# **Know Your Florida Snakes!**



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### **Presentation Overview**

- Snake or not?
- Overview of FL snake diversity
- Florida's native snakes (nonvenomous)
  - Colubridae
  - Dipsadidae
  - Natricidae
- Florida's introduced snakes
- Florida's venomous snakes & safety
  - Viperidae
  - Elapidae
- Resources



### Snake-like, but not a snake

- Glass Lizards
  - 4 species
  - Eyelids, ear
  - Body groove
  - Long, fragile tail



- Pinkish color
- Rings of scale
- No eyes
- Fossorial
- Almost endemic







## FL Native Reptile Diversity

- Crocodilians = 2 species
- Turtles = 29 species
- Lizards = 17 species
- Snakes = 50 species



## Florida's Native Snakes

- Colubridae—Non-venomous snakes (in FL)
- Dipsadidiae—Egg-laying, rear fanged snakes
- Natricidae—Aquatic/semi-aquatic livebearers
- Viperidae—Pit Vipers (venomous)
- Elapidae—Coral Snake (venomous)



# Colubridae

- Non-venomous snakes
  - None in this family in FL produce a venom
  - Great variation in size, color, pattern
  - Previously the most speciose snake family in FL
  - Lay eggs
  - Head relatively narrow (not blocky) and not very distinct from the neck
    - Some will rapidly vibrate their tail—Rats & Racers
  - Found primarily in terrestrial habitats
  - ~20 species in FL

### North Am. (aka Black) Racer

Coluber constrictor

Identification: Long and slender, smooth scales; adults solid black/dk gray, greenish/bluish gray in S FL, chin throat creamy white, dk gray belly; juveniles w/ dark blotches and flecks, belly w/ flecks Habitats: A generalist found in just about

any terrestrial habitat, common in suburbia

<u>Other</u>: TL ~ 2-4 ft. (max 6 ft.); lays 4-36 elongate eggs w/ rough surface; eats insects, anurans, lizards, small mammals & birds—does not constrict prey; commonly referred to as "Black Snake"; FL's most commonly encountered snake; juveniles often misidentified as Pygmy RS and killed; will vigorously shake tail when agitated







## Eastern Indigo Snake

Drymachon couperi (2 sp. now)

- <u>Identification</u>: Large, glossy black/blue, chin/throat reddish-brown/salmon orange/cream, belly gray, smooth scales <u>Habitats</u>: Sandhills, pine flatwoods,
- hammocks often near water
- <u>Other</u>: TL ~ 5-6 ft. (max 8.5 ft.); longest snake in NA; lays 4-12 large eggs w/ granular surface; feeds on snakes (including venomous species), turtles, rodents, anurans; seeks refuge in tortoise burrows; usually a very docile snake; has declined significantly due to habitat loss, road mortality, collection for pet trade; federally listed as Threatened







## Red Cornsnake

#### Pantherophis guttatus

<u>Identification</u>: Body may be orange, tan, brown or gray; numerous reddish-orange blotches often outlined in black; belly a black & white checkerboard, faintly keeled scales down back, 'V' on head

<u>Habitats</u>: Most terrestrial habitats, common in suburbia (barns, attics)

<u>Other</u>: TL ~ 1.5-3.5 ft. (max 6 ft.); lays 5-30 eggs; feeds on rodents, birds, bats anurans, lizards—constricts prey; excellent climbers (belly scales angled), but burrow under leaf litter & soil too; common in the pet trade—numerous color morphs are bred; AKA Cornsnake or Red Ratsnake





## Eastern (aka Yellow) Ratsnake

Pantherophis alleghaniensis

- Identification: Adults are dark yellow w/ 4 dark longitudinal stripes; young are blotched & blotches fade to stripes as snake ages; S FL and Keys animals may be orange-brown w/o or faint stripes
- <u>Habitats</u>: Most terrestrial habitats, common in suburbia (barns, attics)
- <u>Other</u>: TL ~ 3-5 ft. (max 7.5 ft.); lays 4-45 eggs; females may use same nest site from year to year; feeds on rodents, birds (eggs), bats, anurans, lizards—constricts prey; excellent climbers; make good pets; usually do not bite if held gently; a very common snake in suburban neighborhoods http://www.youtube.com/watch?v=cKjG9BUiJBM







