

Dasyatis americana (Southern Stingray)

Taxonomy:

Class: Chondrichthyes (Cartilaginous Fish)

Order: Rajiformes (Rays and Sawfish)

Family: Dasyatidae (Stingrays)

(Insert stingray photo)

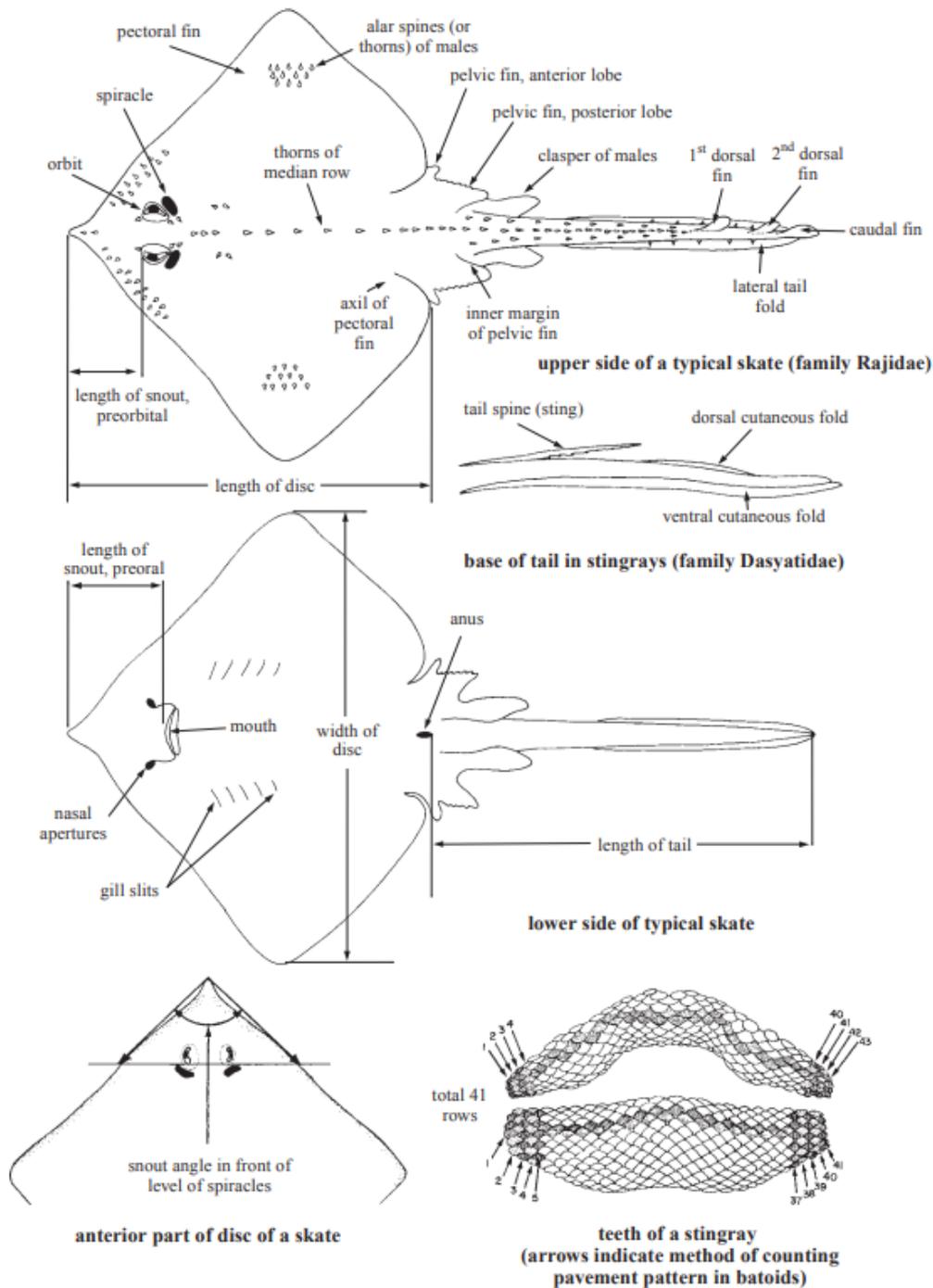


Physical Description:

The southern stingray (*Dasyatis americana*) is a bottom dwelling or “benthic” organism that is characterized by a flattened, diamond, disc shaped body that is connected to a long tail which contains a serrated, venomous spine. Unlike other cartilaginous fish such as sharks, stingrays lack a dorsal fin and the pectoral fins fused together, creating wing-like projections that give this animal their diamond shaped body. Stingrays use these modified, wing-like pectoral fins to propel themselves through the water using a vertical oscillating motion. Depending on the stage of their development, the dorsal surface of the southern stingray is gray, green or dark brown. The ventral surface has a pale white coloration. The eyes of the southern stingray are located on the top of the head and lay adjacent to small respiratory openings called spiracles that allow for the animal to breath while lying on the seafloor or when buried in the sand. The gills which expel the water taken in by the spiracles, and mouth are located on the underside of the animal. This species of stingray displays sexual dimorphism meaning that males and females differ in appearance. Females are substantially larger than males; female and male disc widths range between 75-80 cm and 48-53cm wide respectfully.

(McEachran and Carvalho 2002)

TECHNICAL TERMS AND MEASUREMENTS
(straight-line distances)



Distribution and Habitat

The southern stingray is common throughout the Caribbean region and the Gulf of Mexico and can be found in tropical and subtropical waters of the

eastern and southern Atlantic Ocean. These animals usually inhabit shallow, sandy bottom habitats or seagrass beds where their prey is abundant but can also be seen on coral reefs and in brackish environments. These animals are usually observed swimming alone or with another individual, however they have been observed traveling in large groups during the breeding season.



Global distribution of the southern stingray (<https://www.floridamuseum.ufl.edu/discover-fish/species-profiles/dasyatis-americana/>)

Feeding behavior and preference

Southern stingrays are nocturnal and diurnal benthic predators, feeding upon epibenthic prey such as small teleosts (fish), crustaceans, stomatopods (mantis shrimp), mollusks and annelids (worms) that hide in the sand or seagrass. Southern stingrays rely upon their strong sense of smell, touch and electroreception to locate their prey.

Reproduction

Female and male southern stingrays become sexually mature when their disk width reaches a particular size. Females and males reach sexual maturity when their disc size equals or exceeds 29.5 inches and 20 inches respectively. Very little is known about this animals reproductive cycle, however southern stingrays may reproduce twice a year. Embryonic

development occurs through aplacental viviparity. During aplacental viviparity, an embryo will initially obtain nourishment via a yolk sac within the mother's body. Once the yolk sac is absorbed, embryos are nourished from milk produced by the mothers maternal secretions. Gestation varies between individuals and ranges from 4 to 11 months. On average, 4 pups are born per litter, however litter size can range from 2 to 10 pups. Under human care, pup sizes and weights range between 7.9 to 13.4 inches and 0.6 to 2.5 pounds respectively.

Predators and defense mechanisms

The southern stingrays main predators include humans, various shark and large fish species, specifically the hammerhead sharks. In order to avoid predation and to protect their skin from the sun, these animals bury themselves in the sand. In addition, southern stingrays have a venomous barb at the end of their tail that can be used for defense. However, this barb only functions as a weapon when pressure is applied to the top of the animal.

Parasites

Southern stingrays are commonly affected by trematode ectoparasites and as a result, may engage in symbiotic relationships with cleaner wrasse species.

Citations

1. Bigelow, H., Schroder, W. (1953) [Fishes of the Western North Atlantic. Sawfishes, guitarfishes, skates and rays](#). Mem. Sears Found. Mar. Res., 1:1-558.
2. Henningsen, A.D. (2000). "Notes on reproduction in the southern stingray, *Dasyatis americana* (Chondrichthyes: Dasyatidae), in a captive environment". *Copeia*, **0**(3): 826.
3. McEachran, J., de Carvalho, M. (2002) "Dasyatidae". In: K.E. Carpenter (ed.). [The living marine resources of the Western Central Atlantic](#). Volume 1. Introduction, molluscs, crustaceans, hagfishes, sharks, batoid fishes and chimaeras. pp. 562–571.
4. Snelson, F.; S. Gruber; F. Murru; T. Schmid (1990). "Southern Stingray, *Dasyatis americana*: Host for a Symbiotic Cleaner Wrasse". *Copeia*, 4: 961–965. [doi:10.2307/1446479](#). [JSTOR 1446479](#)
5. [Southern Stingray](#).(2007). Southern stingray Biological Profile, Ichthyology Department, Florida Museum of Natural History