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 parva 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 miliaris, a truly striking fish that is noted for its 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. miliaris. Any slight pollution or change from optimum conditions will result in F. miliaris' 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 affected 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
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.

Feeding Long Island's native killies is no problem at 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,
fréquent water changes and the proper spawning substrate will definetly
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. Its natural
appearance will also enhance the beauty of your killifish aquascape.
Their eggs can be removed to prevent 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 Ripefish (Puntius
dunisiu) 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.

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