### Gray Ratsnake Pantherophis spiloides

<u>Identification</u>: Body gray or light brown, back marked with irregular shaped gray or brown blotches, weakly keeled scales

Habitats: Pine forests, hardwood hammocks, edges of swamps, agricultural areas, common in suburbia Other: TL ~ 3-6 ft. (max 7 ft.); lays eggs in dark, damp location; mainly diurnal but active at night in summer; feeds on rodents, birds (eggs), bats anurans, lizards—constricts prey; excellent climbers; formerly a subspecies of Yellow Ratsnake; may musk if handled roughly







### Pine Snake Pituophis melanoleucus

Identification: Tan to grayish body, back & sides w/ irregular brown to gray blotches that become blurred toward head, blotches often fade with age, weekly keeled scales, leaf-shaped rostral scale on tip of nose

<u>Habitats</u>: Sandhill, scrub, scrubby flatwoods, xeric hammock that is open; Rx fire is important for habitat

<u>Other</u>: TL ~ 3-5 ft. (max 7.5 ft.); lay 4-12 eggs usually underground; feed on lizards, small mammals, birds (eggs); fossorial and often in PG burrows; reluctant to cross roads; coil, hiss, and vibrate tail when threatened







# Rough Greensnake

#### **Opheodrys** aestivus

- <u>Identification</u>: Thin bodied, back ubiquitous bright green, belly & chine are yellowish white, keeled scales
- <u>Habitats</u>: Found in a variety of forested habitats, prefers shrubs and low trees especially near wetland and habitat edges
- <u>Other</u>: TL ~ 2-2.5 ft. (max 3.5 ft.); lay 3-10 eggs under rotting logs, in tree hollows, beneath bark; feeds on caterpillars, spiders, grass hoppers, other insects; diurnal and active foragers; very arboreal; preferred prey of Swallow-tailed Kites







# FL Crowned Snake

Tantilla relicta

<u>Identification</u>: Thin reddish-tan snake with black head/neck cap/collar

- <u>Habitats</u>: Almost **ENDEMIC**—2 GA records: sandhills, scrub, scrubby flatwoods, coastal dunes
- <u>Other</u>: TL ~ 6-8 in. (max 9 in.), lays eggs; feeds on insects and their larvae (beetles), worms, snails, spiders; very fossorial and spends most of time burrowing in sand or under logs; there are 3 species of Crown Snakes in FL so be sure to check range maps for ID







# Dipsadidae

- Oviparous, rear-fanged snakes
  - Previously in Colubridae
  - Produce a mild venom—not harmful to humans
  - Enlarged, grooved, rear teeth
  - Lay eggs
  - Relatively small snakes
  - Head relatively narrow (not blocky) and not very distinct from the neck
  - Generally terrestrial
  - 5 species in FL

## **Ring-necked Snake**

Diadophis puntatus

<u>Identification</u>: Small & slender; glossy black/gray back, orange/yellow belly w/ row of ½ moon spots, underside of tail red, distinct orange/yellow/whitish collar <u>Habitats</u>: Mainly moist forested habitats, but also drier pine and hardwood forests, common in suburbia

<u>Other</u>: TL ~ 6-7 in. (max 10 in); lays small eggs; emits smelly musk and 'corkscrews' tail when agitated; feeds on earthworms, slugs, insects, small amphibians & reptiles; hide under cover by day/active at night; produces a mild venom for subduing prey







## Pinewoods Snake

#### Rhadinea flavilata

- Identification: Small, thin, yellowishbrown body, darker head, yellow/white lips, unmarked belly
- <u>Habitats</u>: Moist pine forests, suburban areas where pinelands once occurred
- <u>Other</u>: AKA: Yellow-lipped Snake; TL 10 -12 in. (max ~16 in.); secretive and spends time under leaf litter and debris, lay 1-4 eggs during the summer; ecology is poorly understood







# Natricidae

- Semiaquatic, live-bearers
  - Previously in Colubridae
  - Give birth to live young
  - *Thamnophis* produce a mild venom—not harmful to humans
  - Head relatively narrow (not blocky) and not very distinct from the neck
  - Most found in or near water, 1 estuarine
    Species (no Sea Snakes in the Atlantic or Gulf of Mexico)
  - ~20 species in FL

