

Keeping Nurse Sharks in Aquariums

Can you keep a nurse shark in a home fish aquarium?

By Scott W. Michael

Q. I'm planning to purchase a new 80-gallon flat-back hex aquarium equipped with a trickle filter and a protein skimmer to house a 22-inch nurse shark. Will I be able to keep my nurse shark in this type of setup, and if so, what are nurse sharks like in regard to feeding, compatibility with other fish, behavior and anything else I should be concerned about?

A. Rather than address your specific queries about the nurse shark I will respond with three words — Don't do it! Putting a 22-inch nurse shark (*Ginglymostoma cirratum*) in an 80-gallon flat-back is like keeping a grizzly bear in a dog kennel.

In the case of a less-active shark species, such as the nurse shark, I recommend that the aquarium be at least as wide and two to two-and-a-half times as long as the shark's total length. This means the aquarium should be at least 22 inches wide and 44 to 55 inches long for a 22-inch nurse shark.

I'm assuming that your 80-gallon flat-back is about 60 inches long and 16 inches wide. If so, the width of the aquarium is already too small for a shark of this size, and considering that a nurse shark can grow 8 inches a year if fed well (but not excessively), the aquarium length would be too small in as little as nine months.

If it were a newborn nurse shark, which is about 11 inches at parturition (birth), this aquarium would be just wide enough. However, the shark could outgrow the aquarium's width in less than a year, and its length in just over two years using my formula for minimum aquarium size. Even if you had a 200-gallon tank you would still have to give up your shark someday because they attain a maximum of 14 feet in length! What will you do then?

Many people purchase these sharks thinking there will be a public aquarium eager to receive an overgrown pet as a gift. How wrong they are! Public aquariums are usually well stocked with specimens and have little room for additional sharks.

Although nurse sharks are wonderful and interesting animals, I do not recommend them for the home aquarium. But, there are smaller shark species that are ideally suited to just such confined living quarters.

The best aquarium sharks belong to the family Hemiscyllidae (commonly know as the epaulette and bamboo sharks). These are smaller sharks — the largest reaches a length of just over 3 feet — that are usually found in tide pools, on the reef flat or fore reef, often in habitats where there is a lot of hard coral cover.

These sharks are adapted to life in tight quarters. They have muscular paired fins that they use to "crawl" through tight spaces. They also have slender, supple bodies and bear a closer resemblance to eels than to most other sharks.

I have seen four species of hemiscyllid sharks in the marine aquarium trade, two of which are regularly encountered. These are the brownbanded bamboo shark (*Chiloscyllium punctatum*) and the whitespotted bamboo shark (*Chiloscyllium plagiosum*). The other two species are the gray bamboo shark (*Chiloscyllium griseum*), which is infrequently encountered, and the epaulette shark (*Hemiscyllium ocellatum*), which is occasionally available.

These sharks are usually referred to as catsharks (which belong to the order Carcharhiniformes and the family Scyliorhinidae) by retailers and wholesalers, but they are actually only distantly related to the true catsharks. The hemiscyllid sharks belong to the order Orectolobiformes and are more closely akin to the blind sharks, wobbegongs, nurse sharks, zebra sharks and even the whale shark.

All of the available hemiscyllids are distributed in the Western Pacific and Indian Oceans, with the majority of aquarium specimens originating from the Philippines and Indonesia. *Chiloscyllium punctatum* is the most common species observed. At hatching it is about 6 inches in length and attains a maximum length of 41 inches.

As a juvenile *C. punctatum* has an attractive color pattern of black and white or beige bands. These bands fade as the sharks mature, with adults having an overall dorsal and flank color of tan to light brown, with slightly darker brown bands.

The second most common bamboo shark is *C. plagiosum*. It also is about 6 inches at hatching and attains a maximum length of 37 inches. Juveniles are usually satiny black with light spots. As they grow older their base color lightens to dark

or light brown. The epaulette shark is limited in distribution to Australia and New Guinea, and like other fish from this area it commands a high price when available. In my opinion, this is the best aquarium shark because it is hardy and quickly acclimates to captive life.

Juvenile hemiscyllid sharks can be housed in aquariums as small as 30 gallons, while adults will do well in a 180-gallon, or larger, aquarium. You should choose an aquarium with as much surface area as possible because these sharks spend little time swimming off the bottom. The aquarium should have a limited amount of decor, although suitable hiding places in which they can refuge during the day should be provided. This is especially important for new and younger specimens in order to ensure that they acclimate to their new homes.

I prefer using the Reefforms artificial corals from Aquarium Systems, Inc. to construct hiding places because these pieces are lightweight and less abrasive than dead coral skeletons. It is also a more ecologically conscious thing to do. The elkhorn coral Reefforms, laid on the bottom of the aquarium, make great hiding places for a hemiscyllid. Heavier rocks and coral pieces that are not securely placed in the aquarium may fall on and kill a digging bamboo shark.

As far as feeding your shark is concerned, it is extremely important that you give it a varied diet that includes fresh, unseasoned seafood, such as squid, shrimp, clams, scallops and marine fish. The hemiscyllids, especially juveniles, have small mouths and their teeth are better suited for grasping prey than chewing it. Therefore, make sure their food is finely chopped. They should be able to swallow these morsels of food whole without having to tear or chew them.

When I feed bamboo or epaulette sharks I impale a small piece of food on the sharpened end of a piece of rigid airline tubing. Place the food near the front of its head and gently wave it back and forth. The shark will usually scurry forward and suck the morsel right off the feeding stick. By presenting food in this manner I know whether the shark ate or not and I can immediately remove the food if it is not consumed. You should be aware that fresh seafood, especially scallops and clams, can rapidly foul your water if left in the aquarium.

I also enjoy feeding them live ghost shrimp so I can observe how they naturally feed. They will flip coral rubble over with their snouts and wedge themselves into tight crevices when hunting for the shrimp. I once saw an epaulette shark flip on its back when in a crevice and suck a shrimp off the roof of the interstice!

It is not uncommon for a hemiscyllid to reject food for a few weeks after it is introduced to an aquarium. If they fast any longer than this, try feeding them live foods, such as ghost shrimp or black mollies. Because these sharks usually hunt more at night, introduce food right before you turn off the lights. Remember to promptly remove any uneaten foods in the morning.

As far as the frequency of feeding is concerned, I would satiate your shark every second or third day. If you feed them too much they are going to grow like weeds. If you don't feed them enough they will suffer from malnutrition. Use the condition of the shark as a gauge for determining whether you are feeding it enough. If it looks as though the shark is losing weight, feed more. If it is fat and growing at an accelerated rate, feed less.

You have to be careful about the kinds of companions you keep in a shark aquarium. Small fish may be eaten, whereas larger species that feed by scraping encrusting invertebrates off the substrate may nip at and permanently damage the sharks. Groupers, jacks, sweetlips, grunts, goatfishes, snappers and monos can be housed with bamboo sharks, but make sure the sharks are getting enough to eat when they are being kept with these faster feeders.

These sharks occasionally suffer from crustacean parasites and flukes (flatworms). Cleaner wrasses will sometimes remove them, or you can use a medicine that is effective against larger parasites. I have had good success with Clout, from Aquarium products. These sharks are apparently sensitive to malachite green, so avoid medications that contain this ingredient.

For more information on the natural history of these sharks, see my book Reef Sharks and Rays of the World; A Guide to Their Identification, Behavior and Ecology (available from Sea Challengers, 4 Somerset Rise, Monterey CA. 93940).