

In and Around Naples  
**A Series of Presentations**  
 for the Collier County Library  
 by Paul Pacter

**Wildlife of  
 Southwest Florida**

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**We're going to  
 look at wildlife  
 found in the  
 Naples area.**



I am a CPA, not a scientist.  
 So my presentation is from a  
 layman's perspective.

**It's a selective look  
 at our local wildlife.**

**Comments and  
 photos will reflect**

- Where I have happened to hike.
- Wildlife I have happened to run into.
- My personal interests.



**For instance, fish  
 don't interest me too  
 much. So even  
 though SW Florida  
 is abundant in fish, they're not  
 in this presentation. Likewise for  
 crustaceans. Little about insects.**  
 However, we will talk a lot about  
 alligators, turtles, and birds.



**The animal kingdom  
 is divided into 2  
 groups:**

- Vertebrates:  
**Backbones and  
 internal skeletons.**
- Invertebrates:  
**No backbone or  
 internal skeleton.**



**Vertebrates include all  
 mammals, birds, reptiles,  
 amphibians, and fish.**

Currently about 69,963 species  
 of vertebrates. 5% of total  
 animal species.

Size ranges from tiny frog to a  
 whale.



**Most of the Southwest Florida  
 wildlife we will look at today are  
 vertebrates.**

I took virtually all of the photos.  
 The few I didn't are marked.

**We will look at the animals in a  
 sequence that I hope makes this  
 presentation interesting. For me,  
 that means starting with alligators!**

**Invertebrates include:**

Type	Number of species
Insects	1,000,000
Arachnids (spiders)	102,000
Snails	85,000
Crustaceans	47,000
Clams	20,000
Corals, squids, and others	<u>72,000</u>
<b>Total Species Roughly</b>	<b>1,300,000</b>

## American Alligator

**Scientific name:**  
*Alligator mississippiensis*.

**Largest reptile in North America.**

**Live only in SE USA:** From East Texas to North Carolina.  
A few in northeast Mexico.



## Alligators are aquatic, cold-blooded

- Primarily aquatic.
- Spend time on land, esp. to get warmth from the sun.
- Valves to close ears and nostrils when submerged.
- Can stay under water 45-60 minutes.



### Size

Weight in the wild (more in captivity)

- Average adult: 790 pounds.
- Some are over 1,000 pounds.
- Males 30% larger than females.
- Largest in Florida: 1,043 pounds.

Length

- Average male adult 13 ft. Female 10 ft.
- Largest in Florida: 14 feet, 4 inches.
- Largest 19.2 feet (Louisiana).

## Where Are Gators Found in the US?



## How Many Gators in the US?

- Estimated 5,000,000 in Southeast United States.
- Largest populations are in:
  - Florida (1,250,000).
  - Louisiana (1,250,000).
  - Texas (500,000).
  - Georgia (250,000).



### Life Expectancy:

- 30-50 years in the wild.
- 60-80 years in human care.

### Appearance – Color

- Olive-black skin.
- Bony scales (scutes).
- Hatchlings and juveniles are black streaked with pale yellow stripes. Stripes help camouflage. Disappear as adults.



## Habitat

### Fresh water.

- Prefer lakes, slow-moving rivers, and wetlands (swamps, marshlands, etc).

### Low tolerance for salt water.

- But sometimes found in brackish (mixed salt-fresh) water.

## Mobility

- Mainly swimming (natatorial).
- Can move on land by a variety of means: Walk, run (short distances), and even crawl. *Next Slide*
- Tail: A long, powerful tail helps propel alligators through water.
- Webbed feet: Also help propel alligators through water.

Alligator "High Walk"  
Turner River Road



## Buoyancy

- Float just under water. Only eyes & nostrils visible.
- Control buoyancy by inflating and deflating lungs.
- Hide, sneak up on prey.
- Special muscles around lungs to help them float, dive, barrel roll.

Monument Lake Campground  
Big Cypress National Preserve



## Generalist Carnivores

### Diet – Juveniles

- Begin eating insects after birth.
- Then crayfish, small fish, frogs.
- Then other small animals.

### Diet – Adults

- Fish, invertebrates, frogs, birds, mammals.
- If gator is big enough, will eat deer, hogs, bear, etc.

**Cannibalistic! Eat other alligators.**

## Use sharp teeth to capture prey:

- Jaws can crack a large turtle's shell.
- But cannot use jaws to chew. Swallow in chunks.
- Sometimes swallow rocks to help grind up food internally.

## Eating Habits – Adults:

- Lurkers, not hunters.
- Wait for something edible to swim or walk by. Then lunge!

## Alligators Are Ectothermic - Cold Blooded.

- Rely on external sources of heat to control body temperature.
- Regulate body heat by:

- Basking in the sun.
- Digging holes in mud to trap heat.
- Moving to areas with warmer or cooler air or water temperatures.



Big Cypress Bend  
Fakahatchee St Park

## Alligator Basking at Big Cypress Bend



## Attitude toward humans:

- Become unsettled. Ignore humans. Or walk or swim away.
- Rarely go after a human unprovoked.
- Can outrun human in first 20-30 feet of exiting water.
- Since 1970s: 23 fatalities and 400 unprovoked alligator bites in Florida.

If you notice an alligator approaching people, call FWC at 866-392-4286.

## Do Not Feed Alligators!

It's illegal. Why?

Alligators are wild animals. Naturally afraid of humans.

Giving them food only makes them bolder and encourages them to seek out people. Attack for food.

Also it alters their natural diet in an unhealthy way.



## Do you want to taste alligator?

- Cracklin Jacks, Collier Blvd. →
- Deep Lagoon, US41 at Vanderbilt.
- Alice Sweetwater's, Airport Rd.
- Old Naples Pub, 255 13th Av South.
- Mudbugs Cajun Kitchen. Sanibel.
- Everglades City Rod & Gun Club.



## Reproduction

Sexual maturity determined by gator's size (length) rather than age.

**Male:** 7 feet (ages 8-12).

**Female:** 6 feet (ages 10-15).

**Alligators mate:** Once a year.

**Normally:** April to June.

Alligators Mating  
Big Cypress Bend  
Green Heron Lake



## Nesting

- Female builds nest in vegetation next to water.
- Clutch of 20-50 eggs (average 38).
- Incubation 60-70 days.
- Female stays near nest. Fiercely protective of nest and hatchlings.



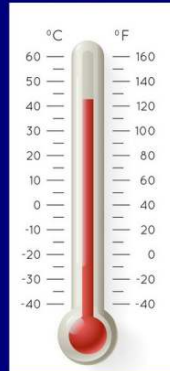
Hatchling at  
Corkscrew Swamp

**Hikers be especially cautious!**

## Sex of offspring

- Temperature in the nest in first 3 weeks after laying eggs determines sex of the offspring.
- Temperatures above 93 degrees will produce males.
- Temperatures of 86 degrees and below produce females.

> 93°F = M  
< 86°F = F



## Survival

Number of eggs laid by female	38
Number of those that hatch	24
Number of those that live to 1 year	10
Number of those that become sub-adults (> 4 ft long)	8
Number of those that reach maturity (> 6 ft long)	5

## Legal status

- By the 1950s: **Almost extinct due to endless hunting.**
- 1966: **Gained protective status under Endangered Species Preservation Act.**
- 1980s: **Population recovered.**
- 1987: **Removed from "endangered" list.**
- Today: **Classified as "threatened" due to similar appearance to a threatened animal, namely the crocodile. This allows state regulation of hunting etc.**

## Fun Fact

### Alligator Teeth

**American alligators have 70-80 teeth.**

- All pointy (no flat like humans).
- As an alligator's teeth wear down or fall out, new ones come in. An alligator can go through 3,000 teeth in a lifetime.
- Over 2,000 pounds per square inch of bite force.



## Birds

Florida Ornithological Society identifies 531 species in Florida.

That's out of around 10,000 species of birds worldwide.

[www.fosbirds.org/florida-bird-list.html](http://www.fosbirds.org/florida-bird-list.html)

Today we will look at only a handful, mostly larger ones.



Birds are warm-blooded vertebrates with:

- Feathers.
- Toothless beaked jaws.
- Hard-shelled eggs.
- High metabolic rate.
- Strong yet lightweight skeleton.

Found worldwide.



Wings = modified forelimbs. Give birds the ability to fly.

Let's look at some birds we're likely to see in the Naples area...



## Anhinga

Large aquatic bird.

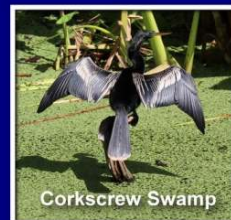
Prefers fresh water.

Wingspan nearly 4 ft.

Weighs 2 to 3 pounds.

Glossy black-green body.

- Male dark black head/neck.
- Female tan head/neck.



AKA snake bird.

Swims underwater with only its neck above water.

Eats fish. Pursues prey while swimming underwater. Spears fish.

Can stay underwater 15 minutes.



Live in warm areas: Louisiana to Florida, Central America, northern South Amer. Fresh water swamps, rivers, wooded ponds, estuaries.

Anhingas in north part of their range, including Florida, will migrate. Others do not.



Webbed yellow feet for swimming. Buoyant.

Feathers soak up water which lets them dive. But they have difficulty flying with waterlogged feathers. So they perch in sun with wings spread to dry.



