

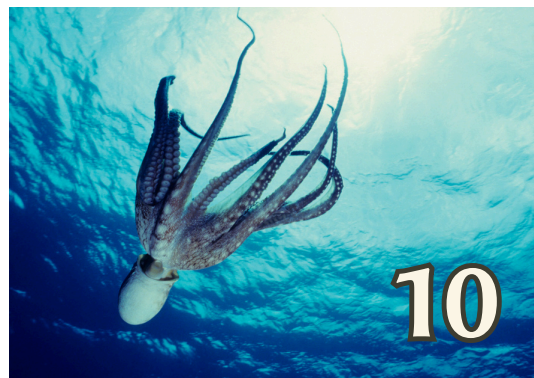
the **DARTER**
MiniMAG
Aquatic Journalism on a small scale

JUNE 2025

Caribbean Queen
are we living the same dream?

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**KEEPING
& BREEDING**

**THE GULF
PIPEFISH**

Syngnathus scovelli

Photo: University of Florida



by Mike Hellweg

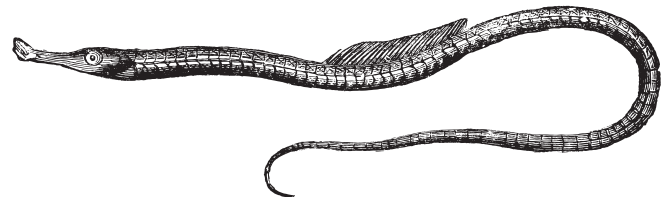
Update to the article originally
published May 2006

THE FRESHWATER PIPEFISH has almost mythical status among livebearer enthusiasts. There are about a dozen species worldwide that are found in freshwater on a regular basis, but only one species in North America fits that bill— *Syngnathus scovelli*. This fish is pretty rare in the hobby and is almost never available commercially.

Many years ago, long before Hurricane Katrina did so much damage in the area, my good friend BG Granier sent me a group of wild caught freshwater adults and juveniles. They came from a place on the north end of Lake Ponchartrain known as Bayou Lacombe, which is almost pure freshwater. Lake Ponchartrain is a huge estuarine lake to the north of New Orleans, and is fairly brackish, with some tidal influence via the Rigolets, a strait or canal on the eastern end of the lake that connects to the sea. The salinity drops considerably in the northern and western ends of the lake due to the influx of many streams and rivers.

BG challenged me to keep them going and get them to spawn. With some research and a lot of effort, in addition to his excellent packing and shipping skill, I was not only able to keep all of them alive, but I was also able to get them to grow, spawn, and even raise 2nd and 3rd generations. There was quite a bit of experimentation and some trial and a lot of error, but these hardy fish not only withstood my mistakes, they rewarded my successes with fry – lots of them!

