

= Bluntnose stingray =

The bluntnose stingray or Say 's stingray (*Dasyatis say* , often misspelled *sayi*) is a species of stingray in the family *Dasyatidae* , native to the coastal waters of the western Atlantic Ocean from the U.S. state of Massachusetts to Venezuela . It is a bottom @-@ dwelling species that prefers sandy or muddy habitats 1 ? 10 m (3 @.@ 3 ? 32 @.@ 8 ft) deep , and is migratory in the northern portion of its range . Typically growing to 78 cm (31 in) across , the bluntnose stingray is characterized by a rhomboid pectoral fin disc with broadly rounded outer corners and an obtuse @-@ angled snout . It has a whip @-@ like tail with both an upper keel and a lower fin fold , and a line of small tubercles along the middle of its back .

More active at night than during the day when it is usually buried in sediment , the bluntnose stingray is a predator of small benthic invertebrates and bony fishes . This species is aplacental viviparous , in which the unborn young are nourished initially by yolk , and later histotroph (" uterine milk ") produced by their mother . Females give birth to 1 ? 6 pups every May after a gestation period of 11 ? 12 months , most of which consists of a period of arrested embryonic development . The venomous tail spine of the bluntnose stingray is potentially dangerous to unwary beachgoers . The International Union for Conservation of Nature (IUCN) has listed this species under Least Concern , as it is widely distributed , common , and minimally threatened by commercial fisheries .

= Taxonomy and phylogeny =

French naturalist Charles Alexandre Lesueur originally described the bluntnose stingray from specimens collected in Little Egg Harbor off the U.S. State of New Jersey . He published his account in an 1817 volume of the *Journal of the Academy of Natural Sciences of Philadelphia* , and named the new species *Raja say* in honor of Thomas Say , one of the founding members of the Academy . The species was moved to the genus *Dasyatis* by subsequent authors . In 1841 , German biologists Johannes Peter Müller and Friedrich Gustav Jakob Henle erroneously gave the specific epithet as *sayi* in their *Systematische Beschreibung der Plagiostomen* , which thereafter became the typical spelling used in literature . Recently , there has been a push to use the correct original spelling again , though it has also been proposed that the International Commission on Zoological Nomenclature (ICZN) officially emend the spelling to *sayi* , for consistency with previous usage .

Lisa Rosenberger 's 2001 phylogenetic analysis , based on morphological characters , found that the bluntnose stingray is one of the more basal members of its genus , and that it is a sister species to the diamond stingray (*D. dipterura*) of the western Pacific Ocean . The two species likely diverged before or with the formation of the Isthmus of Panama , some three million years ago .

= Distribution and habitat =

The bluntnose stingray is found in the western Atlantic Ocean , from Chesapeake Bay southward through the Florida Keys , the northern Gulf of Mexico , and the Greater and Lesser Antilles ; on rare occasions it is found as far north as New Jersey and Massachusetts , as far south as Venezuela , and as far west as Mexico . It is absent from the southern Gulf of Mexico and the Caribbean coast of Central America . Reports of this species from off Brazil and Argentina likely represent misidentifications of the groovebelly stingray (*D. hypostigma*) .

Common in coastal habitats such as bays , lagoons , and estuaries , the bluntnose stingray is a bottom @-@ dwelling species usually found at a depth of 1 ? 10 m (3 @.@ 3 ? 32 @.@ 8 ft) , though it has been recorded from as deep as 20 m (66 ft) . It frequents sandy or muddy flats , preferring water with a salinity of 25 ? 43 ppt and a temperature of 12 ? 33 ° C (54 ? 91 ° F) . Adult bluntnose stingrays are seldom found in seagrass meadows or shoals , though the latter serves as a habitat for young rays . Along the U.S. East Coast , schools of bluntnose stingrays migrate long distances northward into bays and estuaries to spend the summer , and move back to southern offshore waters for winter .

= = Description = =

The bluntnose stingray has a diamond @-@ shaped pectoral fin disc about a sixth wider than long , with broadly rounded outer corners . The leading margins of the disc are nearly straight and converge at the tip of the snout at up to a 130 ° angle ; the anterior disc shape distinguishes this species from the similar Atlantic stingray (*D. sabina*) , which has a longer , more acute snout . The mouth is curved , with a central projection on the upper jaw that fits into an indentation on the lower jaw . There is a row of five papillae across the floor of the mouth , with the outermost pair smaller and set apart from the others . There are 36 ? 50 upper tooth rows ; the teeth have quadrangular bases and are arranged with a quincunx pattern into flattened surfaces . The tooth crowns are rounded in females and juveniles , while those of males in breeding condition are triangular and pointed . The pelvic fins are triangular with rounded tips .