**CREW Bird Rookery Swamp, Naples**



**Cormorants**

**Large aquatic bird.**

**Prefers coastal salt or brackish water.**

**Year-round resident in Florida.**

**Wingspan a little over 4 feet.**



Eagle Lakes Park, Naples

**Looks similar to anhinga, but...**

- Anhinga glossy green with white.
- Cormorant mostly dark black.
- End of beak curves down. Anhinga's is straight.
- Neck thicker than anhinga.



Eagle Lakes Park, Naples

**Cormorants perch in sun with wings spread, to dry, like anhinga.**



Ding Darling National Wildlife Refuge, Sanibel

**Barred Owl.  
AKA Hoot Owl.**

**Native to Eastern US from Canada to all of Florida.**

**Large, stocky owls.  
Rounded heads. No ear tufts.**



Big Cypress Bend

**Barred Owl**

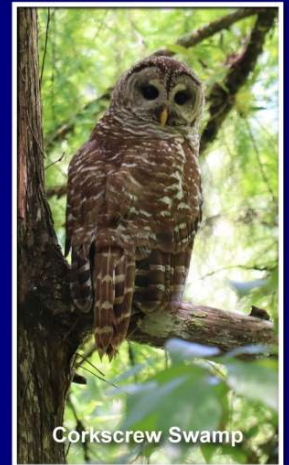
**16 to 25 in in length.**

**Wingspan 38 to 49".**

**Weight about 1.5 pounds.**

**Mottled brown and white overall.**

**Dark eyes.**



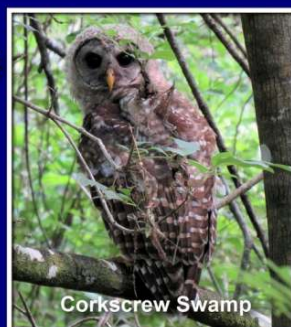
Corkscrew Swamp

**Eat small mammals such as birds, reptiles, and amphibians.**

**Good night vision.**

**Live in mature forests:**

**Big Cypress. Corkscrew Swamp.**



Corkscrew Swamp

**At Big Cypress Bend,  
Fakahatchee Strand  
Preserve  
State Park.**



## Big Cypress Bend



## Hérons

- Wading birds.
- Long-legs.
- Long-necks.
- Freshwater and coastal.
- Long pointy beaks.
- Many varieties.



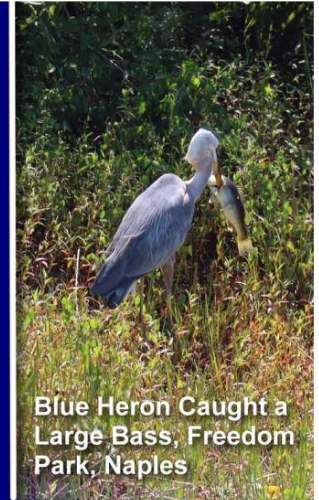
Blue Heron  
Big Cypress Bend

Long beaks, point straight out.  
Found in all continents except Antarctica. All US states.  
Mostly migratory, though some are sedentary.



Tricolored Heron  
Ding Darling NWR  
Sanibel

Feed while wading shallow waters.  
Eat frogs, fishes, and other aquatic animals.  
Nests constructed of sticks in bushes or trees near water.  
Usually in colonies.



Blue Heron Caught a Large Bass, Freedom Park, Naples

Stand with the neck bent in an S shape.  
Fly with the legs trailing loosely and neck retracted against the body, instead of stretching the neck out in front as most birds do.



Great Egret  
Big Cypress Bend

72 species of heron, including egrets and bitterns.  
Kinds of herons around Naples:  
– Great Egret.  
– Great Blue Heron.  
– Little Blue Heron.  
– Green Heron.  
– Night Herons.  
– Tricolored Heron.



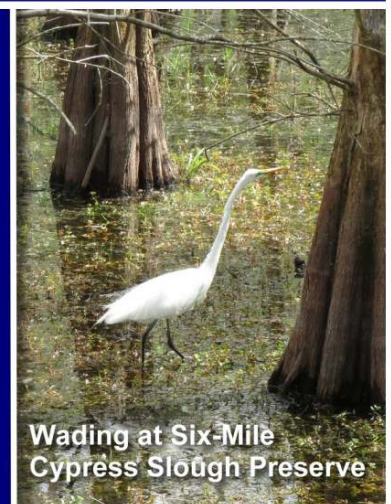
Green Heron  
Along Tamiami Trail

Great Egret  
Range spans the whole planet.  
Both salt water and fresh water habitats.



Big Cypress Bend  
Fakahatchee Strand SP

Great Egret  
3 feet tall.  
Nests in large colonies.  
Over 200,000 in North America.  
Forages in shallow water.



Wading at Six-Mile Cypress Slough Preserve

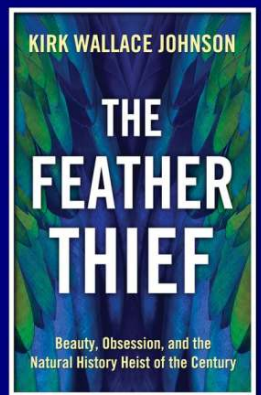


Corkscrew Swamp, Naples

Egret feathers were prized decorations for fashionable ladies' hats, clothing, and jewelry in North America 1870-1920. Hundreds of thousands were indiscriminately killed, almost wiping out the population.

### Book Recommendation

**The Feather Thief: Beauty, Obsession, and the Natural History Heist of the Century**  
by Kirk Wallace Johnson



Non-fiction with elements of a classic thriller.

### Great Egret Big Cypress Bend



### Great Blue Heron

6' wingspan.  
Year-round in Florida.  
Wades in shallow water.  
Spears fish with beak.



Big Cypress Bend

### Blue Heron Six-Mile Cypress Slough Preserve

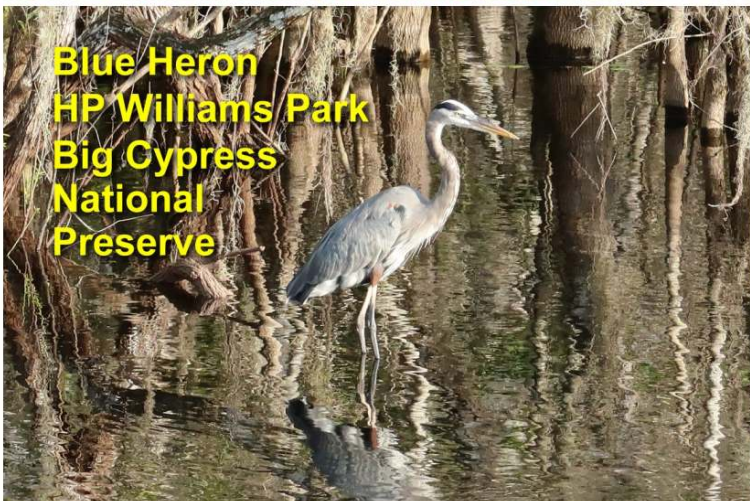


### Blue Heron

Eagle Lakes  
Park  
Naples

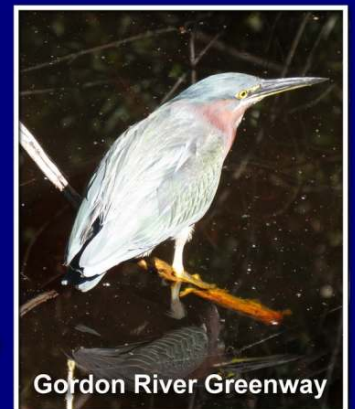


### Blue Heron HP Williams Park Big Cypress National Preserve



### Green Heron

Legs too short to wade. So sits on log, branch, or rock and waits for something to swim by.  
Or drops bait on surface of water to attract fish.



Gordon River Greenway



**Green Heron - Canal Along Tamiami Trail**



**Night Herons.  
Sleep in trees with  
wings spread  
during the day.**

- Yellow-crowned night heron.
- Black-crowned night heron.



