

St. Charles Park District

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You're probably familiar with the phrase "the best of intentions." Maybe you heard it when your daughter tried backing the car out of the garage and scraped up the fender—I know my mom did. Or maybe you heard it when your niece tried to wash your giant glass serving bowl and cracked it in two—I know my aunt did.

Here in the Naturalist Department, we hear about "the best of intentions" most often with regard to invasive species—plants and animals that, for the most part, were brought to this area for what seemed like a good reason at the time but which, by and large, don't play well with their native neighbors. You've no doubt run across some of these characters in your yard or neighborhood park. Fragrant (or pungent) garlic mustard, *Alliaria petiolata*, is a prime example, as is tough-as-nails buckthorn, *Rhamnus cathartica*.

Then there's the mosquitofish, *Gambusia affinis* and *G. holbrooki*. Like so many other introduced species, these guppy-like critters were brought here—as well as to diverse locales around the world—with the best of intentions. Their name says it all, doesn't it? *Mosquitofish*. A fish that eats mosquitoes! How awesome is that?

Somewhere, sometime, someone saw this voracious fish chow down on mosquito larvae and, poof! A legend was born. Never mind that most small fish, from minnows to muskie fry, relish mosquito larvae. (They are, after all, the Lay's potato chips of the aquatic world.)

A few stellar performances in a few mosquito-infested ponds and the mosquitofish's fate was formed. From their native range in the eastern and southern United States, *Gambusia* were shipped around the U.S., and around the world, to do their part in the battle against our planet's deadliest insect.

But as so often is the case, the story doesn't end there. Mosquitofish, as it turns out, have an appetite for all things wriggly, whether it's mosquito larvae or any other macroinvertebrate—even those that eat mosquito larvae.

To make matters worse, *Gambusia* can be bullies. They harass other fish, including those bigger than them, and snack on their eggs and fry. And woe to amphibians who try to share a pond with mosquitofish. *Gambusia* eat the eggs and larvae of salamanders and frogs too.

Then there's the matter of reproduction—another area where mosquitofish literally blow other species out of the water. Like their guppy cousins, mosquitofish are livebearers and produce large amounts of young. A single female gives birth to 40 to 100 fry per brood; by comparison a female black-striped topminnow (*Fundulus notatus*), a common native, produces maybe 20 to 30 eggs per brood. The *Fundulus* offspring must then develop and hatch before they can begin growing; *Gambusia* bambinos begin feeding shortly after

birth and mature quickly. It isn't long, just a few short weeks, before they're busy making little mosquitofish of their own.

If you'd like to get a glimpse of these puny predators, and gain an appreciation for their ability to procreate and dominate, head over to Delnor Woods Park in St. Charles. Look for movement among the duckweed and spatterdock; if it's not a turtle, frog or tadpole, then chances are you're looking at mosquitofish. The larger fish—those around 2 ½ inches in length—are the females, and they tend to school together. The smaller fish, maybe 1 ½ inches long, that you see with them are males, hanging out and waiting for their chance to pass some genes along. And all those other little fish you see here and there? Those would be the youngsters. Right now they're feeding but, soon, they'll be breeding too.

I don't know how long mosquitofish have lived in the Delnor Woods pond, nor what their impact has been on other species there. I don't even know how they got there. But I'll bet they were introduced...with the best of intentions.

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