPhee



Gray wolf; photo courtesy of USFWS



# Coyote range expansion- Conversion to an agricultural landscape



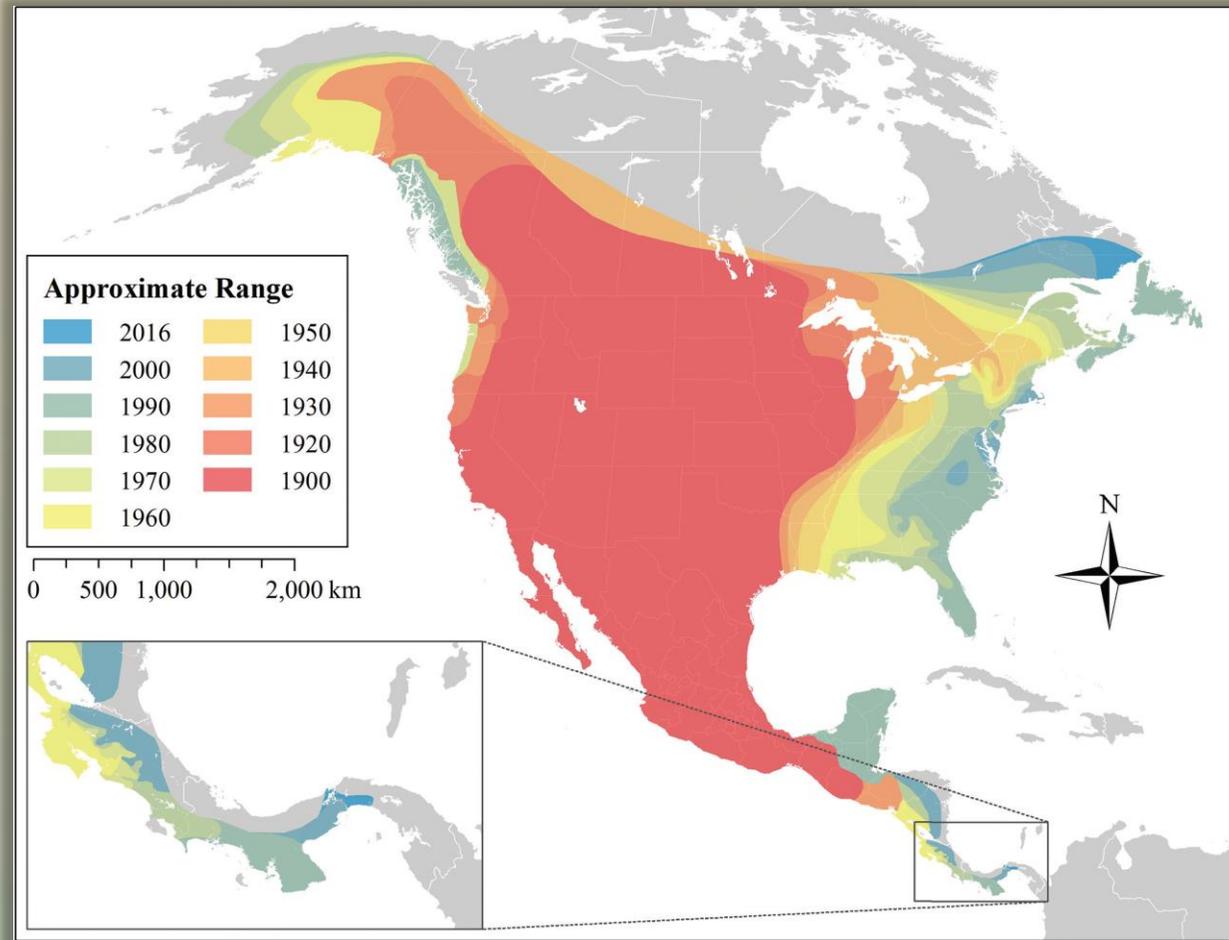
FWC photo- Polk City



FWC photo- Sebring



# History of the spread of coyotes across North and Central America



Hody & Kays. 2018



# History of the spread of coyotes in Florida

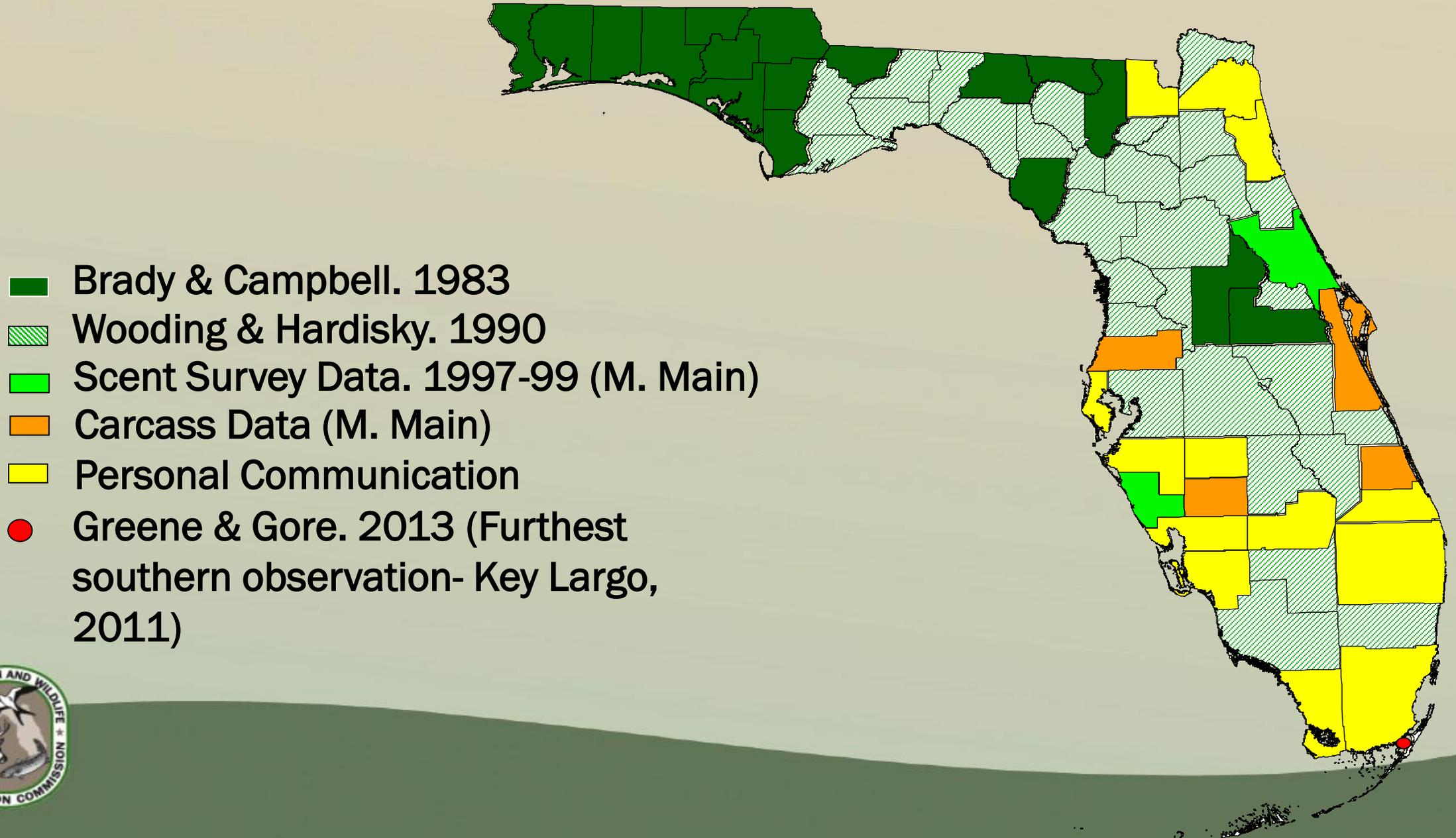




Photo courtesy of Carolyn Beisner- Lake Worth Lagoon



# Coyote biology

- Omnivorous, highly adaptable
- Adults 25-40 lbs.
- Home range size:  
natural areas ~15 mi<sup>2</sup>,  
urban areas ~3 mi<sup>2</sup>
- Mate in Winter
- Pups in Spring
- Litter size ~6 pups
- Both parents care for  
young



