

Popular Freshwater Tropicals

Give *Ameca splendens* a Try

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Also known as the butterfly goodeid, these splendid live bearers are easy to keep, breed and raise.

I've always had a soft spot for live-bearing fish. Today, a vast array of colorful guppies, platies, swordtails and mollies are readily available at local fish stores and are very popular. Although manmade sports are great, wild-type live bearers, adorned in their natural garb, have an innate beauty I find hard to pass up.

Natural History

Guppies, platies, swordtails and others are members of the family Poeciliidae. Other live bearers suitable for our aquariums may belong to Anablepidae, Hemirhamphidae or Goodeidae. Poeciliidae species are commonly available, but one must actively search for Anablepidae, Hemirhamphidae and Goodeidae species, but it's worth it. *Ameca splendens* (Goodeidae) is one such fish.

Ameca splendens was scientifically described in 1971 by Miller and Fitzsimons, who placed it in the new genus *Ameca*, named after the collection site of the Rio Ameca Basin in Mexico. *Ameca splendens*, commonly known as the butterfly goodeid or the butterfly splitfin, received its species name "splendens" because of the glittering scales on the flanks of the male.

Young male and female fish look similar and can be difficult to distinguish. The body coloring of adult males is a metallic greenish gray on the back. Adult males also have a longitudinal band formed from a conglomeration of black spots running from the gills to the peduncle, which separates the lighter-colored underbelly. Also, a splattering of iridescent scales and black spots adorns the flanks of the male. As they become subadults, males develop a faint vertical yellow band on their caudal fin, which develops into a bright orange-yellow band edged with a black band on the peduncle side. The males, which only reach a total length (TL) of 3 inches, develop the typical goodeid andropodium, where leading rays of the anal fin are separated from the rest of the anal fin by a notch to form a lobelike appendage.

The andropodium is flexible and used during mating to aid in the transference of sperm to the female. Females can grow to more than 4 inches TL, but they are less colorful than the males, and their anal fins are undifferentiated. In females, the black spots tend to pepper a large part of the lower body rather than being restricted to the midline.

At one time, *Ameca splendens* could be found at several locations within the Ameca Basin, which is located in western Mexico on the rugged Pacific slope. This species was noted in both the Rio Teuchitlan and Rio Ameca.

In these locations water flows over limestone and is hard and alkaline. Its general hardness (gH) is 6 to 10, carbonate hardness (kH) 7 to 11 and pH 8. Water temperature depends not only on the season but whether it's day or night. It ranges from 68 to 86 degrees Fahrenheit. Here, the large rocks are often covered in a dense mass of algae, and the banks sometimes have hornwort species.

The wild diet of *Ameca splendens* includes all kinds of algae (e.g., green hair algae) and crustaceans. Different species of goodeids are found in the Ameca Basin. Unfortunately, loss of habitat and introduced species, such as tilapia and common carp, are putting pressure on indigenous species.

Aquarium Setup

A couple of years ago, I came across a group of four butterfly goodeids at a local fish shop. The four all looked similar in coloration. Although one was slightly bigger than the rest, it was difficult to distinguish males from females. I purchased the four hoping to have two pairs within the group.

The butterfly goodeids were placed in an established 30-inch-long aquarium that contained just a pair of dwarf cichlids (*Apistogramma agassizi*). The aquarium was well planted with java fern on bogwood, which was placed on a bed of fine gravel. The tank water was a mix of hard London tap water and reverse osmosis water with a pH of 7 and degrees hardness (dH) of 10. Using a heater thermostat, the water temperature was about 77 degrees. An internal canister filter fitted with two sponges and coupled with partial water changes every two weeks kept the water in good condition.

I started them on a heavy feeding program of frozen bloodworms and good quality flake. These greedy eaters were offered food three times a day. In view of a natural diet that includes plant material, vegetable flake food was also regularly included as part of their diet.

Within a few days they had changed from plain-looking fish to fish with character. They all darkened considerably, and the black spots on their bodies became more prominent.

At first, this very active group was always on the go and usually swam together. They were not afraid to mix it up with the dwarf cichlids, standing their ground in any confrontation. My butterfly goodeids grew considerably in about a month's time. Three of the group developed pale yellow bands on their caudal fins, suggesting they were males. There was only one female in the group. At this time, they stopped swimming as a group.

The males tried to establish dominance over each other. Once I saw two side-by-side males attack one another with rapid tail blows of their fully extended fins. They even attempted to bite each others' flanks. No damage was done, as one fish fled to take cover among the plants.

The dominant male sported splendid colors: a bright yellow marginal band in the tail and golden-spangled scales on its flanks. The subordinate males showed only a faint trace of the yellow band on their caudal fins. The dominant male chased the subordinates whenever it encountered them. As a consequence, they started hanging out at opposite ends of the aquarium where some of the aquatic plants offered them adequate cover. I returned the two subordinate males, and the fish shop took them back.

Breeding

The dominant male usually accompanied the female in her wanderings around the aquarium. Sometimes the male would court the female, his display consisting of a head-down stance in front of her with fins extended and some wagging of his head. Fertilization is internal, but I never actually observed the male attempting this act. This apparently takes place after some courting. With the pair side by side, the male cups his andropodium and forcibly directs his sperm via a highly muscular tube into the receptive female's genital opening. The sperm is used immediately to fertilize eggs and cannot be stored as with Poeciliidae species.

Following fertilization, the female grew in girth. Some six or seven weeks later, the female looked misshapen, particularly after a heavy meal. Pregnancy did not diminish her appetite nor did it deter the dominant male from keeping her company.

The gestation period, which is temperature dependent, takes about 55 to 60 days. During gestation, which in *Ameca splendens* takes place in the ovaries, the growing embryos are nourished by ovary-wall secretions through specialized placentalike organs called trophotaenia. This enables fry to grow to a large size before being released; they still have some of the trophotaenia attached for a short time after birth.

When the birth of the fry looked imminent, my female was removed to a heavily planted small aquarium. Here, a few days later she dropped her first brood of 10 plain, silver-colored fry. These fry were approximately a half-inch in length, although larger newborn fry have been reported. The fry initially tended to hang near the water surface, but within two days they were swimming well. They ate all the small foods offered from flake to *Daphnia* and small whiteworms. As a result, they grew rapidly. By three weeks they developed black patches along their bodies and were starting to look similar to their parents.

After dropping the young, the slim-looking female was removed from the small aquarium and placed back into the main aquarium, where she recuperated well and put on a fair amount of mass over the next couple of weeks. About a month later, she was carrying developing fry again.

Conclusions

Ameca splendens could once be found throughout the upper reaches of the Rio Ameca and Rio Teuchitlan, but its numbers have fallen dramatically because of habitat loss and the introduction of foreign fish species. In fact, it is on the International Union for the Conservation of Nature and Natural Resources (IUCN) Red List of Threatened Animals. Fortunately, many captive colonies are held in Europe and the United States, not only among fish hobbyists but also with some commercial breeders.

Ameca splendens (the butterfly goodeid), as both its Latin name and common name suggests, is a splendid-looking fish that is well suited to life in the aquarium. *Ameca splendens* is best maintained in groups of six or more. With a balanced number of males and females, group interactions are much more likely to succeed, particularly if the aquarium they are

being kept in is large enough and well planted. Butterfly goodeids reproduce relatively easy and give birth to a small number of large fry that grow quickly.

I enjoyed my study of butterfly goodeids and was pleased to pass fry along for others to enjoy.