

THE BEGINNER'S BUCKET

In Praise of Poeciliids Part II: Spectacular Sailfins

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If you're only familiar with the store-bred black and orange sailfin mollies, you're likely unprepared for the eye-catching beauty and complex behaviors of wild-type sailfins.

Sailfin mollies were named for the spectacular sail-like appearance of the male's enlarged dorsal fin. Aquarium store mollies were developed from the Mexican molly species, *Poecilia sphenops*, and the sailfin molly species found in the United States, *Poecilia latipinna*.

P. latipinna occurs in fresh, brackish and marine waters along the coastal United States, from the Cape Fear River drainage in North Carolina, down along the Gulf and Atlantic Coasts through to Veracruz, México. *Poecilia velifera*, larger than *P. latipinna*, and possessing a larger sail, is found around the Yucatan. *P. petensis* is an inland species, occurring in and around Guatemala's Lake Peten, but is hard to come by in the hobby.

Sailfin mollies are sold in aquarium stores throughout the country, available in black, white, mottled, and xanthic forms. Through the years, breeders have hybridized all three sailfin species to produce the black, white, mottled, and xanthic domesticated strains. It's a good bet, too, that many commercially available strains derive at least part of their ancestry from *P. sphenops* and perhaps other short-finned strains as well.

The commercially produced strains are nice fish, to be sure. But for my money, they don't hold a candle to the wild-type males of the *P. latipinna* and *P. velifera*. Both species have an intricate lattice work pattern on a blue and silver background.

According to my old copy of *Exotic Aquarium Fishes* by William T. Innes, *P. velifera* is the larger of the two, reaching about five inches in length, while *P. latipinna* grows only to about three-and-a-half inches. Anatomically, the two species

are very similar, with *P. velifera* having more dorsal rays and a more forwardly set dorsal fin than *P. latipinna*. Rather than trying to count fin rays in a living specimen, however, the easiest way to distinguish the two species is by the dorsal fin markings. Dr. Innes noted that the dorsal fin of *P. velifera* has numerous tiny white circles, while the dorsal of *P. latipinna* is marked with horizontal black streaks.

I've observed shoals of *P. latipinna* in southern Florida. Single large males attended a group of about 10 or 12 females, fending off rival males. In the aquarium, males expand their dorsal fins for courtship displays and to threaten rivals. The fish shimmers in place for several seconds, with the dorsal and caudal fins fully extended.

In the wild, large, colorful males tend to be in the minority. Far more numerous are the "mini-males," which can become sexually mature at only a quarter-inch in length. The small males don't develop the spectacular coloring and outsize sail of their larger counterparts and grow very little after sexual maturity. The small males, too, forego the elaborate courtship display and simply chase after the females. Male size and color is hereditary, so if you're breeding these fish for bright color and a large sail, it's best to cull the smaller males out of the breeding population.

Ecologist Joel Trexler at Florida International University in Miami has studied *P. latipinna* extensively. He's found that this species grows largest and fastest at temperatures in the low 80s and a salinity of 2 ppt—which I "guesstimate" to be about a half teaspoon per gallon.

P. latipinna is often found in saline environments. In the aquarium, I think it's a good bet that, along with sodium, sailfin mollies also need some dissolved calcium in their water to thrive. First, some fish species adapted to a saline environment

can sometimes survive in waters with high calcium content. Moreover, freshwater sailfins tend not to occur in soft acidic waters and, for the most part, are limited to waters with high carbonate hardness, like the Everglades. The geology of *P. velifera*'s Yucatan habitat is similar to that of southern Florida, and the fresh waters of that region are often high in calcium carbonate.

Currently, I keep a breeding colony of wild-type sailfins, which is probably derived largely from *P. velifera* stock. They seem to do well with about a teaspoon of salt per gallon. I also mix a small amount of garden limestone—about a teaspoon—in a gallon jug of water and pour it into my 65-gallon tank after each water change.

Sailfins are largely herbivores, and, like most herbivores, they need to graze frequently. In the wild, they use their rubbery, coarse lips to pick at algae all day. I don't think it's possible to raise sailfins to a large size with one or two daily

feedings of flake food. I feed mine cichlid pellets, which I presoak. Dry pellets can expand inside a fish's digestive tract, rupturing the stomach or intestines in the process.

Like many coastal species, sailfin mollies can live in a wide range of salinities, from fresh water to sea water. Each summer, I move my sailfins outdoors, to a 50-gallon tub of seawater. I keep the tub in the sunlight, to stimulate the growth of marine microalgae. I believe that sailfins grow larger and faster on marine algae than on freshwater microalgae.

Sailfin mollies aren't for the impatient. It can take more than a year for a male to mature and develop a full-sized sail. But these are such a beautiful fish that it's well worth the wait. I keep a small group consisting of a large male and six to eight females in a large tank with tall valisneria in the background. A pair of flagfish (*Jordanella floridae*) and a dozen bluefin killifish (*Lucania goodei*) complete the display. 