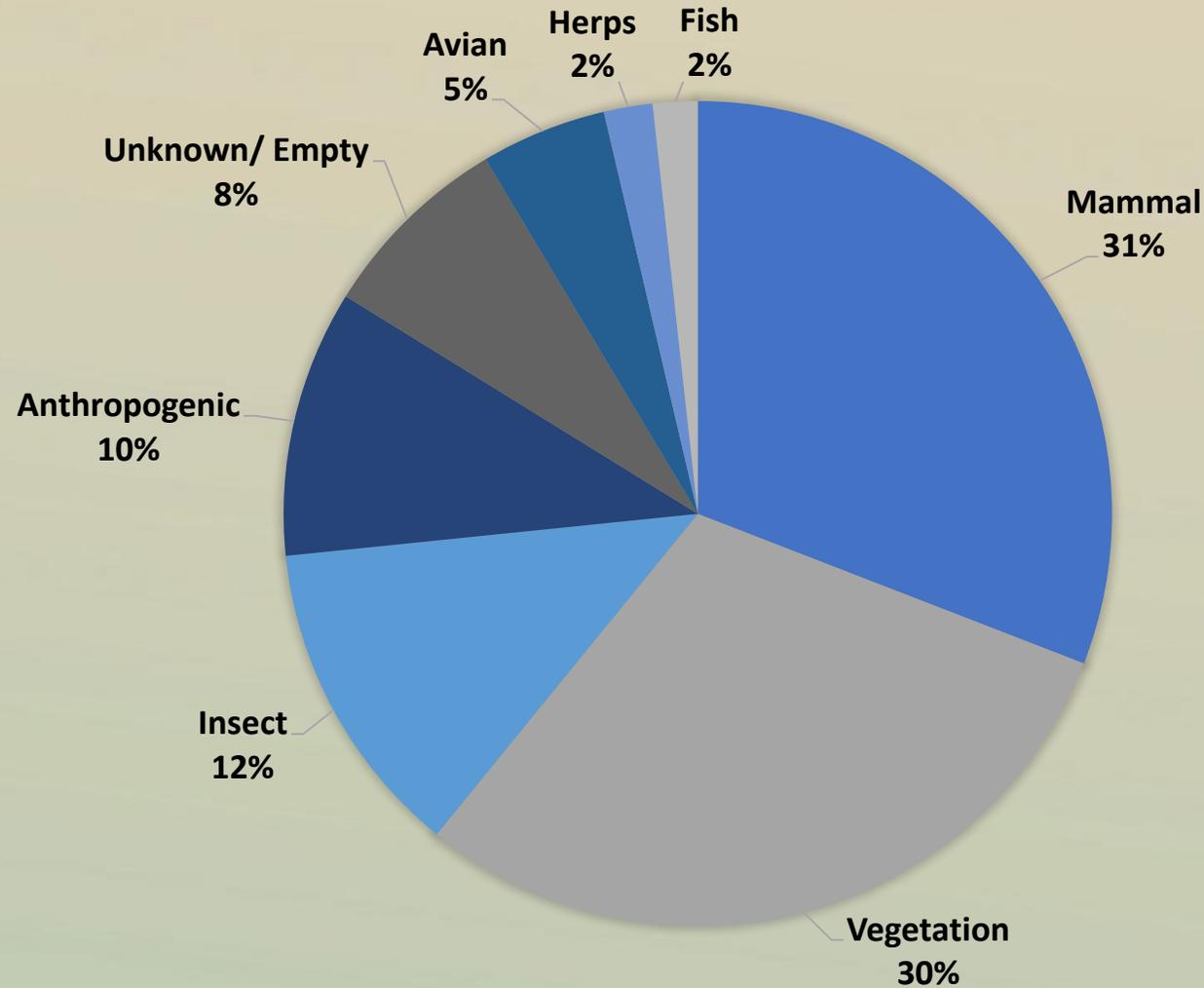
FWC photo- Clearwater



FWC trail camera photo- Big Cypress



# Coyote diet study (2011- 2014)



Frequency of occurrence of contents in coyote stomachs

# Coyote diet study



Obvious dog food found in the stomach of coyote 1024 trapped in NAS Pensacola on 10/12/2011 (USDA)