The whip @-@ like tail measures over one and a half times as long as the disc and bears one or two long , serrated stinging spines on top , about a quarter of the tail length back from the base . The second spine , if present , is a replacement that periodically grows in front of the existing spine . Behind the spine , there are well @-@ developed upper and lower fin folds , with the lower fold longer and wider than the upper . Small thorns or tubercles are found in a midline row from behind the eyes to the base of the tail spine , increasing in number with age . Adults also have prickles before and behind the eyes and on the outer parts of the disc . The dorsal coloration is grayish , reddish , or greenish brown ; some individuals also possess bluish spots , are darker towards the sides and rear , or have a thin white disc margin . The ventral surface is whitish , sometimes with a dark disc margin or dark blotches . A record off French Guyana gives the maximum disc width of this species as 1 m (3 @.@ 3 ft) , but that specimen may have been misidentified and other sources give a maximum disc width of no more than 0 @.@ 78 m (2 @.@ 6 ft) . Females grow larger than males .

= = Biology and ecology = =

The bluntnose stingray has generally nocturnal habits and spends much of the day buried in the substrate . It has been known to follow the rising tide to forage in water barely deep enough to cover its body . This species preys upon small invertebrates , including crustaceans , annelid worms , and bivalve and gastropod molluscs , and bony fishes . It mainly targets benthic and burrowing organisms , but also opportunistically takes free @-@ swimming prey . In Delaware Bay , this species feeds predominantly on the shrimp *Cragon septemspinosa* and the blood worm *Glycera dibranchiata* , and its overall dietary composition is virtually identical to that of the rough-tail stingray (*D. centroura*) , with which it shares the bay . The bluntnose stingray is preyed upon by larger fishes such as the bull shark (*Carcharhinus leucas*) . Known parasites of this species include the tapeworms *Acanthobothrium brevissime* and *Kotorella pronosoma* , the monogenean *Listrocephalos corona* , and the trematodes *Monocotyle pricei* and *Multicalyx cristata* .

Like other stingrays , the bluntnose stingray is aplacental viviparous. with the embryos initially sustained by yolk . Later in development , finger @-@ like extensions of the uterine epithelium called " trophonemata " surround the embryo and deliver protein and lipid @-@ rich histotroph (" uterine milk ") produced by the mother . Only the left ovary and uterus in adult females are functional . Mating occurs during a well @-@ defined period from April to June , peaking in May , with the males presumably using their pointed teeth to grasp the females for copulation . However , embryonic development halts at the blastoderm stage , shortly after the formation of the zygote , and does not resume for approximately ten months . In the spring of the following year , the embryos rapidly mature over a period of 10 ? 12 weeks . This period of embryonic diapause may reflect the greater availability of food in the spring .

Including the extended period of diapause , the gestation period lasts around 11 ? 12 months , with 1 ? 6 young being born in mid to late May . In 1941 , in a shallow channel between Chincoteague Island and Cape Charles , Virginia , several large bluntnose stingrays were observed repeatedly breaking the surface and swimming rapidly in straight lines , some with their tails thrashing in the air

; others were seen rising slowly to the surface and " hanging " for several minutes . One of the rays was hooked and the shock of capture caused it to release five near @-@ term fetuses , suggesting that this activity may have been related to parturition . The aborted young were pale with small yolk sacs , and a swelling in the place of their tail spines . Females begin ovulating a new batch of eggs immediately after giving birth , indicating that they have an annual reproductive cycle . Newborn rays measure 15 ? 17 cm (5 @.@ 9 ? 6 @.@ 7 in) across and weigh 170 ? 250 g (6 @.@ 0 ? 8 @.@ 8 oz) . Males mature sexually at disc width of 30 ? 36 cm (12 ? 14 in) and a weight of 3 ? 6 kg (6 @.@ 6 ? 13 @.@ 2 lb) , while females mature at a disc width of 50 ? 54 cm (20 ? 21 in) and a weight of 7 ? 15 kg (15 ? 33 lb) .

= = Human interactions = =

The bluntnose stingray is not aggressive , though it will defend itself if stepped on or otherwise incited . Its tail spine can inflict an excruciating injury , and can easily pierce leather or rubber footwear . The paralytic venom delivered may have potentially life @-@ threatening effects on those with heart or respiratory problems , and is the subject of biomedical and neurobiological research . This species is popular with ecotourist divers . Abundant and widespread , the bluntnose stingray is caught incidentally by commercial trawl and gillnet fisheries operating in nearshore U.S. waters ; these activities are not a threat to its population , as most captured rays are released alive . The impact of fishing in the southern parts of its range is uncertain , but is unlikely to significantly affect the species as a whole as these activities occur outside its centers of distribution . As a result , the International Union for Conservation of Nature has listed the bluntnose stingray as of Least Concern .