Six-Mile Cypress Slough Preserve

**Yellow-Crowned  
Night Heron  
Corkscrew  
Swamp**



**Black-crowned  
Night Heron  
Homosassa  
Springs  
State Park**

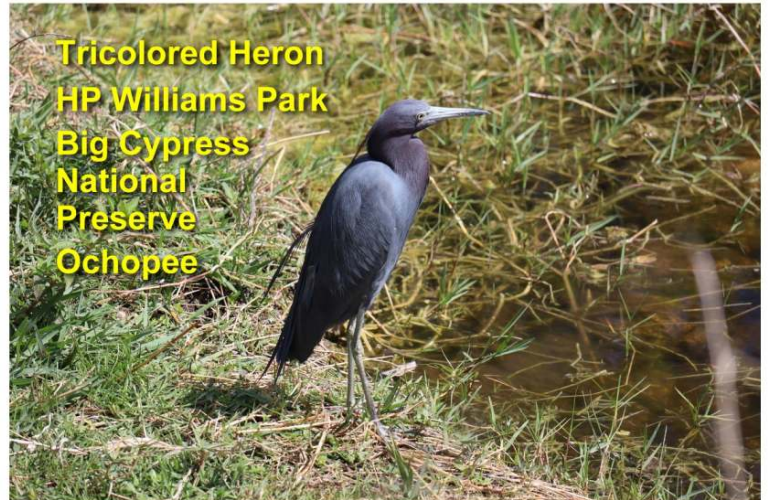


**Tricolored  
Heron.  
Blue-gray  
upper side  
and chest  
with purple  
areas, as  
well as a  
white belly.**

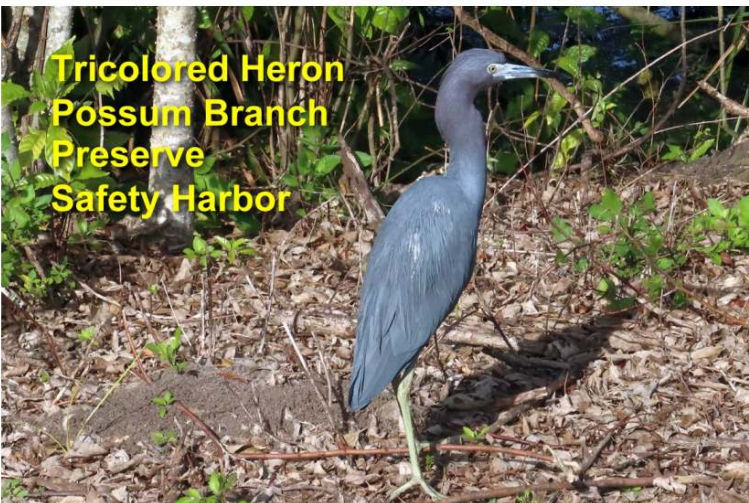


Corkscrew Swamp, Naples

**Tricolored Heron  
HP Williams Park  
Big Cypress  
National  
Preserve  
Ochopee**



**Tricolored Heron  
Possum Branch  
Preserve  
Safety Harbor**



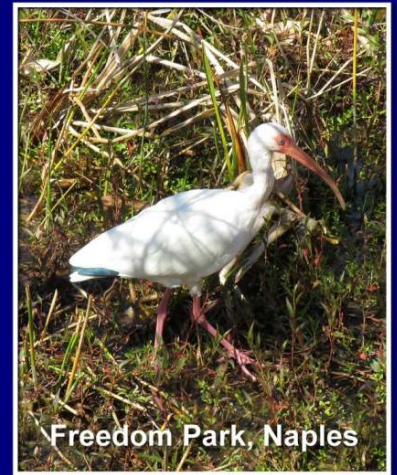
**Tricolored Heron  
Corkscrew  
Swamp  
Naples**



**Tricolored  
Heron and  
Juvenile  
Gator  
Corkscrew  
Swamp**



**White Ibis  
Long-legged  
wading bird.  
Also forages in  
grass and  
marshes.  
In Florida we  
have mainly  
American White  
Ibis.**



Freedom Park, Naples

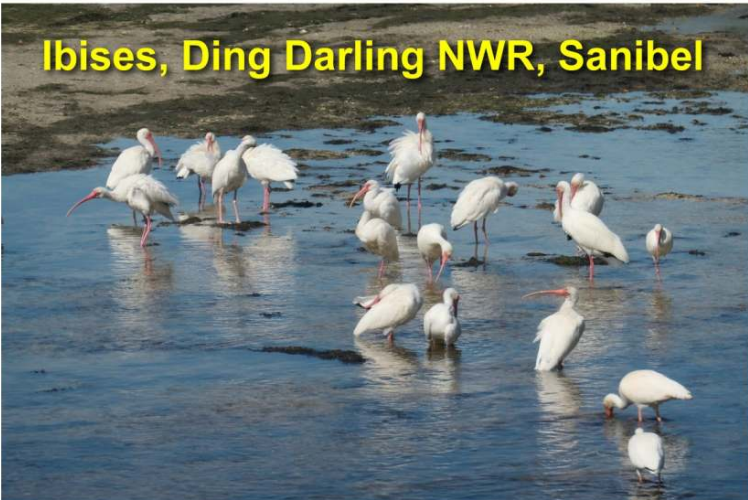
**American White Ibis  
Found throughout Florida and  
along the Gulf and Atlantic  
coasts Texas to Carolinas.  
Eat fish, insects, crayfish, and  
other crustaceans.  
Forages and nests in colonies.**

**Juvenile  
ibises, until  
age 2, are  
brown rather  
than white.  
Feathers  
become  
white.**



Corkscrew Swamp, Naples

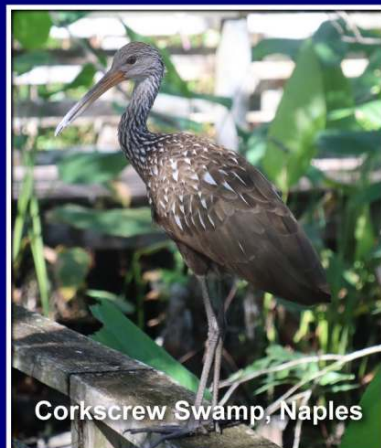
**Ibises, Ding Darling NWR, Sanibel**



**Ibis  
Corkscrew  
Swamp  
Older juvenile.  
Feathers have  
begun to  
turn white.**



**Limpkin  
Large wading  
bird related to  
rails and cranes.  
30 inches long.  
Wingspan 40-42  
inches.**



Corkscrew Swamp, Naples

**Dark brown with  
white markings  
head, neck, and  
upper body.  
Found mostly in  
wetlands in warm  
parts of Americas.  
Florida is only  
place in USA.**



Limpkin  
John Chesnut Park  
Palm Harbor

**Limpkins  
feed on  
molluscs,  
dominated  
by apple  
snails of the  
genus  
Pomacea.**



**Pelicans  
Large water  
birds.  
Long beak.  
Large throat  
pouch used for catching prey  
and draining water from the  
scooped-up contents before  
swallowing.**



**Two kinds in Florida:**

**Brown  
Year-round  
resident.**



**White  
Winters in Florida.  
Rest of year in the  
northern states  
and Canada.**



**Brown Pelicans  
3 to 5 feet in  
length.  
Wingspan 7 feet.  
7 to 8 pounds.  
Bill is over 1 foot  
long. Massive.**



**Pelicans are  
strictly marine  
birds. But avoid  
the open sea.**

**Atlantic Coast from  
New Jersey to the  
mouth of the  
Amazon River.  
Gulf. Pacific.**



**Pelicans  
Grayish-brown  
with dark belly.  
Feed by diving  
into water.  
Mainly fish.  
Some  
crustaceans.**



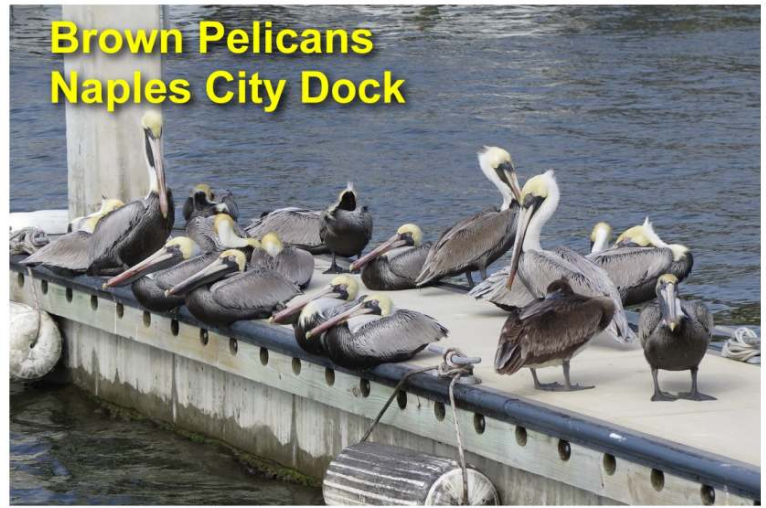
**Brown Pelicans  
Ten Thousand Islands NWR**



**Brown Pelicans**  
**Ten Thousand Islands Natl Wildlife Refuge**



**Brown Pelicans**  
**Naples City Dock**



**American White Pelican**  
**Much larger than their brown cousins.**

**6 feet in length.**

**10-foot wingspan, the greatest of any bird in North America.**



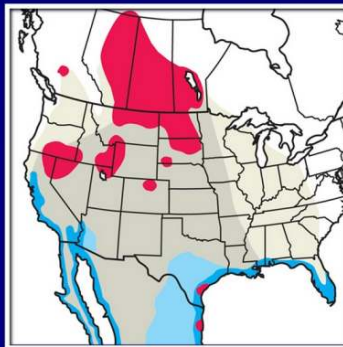
**White Pelican**  
**Beak 15". Larger than brown.**  
**White plumage.**  
**Weight up to 30 pounds.**



Ding Darling National Wildlife Refuge, Sanibel

**American White Pelican**  
**Breed in interior northern states and Canada in summer.** ●

**Migrate south to the coasts, Central and South America in winter.** ●



**White Pelican, Homosassa Springs SP**

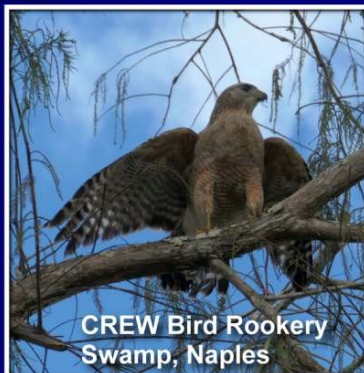


**Red Shouldered Hawk**  
**Medium-sized raptor.**

**Raptor = bird of prey. They aggressively seize small mammals.**

**1.3 pounds.**

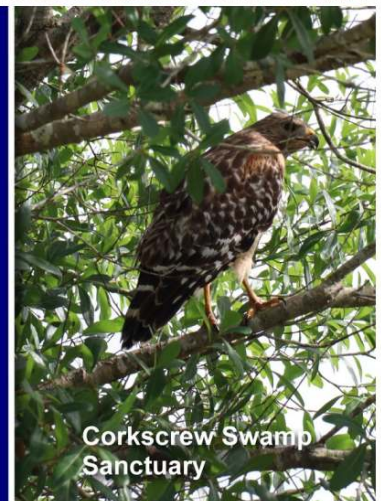
**24 inches long.**



CREW Bird Rookery  
Swamp, Naples

**East coast ones:**  
Range from southern Canada to Florida. Most of these migrate to Mexico in winter. But in Florida they are year-round residents.