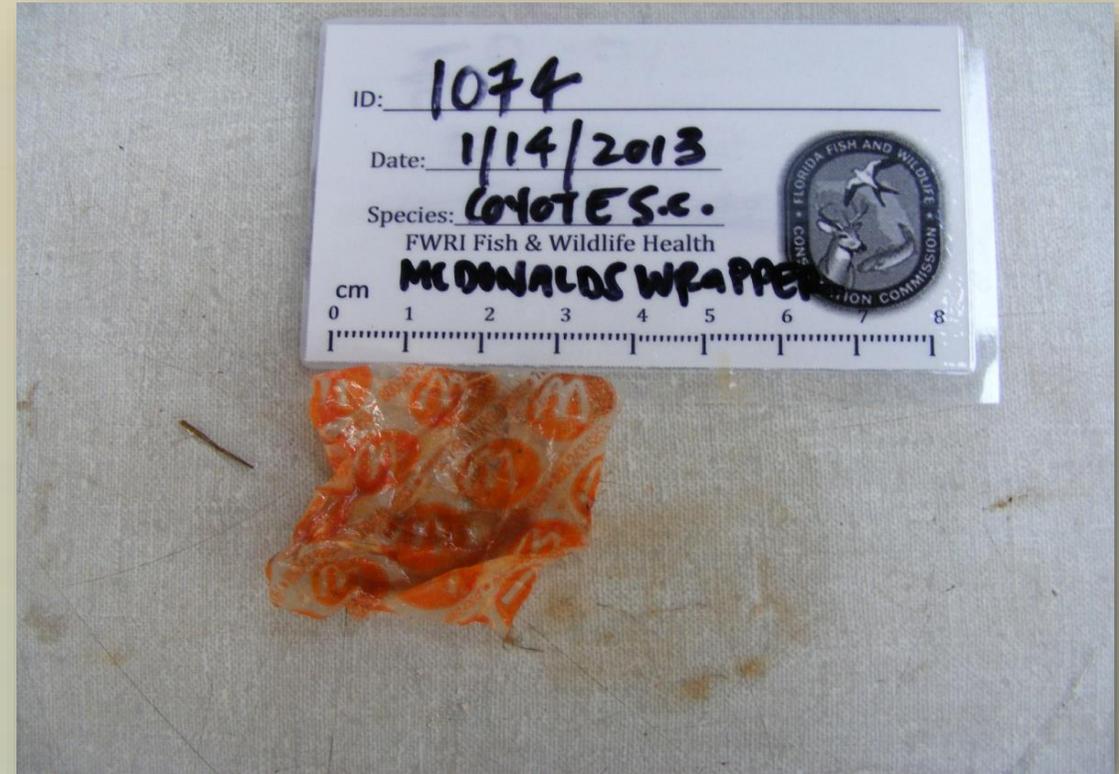
Cooked chicken found in coyote 1081 hit by car in Pinellas county, unknown date



