

COLOR VARIATIONS IN WILD MOLLIES

by Linn Blanchard, Gretna, LA

Southeastern Louisiana is at or below sea level, and water is everywhere. When a road is built above the level of the surrounding marsh or swamp, ditches are created on either side. At frequent intervals, culverts beneath the roads allow water to flow from one side to the other. These ditches also are joined by smaller watercourses which disappear into the swamp or marsh. Thus, a city-dweller may drive for twenty minutes, pull onto a reinforced shoulder, and easily observe the aquatic residents of a marsh or swamp.

The most ubiquitous of these are Gambusia, Poecilia latipinna, and crawfish, in that order. Where the water is brackish, the crawfish are replaced by swimming crabs. The mollies are everywhere. In brackish water, they live peacefully with Adinia xenica and Cyprinodon variegatus. In fresh water, they are found with Fundulus chrysotus and Heterandria formosa.

Here in a suburb of New Orleans, my son discovered large green Sailfin Mollies in a drainage ditch behind a service station. There is an oily film on the water, refuse in the water, and the Mosquito Control Board sprays periodically throughout the summer. The water is teeming with mollies! This ditch eventually joins a large drainage canal to a pumping station which keeps our town above water.

Five minutes' walk from my house is another drainage canal where the large female Sailfin Mollies are escorted by gleaming gold males. The females are dull green, as seen at the site already mentioned. This canal is fed by seepage from adjacent woods and illegal garbage dumps, and by street run-off. Long before the city surrounded it, this was a natural bayou, and the aquatic plants are still profuse. All are at home in shallow water which can suddenly swell to six feet after a heavy rain--Sagittaria and Ludwigia species with occasional stands of cattails. Since no trees block the sun, there is a heavy growth of algae. The muddy bottom and banks are riddled with crawfish burrows, much to the delight of the neighborhood children. Everybody goes crawfishing on spring afternoons.

Not far out of town, along state roads, I have found three other color variations in male mollies. All are Sailfins and two are similar; their tailfins flash aquamarine blue in the sunlight. The largest of what I call 'blue-tail' mollies are found in shallow, hard, alkaline water surrounded by heavy vegetation. The erect dorsal fin displays a row of black circles below the black margin. The body is silver with rows of tiny reddish dots throughout its length which appear to be stripes but aren't. The females are silver with the

"striping" and colorless fins.

My favorite of the blue-tails has a red head, a red zone in the tailfin, and vertical barring below the lateral line. The tailfin has a black margin on the top and bottom. The erect dorsal lacks the black circles and black margin; there are fine black reticulations that give it a delicate appearance. The overall effect in bright sunlight is red, blue, and silver--brehtaking. The females are also silver with the stippled "striping" and colorless fins.

The fifth color? They are black and the site is a secret. Their locale will be safe for some time to come, and it seems a betrayal of a privilege to disturb them.

All the mollies are found in shallow, very warm water. On cold February days, they seek the sun and thrive on the algae which the sunlight fosters. Using a Tetra^R Hardness Test Kit, I have tested water samples from all collecting sites. It ranges from DH 6 to 30+ in brackish water; pH has ranged from 7.0 to over 9.0.

Collecting is gentle and does not disturb the substrate or vegetation. I use an 8" minnow net with a 30" wooden handle and just rest it on the bottom. In a few minutes, all the fish resume their activities; when they swim over the net, I raise it. This method of netting provides ample opportunity to observe the social order.

The fish are transported in foam six-pack coolers (cheap) with the bags open and the lids off (it's hot down here).

In the next installment, we'll watch life go on in a Louisiana bywater and in a tank in a small city apartment.