



Marine Education Poster Contest 2016

Sponsored by Blue Lagoon Island & Vendors from Nassau

Dolphin Encounters-Project BEACH

Contest Deadline: March 4th, 2016

Rays the Roof: Protecting Southern Stingrays in The Bahamas

Beautifully graceful underwater, Southern stingrays choose the turquoise waters of The Bahamas as their home. Like many other reef animals, stingrays play an important role in our marine ecosystem.

When a stingray hunts along the bottom, it mixes the sand and stirs up hidden creatures in search of food. Sea birds will often follow the path of a stingray hoping to make a meal from the animals disturbed by the ray.

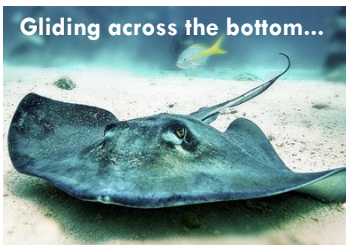


The unique hunting abilities of a stingray – digging, sucking, and crushing – also benefit other reef animals looking for lunch. These gentle winged fish are key predators in a healthy, marine habitat, so it's time to “Rays the Roof” and start protecting our stingrays!

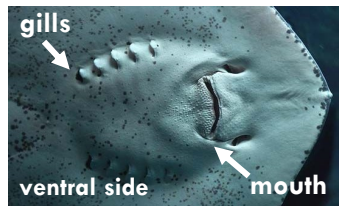
Learn more about this unique animal and the challenges it faces from the MEPC 2016 Info Sheet and express your feelings through art in the Marine Education Poster Contest 2016. Call for a FREE Marine Assembly Program at your school to introduce you to the marine topic “Rays the Roof!”

Ray By Design

Southern stingrays can be found in tropical and subtropical waters of the southern Atlantic Ocean, Caribbean and Gulf of Mexico. These rays have been found in depths of up to 180 feet and are usually found roaming the ocean alone or in pairs. In the summer months, they migrate and travel in schools.

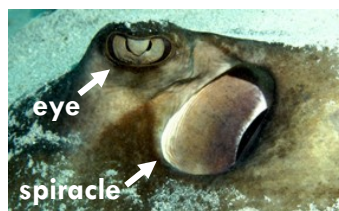


All rays belong to the superorder **Batoidea**, which includes stingrays, electric rays, skates, guitarfish, and sawfish. Like sharks - their close relatives - Batoids have skeletons made of tough connective tissue called **cartilage**. They also use **electro sensors** which are helpful to detect prey.



Unlike sharks, rays crush their food -- prey such as conch, crawfish, worms and fish that live on the seafloor – with **flattened teeth**. The teeth are made of cartilage but strong enough to crush shells.

Southern stingrays are flat and diamond-shaped, varying in color from gray to dark brown, and can reach a weight over 200 pounds! Their **eyes** are located on top of the head along with small openings call **spiracles**, holes that help bring water across the **gills** and allow the stingray to breathe even while lying on the seafloor.



As masters of disguise (**camouflage**), stingrays can completely bury themselves in the sand or soft seafloor. When swimming, if viewed from below, the bright belly of the ray matches the bright sky above, helping to escape large predatory fish such as lemon or hammerhead sharks.



The silky smooth skin of a ray's wings is only interrupted by rough **tubercles**, a bumpy ridge that extends down the dorsal spine to the **tail**. Like underwater birds, rays gently flap their enlarged **pectoral fins** to fly through the water. To reveal hidden prey in the seabed, rays can flap their wings or spray water from their mouth. The wingspan of a southern stingray can reach up to 4 feet!

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Stingray 101

Animal Type: Boneless Fish

Diet: Carnivore

Ave. Lifespan: 15-25 years

Maximum Width: 4 feet

Maximum Weight: 200+ lbs.