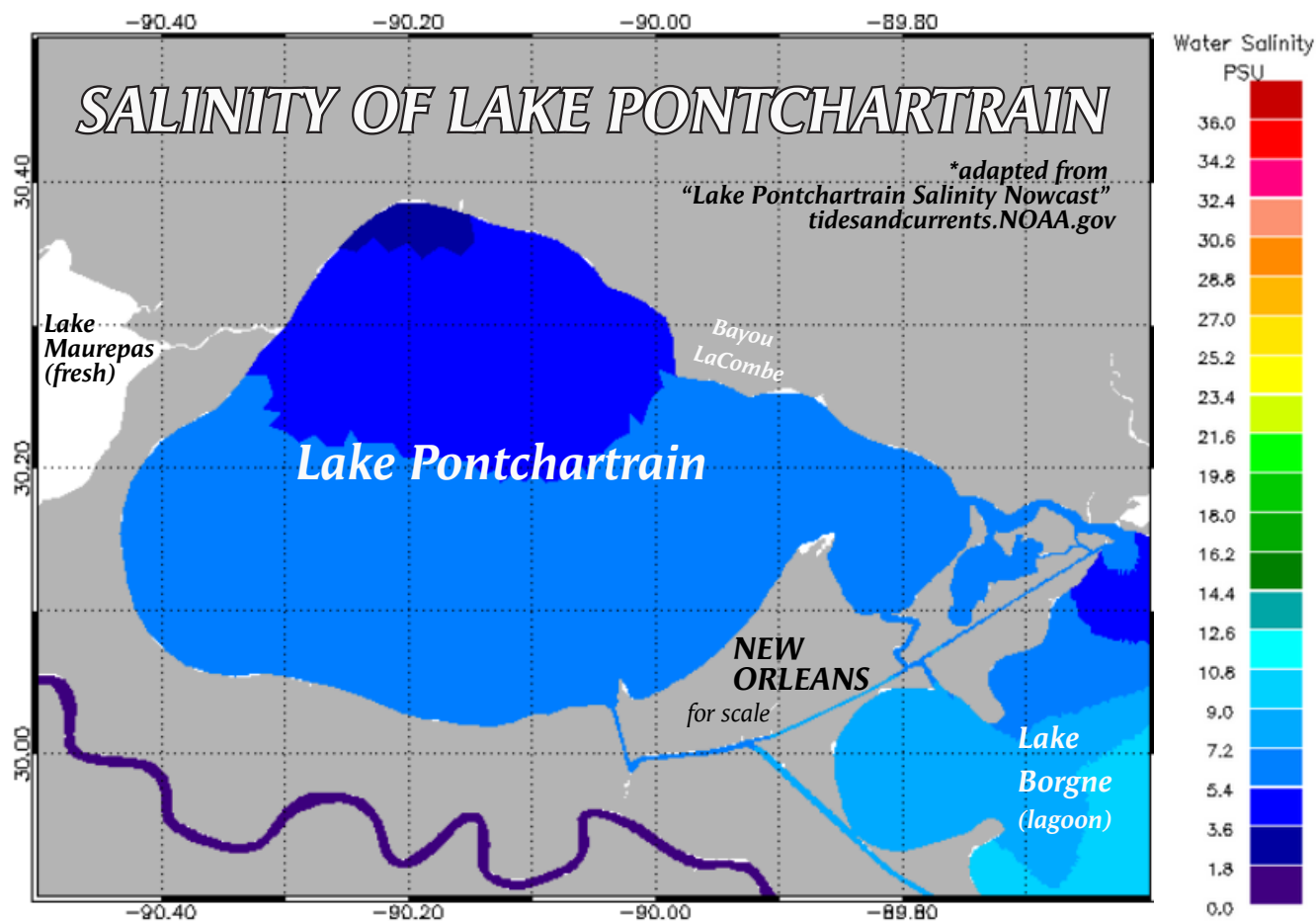
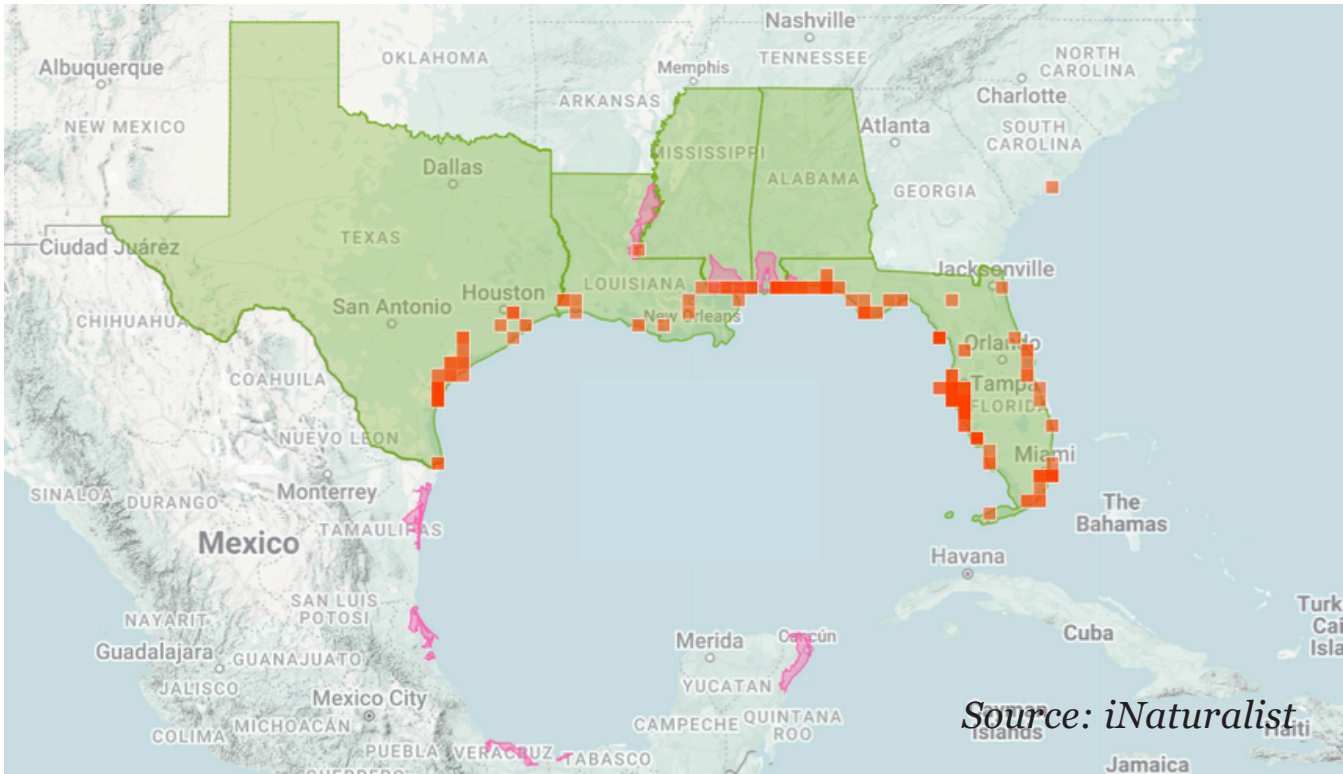
To save space, I'll skip the mistakes and just get right to what worked for me. Keep in mind that this was specifically a “freshwater” population from one particular area. These techniques may or may not work with populations from other areas.



