

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

Wildlife of
Southwest Florida

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www.paulvisits.com

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.

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>
Total Species Roughly	1,300,000

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!

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



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.

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



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.



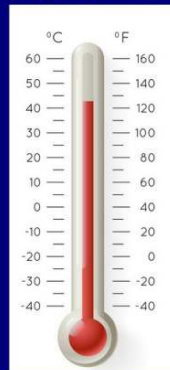
Hatchling at
Corkscrew Swamp

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

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.

Weights 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.



Audubon Corkscrew Swamp - Naples



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

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.

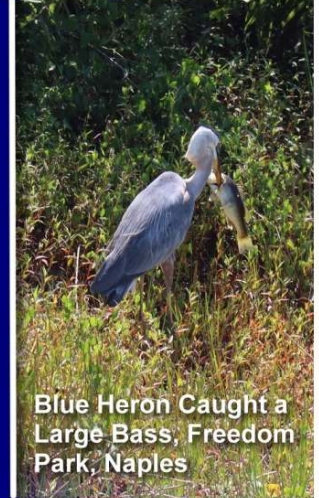


Tricolored Heron
Ding Darling NWR
Sanibel

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

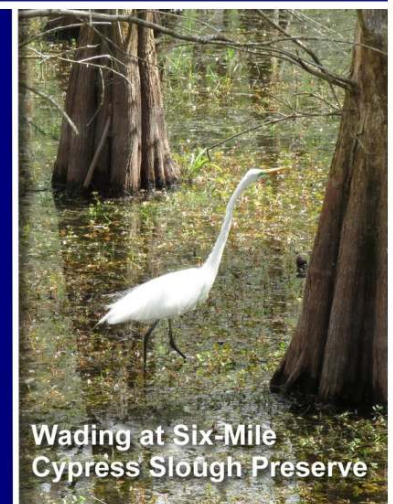
Great Egret
Range spans the whole planet.

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

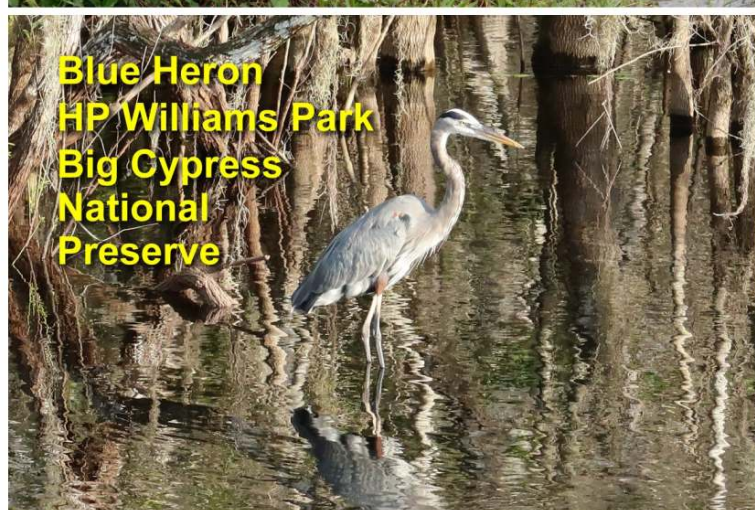


Blue Heron

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

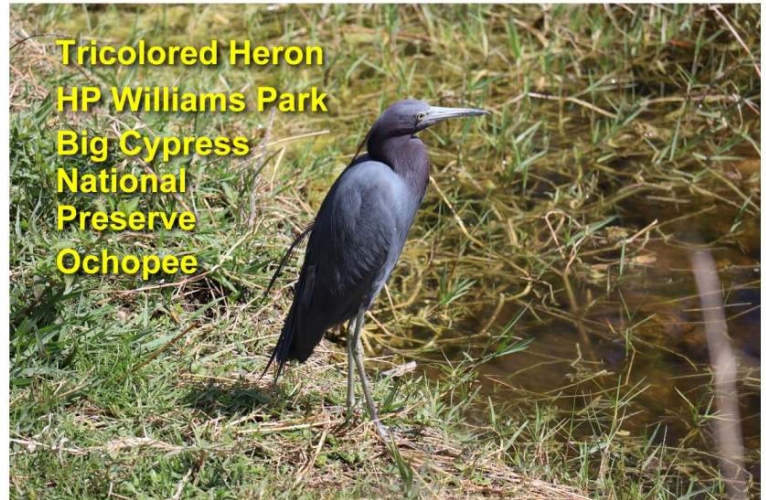


Tricolored
Heron.
Blue-gray
upper side
and chest
with purple
areas, as
well as a
white belly.