# Coyote diet study



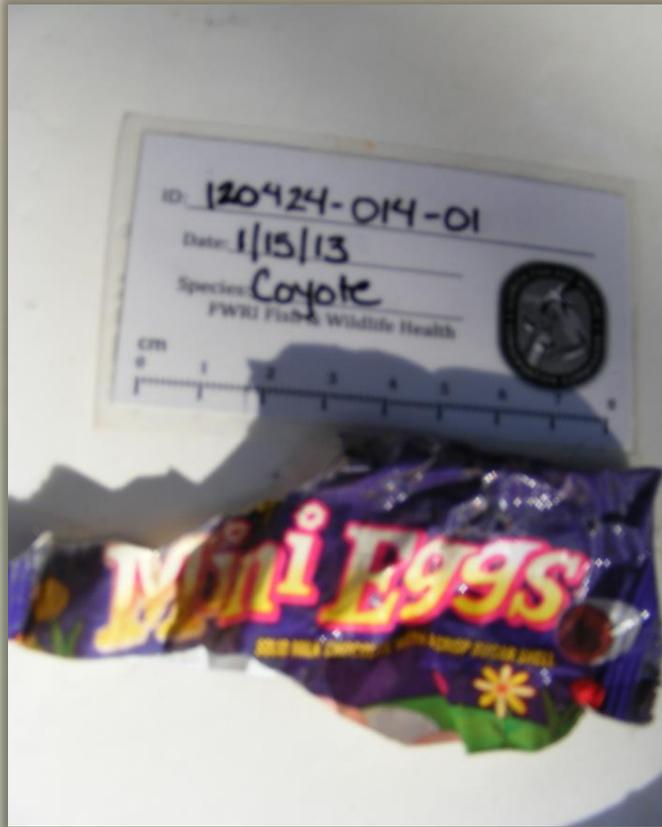
Stomach of coyote 1069 shot in Polk county on 9/18/2012, stained likely by American pokeweed



McDonald's butter wrapper found in stomach of coyote 1074 (H. Jones, FWC) hit by car in Ocala National Forest 11/18/2012



# Coyote diet study



Candy wrapper found in coyote 1051, trapped in St Joseph Peninsula State Park (USDA) on 4/15/2012



A total of 47 small mammals were found in the stomach of coyote 1012, shot in Morriston on 2/7/2012