TWO USEFUL
MAPS

ABOVE: the reported range of the Gulf Pipefish. Red dots are confirmed identifications. Pink areas are likely habitats.

BELOW: the varying salinity of Lake Pontchartrain, where a freshwater population is found.



FROM MY RESEARCH I discovered that *S. scovelli* occur from coastal southern Georgia all the way along the coastline of the Atlantic and Caribbean to Brazil. Most of the known populations do not reproduce in freshwater, though they are frequently found there. Only the Louisiana population appears to regularly occur in, and reproduce in freshwater. There is even a rumored totally landlocked population in Louisiana, but there have been no documented collections from that site since the 1960's.

Since originally writing this article, I've heard from several hobbyists over the years from both the ALA and NANFA confirming a freshwater Florida St. John's River headwater population, and also a couple of other freshwater populations along the southern US coast, but to my knowledge none have been confirmed as spending their entire lives in freshwater. There is still much to learn!

I set up a 10 gallon tank with a layer of crushed coral on the bottom. I filled it with hard, alkaline water (pH 8.0, total hardness 450 ppm, about with about 400 ppm of that coming from calcium carbonate). Later, I rotated weekly water changes with 100% seawater, 100% freshwater and a 50/50 mix to mimic the daily and seasonal fluctuations in coastal Louisiana. Whether necessary or not, I don't know. But it did work for me. They really perked up after each water change, whether fresh, marine or somewhere in between. There was no rhyme or reason to the changes; I just made sure each change was different from the last.

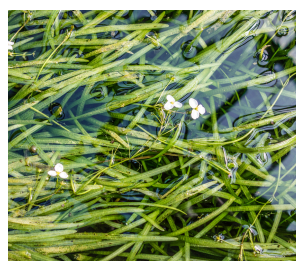
The tank was set up outside of the fishroom in a room that received filtered natural daylight – no direct sun. But I noticed without the slow increase in daylight that came from the natural light (such as when in the fishroom under lighting that came on with a timer) they did not perform their morning greeting ritual. Without this ritual, they do not reproduce.

Before breeding, the hobbyist should know: S. scovelli prefers plastic plants to real plants like Vallisneria and seagrass. Hobbyists should consider the implications of plastic plant enthusiasts splashing around in the gene pool. Even pipefish.



An essential for Gulf Pipefish breeding: natural sunlight. Without this, they will not reproduce. (Readers inquiring about the fuzzy chair should know, this photo is not Hellweg's. It might not even be a photo. Who knows with stock photos, these days.)

I tried various live grassy plants to mimic the *Vallisneria* and Turtle Grass beds where they are normally found in the wild. None of them, even the plants from Lake Ponchartrain, did well for me. So, I added about 2 dozen plastic Jungle Val plants with an open area left in the front of the tank. This open area is where they performed their morning greeting. The tank soon became plagued with a heavy growth of algae, so I added a group of Olive Nerite snails to help control it. They are also found in both full freshwater and full marine water, and they move between the two. When there were fry in the tank, I also added Java moss from other tanks. Java moss is covered with microfauna which adds to the habitat of the grow out and maintenance tanks. I'm not sure if that helped or not, but it is standard practice in my fishroom to add a potential natural food source for the fry between feedings.





