

Marine Reptiles - Cold Blood and Warm Water

- **Class Reptilia**

- Cold blooded (ectotherms)
- Breathe with lungs
- Secretion glands to remove salt
- Lay internally fertilized eggs (oviparous)
- Examples: crocodiles, turtles, lizards and snakes



Green sea turtle

Endangered Sea Turtles

- Florida has Five species of nesting sea turtles
- **LOGGERHEAD** (*Caretta caretta*)
- **GREEN TURTLE** (*Chelonia mydas*)
- **LEATHERBACK** (*Dermochelys coriacea*)
- **KEMP'S RIDLEY** (*Lepidochelys kempi*)
- **HAWKSBILL** (*Eretmochelys imbricata*)



Endangered Sea Turtles

- Largest and most endangered is the **leatherback turtle**:
- Named for smooth, rubbery shell
- Feeds on jellyfish
- A huge turtle: weighs up to 2,000 pounds, may measure 8 feet in length
- Nest in Florida from April - July, ca. 50 nests/year
- Have been found in the arctic
- Many leatherback turtles die from ingesting plastic debris mistaken for jellyfish





Sea jellies are often consumed by juveniles of some turtles species such as the loggerhead, and adults of others like the giant leatherback.

Photo - Chris Johnson



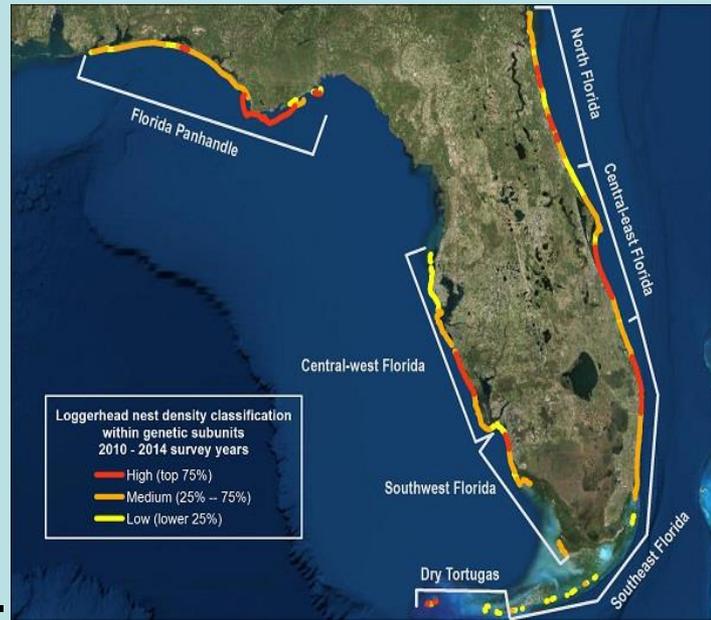
To a sea turtle, a plastic bag may be indistinguishable from a jelly.

Photo - Chris Johnson

Endangered Sea Turtles

- **Loggerhead sea turtle and Nesting:**

- In the United States, 90 percent of all loggerhead nesting occurs in Florida.
- It has a reddish-brown shell and is named for its large head.
- Adults can weigh between 200 and 350 pounds and can reach 3 feet in length.
- Loggerheads typically nest in Florida from April through September.
- Females return to their nesting beach every two or more years to lay about four to seven nests
- Each nest contains on average 100-126 eggs that incubate about 60 days.



Endangered Sea Turtles

- **Sea Turtle Hatch-outs:**
- Female tracks can be seen where she digs her nest
- Male and Female gender is influenced by temperature and position of developing egg in nest
- Males develop from cooler temperatures on the bottom; females develop from warmer temperatures on top
- Hatchling dig their way to the surface in unison and race toward the brightest spot on the beach, which is usually the reflection of the moon over the ocean on a dark beach.
- Only 1 in 10,000 turtles live to adulthood



