

Deep Water Aquarium Fish

New techniques are bringing up deep water fish species to aquarium hobbyists.

By Scott W. Michael

Q. I was speaking to a marine fish supplier last week, and he told me that he had access to deep water fish collected off Florida and in the Caribbean. Supposedly, these fish are being collected in water as deep as 300 feet! He mentioned several anthias, some basslets and a few other species.

First of all, I didn't know that there were any anthias in the Atlantic. Are there? Can you tell me something about these supposed "anthias" he is talking about, and another fish that he told me of, the Spanish flag? Will these fish live in a tank, even though they're from such deep water?

A. Yes, it is an exciting time for the reef fish enthusiast! Forrest Young, an adventurous fish collector who owns Dynasty Aquatics, and some of his staff, are using mixed gas, rather than compressed air, to collect some fascinating deep water fishes! They are diving to depths of at least 300 feet to capture a small grouper species, several basslets, three species of anthias and several other unusual fishes. Because of the danger and cost associated with diving to such great depths, these fish command a high price, and therefore, most of them have been shipped to Japan, where aquarists commonly spend incredible amounts of money on rare fishes. But, in recent months these fish have also been made available to U.S. aquarists.

There are actually a handful of anthias species in the tropical Atlantic and Caribbean, but none of these belong to the genus *Pseudanthias*, the genus that is most familiar to aquarists. And, all of the species from this region inhabit deep water.

One Atlantic anthias species that Forrest regularly collects is the red barbier (*Hemanthias vivanus*). This species attains a maximum length of about 10 inches, and ranges from North Carolina and the northern Gulf of Mexico south to Brazil. The head and body of males are deep red, with small yellow spots and violet on the sides, two golden stripes on the head extending from the eye to the pectoral fin base, and a red tail fin. Adults have filaments extending from the tail fin lobes and the pelvic fins, and the dorsal fin has three to five elongate spines. Females and juveniles are much less spectacular than large males.

The red barbier occurs in large schools on rocky reef slopes, or around rock outcroppings, at depths from 150 to more than 2000 feet! The macro-invertebrates that are found in the same habitat as the red barbier include gorgonians of the genus *Paramurcia*, basket stars, longspine urchins, serpent stars and sea stars. The fish that occupy this habitat include the roughtongue bass (*Holanthias martinicensis*), short bigeye (*Pristigenys alta*), tattler bass (*Serranus phoebe*), bank butterflyfish (*Chaetodon aya*), wrasse bass (*Liopropoma eukrines*), twospot cardinalfish (*Apogon pseudomaculatus*), blue goby (*Logosoma calliurus*) and the Atlantic sharpnose puffer (*Canthigaster rostrata*).

The red barbier occurs in large, fast-moving schools. Juvenile and females feed on zooplankton, especially copepods, near the sea floor, while large males move further away from the bottom to capture similar prey. When the red barbier is approached underwater it will take cover in the holes and crevices of the reef. It has been observed sharing a burrow with the wrasse bass and the sand perch (*Diplectrum formosum*).

The red barbier should be housed in a dimly lit tank at water temperatures slightly lower than those often maintained in the tropical marine aquarium. This species, and the other deep water anthias, are best kept at water temperatures of 55 to 74 degrees Fahrenheit.

They can be housed in small to large groups in the aquarium. However, they will form size-related dominance hierarchies, with large individuals chasing smaller members of their species. Although solitary individuals can be kept in tanks as small as 55 gallons, if you are going to keep a group, you should place them in an aquarium larger than 100 gallons to prevent possible aggression problems.

Another Atlantic anthia that is now readily available to aquarists is the roughtongue bass (*Holanthias martinicensis*). This fish attains a maximum length of 8 inches and occurs around Bermuda, North Carolina, Florida and the Greater Antilles south to northern South America. This is a beautiful fish, whose eyes are deep blue or bright green, depending on where the fish is in relation to the light. Small individuals (under 2 inches from the tip of the snout to the base of the tail) have a

brown saddle from the dorsal fin base to the mid-line of the body. Males also have filaments on the tail fin.

The roughtongue bass lives on deep rocky reefs slopes and on limestone outcroppings at depths from about 200 to 2000 feet. It occurs singly or in schools that number up to 20 individuals. However, it most commonly occurs in pairs and small groups of up to five individuals. Unlike the red barbier also occupying its range, this species usually swims away from predators rather than hiding in holes in hard substrate. See the species account above for the red barbier for information on some of the macro-invertebrates and fishes that occur in the same habitat as the roughtongue bass. In certain areas, like off the North Carolina coast, the roughtongue bass is found in association with clumps of stony corals that belong to the genera *Oculina* and *Madrepora*.

The roughtongue bass is a very durable fish that does best if kept in a dimly lit tank at cooler water temperatures. It is not overly aggressive, and can be kept with other deep water anthias and smaller zooplanktivores. It is prudent to house only one male per tank, unless the aquarium is of considerable size (100 gallons or more).

The Spanish flag (*Gonioplectrus hispanus*) is one of the most beautiful fish that Forrest is collecting. It has fluorescent pink and orange alternating stripes and a red spot on its anal fin! This fish ranges from Texas to the Bahamas, and throughout the Caribbean south to at least Curacao. It attains a maximum length of 12 inches. Although the individuals that are offered in the trade are often 5 or 6 inches long, occasionally they will collect a juvenile specimen, approximately 1 to 2 inches in length. These little fish are glorious!

The Spanish flag is found on rocky reefs at depths from 200 to 1200 feet, and is most common where there is an abundance of caves, holes and overhangs. It is often seen swimming upside down with its belly facing the roof. It is quite reclusive, hiding among sessile invertebrates and in crevices.

This is a very hardy aquarium fish that will thrive in a tank of 30 gallons or larger that has plenty of hiding places. It will spend more time in the open once it adjusts to its new home, and "prefers" water temperatures between 55 and 74 degrees Fahrenheit, although it can be kept at higher temperatures.

It is aggressive toward members of its own species, related forms and passive fishes. Therefore, it is best to house it on its own or with moderately aggressive or larger tankmates, like squirrelfishes (*Holocentridae*), soldierfishes (*Myripristis* spp.), larger roughtongue bass, larger red barbiers, angelfishes (*Holacanthidae*) and large butterflyfishes (*Chaetodontidae*). They will also eat any fish or crustacean that can be swallowed whole.

There are also members of the genus *Lipogramma*, including the bicolor basslet (*Lipogramma klayi*) and the threeline basslet (*L. trilineatum*), that are also being offered for sale, as well as one of the most spectacular fish of all, the candy bass (*Liopropoma carmabi*). If you can't afford to buy one of these fish for your own tank, you may be able to view them at some public aquariums, like the Toledo Zoo and Aquarium, which is currently putting in an Atlantic deep water display tank.

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References

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