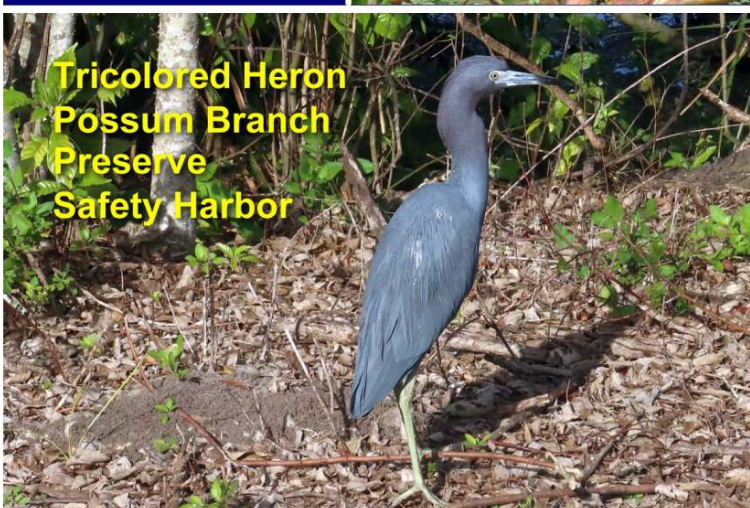


Corkscrew Swamp, Naples

Tricolored Heron
HP Williams Park
Big Cypress
National
Preserve
Ochopee



Tricolored Heron
Possum Branch
Preserve
Safety Harbor



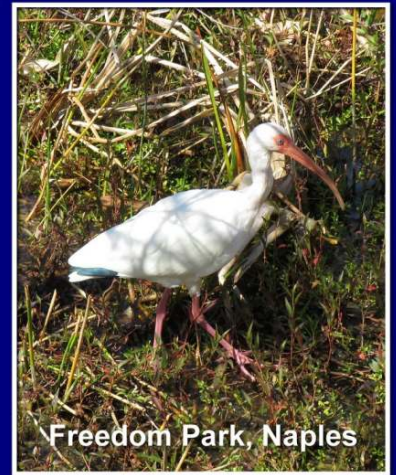
Tricolored Heron
Corkscrew
Swamp
Naples



**Tricolored
Heron and
Juvenile
Gator
Corkscrew
Swamp**



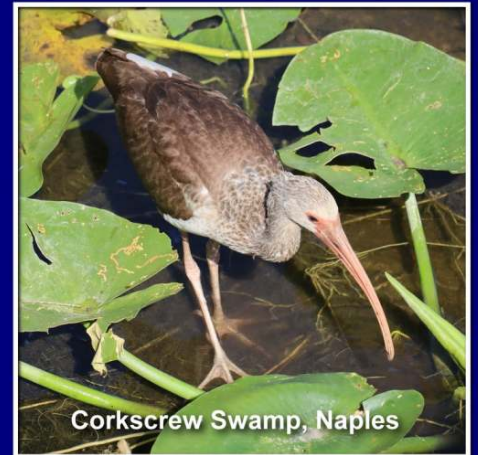
**White Ibis
Long-legged
wading bird.
Also forages in
grass and
marshes.
In Florida we
have mainly
American White
Ibis.**



Freedom Park, Naples

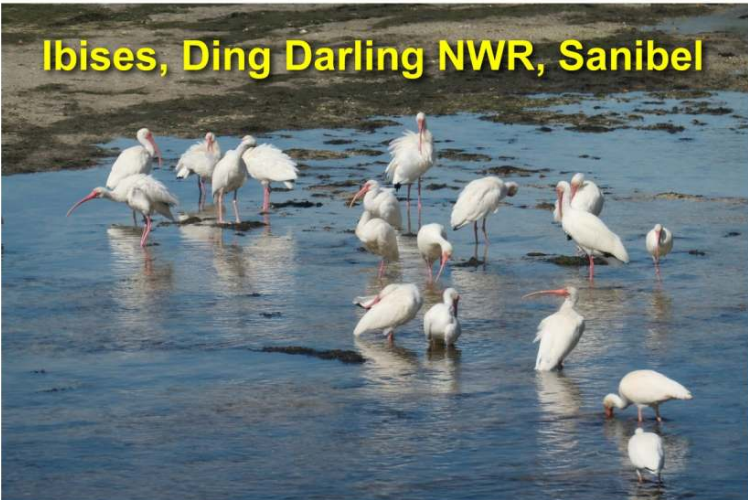
**American White Ibis
Found throughout Florida and
along the Gulf and Atlantic
coasts Texas to Carolinas.
Eat fish, insects, crayfish, and
other crustaceans.
Forages and nests in colonies.**