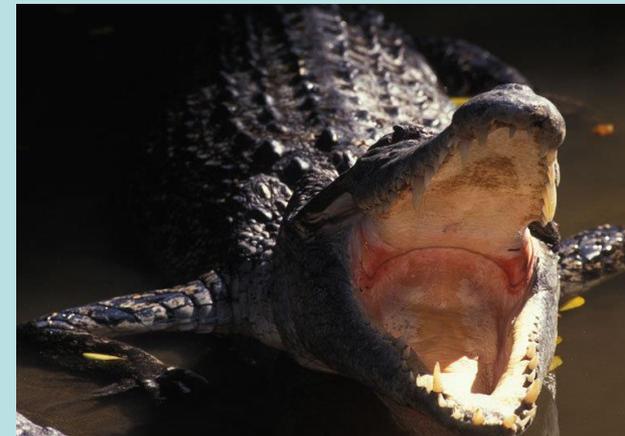
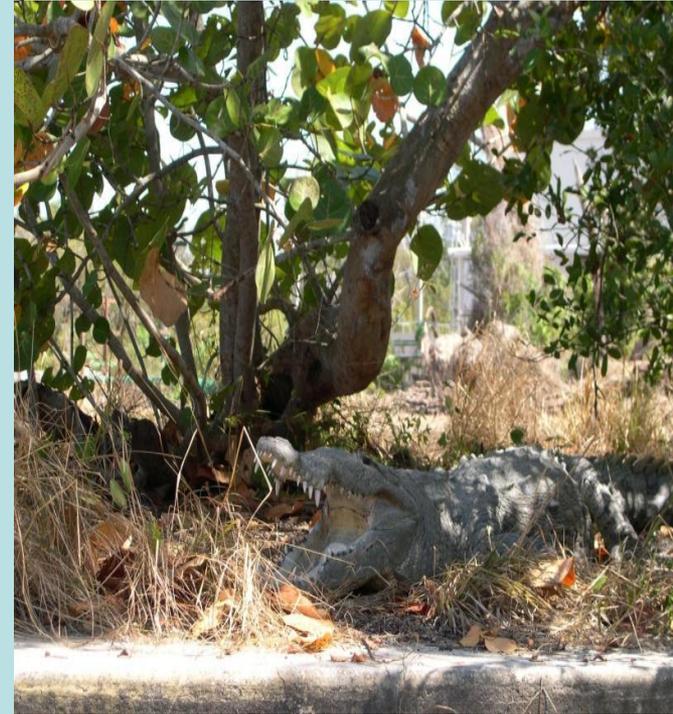
Sea Turtles were once an open fishery for harvest

- **Key West Sea Turtle Fishery**



Saltwater Crocodiles: American crocodiles (*Crocodylus acutus*)

- Endangered
- Shy and reclusive species.
- They live in coastal areas throughout the Caribbean, and occur in south Florida.
- Brackish or saltwater areas
- Excellent swimmers
- Control their body temperature by basking in the sun, or moving to areas with warmer or cooler air or water temperatures.
- Average size = 17 feet long, 1000 pounds
- Everglades National Park



Marine Birds

- Sea and shore provide habitat for many species of birds.
- Birds that depend on the sea for their survival are called Seabirds.
- There are nearly 9,000 species of birds.
- Not all birds fly, but they all share some important characteristics.

Seabirds – Class Aves

- Share similar life history traits
- Reptiles
- Endothermic
- Salt excretion glands
- Lay external eggs
- Examples include petrels, gulls, pelicans and penguins



Bird Adaptations

- All birds have feathers
- Down feathers are for warmth.
- Contour feathers cover the body and are used in flight.
- Powder feathers above down are waterproof.
- Some birds also have a special gland near their tail that produces a waterproof oil.
- Light, hollow bones.
- 4 chambered heart, warm blooded
- Sexual reproduction, lay eggs

Marine Bird Adaptations

- Seabirds have webbed feet for swimming
- Shore dwelling birds are not considered seabirds.
- Seabirds require a land base on which they can lay their eggs.
- Of the 9000 species of birds, only 350 are true seabirds.

Florida Sea Birds

- Pelican
- Snowy Egret
- Frigate bird
- Blue heron
- White Ibis



Penguins



- All 17 species of Penguin live in the southern hemisphere.
- They are the best adapted for swimming, because their wings have evolved to become flippers.
- Penguins mate for life.
- The fathers hatch the chicks, while the mothers leave in search of food to bring back to the chick.
- Penguins have adapted special feathers to help them withstand the cold waters, and the freezing cold temps.
- Black and white counter shading makes them nearly invisible to predators above and below.

Penguins

- All 17 species of penguins live in the Southern Hemisphere; on every continent.
- Penguins are abundant on many temperate and sub Antarctic islands.
- They are not only found in cold climates such as Antarctica. Several species live in the temperate zone, and one species, the Galapagos Penguin, live near the equator.
- Penguins feed on a range of sea creatures: fish, squid, sardines, anchovies, but most of all, especially the smaller penguins, on krill, a small shrimp.

Emperor Penguins

