

Kids' pages

Are you ready to learn about the bay?

Summer 2021



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Mark your
calendars!

Field Trips Available!

School starts the week of August 9 for Pinellas and Hillsborough County schools, and Estuary EDventures wants to see you at Tampa Bay Watch for a school field trip! The programs at our beautiful location in Tierra Verde are designed to engage students in hands-on, experiential labs, and field activities focused on the estuarine environment. Whether seining, dissecting, or identifying, students learn basic science principles and leave feeling inspired. Visit tampabaywatch.org for details!



Got a Question? Ask a Scientist!

Q Is Tampa Bay home to any endangered species?

A Yes, there are endangered species that reside in the Tampa Bay area, both in water and on land. Some of the well-known endangered species in Florida include the leatherback sea turtle and the Florida panther. However, the term "endangered" is only one category used to describe the conservation status of a population. Another category is "threatened," and this includes species such as the American crocodile, loggerhead sea turtle, and giant manta ray. So, who gets to decide which species are threatened, endangered, or possibly doing better than before? There are a few governing bodies who decide.

At the state level, the Florida Fish & Wildlife Conservation Commission creates a list of state threatened species or "species of special concern" recognized by the state of Florida. State threatened species include the roseate spoonbill and the gopher tortoise.

At the United States, or federal, level, the U.S. Fish & Wildlife Service develops a list using guidelines outlined by the Endangered Species Act.

According to the Endangered Species Act (USA), "endangered" is when a



The Florida Panther is listed as "endangered" by the ESA.

species is in danger of extinction throughout all or a significant portion of its home range. "Threatened" is when a species is likely to become endangered within the near future.

The International Union for Conservation of Nature (IUCN) is an international organization that evaluates the severity and specific causes of a species' threat of extinction. They created the "IUCN Red List" in 1964, the world's most comprehensive record of species conservation statuses.

IUCN has nine categories: Not Evaluated (NE), Data Deficient (DD), Least Concern (LC), Near Threatened (NT), Vulnerable (VU), Endangered (EN), Critically Endangered (CR), Extinct in the Wild (EW), and Extinct (EX).

Not every animal or plant on the planet has been evaluated by the IUCN. Some species may not be at risk globally, but are at risk in a specific country or state, which could account for species being in danger at a smaller level, but less so on a global scale.

Sources: U.S. Fish & Wildlife Service, myfwc.com, IUCN.org, IUCNRedList.org, National Geographic, Canva.

Expand Your Mind!

Meet & Greet: Federally Threatened Friends



NASSAU GROUPE

Epinephelus striatus

In 2018, the state-listed status changes that were proposed in 2011 were approved, which changed the status of the Nassau grouper to "federally threatened." Adult Nassau groupers spend their time lingering near coral reefs, but juveniles can be found in seagrass beds. Though not quite far enough north to be in Tampa Bay, their range does include parts of South Florida and extends throughout the Caribbean and down to southern Brazil. The main reasons for their decline are overfishing and lack of enforced rules.

Sources: NOAA fisheries, myfwc.com, A field Guide to Coastal Fishes, Canva



EASTERN INDIGO SNAKE

Drymarchon corais couperi

This nonvenomous snake is most easily identified by its glossy, bluish-black coloration and its size: it's the longest snake in North America and can reach up to eight feet in length! The diet of indigo snakes is rather unusual, including all venomous snake species native to the Southeastern U.S. Some studies suggest they are immune to rattlesnake venom. These snakes are indicator species for pine forests because their presence helps determine the health of the habitat. The main reasons for their decline include habitat destruction from development and over-collection for the pet trade.

Sources: myfwc.com, U.S. Fish & Wildlife Service, The Nature Conservancy, Canva



WOOD STORK

Mycteria americana

Wood Storks are the only stork native to North America. They are entirely white except for black flight feathers under the tips of their wings and tail. Their most recognizable feature is their head, which is unfeathered and scaly-looking. They forage in swamps, ponds, marshes, and especially wetlands. At one time, there were over 150,000 individuals, but by the early 1990s the population had fallen to around 10,000 because of habitat destruction and degradation of Florida's wetlands.

Sources: myfwc.com, allaboutbirds.org, National Audubon Society, Canva



Our education programs get kids into the bay!

Success Stories

CONSERVATION
CORNER

A species typically becomes threatened or endangered in two ways: loss of habitat and loss of genetic variation, or the diversity found within a population. Though loss of habitat can happen naturally over time, human activity contributes significantly to habitat destruction for many animals—usually from land development to keep up with human population growth. Having genetic variety in a population allows species to adapt to changes in the environment. However, overhunting and overfishing leads to a smaller breeding pool, which causes inbreeding and can result in a population of animals that is weaker against changes in habitat or disease.

In the early 1960s, the bald eagle was in danger of extinction throughout most of its range. Habitat destruction, illegal shooting, and the poisoning of the fish food source due to widespread use of the pesticide DDT, greatly reduced the eagle population in the U.S.


Scientists found that DDT was particularly harmful because the chemical disrupted the female eagle's ability to produce strong eggshells. As a result, eggshells were so thin that they often broke when the mom would sit on them, or they failed to hatch all together.

Good news came in 1972 when DDT was banned in the United States. Today, the bald eagle has recovered remarkably through agreements like the Endangered Species Act, the Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act. Additionally, efforts from the federal government's banning of DDT and conservation actions taken by the general public have helped our national bird populations.



Sources: EPA.gov, U.S. Fish & Wildlife Service, myfwc.com, Canva

Fun Facts about endangered species

 The Florida scrub-jay (federally endangered) is the only bird species that lives exclusively in Florida and rarely moves more than a few miles from where they hatched.

 The IUCN's Gulf of Mexico region has examined 3,892 marine species, including the tiger shark (NT), whitespotted eagle ray (EN), and great hammerhead (CR).

 In 2006, elkhorn and staghorn corals were the first two coral species to be added to the Endangered Species List under the ESA.

 The Squirrel Chimney cave shrimp (federally threatened) is only found in a single sinkhole near Gainesville, Florida and only about a dozen have been observed.

 A gopher tortoise's (state threatened) burrow averages 15 feet long and 6.5 feet deep, and is a shelter for over 350 other species.

Sources: U.S. Fish & Wildlife Service, IUCNredlist.org, myfwc.org, coralreef.gov, allaboutbirds.org

Did You Know...



The brown pelican and the white ibis were among the 15 species removed from Florida's Endangered and Threatened Species List in January of 2015. Source: myFWC.com



Fun Activity for Home: Turtle Bowl Craft

All seven sea turtle species around the world are protected under a global agreement commonly known as CITES, or the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Six of our seven species are listed as endangered or threatened under the Endangered Species Act in the United States. The seventh species, the flatback sea turtle, is a bit of a scientific mystery; however, it is still protected under CITES.

This craft lets you build and design your own endangered sea turtle species!

Materials:

- Paper bowl
- Green construction paper
- Markers or crayons
- Paper mache squares or scraps of colored paper
- Glue
- Scissors

Instructions:

1. With the bowl upside down, crumple up the paper mache or colored paper and attach to the dome of the bowl with glue.
2. On the green construction paper, draw shapes for the head, front flippers, rear flippers, and tail of the sea turtle. Add details, such as scales and eyes, if desired!
3. Cut out the body parts and, using glue, attach to the rim of the bowl.