### **Banded Watersnake**

#### Nerodia fasciata

Identification: Quite variable pattern and colors, usually black/gray/dk brown with lighter colored cross bands, may be solid brown-black, belly scales with irregular dark markings, strongly keeled scales, often dark lines along lip scales

<u>Habitats</u>: A habitat generalist in aquatic settings—lakes, ponds, swamps, rivers, canals, wet prairies (statewide)

<u>Other</u>: TL ~ 2-3.5 ft. (max 5 ft.); gives birth to 2-80 live young, avg., ~ 25; eats anurans, fish, crayfish, salamanders; often bask on logs and in thick vegetation; readily bite and musk if threatened; NOT a Cottonmouth







## FL Green Watersnake

#### Nerodia floridana

- Identification: Olive green with small dark flecks/bars, greenish beige belly, strongly keeled scales, sub-ocular scales under each eye
- <u>Habitats</u>: Lakes, ponds, marshes, canals; not typically in rivers
- <u>Other</u>: TL ~ 2-3.5 ft. (max 6 ft.), largest watersnake in FL; can give birth to > 100 live young, 30-40 is typical; eats fish and frogs mainly; flatten body and strike when cornered; may bite hard and musk when initially captured; ecology in Florida is poorly known







### **Brown Watersnake**

Nerodia taxispilota

- <u>Identification</u>: Brown body with alternating black blotches, belly is cream colored with dark spots; strongly keeled scales
- <u>Habitats</u>: Rivers, spring runs & adjacent swamps mainly; may also be found in lakes, canals, and wetlands with trees and fallen branches for basking
- <u>Other</u>: TL ~ 3-5 ft. (max 5.5 ft.); gives birth to 20-30 live young on avg., but up to 60; eats fish mainly (especially catfish), tadpoles, anurans; may sit and wait or actively forage for fish; good climbers DO NOT confuse with venomous Cottonmouth







## Florida Brownsnake

Storeia victa

<u>Identification</u>: Very small snake, gray to reddish brown body with faint light stripe flanked by dark spots, light "collar" on neck

<u>Habitats</u>: A variety of uplands, often near water, hides under logs and debris, common in suburban neighborhoods

<u>Other</u>: TL ~ 7-10 in. (max 13 in.); feeds on earthworms, slugs, small insects; may be "captured" in pool skimmers; mainly nocturnal; average number of young ~10-15; predators include: shrews, raccoons, opossums, Shrikes, Brown Thrashers, Hawks, Robins, snakes, toads, spiders







## Eastern Ribbonsnake

Thamnophis sauritus

- <u>Identification</u>: Very slender w/ long tail, scales keeled, 3 light stripes on back & sides, light blotch in front of eye
- <u>Habitats</u>: A generalist—a variety of open upland habitats, often near water
- <u>Other</u>: TL ~ 1.5-2 ft. (max 4 ft.), give birth to liters averaging 10-15 young; generalist diet: feed on frogs, tadpoles, small fish; mainly nocturnal; 4 subspecies occurring throughout much of eastern US; prefer edges of ponds, marshes, rivers







### **Common Gartersnake**

#### Thamnophis sirtalis

- Identification: Body color olive, gray, dark green, blue-green, black; w/ numerous dashes, and/or blotches given a checkerboard look; often w/ 3 light longitudinal stripes; keeled scales
- <u>Habitats</u>: A generalist—a variety of open upland habitats, often near water
- <u>Other</u>: TL ~ 1.5-2 ft. (max 4 ft.), give birth to liters up to 100 young—depends on female size; generalist diet: feed on frogs, fish, earthworms, slugs, salamanders, small mammals; produce a mild venom not harmful to humans; readily flatten head/body when scared







# Introduced Species

- 5 species breeding in FL
  - -Javan File Snake
    - Rock pit in Miami-Dade County
  - -Common Boa
    - Charles Deering Estate in Miami-Dade County
  - -Northern African Python
    - Small area on western outskirts of Miami, remains relatively localized, 2 confirmed in past year





