

Livebearer Fish Deserve Respect

Mollies, guppies, platies and swordtails are all livebearer fish.

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Livebearer fish by Tony Teceira. For those of us who started the aquarium hobby as children, the magic of that first aquarium or bowl may never be equaled. Yet the diversity and majesty of our childhood favorites lives on in the livebearers. From the simplest feeder guppies to the most elaborately adorned sailfin mollies, the world of livebearers offers a variety of shapes, sizes and colors to custom fit any freshwater community aquarium.

Mollies

Native to the mangrove swamps and estuaries of Central and South America, mollies have been introduced to the southern United States, as well as throughout much of Southeast Asia. The mollies comprise a large portion of the family Poeciliidae, a group known for its tolerance of brackish and saline environments. Mollies are very salt-tolerant, and millions are produced annually for the commercial pet trade in coastal breeding preserves that are fed entirely by the ocean.

Many saltwater hobbyists use mollies, particularly black mollies (*Poecilia sphenops*), to feed their groupers, sharks, eels and other carnivorous fish because of the molly's ability to stay alive and well in saltwater. A batch of feeder goldfish dropped into a reef aquarium will last for only a few minutes before going belly-up, if they are not eaten immediately. But a batch of salt-acclimated mollies will thrive in a marine aquarium for as long as it takes the predatory fish to consume them.

Ironically, it is this salt tolerance that makes the molly somewhat unsuitable for a community freshwater aquarium. They have specific water requirements and demand a good degree more attention than the typical freshwater community fish. Water temperature of 68 to 82 degrees Fahrenheit and a pH of 7.0 to 8.0 are critical to a successful molly aquarium. Although these fish can live their entire lives in freshwater, an addition of aquarium salt (5 ml/4.5L will benefit your mollies in a number of ways: healthier slime coating (which is crucial in protecting against parasites), full finnage and lower stress levels.

Mollies do best in a mature planted aquarium that has been cycling and healthy for several months, and which provides plenty of cover. Dropping a couple of conch shells in the water will also help - as these calcium and silicon shells break down, they will help to maintain a high pH and will release some amount of oceanic salt into the water.

Diet is also crucial. Although these fish thrive consuming live mosquito larvae and other aquatic insects, they also consume a surprising amount of plant materials, such as leaf matter, root tips, algae and any other bit of aquatic greenery they can find. In the home aquarium, it is paramount that mollies get sufficient plant matter. Algae disks or flake foods for omnivores are best, while slices of zucchini squash (frozen then thawed to break down the cell walls and make it digestible) dropped into the aquarium will also make for a fine, if not a little messy, vegetarian feast for your mollies.

Mollies are selectively bred for color, size and fin adornment; and it seems like a new strain is coming out every few months. All things considered, however, there are only about three molly species that show up on the market, with more than a dozen different morphs of each species. The black molly has been selectively cultivated to form "sub-species," such as the green molly, liberty molly and Mexican molly. The black molly itself is the result of cross-breeding. In its native Central American waters, the black molly is a sort of dull gray color that might warrant the name "charcoal molly."

One of the most unusually patterned of the mollies is the dalmatian molly, which is a cross between the black and white mollies. The drawback to this beautiful fish is that in generating its peppered appearance, breeders robbed this fish of its vitality, making it less hardy than most other mollies and more prone to diseases such as ich, body fungus and fin rot.

A particularly striking member of the family is the sailfin molly, the large dorsal fin occurring in two species. The larger of the two is the giant or Yucatan molly (*P. velifera*), which may grow to lengths of more than 6 inches. It is not as often seen on the pet trade as is its counterpart, the common sailfin molly (*P. latipinna*), which may only reach 4 to 4½ inches. More often encountered than either of these species are cultivated forms that result from cross-breeding with other mollies. Such "manufactured" varieties include the albino molly, golden sailfin and lyretail molly, which is a form of black

molly.

Not the most prolific of the livebearers, mollies tend to brood every eight to 10 weeks (instead of four), but may birth as many as 130 to 150 fry. Just remember to feed your mollies a hefty amount of vegetable matter if you want them to breed. Although it is not fully understood, the reproductive chemistry of these fish will not properly operate without a plant-rich diet.

Guppies

The second large group of Poeciliids is the guppies. Originally restricted to northern South America, Trinidad and Barbados, guppies now hail from all corners of the globe. Introduced to some new areas when they survived being flushed down the toilet, a great number have been reputed to thrive in the sewer systems of southern cities, thus flushed fish may not actually die, but go on to live in recycling ponds, streams and other bodies of water. These fish were also purposefully released in New Zealand and the southern and central United States as a form of biological pest control intended to eat mosquito larvae. These guppies have successfully taken their place within these ecosystems.

Guppies are hardy fish that are far more tolerant of varied water conditions than their molly cousins. Given a proper acclimation process, these fish may also take to life in saltwater. A stable pH of 7.0 is best, although gradual dips or rises of no more than 0.5 pH are tolerable. Guppies also require ample filtration but without a powerful current - it is difficult for these weak-finned fish to fight strong currents. A bio-wheel style filter that can cycle three aquarium volumes per hour is recommended (although an undergravel/ airstone filter combination worked for me for a number of years with no problems).

Like mollies, guppies have been the subject of selective breeding that strives to attain genetic perfection in the areas of color, fin formation and overall aesthetic beauty. Almost all guppies seen in the pet market today are variations of the wild guppy (*Poecilia reticulata*). Different wild populations of guppies had different characteristics (for example, those found in brackish waters sported flowing fins, while stream varieties had shorter, rigid fins), and these were exploited by commercial breeders. Line breeding produced especially colorful and flamboyantly finned fish to such an extent that guppy societies have formed around the world to collect, catalog and set up their own breeding standards. Some of these cultivated varieties include the triangle, veiltail, fantail, lyretail, roundtail, speartail, top/bottom swordtail, double-swordtail, coffertail and bannertail. With so many breeding bloodlines available these days (although many are not found in the typical fish store), there is no shortage of variety for the discriminating aquarium hobbyist to choose from.

Guppies are omnivores that thrive on a combination of plant and animal material. A captive diet consisting of tropical flakes is sufficient to keep them alive, while a more vegetation-rich regimen will give your guppies superior color and prepare them for successful mating. Many professional breeders have aquariums that are overgrown with algae. While the average fishkeeper may not want the walls of the aquarium covered in green slime, these fish will benefit greatly from a diet rich in algae. Leave the pleco at the store, and watch your guppies grow fat from devouring the algae that grows in their aquarium!

If you do wish to have both robust guppies and a clear aquarium, drop a few live aquatic plants, such as Amazon swords (for example, *Echinodorus amazonicus*, *E. bleheri*, and *E. cordifolius*) in the aquarium. Your guppies will nip tiny bits of decaying greenery off the leaves, thereby supplying their need for vegetation, while at the same time keeping your plants neatly preened and healthy.

Breeding is not a difficult task with guppies. Males have a noticeable gonopodium (the elongate fin situated between the anal fins), and grow no larger than about 1.2 inches. Females, however, are a good bit larger: 1.8 to 2 inches. Under ideal conditions, guppies are prolific fish that will brood every four to six weeks and may drop as many as several dozen fry. The largest brood I ever heard of numbered close to 70 fry.