**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.**

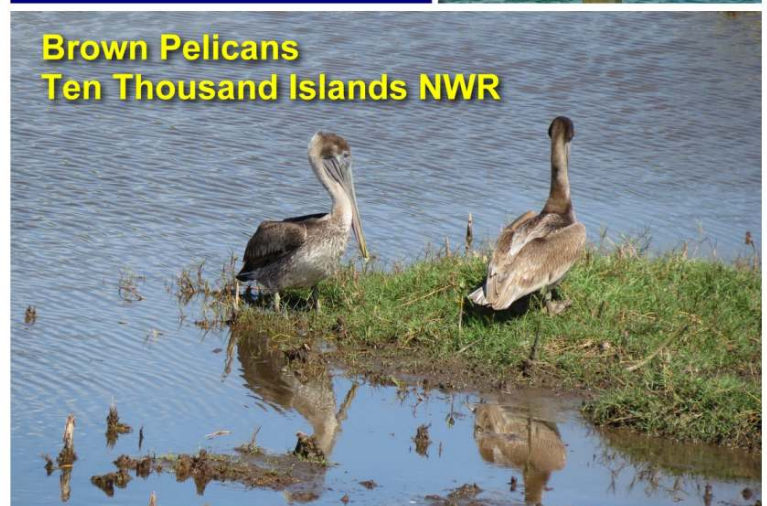
**Atlantic Coast from
New Jersey to the
mouth of the
Amazon River.
Gulf. Pacific.**



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



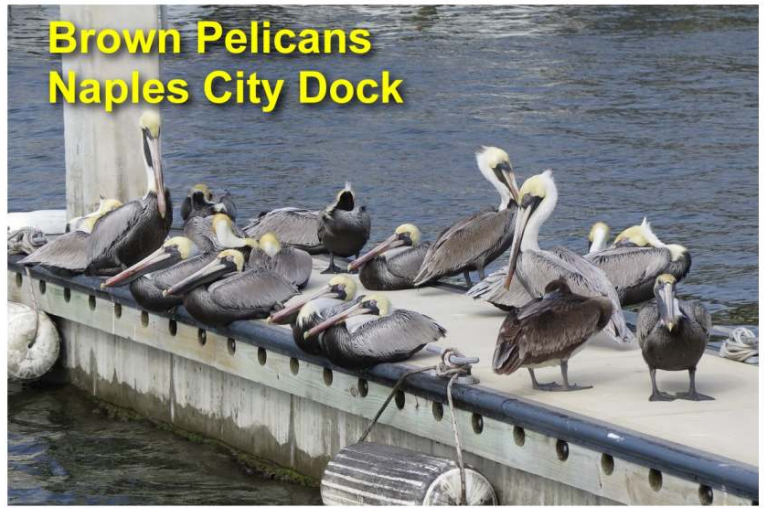
**Brown Pelicans
Ten Thousand Islands NWR**



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.



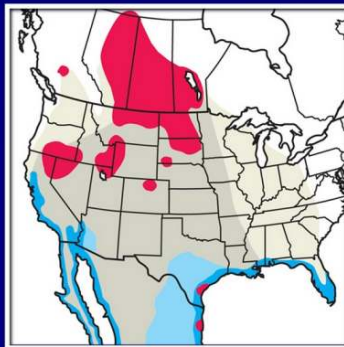
White Pelican
Beak 15". Larger than brown.
White plumage.
Weight up to 30 pounds.



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

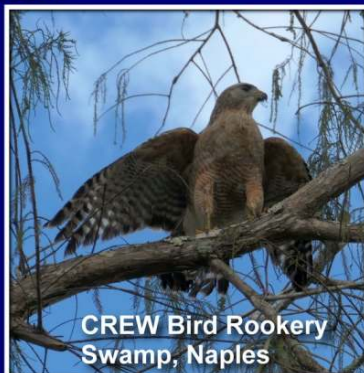


Red Shouldered Hawk
Medium-sized raptor.

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

1.3 pounds.

