

Fish Aquarium Species Tank

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By Scott W. Michael

There are many wonderful triggerfish that do best on their own because of their unpredictable personality traits. There are all kinds of marine aquariums. I've seen home setups less than 1 gallon in volume to more than 10,000 gallons. They also cover a variety of tank types: reef tanks, fish-only tanks, predatory reef tanks, passive community tanks and even shark ponds.

One type that is not experienced often enough by aquarists is the marine fish species aquarium: a tank containing a single fish species. A species tank often contains an individual, but may also be home to a pair or group/colony of a particular species.

Although the marine species tank, by definition, is limited to one species of fish, it can include a variety of invertebrates. For example, a nano-reef tank can also make a perfect species tank (I call these species nano-reefs). Some hobbyists use the term "species tank" to refer to an aquarium that contains only a particular group (e.g., genus) of fish. For example, a tank with several morays may be referred to by some as a species tank. In this article, I define it as a tank containing a single fish species.

The Advantages of a Species Aquarium

While most of us want fish diversity in our home aquariums, there are several advantages to setting up a marine fish species tank.

First, a species tank can be smaller if you are keeping a smaller species. This makes it more affordable and easier to fit into just about any space. For example, a 5-gallon species tank can be placed on an office desk or a kitchen cabinet. (As with any aquarium, when selecting a place to put the tank, make sure it is not exposed to harmful substances that can pollute the water, such as smoke, insecticides, grease or air fresheners.)

Second, a marine species tank can be perfect for more aggressive or predatory species that don't get along well with tankmates. Morays, frogfish and scorpionfish are all good candidates. These fish are likely to ingest any other fish they can swallow whole. The more aggressive dotybacks are also well-suited to a species tank. Some of these fish sport brilliant colors, are extremely durable and make fascinating aquarium inhabitants - but they are too pugnacious and will create a lot of chaos in a community aquarium.

The third advantage to a species tank is that it's a good option for taking care of fish with more demanding care requirements. The syngnathids (seahorses and pipefish) and some of the nano-gobies exemplify groups that fall into this category. These fish can be difficult to feed, especially when housed with fish that have voracious appetites. Scorpionfish and some frogfish often do best in a species tank because certain tankmates may pick at their skin, which looks much like encrusted substrate.

A final advantage to a species tank is that it makes a fascinating display aquarium. For example, a 55-gallon species tank with a colony of yellowheaded jawfish (*Opistognathus aurifrons*) can provide hours of entertainment for aquarists who are interested in fish behavior. This type of tank makes it possible to observe social interactions and may even lead to spawning behavior. A species tank also allows you to highlight a fish that may either be overlooked in a larger tank or that deserves special recognition because of its rarity.

Species for a Species Tank

Any fish available to marine aquarists can be housed in a species tank, but there are some species that do best when kept on their own. The following are some excellent examples.

Morays (Family Muraenidae)

Morays are probably kept in species tanks more often than any other fish. Because so many morays are predators of fish and can eat relatively large prey, they are regularly kept on their own. In many cases, however, more than one species of moray is kept in the same tank. There are a few morays, such as the blue ribbon eel (*Rhinomuraena quaesita*), that are

easier to feed and take care off when housed by themselves. Make sure your moray tank has a full-fitted top to keep them from jumping out. If you use a glass top, add an air stone or trickle filter to increase the water's oxygen levels.

Frogfish (Family Antennariidae)

Frogfish are some of the most ideal candidates for a species aquarium. As mentioned earlier, they are a threat to their tankmates because of their incredibly large mouths and even larger appetites. They often do best when not housed with other fish because some will pick on the frogfish. Frogfish do not require a lot of space to thrive, so they can be housed in smaller aquariums. Smaller species are especially ideal for nano-reefs because they do not contribute greatly to the nitrogenous load of an aquarium.

Seahorses (Family Syngnathidae)

Seahorses are ideal for a species aquarium because they tend to be easier to feed when not having to compete with more aggressive fish. Aquaculturists are now selling captive-born and -raised seahorses that have been weaned on frozen mysid shrimp. If you decide to keep seahorses, not only do you want to acquire captive-raised individuals, you will need access to appropriate foods.

Avoid wild-caught seahorses. In many areas, seahorse populations are suffering from overexploitation. Although most wild seahorses are collected for the traditional Chinese medicine trade, the aquarium hobby also accounts for some of their exploitation. Wild-caught seahorses are also much more difficult to keep alive.

