

# FEATURE ARTICLE

3

## A MARINE KILLIFISH COMMUNITY

---Harry W. Faustmann

My experience with salt and brackish water killifish keeping has been limited to the varieties of killifish found here on the south coast of Long Island. I've also collected native species during American killifish Convention field trips but have never actually kept the *Lucania parve* that we found at the New Jersey Pine Barrens. However, other interesting killies are found closer to home: these include Cyprinodon variegatus, the Sheepshead Minnow, and Fundulus diaphanus. Both species inhabit both fresh and brackish waters. A true salt water killie also found here on Long Island is Fundulus mizalis, a truly striking fish that is noted for it's sexual dimorphism: males exhibit a black horizontal barring; females show vertical black bars.

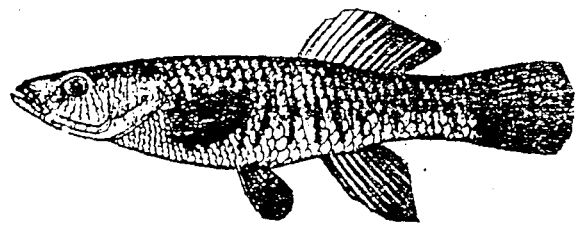
All of the above species can be kept together as long as their marine salt requirements are met to insure a healthy environment for F. mizalis. Any slight pollution or change from optimum conditions will result in F. mizalis' decline and eventual death. The other species (mentioned above) are more tolerant and can endure most condition changes and are even able to adapt to a pure freshwater environment, provided gradual changes are made.

A typical collecting area for these killies are bays and salt grass mud banks that are directly effected by the tidal changes. A constant food supply is provided with the tides and all creatures that form the primary end of the food chain benefit from

this. The killifish remain in the channels and pools as the tides recede and are easily seen thrashing about upon one's approach. Collecting has been good at both high and low tide, depending on the collecting site.

To aquascape a fish tank for native killifish, I would suggest a mud bank background with an overhang of salt marsh grass. This is perhaps the most obvious habitat of these killies and the easiest to duplicate in the home aquarium.

A background outside the tank will eliminate any potential muddy water problems. Smooth saltwater stones, such as might be found at a collecting site, when spread over the gravel bottom will decorate the inside of the tank. Saltwater hairgrass can be planted in, or left to float about, the tank to provide refuge for the shyer members of your killifish community. Those grasses that require a soil base to grow in, such as Turtle Grass, can be planted in small pots or trays and the containers hidden in the substrate, as is done in freshwater aquariums. Indeed, in a well managed aquarium, i.e., one that uses undergravel filtration, potting these plants would be the best method. Frequent 25% water changes will greatly benefit these fish and really color them up.



STRIPED KILLIFISH

Feeding Long Island's native killies is no problem as all these fish will readily take standard flake foods; however, fresh and/or live foods should always be supplied to insure a proper and balanced diet. Incidentally, often an observant collector will spot

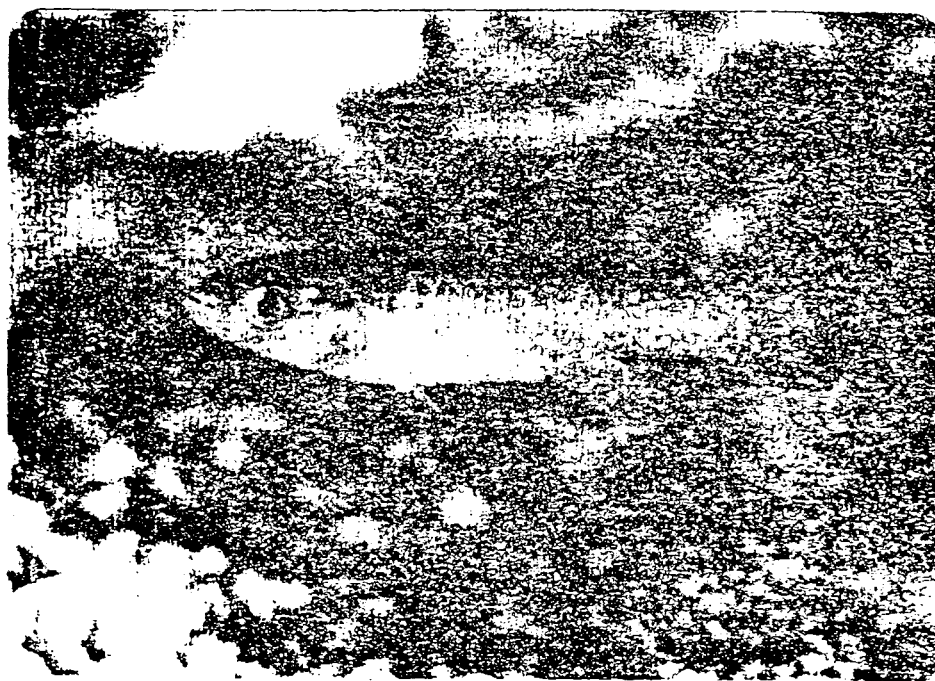
our native killies' favorite food at the collecting site. This is the common Grass Shrimp; all our Long Island killies devour them voraciously. I have, in fact, kept these shrimp alive in the aquarium until the fish finally hunted them down and eaten them. More often, however, I've simply collected these shrimp, rinsed them, and then frozen them for later use. Either frozen or live, the killies love them.

Spring is spawning time for our Long Island killies and their colors are really outstandingly displayed at this time. Good food, frequent water changes and the proper spawning substrate will definitely cause these easy to spawn fish to scatter their eggs about the tank. Dried spanish moss has, in the past, been used to provide a medium for egg scatterers and is ideal for this purpose. It's natural appearance will also enhance the beauty of your killifish aquascape. Their eggs can be removed to prevent them from being eaten or left in the tank and the parents removed. Either way, no special care is needed to induce hatching and the fry are easily reared by any of the numerous traditional methods employed by freshwater fish breeders.

Some other fish to complement this native marine or brackish water community tank might include the marine Pipefish (Punitius punitius) and perhaps some small hermit crabs. Whatever fish you choose for your killifish community, be sure to collect extra seawater

to fill the tank that these fish are to be kept in. After the tank is established and biological filtration is working properly natural seawater is no longer needed for partial water changes as Long Island's native killies adapt very well to any good quality sea-salt mix. With proper aquarium management, these hardy fish should more than fulfill any native fish fancier's needs for a marine killifish community.

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GULF KILLIFISH---- PHOTO BY GERALD C. CORCORAN