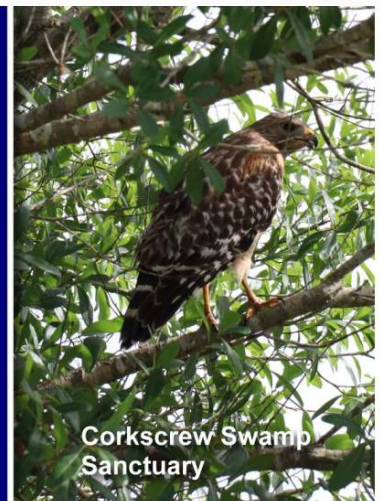
24 inches long.



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.



Amazing!



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



**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.**



**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



**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

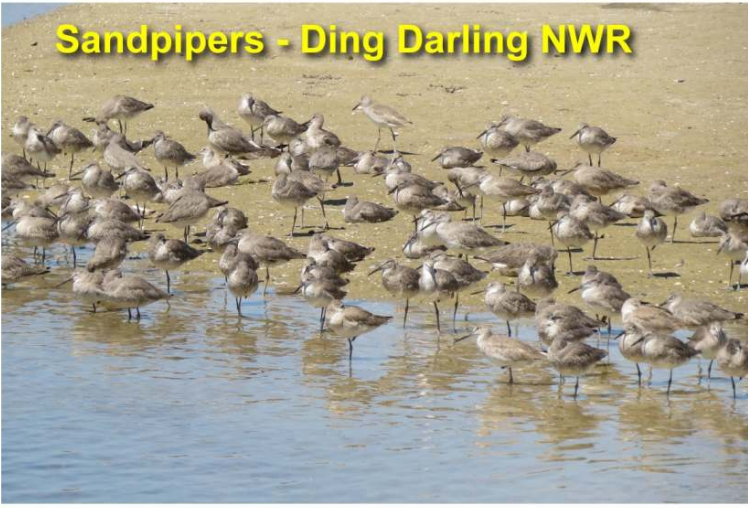
Sandpipers Seabird

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

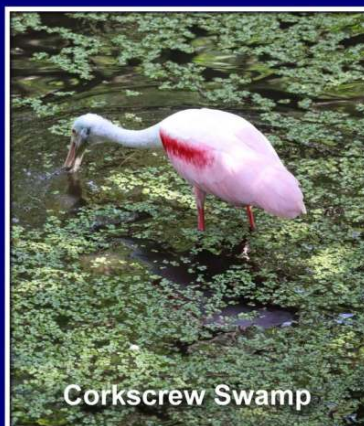


Roseate Spoonbill
Medium-sized
wading bird.
Bright pink except
white back.
Pink is natural but
brightens after
eating shrimp and
crayfish.



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.

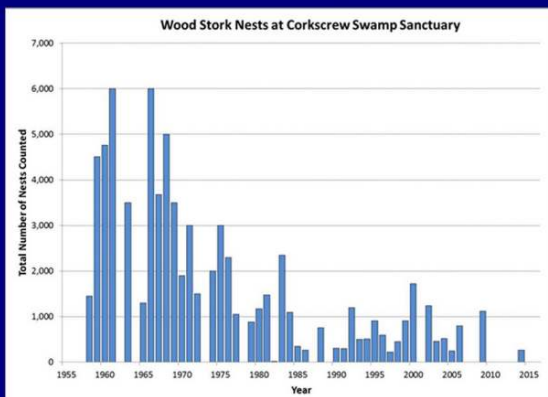
**Example: removing willows in
Corkscrew Swamp.**