Scorpionfish (Family Scorpaenidae)

While the scorpionfishes can be kept in community tanks, there are some risks in doing so. First, most members of this family are able and willing to eat any fish and crustaceans that will fit in their mouths. There are also certain fish (e.g., angelfish, puffers, triggerfish) that will pick at the skin of the more secretive scorpionfish because they look like invertebrate/algae-encrusted substrate. Although it is relatively rare, fish tankmates have been known to collide with a scorpionfish's venomous spines, which can lead to injury or death. Because most scorpionfish do not require much space to thrive, they can be housed in relatively small tanks (the size is species-dependent because they are diverse in their maximum lengths). All scorpionfish are venomous, so aquarium placement should involve careful consideration (especially if children are present). You should also be careful when transferring these fish from one tank to another.

There are two groups of scorpionfish that are especially good for a species aquarium. The first group is the genus *Rhinopias*. In the past few years, members of this genus have become more common in the aquarium trade. They are amazing display animals that will elicit a reaction in even the most jaded marine enthusiasts.

They do present some husbandry challenges. New individuals usually have an abraded lower jaw resulting from rubbing against the shipping bag during transport. They are susceptible to bacterial infections if injured, and can also suffer and succumb to skin parasites. Live food (e.g., gut-packed ghost shrimp, mollies, guppies) will be needed to initiate feeding, and many individuals may never accept anything but live fare. They are relatively inactive, and small individuals can be kept in smaller tanks (20 gallons or more).

The leaf scorpionfish (*Taenianotus triacanthus*) is a fantastic example of mimicry. In order to avoid detection, it looks like a water-logged leaf or algal frond. It enhances its resemblance to plant debris by rocking back and forth or swaying from side to side. This lovely scorpionfish comes in many colors, including pink, maroon, yellow and white. It is a great choice for the species aquarium because it tends to spend time in the open. It does best when not housed with aggressive food competitors.

Groupers (Family Serranidae)

The groupers are voracious predators, but there are some members of the family (e.g., *Serranus* spp.) that do not get large enough to be a threat to a wide range of fish tankmates. However, you will need to be careful when selecting tankmates for many groupers, or you may want to keep them in a tank of their own. Many groupers get too big for even large home aquariums, so you need to know what species to avoid. Some members of the genus *Cephalopholis* are ideal for a species tank because most attain a manageable size, and many are brightly colored.

There are soapfish that are smaller, interesting to observe, highly predatory and better suited for solitary confinement. The sixline soapfish (*Grammistes sexlineatus*) is one such species. Soapfish are known to emit toxin from their skin that can kill their tankmates. Although this occurs rarely, it is another good reason to keep them on their own.

Dottybacks (Family Pseudochromidae)

This family contains some of the most hardy aquarium species, but it also contains some of the most aggressive aquarium fish. While they can be kept in larger tanks with other aggressive fishes, there are some members of the family that I

believe are better-suited to a species tank. This is especially true for the larger species, such as members of the genera *Labracinus*, *Ogilbynia* and *Oxycercichthys*, and larger members of the genus *Pseudochromis*. Two examples of the last genus would be the jaguar dottyback (*Pseudochromis moorei*) and Steene's dottyback (*P. steenei*). These are very aggressive but attractive species that make wonderful pets if housed on their own. Another ideal dottyback for a species tank is the carpet eel blenny, also known as the wolf eel (*Congrogadus subducens*). This is a highly predatory species that will thrive in a 20-gallon tank. Make sure the tank contains hiding places.

Jawfish (Family Opistognathidae)

Jawfish are comical, fascinating aquarium inhabitants. Most species will do fine in a community aquarium, but there are also reasons to consider them for a species tank. Some jawfish (e.g., spotfin jawfish, *Opistognathus robinsi*) are larger, more predatory species that will eat small fish and crustaceans. There are also species that will do better (or at least make a more interesting display) when a small group is housed in a tank of its own. For example, a group of the ubiquitous yellowheaded jawfish (*O. aurifrons*) makes an incredible exhibit. It's fascinating to watch these fish interact with each other in a tank that has a deep sand bed for them to burrow in. The substrate should be a blend of coral sand, bits of rubble, shells or bits of shells. The sand bed depth depends on the maximum length of the species or individual in question. For species such as the yellowheaded jawfish, 3 to 4 inches of substrate should suffice.