Native Range:

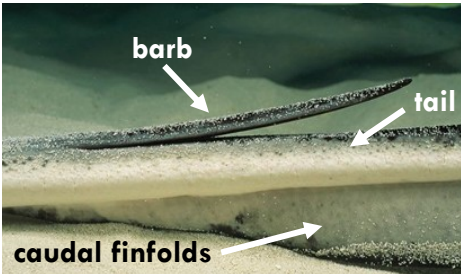


Relative Size:

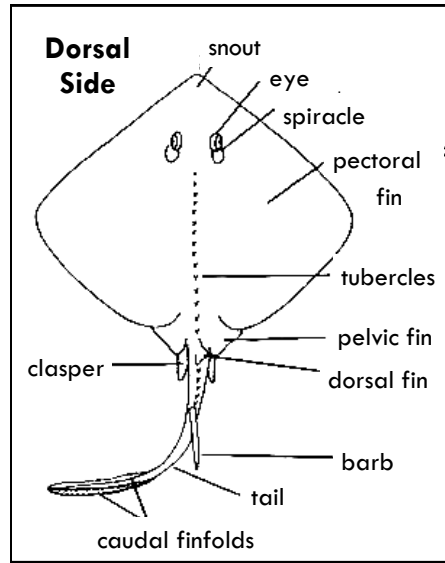


Ray By Design (continued...)

A stingray's **tail** is a long, slim whip with **pelvic fins** and a **dorsal fin** at the base of the tail and soft **caudal finfolds** under the end of the tail. All the fins assist in steering. Armed with a serrated, venomous-covered **barb**, a ray will raise its tail like a scorpion and stab a predator with its barb if threatened.



However, stingrays are quite **docile** and are MORE likely to swim away from a predator. Ejecting the barb will leave an animal VERY vulnerable as the new barb will take **months** to grow back.



Many years ago, the venom on the barb was actually harvested to use as an **anesthetic** during dental surgeries.



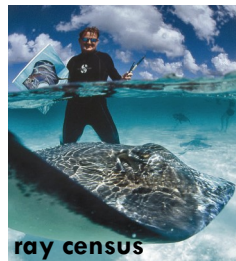
Female rays can generally be recognized by their larger size but only males have the cigar-shaped **claspers** found at the base of the tail. A mother ray will give birth to multiple **pups** and as soon as they are born, they set off into the world on their own.

Stingrays are known to visit **cleaning stations** where smaller fish such as the Bluehead wrasse or Spanish hogfish will pick and eat parasites and mucus off of their bodies.

Rays Awareness

Rays rely on coastal and near shore habitats for critical life history stages as they transition from their nursery grounds as babies to deep ocean habitats as adults. An increase in coastal development and pollution within The Bahamas may affect the available places this species needs for growth and reproduction.

Currently, there is not enough data to determine if Southern stingrays are threatened or endangered. **Overfishing, by-catch** and



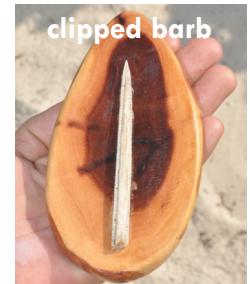
ray census

marine pollution impact the healthy survival of rays and many other marine creatures.

In the Cayman Islands, the **Guy Harvey Research Institute** is studying the behaviour, reproduction and population characteristics of rays, which will help to formulate conservation plans for this charismatic species.

Ray Safety: Stingray Shuffle

To help protect rays and YOU, whenever you enter shallow sandy waters, you should always **SHUFFLE** your feet across the bottom. Known as the **stingray shuffle**, the vibrations of your feet will alert any possible rays buried in the sand who can safely leave before you could accidentally step on them. If you're stepping into murky water from a boat, poke around with a stick before you set down your foot.



clipped barb

Marine Education in Action – New Stingray Program on Blue Lagoon

Though Blue Lagoon Island has a long history with stingrays, Dolphin Encounters will be introducing a new stingray program that inspires ray education and conservation in 2016. Our experienced animal training staff will share the unique features of these winged boneless fish through a fun **briefing** and **interaction** followed by free time to **snorkel** and observe these graceful animals in a spacious sandy pool.



briefing

For a greater sense of safety for our guests, each of our rays has its barb **trimmed** on a regular basis.

This **husbandry behavior** – a pedicure of sorts - is the equivalent of trimming a dog's nails as the barb regrows much like a toenail. As a part of their training, the rays will also learn **behaviors** that help ensure they are healthy, eating a diet fit for their weight and size, and show off their natural abilities.

Much like the dolphins and sea lions, each stingray has its own personality and behaviors.

We look forward to sharing this exciting stingray experience with our guests and inspiring a new sense of conservation for rays and their fishy friends.



interaction