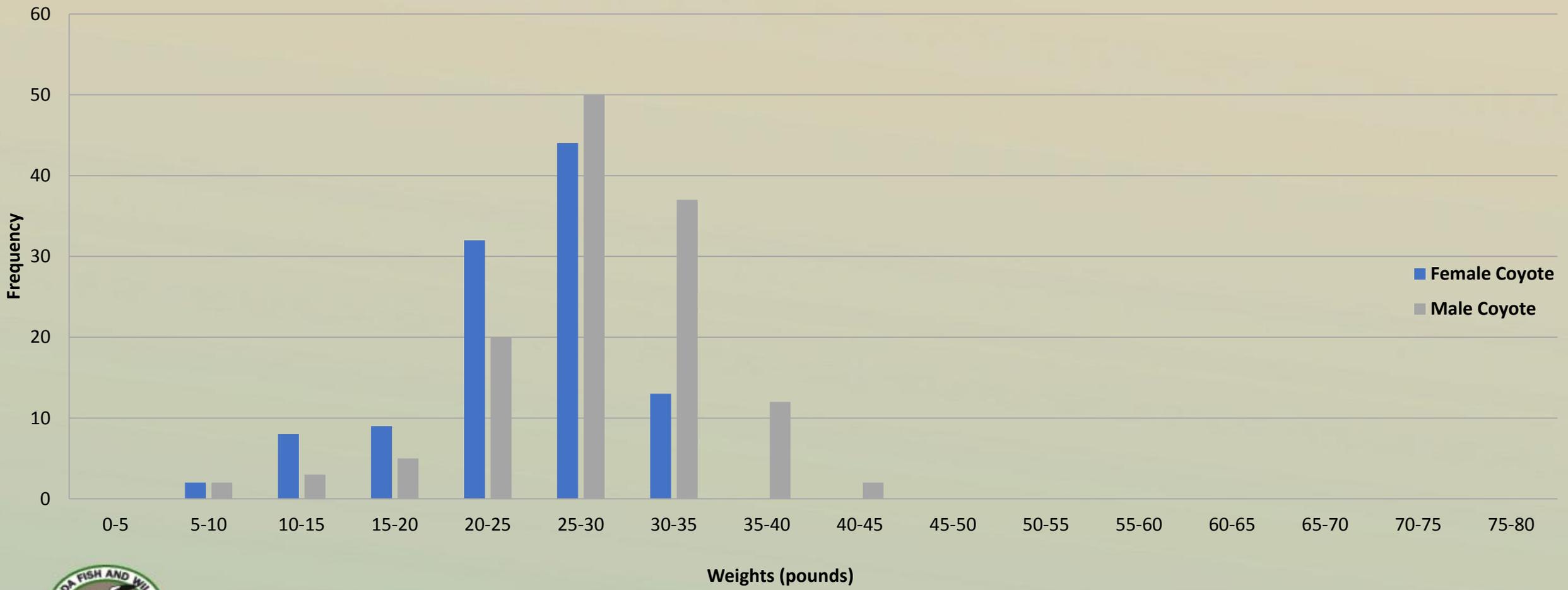
# Coyote diet study



Substantial amounts of insects found in the stomach of coyote 1052, trapped at NAS Pensacola on 4/16/2012 (USDA)



# Coyote diet study (2011- 2014)- weights n=239



# Coyotes in Florida: ecological benefits?



*Robert Steagall*

Photo courtesy of Robert Steagall- Sanibel Island



# Aesthetic values of wildlife



# Control of smaller predators



Opossum, raccoon, gray fox, domestic cat, Norway rat



# Effects of coyotes as predators



Northern bobwhite, prairie warbler, loggerhead shrike, mottled ducks, roseate spoonbills; FWC photos