### **Burmese Python**

#### Python bivittatus

- <u>Identification</u>: Large—to 18 ft./180 lbs in FL; tan/brown body w/ giraffe-like pattern down back and sides
- <u>FL Range</u>: Extreme southern FL but spreading N; isolated records in peninsula <u>Habitats</u>: Everglades, mangrove swamps, densely vegetated canal banks, tropical hardwood hammocks
- <u>Other</u>: Eat many native species including deer, alligators, wood storks, wood rats; linked w/ declines of mesomammals;
- FWC—cannot possess w/o permit; REPORT SIGHTINGS @ eddmaps.org







### **Brahminy Blind Snake**

#### Indotyphlops braminus

- <u>Identification</u>: Small (< 6 in.); round; brown/black w/ blunt tail and snout; looks like a reptilian earthworm; no ext. eyes
- Year introduced: 1979
- Invasion pathway: Cargo stowaway
- <u>FL Range</u>: Much of peninsula; a few isolated panhandle sites
- <u>Habitats</u>: Most often in suburban areas and disturbed site; pine rocklands, trop. Hardwood hammocks
- <u>Other</u>: Parthenogenetic—all are females; widely introduced globally; strictly fossorial and found under rocks, logs, debris; eats eggs and pupae of ants/termites





# Venomous Snakes in FL

### • Viperidae

- Hinged, hollow fangs
- Produce toxic venom
- Heavy bodied
- Give birth to live young
- Rattlesnakes, cottonmouths, copperhead
- Elapidae
  - Fixed fangs
  - Related to Cobras, Taipans, etc.
  - Lay eggs
  - Coral Snake

# Only 6 (7) Venomous Sp. in FL

#### Copperhead



#### Cottonmouth



#### **Coral Snake**



E. Diamond-backed Rattlesnake

#### **Pygmy Rattlesnake**





#### **Timber Rattlesnake**



### **Characteristics of Venomous Pit Vipers**

-Thick, blocky head with obvious neck

- -Heavy-bodied for their length
- -Relatively short, thick tail
- -Heat-sensitive pit on side of face
- -Complete scales on underside of tail

-Keeled scales (in some non-venomous too)

-Often a dark band from eye to corner of jaw





Nonvenomous watersnake











## Cottonmouth / Water Moccasin—Pit Viper

Adult Cottonmouth

Juvenile Cottonmouth



Distribution in Florida: Entire State





FL Cottonmouth (*A. conanti*) = statewide; N. Cottonmouth (*A. piscivorous*) = west of Apalachicola River

### Non-venomous Watersnakes (NOT Moccasins)

Florida Green Watersnake



**Brown Watersnake** 



These snakes are often persecuted as Moccasins. They are harmless.



**Banded Watersnakes** 



### Watersnake or Cottonmouth?



### Copperhead—Pit Viper





### Eastern Diamond-backed Rattlesnake—Pit Viper



## Timber Rattlesnake—Pit Viper





Distribution in Florida: North Florida



## Pygmy Rattlesnake—Pit Viper



**IFAS** Extension

### Coral Snake—Elapid



Distribution in Florida: Entire State





### Coral Snake and Non-venomous Look-alikes

Coral Snake



Scarlet Kingsnake

**Scarlet Snake** 



#### "Yellow Red STOP!"

### **Snakebite Action Plan**

- -Obtain prompt medical care—call 911 immediately!
- -Call the Poison Control Centers National Hotline 1-800-222-1222

#### **DO!**

- -Get the victim away from the snake
- -Keep bitten extremity lower than victim's heart
- -Wash the bite area with soap and water (do not delay seeking medical help)
- -Keep victim warm; as comfortable as possible; offer reassurance
- -Remove bracelets, rings, watches or restrictive clothing on bitten extremities

#### DO NOT!

- -Wait to seek medical attention until symptoms develop
- -Apply a tourniquet to a bitten extremity
- -Make incisions and attempt to suck out venom
- -Apply ice to the bite
- -Attempt to capture the snake to ensure identification
- -Handle a "dead" venomous snake



Snakebite,

### **Snake Resources**

## http://ufwildlife.ifas.ufl.edu/

### Snake ID Guide Dealing with Snake Links to "Fact Sheets"

IFAS Bookstore: Florida Snake ID Deck Venomous Snake Poster



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