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.**



Collier-Seminole
State Park

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



Fakahatchee Strand Preserve
State Park

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

Pileated Woodpeckers **Corkscrew Swamp**



Burrowing Owl



Marco Island and Cape Coral

Gallinule - Freedom Park



Bald Eagle



Homosassa Springs State Park

Mottled Mallard Ducks



Freedom Park

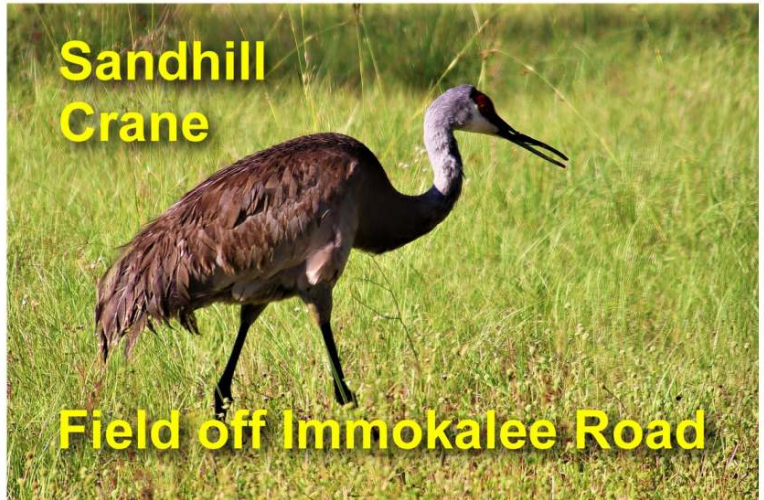
Muscovy Duck and Many Chicks
Freedom Park



Red-Bellied Woodpecker
CREW Flint Pen Strand



Sandhill Crane



Field off Immokalee Road

Reptiles

A class of animals that includes:



Turtles



Crocodilians



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



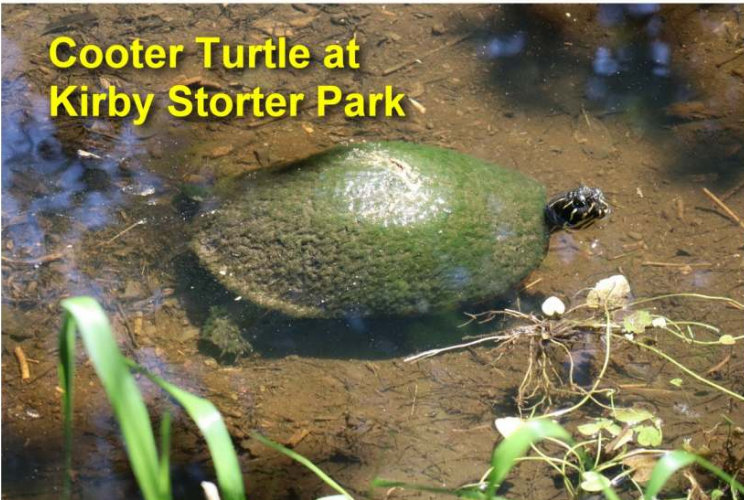
Designed for Swimming

Three adult red-bellied cooter turtles sunning at Freedom Park



Plus a juvenile

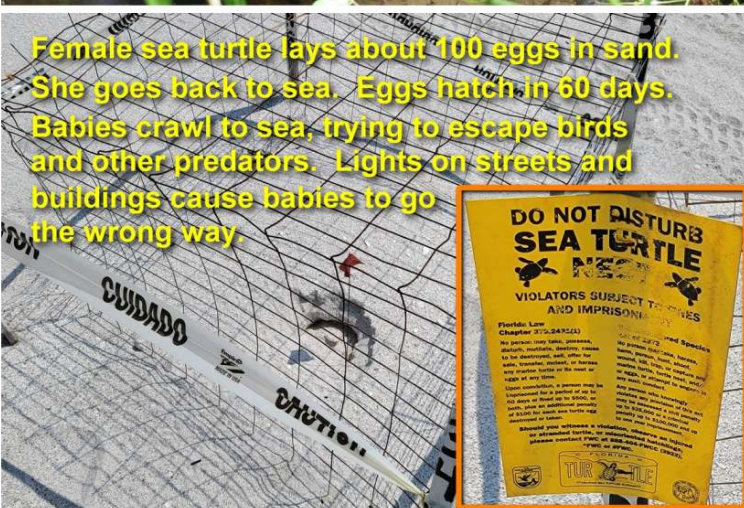
Cooter Turtle at
Kirby Storter Park



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.