# Coyotes in Florida: negative ecological impacts?



FWC trail camera photo- Miami



# Competition with native predators? Florida panther (*Puma concolor coryi*)



FWC photo

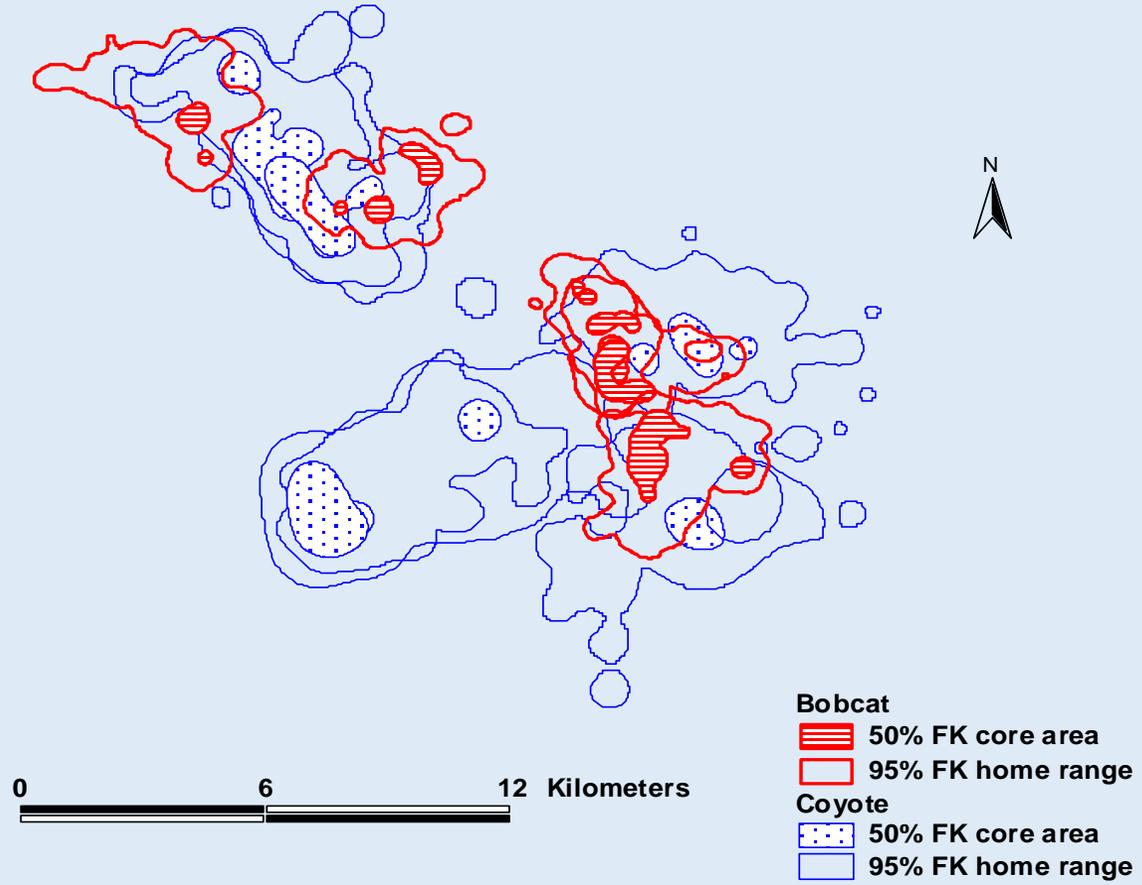


# Competition with native predators?

## Bobcat (*Lynx rufus*)



FWC trail camera photo- Riverview



Thornton et al. 2004





2/24/2018 10:29 PM



2/25/2018 05:22 AM



FWC trail camera photos- Lithia

# Predation upon rare & endangered species



Snowy plover, burrowing owl, gopher tortoise & loggerhead sea turtles; FWC photos



# Coyotes in Florida: Human conflicts



Photo courtesy of Beverley Batts- Panama City



FWC photo- Clearwater



# Coyotes in Florida: Human conflicts

Do coyotes have an undeserved public reputation?

Common myths and misconceptions:

- Size
- Packs
- Coy-dogs/ Coy-wolves
- Disease
  - Rabies
  - Mange
  - Distemper



FWC photo- Clearwater



# Urban coyotes and pet loss



FWC photo- Clearwater





2/24/2018 10:29 PM



2/25/2018 05:22 AM



2/25/2018 05:14 AM



FWC trail camera photos- Lithia

# Dog attacks vs. coyote attacks

- Coyotes (USA and Canada 1970- 2015):
  - 8.9 attacks/yr.
  - 2 fatalities/45 yrs.
- Domestic dogs (USA):
  - 1,000 emergency room visits/day
  - 5 million cases/yr. require medical treatment
  - 181 fatalities during 2013-2017



[www.dogsbite.org](http://www.dogsbite.org)



# Can we get rid of coyotes?

NO

- Eradication efforts
- Breeding dynamics
- Territorial with high replacement
  - Adaptable and intelligent
  - Here to stay



# Prevent problems with coyotes- Secure Attractants

- NEVER feed coyotes!
  - Anything that can attract a dog, cat or raccoon can attract a coyote
- Secure garbage
- Clean up pet food, fallen fruit & bird feeders
- Keep cats indoors
- Keep dogs on leashes & supervised outdoors (especially small dogs)

