# Montezuma Swordtail

**Breeding the Montezuma swordtail.**

*By Mike Hellweg*

Click Photo to Enlarge
Rio Tamasopo montezumae by Gary Lange

Most of the livebearing tropical fish of the genus Xiphophorus that we aquarists keep are domestic strains – highly developed and carefully bred for many generations over the past 80 or so years. These beautiful tropical fish come in every color of the rainbow, and every combination of those colors. But there is something to be said for the simplicity of the original wild color patterns of platies, swordtails and variatus. In the past decade or so, many aquarists have begun seeking out the original wild-colored livebearers. Some of these wild color patterns can even be found in aquarium specialty stores.

Along with this move toward wild color strains of the popular species, many of the wild species that have not been domesticated have also become popular. Most are fairly plain, and are kept more for the interest of having a “natural” fish than for their spectacular colors. But one species that has grown in popularity is the stunning Montezuma swordtail (Xiphophorus montezumae), commonly called the Monty. This species has been a source of much confusion over the years, as many closely related Xiphophorus species (such as X. cortezi) were thought to be the “true” Montezuma. In the late 70s and early 80s, there was even a supposed “true” Montezuma crossed with domestic helleri-type swordtails that was a real giant – with mature fish reaching upwards of 7 inches, not including the tail.

It wasn’t until the early to mid-1990s when hobbyists started traveling to Mexico to collect tropical fish that the real Monty made it back to the U.S. in any quantity. When aquarists saw this tropical fish, it was apparent that earlier fish were not “true” Montezuma swordtails. This aquarium fish is like nothing else, and can’t be mistaken for any other fish. Males are among the most stunning of all male livebearers, with a mature male easily having a sword equal in length to its body. A fish that was displayed at our local aquarium club’s annual show had a body length of just over 2 ½ inches, but with the sword it was longer than a dollar bill.

There are several variants now available, often known by their locality names, such as Rio Tamasopo, Rascon, Capuchin (or Cienega Grande), Rio Ojo Caliente, Rio Ojo Frio (or El Quince) and others. If you get a fish with a location attached to its name, make sure you don’t mix it with another strain. All of them are spectacular, but in my opinion, the Rio Tamasopo strain is the most striking. Males often have a bluish sheen to the body, a bright yellow dorsal fin, and a huge black and gold sword. Fry from the same brood will develop into an amazing variety of spot patterns, with some having many small black spots, others having a few black patches and some having none at all.

Females grow to about 3 inches, and have the same basic olive-brown coloration as the male. The females often sport black spots, as well, but don’t develop the yellow dorsal or the bluish sheen. Their gravid spot becomes apparent at about 8 to 10 months of age, and they will drop their first brood when they reach about a year old. This is very different from the common pet shop Xiphophorus species, which often reaches maturity and drops its first broods at about 3 to 4 months of age.

Another interesting thing that often happens is that only one male in a group will “sex out” or develop a huge tail. Sometimes two will sex out at the same time, but usually only one will be the dominant fish and mate with the females. Other males in the school do not develop the swordtail but will continue growing. Remove the male with the sword from the group, and one or two more will quickly develop their own spectacular sword, often within a few weeks. Some aquarists (including me) have witnessed this in their colonies, while others have not. Many theories abound, but scientists really aren’t certain what the mechanism is behind this interesting behavior.

Both of these factors come into play when aquarists think they have sterile aquarium fish. Most of the time, they have no broods of fry and start thinking something is wrong with their fish, but in reality they have either a dominant male and a subdominant male that hasn’t sexed out, or they have a female that has not reached sexual maturity. That’s why it is always best to try and buy your tropical fish as juveniles in groups of six or more. This virtually assures you will get at least one pair.

These are not small aquarium fish, and they need a correspondingly large aquarium for their home. I would not

recommend an aquarium smaller than 55 gallons. They will live and possibly even breed in smaller aquariums, but the males will not put on a show like they do when they have room to move around and go through their full display.

In their native home of the Rivers of the Rio Panuco basin in the Mexican state of San Luis Potosi, they are found in flowing streams with some aquatic plant cover and a lot of open area. The adults spend much of their time out in the open, but females will move into the plants to drop their broods. Fry and juvenile fish also stay close to cover. Keep this in mind when decorating their aquarium. Give them cover around the sides and back, and keep the aquarium open in the front. A good power filter will provide plenty of current and help keep the water quality high, which is beneficial for Monetezumas. In addition, provide good lighting and keep the temperature in the low to mid-70s (Fahrenheit). And do large regular water changes.

Water hardness and pH are usually less important, as long as extremes are avoided. Montezumas are riverine fish, not coastal fish like some other livebearers, so salt is not needed. If you have soft or acidic water, add some crushed coral to the gravel or in a small bag in the filter, which will add buffering capacity and help raise the pH.

Feeding presents no problem. Even wild-caught specimens will go after flake foods. Feed them a variety of quality flake, such as a vegetable-based flake and a meat-based carnivore flake, along with several feedings a week of frozen or freeze-dried foods. For fry and juveniles, I also like to add one feeding a day of newly hatched brine shrimp. The fry grow quicker and seem to do better when they get at least one feeding of this food per day.

When well fed, these fish will do what comes naturally once they reach sexual maturity at about 12 months of age. The courtship display of the male is a complex dance where the male contorts his body in front of the female, bending to display the large sword. Research has shown that female swordtails of most species are attracted to large swords, so the male always tries to show his to its best advantage. If she approves, she allows the male to move around her and mate with her. The male's anal fin is modified into a tube called a gonopodium, which he uses to transfer packets of sperm into the female. These packets can fertilize several subsequent batches of eggs, so the female may continue to regularly drop batches of fry for several months even if no male is present in the aquarium.

Once fertilized, the eggs develop inside the female for about 30 days. At that point the female will drop a batch of 20 to 25 three-eighth-inch fry early in the morning. Unlike some other Poecilliids, Montezumas usually ignore their fry and rarely eat them. Make sure the adults are well-fed, and you should have no problems with fry predation. Soon, you'll have a colony of fish of all different sizes in the main aquarium.

At this point, it will be time to start looking for homes for some of your fish to prevent overcrowding. If you develop a good relationship with a local independent pet shop, the owner will often take your excess fish in trade for food and supplies.

If you reach this stage in working with these swordtails, congratulations! You've just completed another successful Adventure in Fish Breeding!