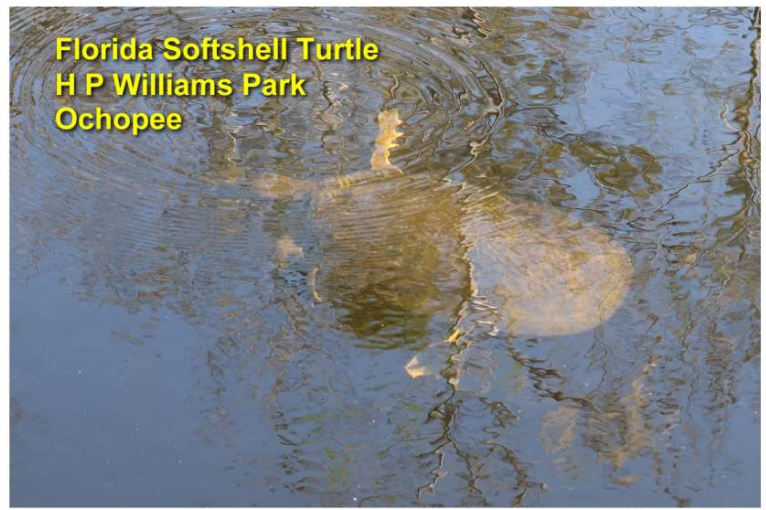
Tracks of female sea turtle who crawled from sea to lay her eggs



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 $> 30^{\circ}\text{C}$ (86°F)
– Male if $< 30^{\circ}\text{C}$ (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
Delnor-Wiggins St Park	90-100	7-10
Clam Pass	90	8-9
Barefoot Beach	100	10
Koreshan State Park	46% did not survive (no numbers given)	

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

Disagreement on how many non-venomous:

Wikipedia: 31

en.wikipedia.org/wiki/List_of_snakes_of_Florida

Florida Fish and Wildlife Commission: 38

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/

Reptile Guide: 40

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

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

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:

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"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/

I am not particularly interested in:

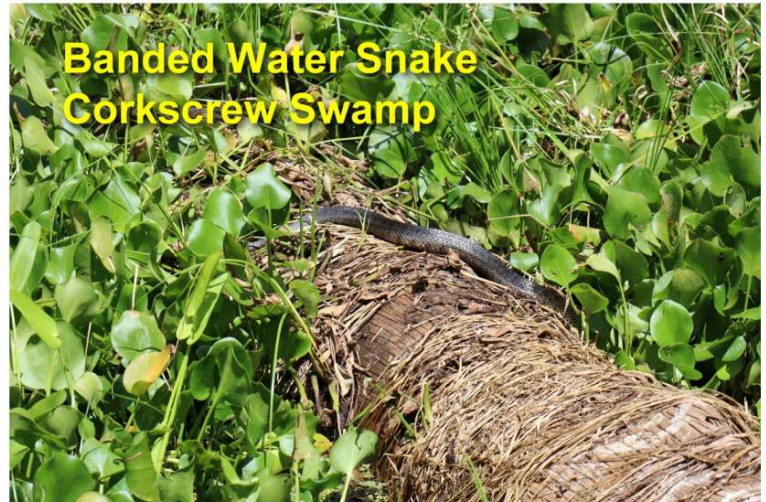
Ophiology: The study of snakes.
Sometimes called Serpentology.