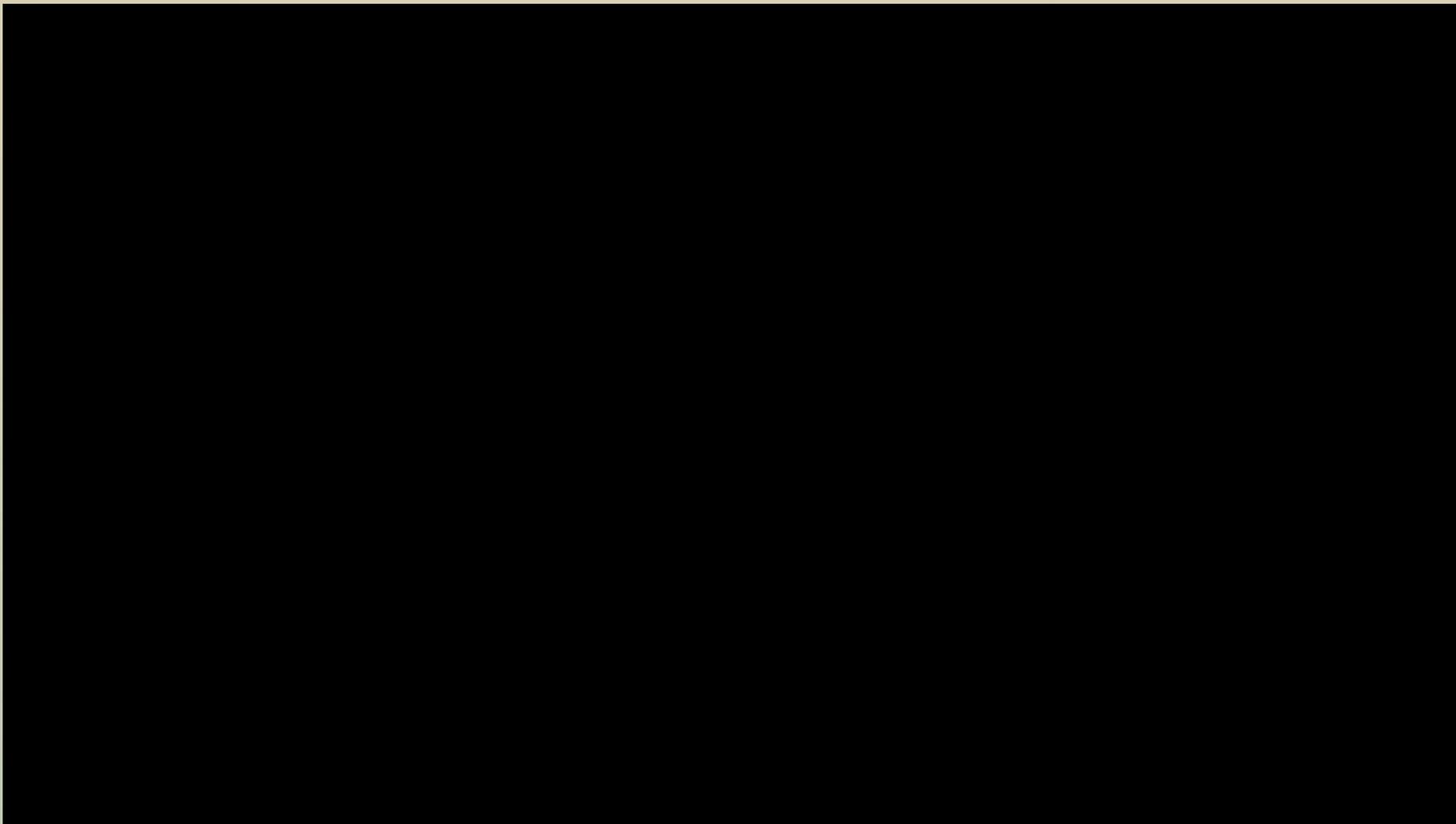


# Prevent problems with coyotes- Hazing

- Human Dominance
- Rocks & sticks
- Whistles
- Pots & Pans
- Car & air horns
- “Coyote shaker”
- Motion sprinklers
- Water pistols
- Motion lights
- Firecrackers
- Bear spray



# Prevent problems with coyotes- Hazing



Clearwater; February 2019

# Coyotes in Florida: some facts

- Adult coyotes weigh 25-40 pounds
- Coyotes occur in every state and nearly every large city in the U.S.
- Attacks by coyotes on humans are exceedingly rare
- Coyotes will kill cats and small dogs
- Coyotes can carry rabies, but it is rare



FWC trail camera photo- Riverview



# Coyotes in Florida: some advice

- Never feed coyotes or any wild animal
  - It is illegal to feed coyotes in Florida!
- Prevent access to garbage and pet food
- Keep cats indoors, have small dogs on a short leash or in a well fenced yard
- Follow hazing recommendations to consistently frighten coyotes away
- If a coyote approaches, lift small pets and children off the ground and be prepared to defend yourself (never run)



Photo courtesy of Dan Muccie- Estero



# Coyotes in Florida: who should you contact when there is a problem?

- FWC Northeast Regional Office (352) 732-1225
- Wildlife Alert Hotline (888) 404-3922
- Nuisance Wildlife Trapper  
<http://myfwc.com/trappers/>



# Thank you!



Photo courtesy of Reinier Munguia- Lakeland



# Florida Fish and Wildlife Conservation Commission

Angeline Scotten- Senior Wildlife Assistance Biologist  
Janelle Musser- Area Bear Biologist

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