**West coast ones:**  
Non-migratory.



Corkscrew Swamp  
Sanctuary

**Red-shouldered hawks are forest raptors. Kill prey by dropping on them from the air. Mainly eat small mammals, lizards, snakes, and amphibians.**



Corkscrew Swamp Sanctuary, Naples

**Amazing!**

**John James Audubon's drawing of a red-shouldered hawk in 1827. And my photo in 2021.**



Corkscrew Swamp

**Osprey  
Large raptor.  
Raptor = bird of prey (aggressively seize their prey).  
Raptors include: Eagle, osprey, owl, vulture, falcon, caracara, hawk.**



Naples Preserve

**Osprey  
More than 24-inch length.  
2-foot wingspan.  
Diurnal (active during the day).  
Keen vision.**



Lovers Key State Park  
Black Island Trail

**Fish-eating (piscivorous) – 99% of its diet.  
Plunges feet first to seize a fish in its long, curved talons.**



Barefoot Beach Preserve

**Osprey enjoying a fish dinner**



Barefoot Beach



Barefoot Beach

**Ospreys are found worldwide. Fresh or brackish water.  
Mate for life.  
Some Florida ospreys stay here year-round. Others migrate in winter to South America.**



Tigertail Beach  
Marco Island

**Sandpipers Seabird  
Brownish-gray spotted upper-side, white under-side.**



**Eat small invertebrates picked out of the mud or soil.  
Find by tactile foraging (digging).  
Insects, crustaceans, crickets, grasshoppers, worms, snails, crabs, shrimp.**

## Sandpipers - Ding Darling NWR



## Sandpipers (brown) and Terns (white) Barefoot Beach



**Terns**  
Long-lived seabirds.  
Few natural predators.  
Worldwide distribution.  
White with gray mantle, black cap.



Naples Pier

Annual migration  
20,000 miles round trip (some 40,000).  
Live in open habitats. Breed in noisy colonies.  
Dive for fish by plunging head-first into water.



Barefoot Beach Preserve

## Terns at Barefoot Beach Preserve

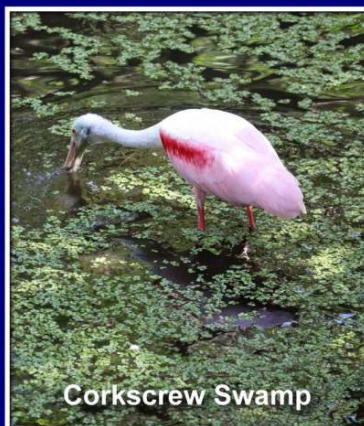


**Roseate Spoonbill**  
Medium-sized wading bird.  
Bright pink except white back.  
Pink is natural but brightens after eating shrimp and crayfish.



Corkscrew Swamp

Nearly wiped out by plume hunters early 20th c.  
Now common.  
Preen and feed in a shallow pool of water.



Corkscrew Swamp

With a flat bill, the roseate spoonbill feeds by slashing its bill side to side in shallow waters. Snaps shut when something is caught.



Corkscrew Swamp

**Roseate Spoonbills and Ibises  
Corkscrew Swamp Sanctuary**



**Wood Stork**

Large wading bird.  
Used to be called "wood ibis" because of curved beak. But it is not an ibis.

Found year-round in South Florida.



Homosassa Springs St Park

Head and neck have no feathers.  
Prehistoric looking like vultures.  
Rest of body white or gray feathers.  
33-45" tall.  
Wingspan 55-71".  
Weight 7 pounds.



In a tree along the Tamiami Trail

**Endangered!**

20,000 nesting pairs in the Everglades during the 1930s.

Less than 5,000 by 1970s.

Wood storks were moving from FL to GA and SC in search of shallow wetlands.

1984 listed as endangered under the Endangered Species Act.

**A recovery plan was created that called for:**

- Stop drainage of wetlands for development.
- Remove woody vegetation that sucks up water and prevents migrating birds from landing.

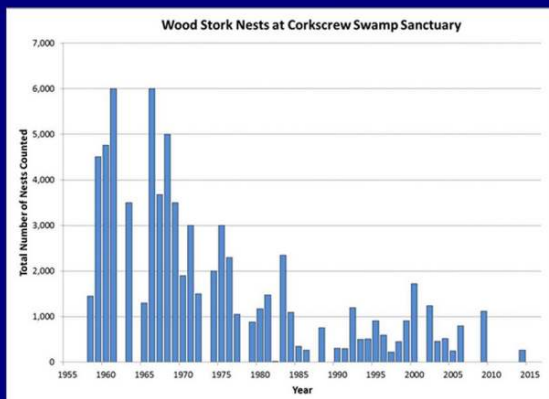
**Example: removing willows in Corkscrew Swamp.**

**Good News:**

Since wood storks were listed, breeding population doubled.  
Now 10,000 or more nesting pairs.  
And triple the number of nesting colonies. They can now be found in six states.

But in Naples area and Everglades, they are mostly gone.

**Wood storks declining at Corkscrew**



**Rookery Bay Environmental Learning Center  
Viewing Platform on Henderson Creek**



**Vultures**  
**Large bald birds.**  
Black head =  
black vulture.  
Red head =  
turkey vulture.  
**Ugly. Prehistoric-  
looking heads.**



**Some Negatives:**

- Aggressive.
- Eat mainly dead  
flesh (carcasses).
- Get into garbage  
cans.
- Defecate  
everywhere.



Corkscrew Swamp  
Sanctuary

**However the positives about  
vultures outweigh the negatives:**

- Remove a health hazard: Roadkill.  
Dead cattle in fields.
- Feces kill bacteria (whereas feces  
of most other animals produce  
bacteria). Prevents diseases.
- Kill undesirable creatures such as  
maggots etc that sicken livestock.

**Black Vultures**  
**Burns Lake**  
**Campground**  
**Ochopee**



**Turkey Vultures**



**Here are a few other  
miscellaneous birds  
that seem to be fairly  
common in the Naples  
area:**

**Pileated Woodpeckers**  
**Corkscrew Swamp**



**Burrowing Owl**





**Gallinule - Freedom Park**



**Bald Eagle**



**Homosassa Springs State Park**

**Mottled Mallard Ducks**



**Freedom Park**

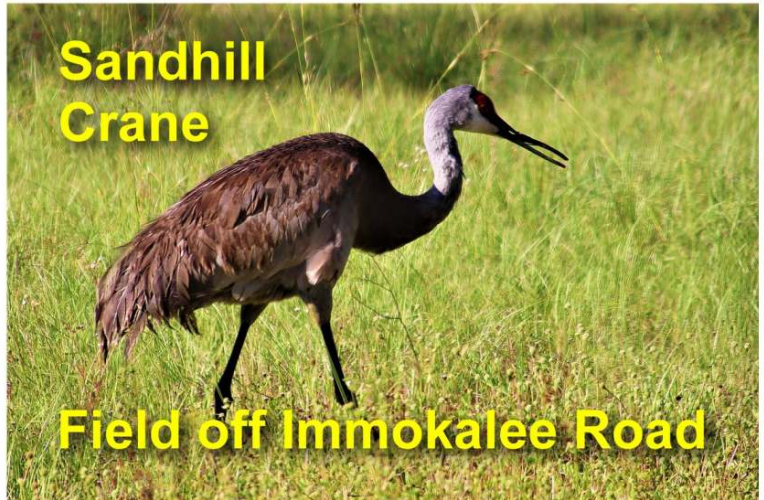
**Muscovy Duck and Many Chicks  
Freedom Park**



**Red-Bellied  
Woodpecker  
CREW Flint  
Pen Strand**



**Sandhill  
Crane**



**Field off Immokalee Road**

**Reptiles**

**A class of animals that includes:**



**Turtles**



**Crocodylians**



**Lizards**



**Snakes**

**11,700 species of reptile in the world.**

**Florida has 142 recognized native reptile species, and 56 established (reproducing), non-native species.**

**In 1987 the Florida legislature designated the American alligator as our state reptile.**

**Turtles:** 26 kinds in Florida. Land, fresh water, and sea dwelling ones.

**Crocodilians:** In Florida, of course, main type is alligators.

**Lizards:** Over 40 species in Florida, incl. anoles, skinks, iguanas, geckos.

**Snakes:**

6 venomous in Florida.

Roughly 40 non-venomous.

**We have already discussed alligators at some length.**

Let me now add a few comments on local: **lizards, turtles (especially gopher tortoises), and snakes.**

## Anoles

**Tropical American insectivorous lizard.**

**1" to 9" or more.**

**250 species.**

**Males display colorful dewlap in their throat for mating.**



Cuban Brown Anole

**Two most common anoles in Naples area:**

- Cuban brown anole.
- Green anole.