Damselfish (Family Pomacentridae)

Many damselfish make wonderful community aquarium inhabitants - but others are real hellions! For example, juveniles of the genus *Plectroglyphidodon* are often sold in aquarium stores, where these cute, colorful fish are often purchased by unwary neophytes. But as they grow, these fish can become very aggressive even as their colors fade. If you are a fan of damsels and want to keep members of this genus, you may be better off housing one in a small tank of its own.

Gobies (Family Gobiidae)

Most gobies are ideal for the peaceful community aquarium. However, in recent years, there have been a number of tiny gobies (often sold as nano-gobies) entering the aquarium trade. Some of these are so small that they are potential food for a wide variety of fish tankmates, and thus are best housed on their own. The ideal home for these fish is a small nano-reef aquarium. One good example of a nano-goby that will do better on its own is the spikefin goby (*Discordipinna griessingeri*).

This ornate little goby only attains 1 inch in length and is quite secretive, hiding among coral rubble during the day. In a larger tank, you will rarely, if ever, find it. If kept with other fish, it is likely to be eaten or at least have problems getting enough to eat. There are other tiny gobies in the genera *Eviota*, *Priolepis*, *Trimma* and *Trimmatom* that are also best housed in a species nano-reef tank. Some of the *Eviota* and *Trimma* species (e.g., *E. bifasciatum* and *T. tervegae*) can be kept - and often do better - in small groups.

There are other gobies that make wonderful species tank residents because of their showiness or interesting behaviors. For example, any of the shrimp gobies, along with their crustacean partners, can be fascinating to watch in a desk top aquarium.

Dragonets (Family Callionymidae)

The green or striped Mandarin dragonet (*Synchiropus splendidus*) is very popular in the aquarium trade. Unfortunately, this magnificent fish is often difficult to keep because of its feeding behavior. It tends to be a methodical hunter that often has food stolen out from under its nose by more ravenous piscine tankmates. It will feed on protozoa and small crustaceans that often reproduce in live substrates. But these populations of micro-invertebrates are also preyed upon by other fish (e.g., dottybacks, wrasses), and the Mandarins still may not get enough eat because of this competition. For these reasons, Mandarins may do better in a species tank.

A Mandarin species tank should contain live substrate, and you should regularly add some of the micro-crustaceans (e.g., "pods") that are now available to aquarists. Although you can keep a mandarin in a smaller species tank, you will need to introduce food more often to ensure that prey densities are high enough to keep the fish healthy. This principle applies to the other dragonet species available in aquarium stores. They will do best if they are kept on their own with prodigious quantities of live food.

Boxfish (Family Ostraciidae)

The box or trunkfishes can make personable aquarium inhabitants. However, many are equipped with a defense mechanism that can be lethal to their tankmates. If stressed, boxfish can exude a toxic body slime that can poison fish housed with them. For this reason, it is often wise to keep boxfish on their own.

Before you set up a boxfish species tank, study the members of this family to see how big they get. Some grow

quite large and will become too big for the average home aquarium. Some of the best boxfish for species tanks are the blue boxfish (*Ostracion meleagris*) and the reticulate boxfish (*O. solorensis*). The males of both are very colorful and they remain relatively small (a 55-gallon tank should suffice). It's possible to house a male and female together. The sexes differ in color. The female blue boxfish is brown with white spots, while the male is blue with white and yellow spots. The female reticulate boxfish is yellowish with white lines and dark reticulations, while the male of this species is blue overall with light spots and lines.

Triggerfish (Family Balistidae)

There are many wonderful triggerfish that do best on their own because of their unpredictable personality traits. For example, it is not uncommon to have a clown trigger (*Balistoides conspicillum*) live peacefully with other fish in a large aquarium for some time, only to have it suddenly start killing its piscine neighbors. This doesn't always happen, but it can - I've seen it! Because of this, it's often better to keep the more aggressive triggers in a species aquarium.

Some species best housed on their own include the undulate (*Balistapus undulatus*), gray (*B. capriscus*), queen (*B. vetula*) and bluelined (*Pseudobalistes fuscus*) triggers. As mentioned earlier, the clown triggerfish is also a good candidate, although some individuals do behave themselves when kept with other fish in larger tanks. Place bits of rubble in the triggerfish tank - they seem to "enjoy" rearranging aquarium decor.

I hope you will consider a species tank. For those of us who lack room for a larger tank, but are interested in fish that require special care or that are dangerous to most fish tankmates, the species tank is a viable aquarium alternative. Until next time, happy fish-watching!