

Freshwater Stingrays

Care Guide

Relatives of Sharks

Stingrays are relatives of sharks, sawfish, skates and guitarfish, having cartilaginous skeletons rather than true bones. As their name suggests, stingrays have a venomous barb – actually a modified scale – on their tails, which they use as a defense mechanism. Contrary to popular belief, stingrays do not come at you waving their stingers; you have to step on one or SERIOUSLY harass them to be stung. The barbs are shed and replaced by new ones periodically, and discarded spines can be found lying on the bottom of the aquarium. Rays also have "Lorenzian ampullae" located on their heads, which allow them to sense electrical impulses in the water.

Many people are surprised to learn that some stingrays live in freshwater. Freshwater stingrays are very intelligent and quite interactive with humans. They can even be taught to hand feed. That said, they are not for everyone. They need large aquariums, pristine water conditions and specialized diets, but for those willing to put in the effort, they are truly unique fish that quickly become beloved pets. In the past, most rays offered for sale were captured in the wild, which means they were often stressed and frequently carried parasites and other diseases. Many rays sold today are captive bred and are a better choice for aquarists.

Natural Habitat

Freshwater stingrays are found in river systems in Southeast Asia, Australia, Africa and South America. Aquarium shops in North America typically offer members of the genus *Potamotrygon* (Family Potamotrygonidae), which are native to South America. Most species of rays are native to a particular river system, with the majority coming from the Amazon River. They live in a variety of habitats including slow moving sandy bottomed rivers, but they can also be found in flooded forest areas during the rainy season.

Water Requirements

Stingrays are very sensitive to ammonia, nitrite and nitrate, so it's vitally important to understand the Nitrogen Cycle and maintain pristine water quality. To complicate matters, they produce high amounts of ammonia



relative to their size. Large aquariums, efficient biological filtration and frequent water changes are the best way to maintain proper water conditions. Most freshwater rays can be kept at a pH between 6.8 and 7.6, alkalinity between 1° and 4° (18ppm to 70 ppm) and temperature between 75° and 82° F. Ammonia and nitrite levels should always be zero and nitrates below 10 ppm. Many stingray owners use RO/DI water with a trace element restorer. Salt should not be added to the aquarium unless it is used to help bolster their immune systems against stress or diseases or to reduce the harmful effects of elevated nitrite levels. Always check the salt tolerance of other fish in the aquarium before using it! Use an Aqueon[®] Aquarium Heater to maintain proper temperature, maintain good filtration and do a 25% to 50% weekly water change using an Aqueon[®] Aquarium Water Changer or Siphon Vacuum Gravel Cleaner. Don't forget to treat tap water with Aqueon[®] Water Conditioner before refilling your aquarium!

Housing Requirements

Simply put, when it comes to the proper sized aquarium for freshwater stingrays, the bigger the better. Height is not critical, but a length of at least 72" to 84" and depth (width) of 24" to 36" should be considered the minimum for long term housing. A 75 or 90 gallon aquarium can be used for juvenile stingrays, but nothing smaller than a 180 gallon aquarium should be considered for keeping adults long term. The substrate should be fine sand and decorations, if used, should be smooth and free of sharp edges. Leave as much of the bottom as possible open for the rays to swim and bury in the sand. Heaters should have a guard around them or be in-line or located in a sump to prevent your stingrays from burning themselves on them. Lighting should be subdued with a 12-hour day/night cycle.

Behavior/Compatibility

Stingrays spend most of their time on the bottom. Their eyes and gill inlets (called spiracles) are located on top of their bodies which allows them to remain buried in the sand waiting for food to come along. They have excellent eyesight and leap out of the sand to trap prey with their bodies. The best tank mates for freshwater rays are other rays, although

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Care Sheet (continued)

severums, Geophagus species, silver dollars, arowanas and bichirs are possibilities, as well. Different species and sizes of stingrays can be mixed as long as there is adequate space and filtration. Beyond that, compatible fish should be large enough to not get eaten by the rays, yet peaceful enough to not nip at them or steal their food. Middle to upper water level swimmers are best so that your rays have free access to the bottom. Avoid plecostomus and other suckermouth catfish, as they are known to injure rays by sucking on their soft bodies.

What Do Stingrays Eat?

Freshwater stingrays are carnivores, feeding mostly on fish and crustaceans in the wild. Many hobbyists feed live blackworms to get new rays eating as soon as possible, but frozen bloodworms, mysis shrimp, raw shrimp or white fish (tilapia) and live earthworms are better choices once rays are acclimated to their new surroundings. Freshwater rays can be taught to take food from tweezers or even from your hand. Many rays, especially captive bred specimens, will also eat sinking pellet or tablet foods such as Aqueon® Tropical Granules, Bottom Feeder Tablets, Shrimp Pellets and Cichlid Pellets.

Buying Stingrays

As of 2017, Arizona, Arkansas, California, Georgia, Hawaii, Mississippi, Nevada, Oklahoma, Texas and Utah prohibit private individuals from owning Potamotrygon species, and Colorado and Florida require a permit. Always check local and state regulations before purchasing any animal. Before buying a stingray, make sure the edges of the disc are not curled upward (known as the “death curl”) and there are no visible injuries. Ask to see the fish eat and avoid individuals that show no interest in food. Never buy a stingray that has just arrived in the store; give them a week or more to settle in before taking them home. When adding new rays to an existing population, always quarantine them for at least 30 days before introducing them to your existing fish.

Breeding Level – Difficult

A number of hobbyists have had success breeding freshwater stingrays, but it takes time, space and dedication. Females are larger than males and have two uteruses, meaning they can have litters of pups from two different males at the same time. Males have modified pelvic fins called claspers, which they use to inseminate the females. All freshwater stingrays are believed to give live birth to pups.