Cuban Brown Anole

**Non-native**



Green Anole

**Native**

## Green Anole:

- The only anole species native to Florida.
- Emerald green.
- 5-9" long.
- Pointed snout.
- Round tail.



Green anole along the Tamiami Trail

## Cuban Brown Anole:

- Native to Cuba.
- Bought to Florida as stowaways on cargo ships and in plants.
- Highly invasive.
- Detrimental to native green anoles. Drive green ones to live up a tree, eat their food, eat young green anoles.



Freedom Park

**Escapes a fight by letting the enemy bite off its tail.**

**Tail will regrow in 60 days!**



**Skink**  
Another lizard we have in Naples.  
There are 1,500 species of skinks.

- Live in burrows.
- Eat insects.

**Skinks Have Green Blood!**



# Turtles

Turtles are reptiles having bodies encased in a bony shell. Tortoises are a sub-group of turtles.



Cooter Turtle - Corkscrew Swamp



Gopher Tortoise - Barefoot Beach

Turtle (Non-tortoise)	Tortoise
Reptile in bony shell.	All tortoises are turtles.
Omnivores.	Herbivores.
Water dwelling (mostly). Can swim.	Exclusively land dwelling. Cannot swim.
Light shell.	Heavy shell.
Front limbs flipper-like.	Front limbs more like shovels used for digging.
Rear feet webbed.	Rear feet not webbed.
Lifespan 20-40 years.	Lifespan 80-150 years.

Cooter Turtle  
CREW Bird Rookery Swamp

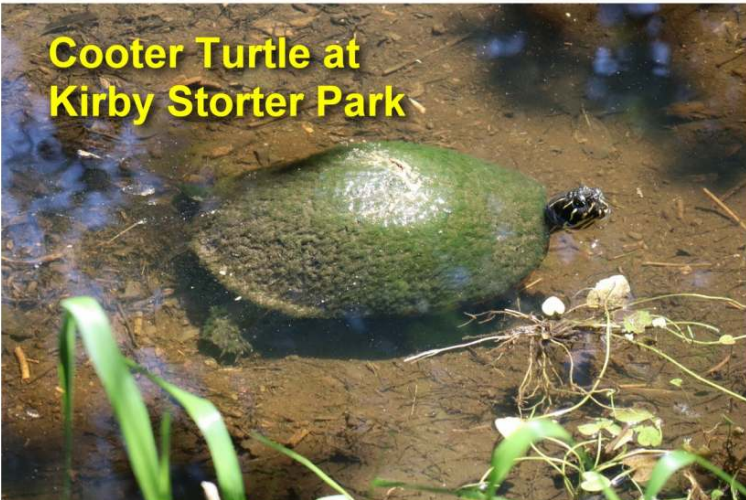


Three adult red-bellied cooter turtles sunning at Freedom Park



Plus a juvenile

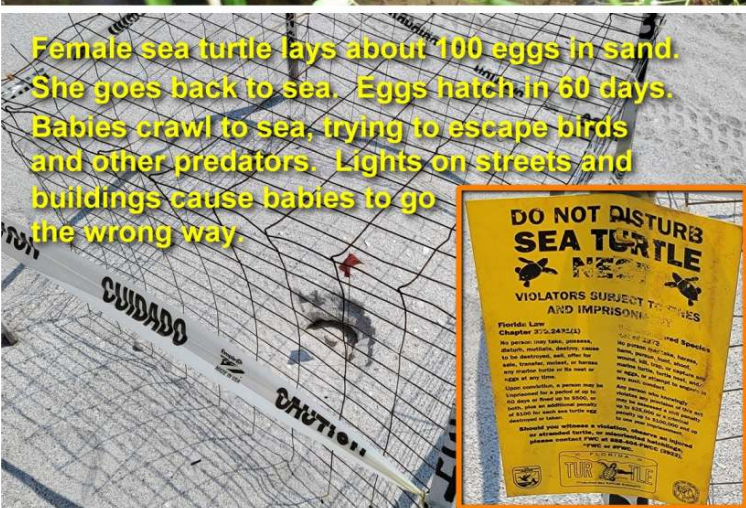
Cooter Turtle at Kirby Storter Park



Peninsula Cooter Turtle  
Six-Mile Cypress Slough Preserve



Female sea turtle lays about 100 eggs in sand. She goes back to sea. Eggs hatch in 60 days. Babies crawl to sea, trying to escape birds and other predators. Lights on streets and buildings cause babies to go the wrong way.



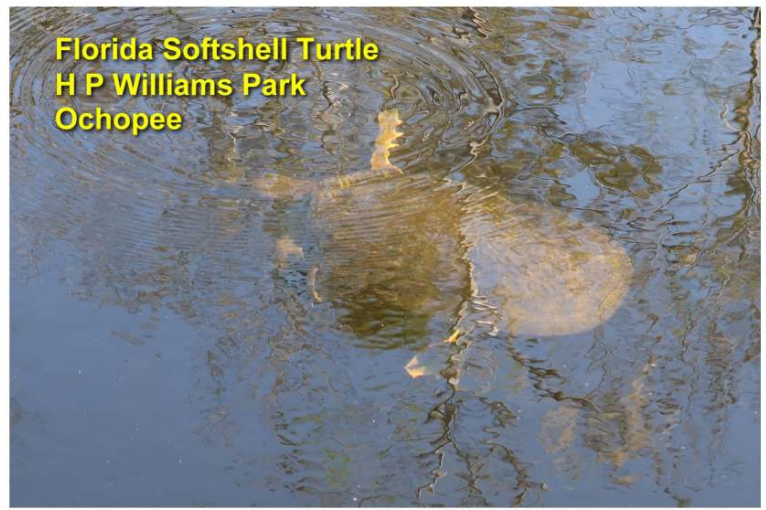
Tracks of female sea turtle who crawled from sea to lay her eggs



Park Shore, Naples



Softshell Turtle - Kirby Storter Park



Florida Softshell Turtle  
H P Williams Park  
Ochopee

**Gopher Tortoise**  
Species of turtle.  
Native to SE USA.  
Adult size 6-16".  
Adult weight 4-13 lbs. Avg 9 lbs.  
Top shell: Carapace.  
Bottom shell: Plastron.  
Connected at sides for protection.  
Sections of shell called scutes.



Barefoot Beach Preserve

**Female lays eggs.**  
**Incubate 100 days.**  
**Sex depends on heat of sand in nest.**  
– Female if > 30C (86 F)  
– Male if < 30C (86 F).  
**Most eggs eaten by predators.**  
**Only 6% survive.**



Barefoot Beach

**Normal lifespan 40 yrs.**  
**Some much longer.**  
**Terrestrial.**  
**Cannot swim.**  
**Live underground in burrows up to 50' long and 8 feet deep.**  
– Dig with front feet.  
– Burrow protects from heat, cold, fire, predators.



Barefoot Beach, Naples

**Keystone species because 360 species share the burrow.**  
**Herbivorous:**  
– Grass, mushrooms, berries.



Burrow at Barefoot Beach

**Best places to see gopher tortoises in our area:**  
**#1 is Barefoot Beach. [Jan: Closed till 2024]**  
Rookery Bay - Shell Island.  
Gordon River Greenway (esp. Mulch Trail).  
Lovers Key State Park (esp. Black Island Trail).



Gopher Tortoise at Shell Island, Rookery Bay



Gopher Tortoise at Burrow Entrance  
Koreshan State Park

**Hurricane Ian DEVASTATED the gopher tortoise population in Collier County.**

Died either by drowning in burrows, being buried by sand, or being washed away.

Number of Tortoises	Before Ian	After Ian
<b>Delnor-Wiggins St Park</b>	90-100	7-10
<b>Clam Pass</b>	90	8-9
<b>Barefoot Beach</b>	100	10
<b>Koreshan State Park</b>	46% did not survive (no numbers given)	

"Washed away: Devastation for Southwest Florida's coastal gopher tortoises". Naples Daily News. Dec 22, 2022.

## Snakes: How many in Florida?

Most websites agree 6 venomous:

- Eastern diamondback rattlesnake.
- Timber rattlesnake.
- Dusky pygmy rattlesnake.
- Coral snake.
- Cottonmouth.
- Copperhead.



Water Snake (Non-venomous)  
Corkscrew Swamp, Naples

## Disagreement on how many non-venomous:

**Wikipedia: 31**

[en.wikipedia.org/wiki/List\\_of\\_snakes\\_of\\_Florida](https://en.wikipedia.org/wiki/List_of_snakes_of_Florida)

**Florida Fish and Wildlife Commission: 38**

[myfwc.com/conservation/you-serve/wildlife/snakes/](https://myfwc.com/conservation/you-serve/wildlife/snakes/)  
"Only six of Florida's 44 snake species are venomous"

**Florida Museum: 44 or 47? Inconsistent**

One page says: "Of the 50 established species found in Florida, only 6 species are venomous."

Another page on same website says "non-venomous 47".  
[www.floridamuseum.ufl.edu/florida-snake-id/](http://www.floridamuseum.ufl.edu/florida-snake-id/)

**Reptile Guide: 40**

<https://reptile.guide/florida-snakes/>

"46 native Florida snake species...only six of these are venomous."