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**



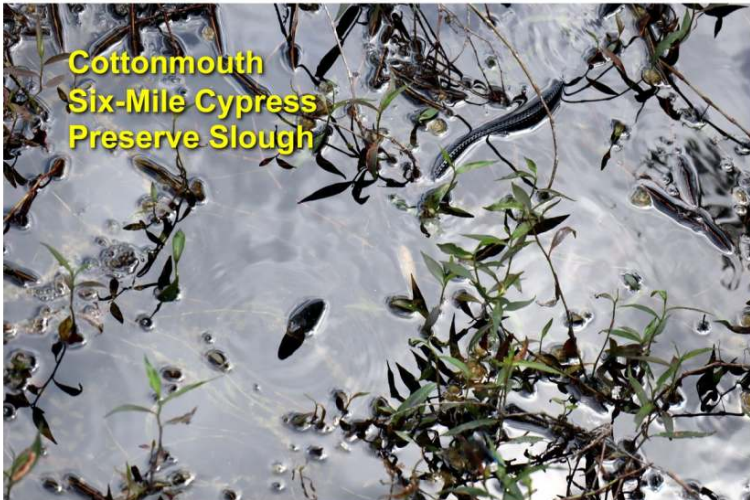
**Cottonmouth
Big Cypress Bend**



**Copperhead
Florida Panther
NWR**



**Cottonmouth
Six-Mile Cypress
Preserve Slough**



**Eastern Ratsnake
Koreshan State Park**

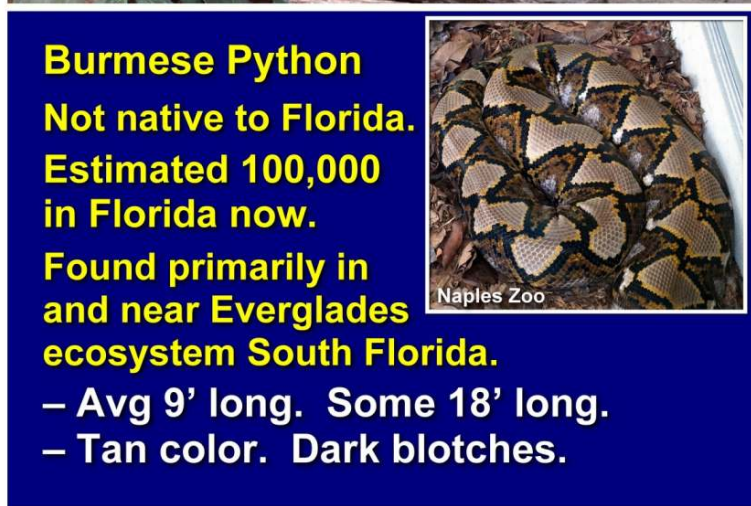
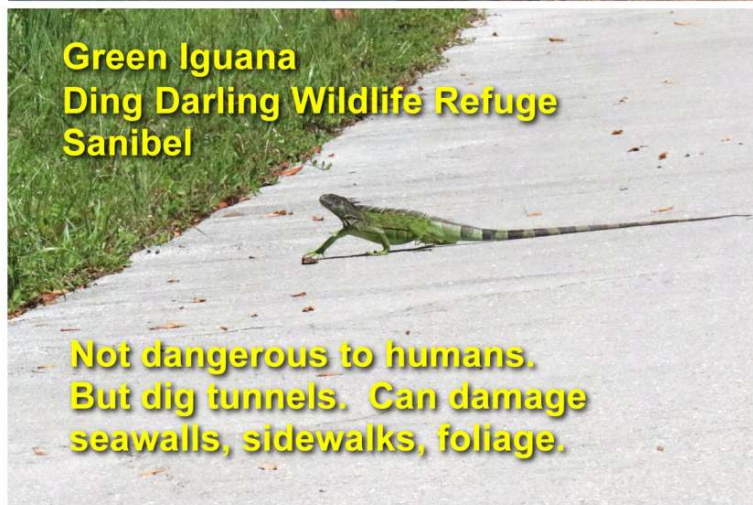


**Water Snakes
Adult and Juvenile
Corkscrew Swamp**



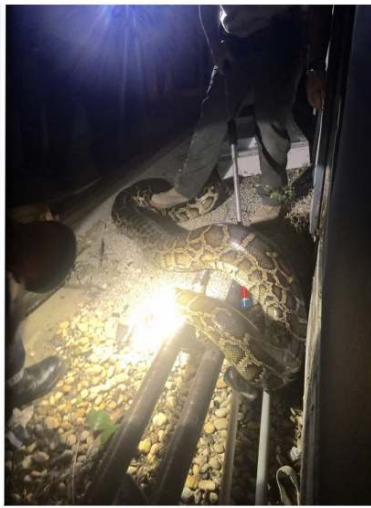
Five invasive reptiles in Florida:

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



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

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.

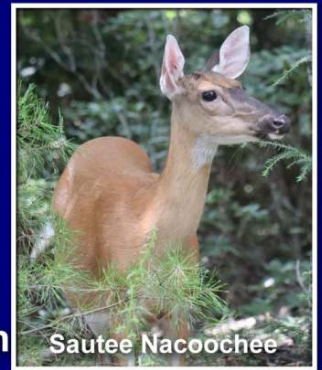
Most economically important big game mammal in North America and Florida.



CREW Bird Rookery Swamp

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.



Sautee Nacoochee

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.

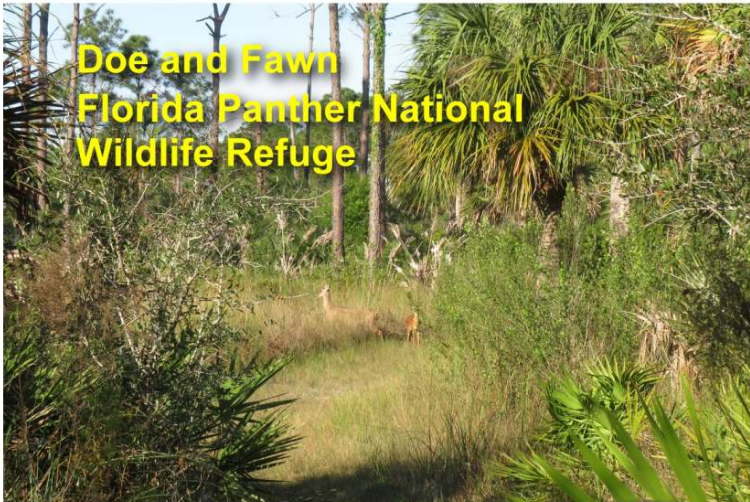
- Today over 120,000 harvested by hunters annually in Florida.

