

Betta edithae

Breeding the *Betta edithae*.

By Mike Hellweg

Betta edithae by Gary Lange

When some aquarists think of bettas, they automatically think of the beautiful *Betta splendens*, also known as the Siamese fighting fish. One of the unique things about these beautiful fish is that the males build a large bubble nest and tend the eggs and fry in that nest. While it's reasonable to assume that all bettas spawn in a similar manner, most of the known *Betta* species are not bubble nesters, but rather paternal mouthbrooders. In other words, after spawning, the male keeps the eggs in his mouth until the young are large enough to fend for themselves.

It is believed that mouthbrooding started when *Betta* ancestors moved to new habitats (such as streams) from swampy lowland areas. Their labyrinth organ allows them to survive in warm, stagnant water with little oxygen. This is likely why they developed the spawning strategy of building bubble nests. It allowed them to keep their eggs and fry near the oxygen-rich surface without drying out. Bubble nests don't survive for long in a flowing stream. Mouthbrooding is a way for the male to take his fry with him wherever he goes without having to stay in one place or keep track of the fry. Once the fry are hatched and fully developed, he releases them and gives them no further care.

Betta edithae is one of these mouthbrooding *Betta* species. It comes to the hobby from the Indonesian islands of Sumatra and Borneo. There, it can be found in slow-flowing, lowland streams.

There are as many as five variants across their range, and they are known by their locality, such as Bangka or Liang Angang. If your fish comes labeled with one of these locality names, it's a good idea not to mix localities.

Males are slightly larger than females at 3 inches and are more colorful. They have a red-brown coloration and each scale is tipped with a greenish-blue metallic spot. All of their unpaired fins also have this greenish-blue metallic coloration, with red-brown rays. The fins are edged in metallic blue-white. Females also show the greenish-blue metallic spots on their scales, but don't have much in the way of coloration in their fins. Males' dorsal fins are long and often reach back to the caudal fin, while females carry their smaller dorsal fin erect. The ventral fins of males often trail back past the middle of the anal fin, while those of females rarely reach half that distance.

The easiest way to sex the fish, even young ones, is to look at them from above. Look at the mouth. In males, it is a wide, shallow "U" shape, while in females it is a sharper "V" shape. Once you see this a few times, it becomes easy to sex even young mouthbrooding Bettas long before their secondary sexual characteristics start to show. So far, this has worked on every one of the 20-plus mouthbrooding species that I have worked with.

Feeding *B. edithae* is not a problem. They are carnivores, and will take anything that hits the surface of the water, even flakes or small pellets. They should have a variety of foods in their diet, including frozen, freeze-dried and live foods. Try to get foods that are either insect or crustacean-based, such as bloodworms, Mysis and krill. When conditioning for breeding, it is a good idea to add meaty foods, such as white worms, black worms and even small earthworms. This helps the male put on weight before spawning, as he does not eat while carrying the eggs and fry.

Betta edithae can be kept in a planted community tank, as long as the other fish aren't too rambunctious. Some fish, like the tiger barb and zebra danio, should be avoided. Unlike their cousins the Siamese fighting fish, *B. edithae* are peaceful and don't fight among themselves, except when spawning. During spawning, a female will chase other females away from the male she has chosen, though little harm is done. Males are completely inoffensive, and often several males will brood together in the same area of the tank.

Water parameters are unimportant, as long as extremes are avoided. A neutral pH, with low to moderate hardness and low carbonate content should be fine. Keep the water clean with lots of water changes. Remember that these guys come from streams, so give them a little circulation in the water, too. A bubbling sponge filter or small waterfall filter is just fine. Keep the temperature in the mid to upper 70s (Fahrenheit) and your *Betta edithae* will be in good shape.

If your fish are "happy," and you have males and females, it is only a matter of time before they spawn. *Betta edithae* will

even spawn in the community tank if you give them an out-of-the-way place to spawn. Most often this can be a clump of floating plants, but in a pinch, they will spawn in a secluded area of the tank behind a decoration.

When they are well-fed with a rich, meaty diet as described above, they will spawn quite readily. In fact, *B. edithae* is regarded as one of the easiest of all of the mouthbrooders to induce to spawn.

Unlike with the bubblenesters, in mouthbrooders the female initiates the spawning process. If the male is willing, he follows the female to a secluded area. As with all other known Anabantoids, they perform the typical "spawning embrace." Instead of the eggs falling to the bottom, the male rolls on his side and creates a sort of "pocket" with his anal fin. The female lays several eggs and the male fertilizes them. Then they separate and the male remains on his side with the eggs in the "pocket" while the female picks them up in her mouth. She then spits them one egg at a time at the male, who catches them and moves them into his buccal pouch (the specialized area of his throat that expands as the eggs hatch and the fry grow). During this time, the female may break off the spawning for a minute or so to chase other females away. She then returns to her mate. They then repeat this process until the male is holding all the eggs. Smaller males may only hold 40 eggs, while the largest males will hold more than 100.

The male will move to a secluded area to brood his mouthful of eggs. His colors darken and often the head takes on a greenish-blue coloration. He does not eat. He will hang about in floating plants, or if none are available, in or behind other decorations in the tank. The new floating aquarium logs make an excellent floating cave for the male to hide in. If there are multiple males in the tank, it is not uncommon to find them all holding at about the same time. Don't be discouraged if young males hold for a few days, then are back out feeding as normal. If this happens, it means the young male ate the eggs. This behavior is little understood, but it is speculated that it could be due to immaturity, inexperience or even that the eggs were infertile. This might happen with the first couple of spawns and is fairly common until they get the idea. Then they are great parents.

Brooding normally takes less than two weeks. During this time, it is best to leave the male and the tank alone. If possible, remove the other fish and let him have the tank to himself. Some breeders even cover the front of the tank with construction paper to keep distractions to a minimum. I think this is a bit excessive, but it does work for those who have tried it. When the fry are released, you will find them all over the tank. Most head toward the bottom and spend their first few days hiding wherever they can. At this time the male can be removed. It is best to give him a few days alone with some good foods before putting him back into a tank with females, as he will likely spawn again very soon.

The fry will take newly hatched brine shrimp, microworms and other similarly sized foods from the start. After a few weeks, you can start adding finely crushed flakes to their diet. Provide them with room to grow, good food and plenty of water changes. They grow quickly and reach adult size in as little as six months, though they likely won't begin spawning until they are about a year old.

If you reach this point, congratulations! You've had another successful adventure in fish breeding.