## Florida Snakes

### Non-Venomous



### Venomous



**Good information on snakes in Florida:**

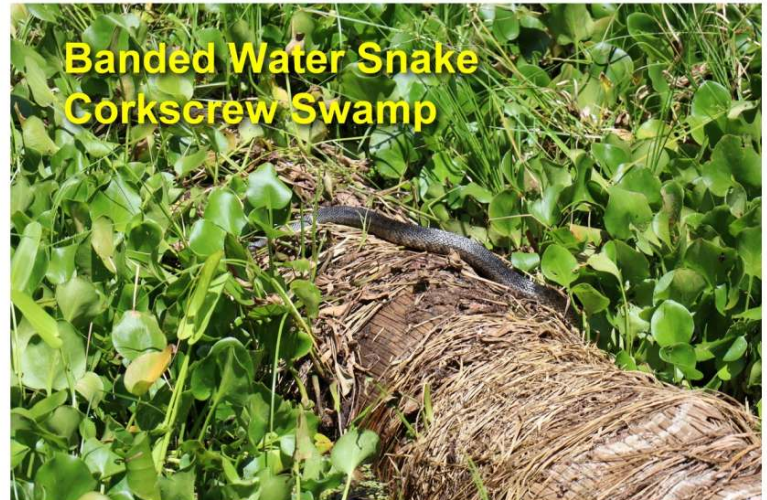
[www.floridamuseum.ufl.edu/florida-snake-id/](http://www.floridamuseum.ufl.edu/florida-snake-id/)

**I am not particularly interested in:**

**Ophiology:** The study of snakes.  
Sometimes called Serpentology.

**Ophiology is a branch of Herpetology:**  
The study of reptiles and amphibians in general.

**I will talk about just a few photos of snakes I have encountered on my walks in the Naples area.**



**Banded Water Snake  
Corkscrew Swamp**



**Black Racer  
Corkscrew Swamp**



**Black Snake  
Big Cypress Preserve  
Visitor Center**



**Black Swamp Snake**  
**Lovers Key State Park**



**Water Snake**  
**Corkscrew Swamp**



**Cottonmouth**  
**Big Cypress Bend**



**Copperhead**  
**Florida Panther NWR**



**Cottonmouth**  
**Six-Mile Cypress Preserve Slough**



**Eastern Ratsnake**  
**Koreshan State Park**



**Water Snakes**  
**Adult and Juvenile**  
**Corkscrew Swamp**

**Five invasive reptiles in Florida:**

- Argentine B&W Tegu.
- Green Iguana.
- Cane Toad.
- Python.
- Northern Curly-tailed Lizard.

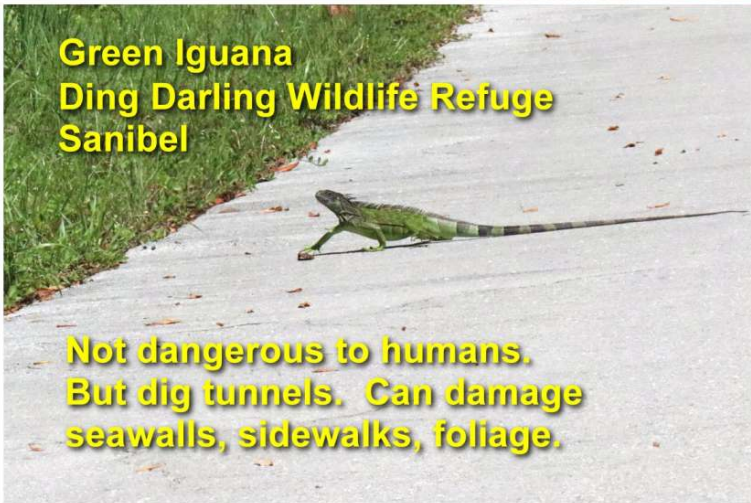
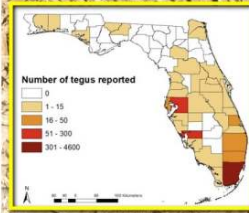


**Argentine Black and White Tegu**  
Up to 4½ feet long.  
Aggressive.

Omnivorous  
Pets Released into the Wild  
Invasive in FL, GA, SC  
Threat to Native Birds and Reptiles



**Everglades Wonder Gardens**  
**Argentine Black and White Tegu**



**Green Iguana**  
**Ding Darling Wildlife Refuge**  
**Sanibel**

Not dangerous to humans.  
But dig tunnels. Can damage  
seawalls, sidewalks, foliage.



**Green Iguana**  
**Calusa Nature Center**  
Around 20,000 in the Wild in Florida

Up to 5 Feet Long



**Cane Toad**



Native to South and Central America.  
Invasive in Florida.  
Highly poisonous glands (bufotoxin) and toxic  
skin. Deadly to dogs and cats.



**Burmese Python**  
Not native to Florida.  
Estimated 100,000  
in Florida now.  
Found primarily in  
and near Everglades  
ecosystem South Florida.

– Avg 9' long. Some 18' long.  
– Tan color. Dark blotches.



Naples Zoo



Prey on birds,  
mammals, reptiles,  
even alligators.  
Growing population.  
Female may lay 50 to  
100 eggs at a time.  
Since 2000, more  
than 17,000 wild  
Burmese pythons  
have been removed  
from the state of  
Florida.

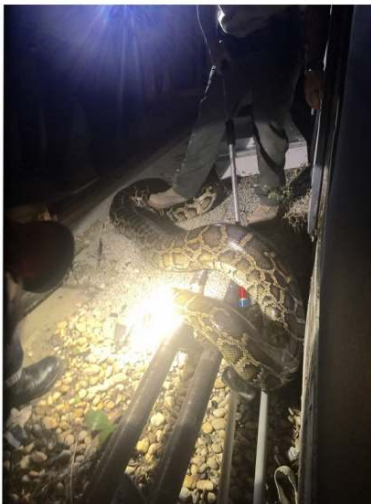
Naples Zoo



**Everglades Wonder Gardens**  
**Bonita Springs**

My nephew is a Collier firefighter-paramedic often stationed at Isles of Capri.

Here's a python they caught at the Isles of Capri fire station.



## Python Swallowed a Deer Everglades National Park



US NPSPhoto

### Curly-tailed lizard.



On pavement along  
Tamiami Trail.

### Northern Curly-tailed Lizard Native to Bahamas, Cayman Is., Cuba.

– Introduced to Florida in the early 1940s to combat sugar cane insects.

– Didn't work.

Meanwhile, northern curly-tailed lizard became established in the wild.

Up to 11 inches long.

Eat insects, flowers, fruit. Even garbage.

Push native lizards out of its territory.

### Amphibians *(Just this one slide)*

– Florida: 36 species of frogs and toads.

– Florida: 16 species of salamanders.

Amphibians differ from reptiles:

Amphibians	Reptiles
No scales	Scales
Moist skin	Dry skin
Jelly-like eggs and metamorphosis	Hatch from eggs
Most breathe thru their skin	Breathe thru lungs

### Mammals

#### Vertebrate animals with:

- Mammary glands that in females produce milk to feed (nurse) their young,
- An advanced brain (cognitive abilities).
- Fur or hair.
- Three middle ear bones.

Those criteria distinguish mammals from birds and reptiles.

Around 6,400 extant species of mammals in the world.

70% of those are rodents, bats, and shrews.

### What about in Florida?

Only 116 of the 6,400 mammal species live in Florida.

### Wikipedia describes all 116 here:

[https://en.wikipedia.org/wiki/List\\_of\\_mammals\\_of\\_Florida](https://en.wikipedia.org/wiki/List_of_mammals_of_Florida)

### I want to comment only on 6 of the 116 mammal species in Florida:

- Florida white tailed deer.
- Wild boar.
- Manatees.
- Florida panthers.
- Bobcats.
- Raccoons.