- Sustainable.

CREW Bird Rookery Swamp
Naples



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.

All 67 counties of Florida.

Free roaming. No hunting license
required!



Corkscrew Swamp, Naples

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".

Native to Florida.

About 7,500 in Florida.

Average adult 10' long.

Weighs between 800 and 1,200 pounds.



Homosassa River

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

Eat seagrass and freshwater vegetation.

Sexually mature age 5.

1 calf is born every 2 to 5 years.



Homosassa River

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.

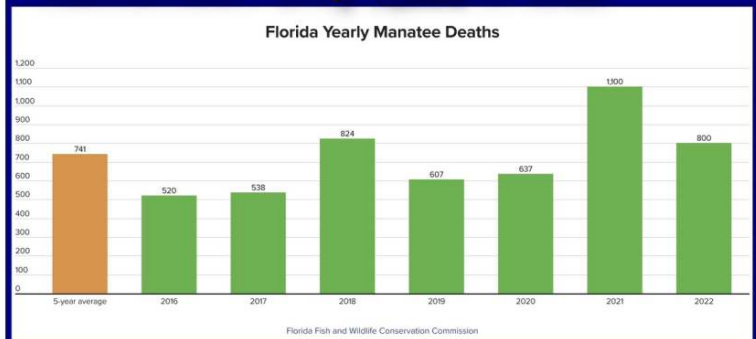
Why: Lack of seagrass.

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.

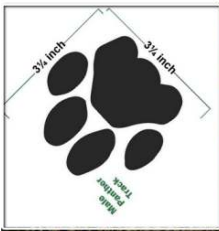
12-16 panthers roam.

Some guided tours.



Fresh Panther Track Last Night or This Morning





Panther Track

Panther - Homosassa Springs State Park



Panther (Athena) at Naples Zoo



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



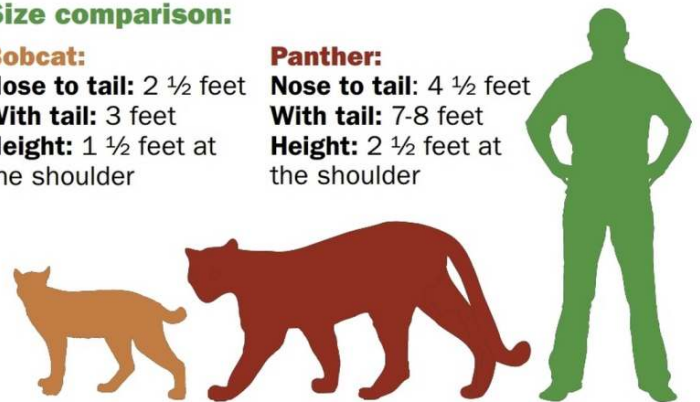
Bobcats are fairly common in the wild in Florida. Unfortunately I haven't seen one. Still, I think it's useful in this presentation to contrast panthers and bobcats.

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:

Bobcat:
Nose to tail: 2 ½ feet
With tail: 3 feet
Height: 1 ½ feet at the shoulder

Panther:
Nose to tail: 4 ½ feet
With tail: 7-8 feet
Height: 2 ½ feet at the shoulder



Homosassa Springs State Park



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.



Homosassa Springs

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

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.

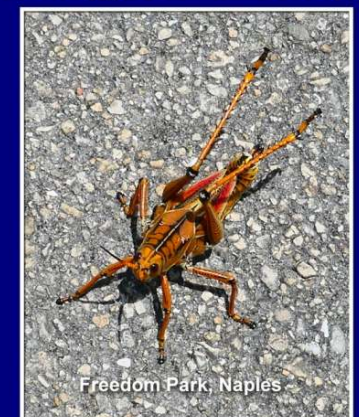


Big
Cypress
Bend

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

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.

WARNING

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.

THE END
Thanks for Joining Me!



Wildlife of Southwest Florida
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www.paulvisits.com