John Chesnut Park  
Palm Harbor



**Florida White-tailed deer.**

**White-tailed deer found throughout N America (east of Rockies). Also Central & S Amer.**



**Most economically important big game mammal in North America and Florida.**

**125 pounds (male).  
95 pounds (Female).  
36" high at shoulder.  
Body length 5-6.5 ft.  
200 day gestation.**



**Deer in North Florida 50% larger than South Florida. More body mass helps them survive cold temps.**

**Nearly extinct in Florida and other states in 1930s due to overhunting.**

**– Fewer than 20,000.**

**Hunting restrictions resulted in major comeback & overpopulation.**

**– By 1985 deer in FL 100,000.**

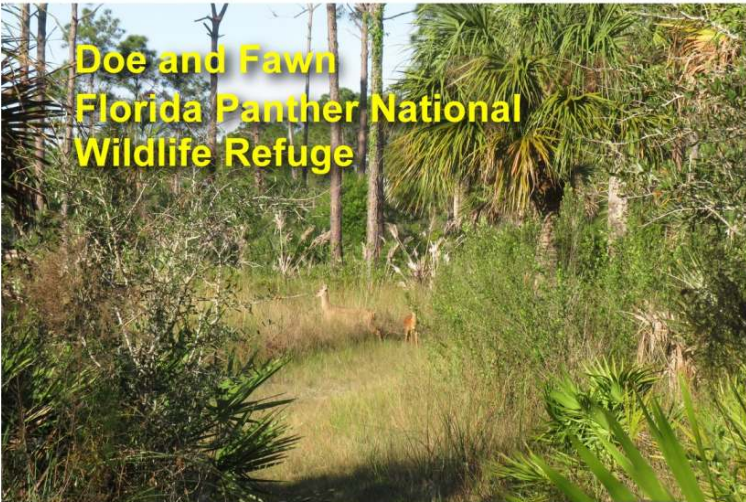
**– Today around 700,000.**

**– Today over 120,000 harvested by hunters annually in Florida.**

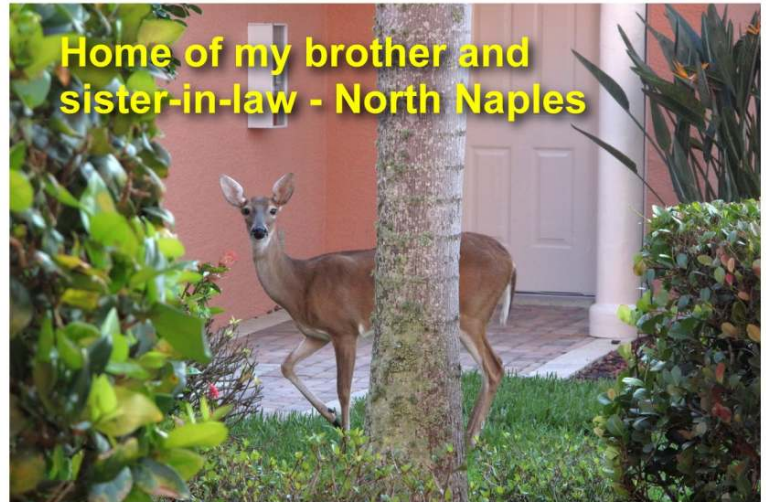
**– Sustainable.**



**Doe and Fawn  
Florida Panther National  
Wildlife Refuge**



**Home of my brother and  
sister-in-law - North Naples**



**Wild Boar in Florida  
AKA wild hog, feral  
hog, feral swine,  
feral pig, wild pig.**

**> 150 pounds.**

**5 to 6 feet long.**



Corkscrew Swamp, Naples

**All 67 counties of Florida.**

**Free roaming. No hunting license required!**

**Estimated numbers between 500,000 to 1 million in Florida.**

**2 litters – 26 piglets – a year.**

**Omnivorous. Many habitats.**

**Destructive to plants and ground due to rooting. Destroy pastures and gardens.**

**Carry pathogens including brucellosis harmful to humans.**

**Wild boar not native to Florida. Introduced by Spanish explorer Hernando DeSoto 1539.**



**In 1539, DeSoto landed 9 ships, 620 men, 220 horses south of Tampa Bay. Goal: establish settlements for Spain. Brought hogs to release to provide food for settlers. Many subsequent introductions.**



**Wild Boar - Corkscrew Swamp Back-country, Naples**

## **Everglades National Park**



**Wild Boar - Corkscrew Swamp Naples**

**Manatee**  
Large, gray, aquatic mammal.  
"Sea Cow".



Homosassa River

**Native to Florida.**  
**About 7,500 in Florida.**  
**Average adult 10' long.**  
**Weighs between 800 and 1,200 pounds.**

**Live in shallow, slow-moving rivers, estuaries, coastal areas.**  
**Vegetarian.**



Homosassa River

**Eat seagrass and freshwater vegetation.**  
**Sexually mature age 5.**  
**1 calf is born every 2 to 5 years.**

**Not tolerant to cold.**

**Migratory.**

**Summer range: Texas to Mass.**

**Winter range: Florida.**

**Protected under both Federal and Florida criminal laws.**



Homosassa River

**Homosassa River - Dec. 2022**

**Springs keep river at constant 72 deg. F.**



**13 "key" manatee counties in Florida:**

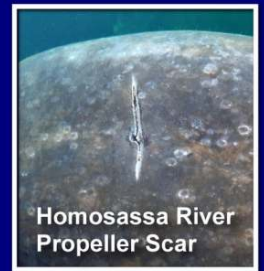
Brevard, Broward, Citrus, Collier, Dade, Duval, Indian River, Lee, Martin, Palm Beach, St. Lucie, Sarasota, and Volusia.

**Projects to improve habitats and prevent injuries and deaths.**

**Two leading causes of death:**

- Starvation (due to declining seagrass).
- Boat propeller hits.

**95% have boat propeller scars!**



**Manatee with Propeller Scars**

**Manatee with Propeller Scars**

**2021 "Unusual Mortality Event". 700 carcasses examined by FWC. Cause: Starvation.**

**Why: Lack of seagrass.**

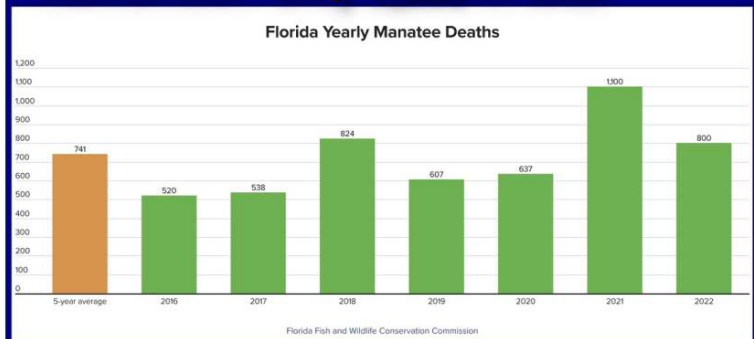
**Seagrass grows underwater. Too much algae on water surface.**

**Blocks sunlight.**

**Why too much algae?**

**Fertilizer and septic tank runoff.**

**Manatee Deaths in Florida 2021 and 2022 spikes Remember: Only 7,500 in total**



**What is the State of Florida doing?**

**Short term:**

- Feeding program (lettuce).

**Longer term:**

- Mangrove and seagrass restoration.
- Rein in pollution.



## Florida Panther Info

Note: I have never seen one in the wild.

- Either same as or subspecies of North American cougar.
- Outside Florida called mountain lion, puma, cougar.
- It is not a bobcat.
- Florida's state animal.



## Color:

- **At Birth:** Tan with black spots. Blue eyes.
- **Adult:** Spots fade by age 6 months.
  - Coat becomes completely tan.
  - Underbelly is a creamy white.
  - Black tips on the tail and ears.
  - Sides of muzzle blackish.
  - Yellow eyes.
  - Tail almost as long as its body.



## Number of Florida Panthers:

- **1900:** Estimated 500.
- **1967:** Not more than 20 adults due to hunting and loss of habitat.
- **1967:** "Threatened with extinction".
- **1973:** US "endangered species" list.
- **1995:** Breeding program with 8 female cougars from Texas. Result: steady increase in numbers.
- **Today:** Around 250 wild in Florida.
- **Current status:** "Endangered".

## Size:

- **Adult male:** 100–160 pounds.
- **Adult female:** 64–115 pounds.
- **Length:** 5.9 to 7.2 feet, nose to tip of tail.
- **Shoulder height:** 24–28 inches.



## Mating:

- **Mating season:** October to March.
- **Age:** Female 2 yrs. Male 3 yrs.
- **Gestation:** 90 to 95 days.
- **Litter:** 1 to 3 kittens.
- **Kittens:** Blind (eyes shut) for 2 to 3 weeks. Then eyes open.
- **Weaned to meat:** After 2 to 3 months.

## After Mating:

- Panthers are polygamous.
- A week or so after mating, father moves on to solitary life until next mating season.
- Mother raises kittens.
- Kittens stay with mother 18-24 months.
- Then mother moves on to solitary life or another mating partner.

## Lifespan:

- 15 to 20 years in the wild.

### Diet:

- Carnivore (meat eater).
- Opportunistic.
- 90% of diet is wild boar, white-tailed deer, raccoon, and armadillo.
- Occasionally rabbits, rats, birds, gators.
- Also will prey on domesticated farm animals, as well as dogs and cats.
- **Adults need to consume equivalent of about 1 deer or hog per week.**

### Range:

- Mainly in southwestern Florida.
- Territorial and solitary (except when mating).
- Male home range: **200-250 sq mi.** Female: **70-80 sq mi.**
- Home range marked by claw marks and urine or feces. Tells others: stay away.
- **Panthers wander 15-20 miles a day searching for food. Can swim. Keen sense of smell.**

### How Panthers Hunt

- Begin hunting with mother age 2 months.
- Hunt on their own starting 18 months to 2 years.
- Creep up as close to prey as possible and launch a short spring ambush.
- Bites the animal's neck and cuts the spinal cord, or suffocation.
- Most active at night.

### Threats to Panthers:

- Loss of habitat due to development.
- Habitat fragmentation and degradation due to roads, fences, development.
- Vehicular collisions.
- Territorial aggression from other panthers.

### Causes of Deaths of Panthers

**Vehicles: 59%.** Mostly Collier and Lee Counties

**Killed by Other Panthers: 16%.**

**Diseases and Other**

**Known Causes: 12%.**

**Unknown Causes: 13%.**

**66% of panthers killed in vehicle collisions are 3 years old or less.**

### Are Panthers a Danger to Humans?

- Never a reported attack of a human by a panther in Florida.
- Yes - incidents with cougars outside Florida.
- If you encounter one:
  - **Do not run or turn your back.**
  - **Stand tall. Look panther in eye.**
  - **If attacked, fight but do not turn your back.**

### Florida Panther Nat'l Wildlife Refuge

SR 29 at I-75 Exit 80.

Free.

Sunrise to Sunset.

26,000 acres.

Hiking trails 1.3 mi.

12-16 panthers roam.

Some guided tours.



### Fresh Panther Track Last Night or This Morning





**Bobcat (aka lynx).**  
**Color: Typically reddish brown with spots. Black bobcats have occasionally been documented in Florida.**

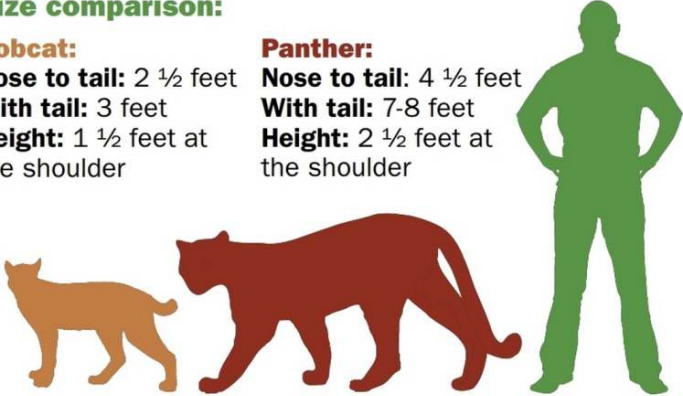


**Bobcats are fairly common in the wild in Florida. Unfortunately I haven't seen one. Still, I think it's useful in this presentation to contrast panthers and bobcats.**

**Bobcat Ears:** Short, pointy.  
**Adult male Bobcat:** 18-35 lbs.  
 Up to 37" length nose to tail.  
 Females are smaller.  
**Adult male panther:** 100-160 lbs.  
 Up to 60" nose to tail. Tail adds one-third more. Females smaller.  
**Domestic cat:** About 10 inches not counting tail.

**Size comparison:**

<b>Bobcat:</b>	<b>Panther:</b>
<b>Nose to tail:</b> 2 ½ feet	<b>Nose to tail:</b> 4 ½ feet
<b>With tail:</b> 3 feet	<b>With tail:</b> 7-8 feet
<b>Height:</b> 1 ½ feet at the shoulder	<b>Height:</b> 2 ½ feet at the shoulder



**Bobcat is an efficient hunter.**  
**Hunts by sight. Usually at night.**  
 – In Florida, prey are mainly squirrels, rabbits, and rats.  
 – Also eats birds in winter.  
**Beneficial by controlling populations of rodents, etc.**  
**Not aggressive toward people.**





These two bobcat photos were taken at Corkscrew Swamp, Naples, in Dec 2022 by Corkscrew volunteer Donald Sawin:  
<https://donald-sawin.pixels.com/>

## River Otters

Found all over Florida except the Keys.  
 Prefer fresh water.  
 Found in rivers, lakes, and swamps.



Good swimmers.  
 Short legs, webbed toes, and a strong, flattened tail:

Useful for swimming.

Length: 8-47 inches.

Weight: 10-20 pounds.

Can stay submerged for up to eight minutes.



Feed on crayfish and fish.

But also strong predators.

They can take out sizeable beavers, raccoons, snapping turtles, snakes, and small gators.

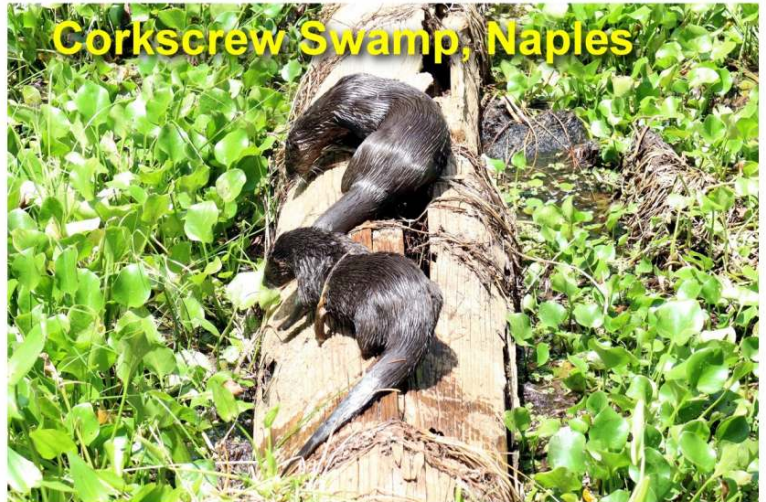


National Geographic Photo  
<https://www.nationalgeographic.com/animals/article/140306-otter-alligator-florida-predator-photos-wildlife>  
 "How a River Otter Can Bag an Alligator for Lunch"

## Corkscrew Swamp, Naples



## Corkscrew Swamp, Naples



Otters are social animals.



Corkscrew Swamp

Often swim and play in groups.

## Raccoon

Prominent black facial mask.

Long bushy tail, striped with 4-7 black rings.

Body length: 30-35".

Tail: 9-12".

Weight: 8-15 lbs.



## Raccoon

Common all over Florida.  
Live in trees.  
Stay near source of water.  
Common in urban areas.  
Intelligent.



**Raccoons eat:** Fruits, plant material, eggs, crustaceans, small animals, and even garbage.

**Activity:**

- Typically sleep in trees during the day.
- More active in late afternoon and all night.

Raccoons are omniverous.  
Eat almost anything!

Going after berries  
in Corkscrew Swamp



**Benefits:** Raccoons help control populations of rodents and insects - naturally (pesticide free).

**Possible dangers:** Distemper, rabies. 65% of animal rabies cases in Florida come from raccoons.

In mangroves in the Everglades



Six-Mile Cypress  
Slough Preserve  
Fort Myers



On the Corkscrew Swamp boardwalk



**Nine-Banded Armadillo**  
Cat-sized, armored,  
insect-eating  
mammal.  
Protective shell.  
Length: 6-10".  
Weight: 14 pounds.  
Prolific digger:  
Burrows.



Honeymoon Island  
State Park, Dunedin



**Marsh Rabbit**  
**Small cottontail.**  
**Lives in marshes and swamps in coastal regions of SE USA.**  
**Strong swimmer found only near regions of water.**



Freedom Park, Naples

**Similar to the eastern cottontail but smaller ears, legs, and tail.**  
**Weight: 2.5 lbs.**  
**Length: 17".**



Corkscrew Swamp Sanctuary

**Insects**

**More than 1,000,000 species on Earth.**  
**Insects have three body segments and six legs.**



**Not my interest. Few photos.**  
**But I want to comment on two Florida insects:**

- Eastern lubber grasshopper.
- Fire ants. *Photo Above*

**Eastern Lubber Grasshopper**

**Large:**  
 - Females up to 3 inches.  
 - Males 2.2 inches.  
**Abundant in Naples area, esp. summers.**



Freedom Park  
 Naples

**Native to Florida.**  
**All habitats.**  
**Colorful.**  
 - Black and yellow in northern Florida.  
 - Red and yellow with black markings in southern Florida.



Corkscrew Swamp Sanctuary, Naples

**Flightless: Walk, rather than leap.**  
**Destructive: Eat citrus, vegetable crops, and ornamental plants.**  
**Garden pest.**  
**Resistant to insecticides.**



Fakahatchee Strand Preserve State Park

**When alarmed, lubbers spread their wings, hiss, and secrete foul-smelling froth. Poisonous and potentially fatal to birds and small mammals. Toxic but not fatal to humans. They do not bite.**

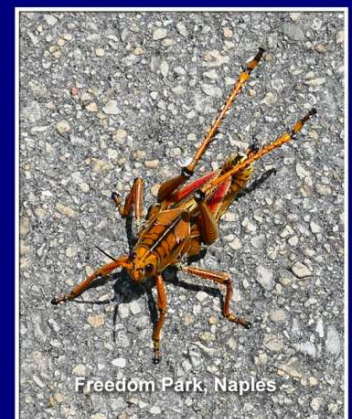


Big Cypress Bend

**Eastern Lubber Grasshoppers - 3" Long**



Corkscrew Swamp, Naples



Freedom Park, Naples

## Fire Ants

Reddish-brown to bright red with a brown abdomen (back-end).

Aggressive!

Stinging.

Get stung: Sharp pain and burning.



Internet Photos

Fire ants build dome-shaped mounds. 8-12" tall, up to 18" across.

In open sunlit areas.

Florida Panther National Wildlife Refuge

If you step on a mound, many stings at once.

Each sting turns into itchy white blister in a day.



Single-queen colony: 150 mounds, total 7 million ants, per acre.

Multiple-queen colony: 300 mounds and 40 million ants per acre.

The math: That's 130,000 ants per mound!



Rivers Road Preserve, Naples



WARNING: Never touch a suspected fire ant nest with your feet, hands, or a short utensil. Any time you disturb a fire ant mound, hundreds of them will pour out to attack. One fire ant stings several times, causing an intense burning sensation and white pustules on the skin.

*We've covered a lot of ground in 90 minutes:*

**Birds:** Anhingas, cormorants, owls, herons and egrets, ibises, limpkins, pelicans, hawks, ospreys, spoonbills, wood storks, vultures, seabirds, and woodpeckers.

**Reptiles:** Alligators, anoles, skinks, turtles, tortoises, snakes, and a few invasive reptiles.

**Mammals:** Florida white tailed deer, wild boar, manatees, Florida panthers, bobcats, otters, raccoons, armadillos, and marsh rabbits.

**Insects:** Only two kinds – fire ants and Eastern lubber grasshoppers.

# THE END

## Thanks for Joining Me!



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