Another trick: keeping pipefish with happy Nerite snails. When the Nerites breed, their planktonic larvae will provide a passive food source. Note, you can use the same trick for breeding other difficult micropredators.

The tank was filtered with a sponge filter, and kept at room temperature which fluctuated between 68 and 78 degrees over the course of the year, and went up and down about 5 degrees over the course of a day. No heater was used. 50% water changes were done weekly, as described above.

I fed them almost exclusively live foods. They only went after one frozen food, as described below, and that was only fed occasionally. They need to be fed every day, as their exoskeleton prevents them from storing too much fat, and they have a rudimentary stomach. I fed newly hatched brine shrimp daily, alternated with a second feed of *Daphnia*, *Moina*, Grindal worms, and occasionally microworms. With later species, I've discontinued feeding the worms entirely, and also added *Gammarus* (they seem to enjoy hunting these as their colors brighten up as they stalk them through the plants) and young cherry shrimp and the pelagic larvae of Ghost Shrimp when available.

Note that the pelagic larvae of Ghost Shrimp (Palaemonetes paludosus) can also be used for live food. Just keep the Ghost Shrimp in another tank, or they may prey on pipefish fry.

My original fish developed a routine for feeding that showed some intelligence, or at least an ability to learn about the local conditions. Instead of hunting the food, they would gather in the Val around the sponge filter and wait until it brought the food to them! After a few hours, they would again be scouring the tank looking for food. But at feeding time, they always moved to the area around the sponge filter. This gave me the idea to try frozen and freeze dried cyclops. They went for it as long as it was moving in the current. As soon as it settled down to the bottom, they ignored it.

Mating occurred frequently during the morning greeting ritual. At most times, there was at least one gravid male in the colony. As far as I could tell, only one female spawned with all of the males. She would turn coal black each morning, balancing upright on her tail in the open area, just as it started to grow light. The bright silver "Ys" on her flanks would seem to glow. At other times they are only barely visible. The males would turn lemon yellow and move one at a time into the open area and also balance on their tails parallel to the female, almost looking like the number 11. They would spend a minute or two looking each other up and down, and then rise up into the water. Sometimes they would mate, other times the male would then just swim away.



MATING IS A QUICK AFFAIR, with just a brief touch of the bellies. The female inserts several eggs into the male's pouch, where they are fertilized. The male then moves off and another male takes his place. Sometimes several males participate, sometimes only a few. But it appears that the greeting takes place each morning. Only the largest female participates. The others just watch from the plants. Every time I was up that early and watched, they did it. Interestingly, the gravid males often participated in the ritual as well. Sometimes they even mated with the female. There have been many males collected in the wild with more than one batch of eggs in their pouch in different stages of development, so it appears that this behavior is not uncommon.

Contrary to popular belief, the male does provide some nutrition to the developing embryos, along with allowing for some gas exchange and some waste removal from the eggs. The mechanisms for this are only now beginning to be studied, so I'm sure more information will come along as the years go by. As of this writing in May of 2025, this is still being studied and science learns more regularly.

Fry are born about two weeks after mating, early in the morning. I always found fry; I never witnessed the actual delivery. Fry are miniature copies of the adults, about 3/8ths to 7/16ths of an inch or so in size. They are ready to feed fairly quickly after birth, and are ravenous eaters. The adults appear to ignore them, and I never had a problem with predation.



.....
"As they grow, they will also take young Gammarus, copepods, isopods, young Daphnia, and young Moina. Variety seems to be important."
.....

Fry feed on newly hatched San Francisco Bay brine shrimp, which are smaller than the Utah brine shrimp. I don't know if they will feed on the Utah strain right away or not. I have not tried. As they grow, they will also take young *Gammarus*, copepods, isopods, young *Daphnia*, and young *Moina*. Variety seems to be important. While they will take vinegar eels and microworms and did regularly for me, young pipes will not thrive on them. Many of the folks who got juveniles from me had no long-term success feeding them strictly on a diet of these easy to culture foods.

One other thing that, looking back, seemed to be the difference between success and failure and the reason why I was able to succeed where many others failed. The Olive Nerites will lay eggs in the tank. While this annoys the heck out of planted tank enthusiasts, it turned out to be very beneficial for the pipes. Unlike most other snails, nerites have free swimming larvae called **veligers**. They are photophilic (attracted to light), so after hatching they swim up to the surface and gather under the lights. With a good sized population of nerites, you will have their larvae on most days. The young Pipes will find them and spend hours munching them near the surface. This became so common that I left a couple of the Vals floating so the young pipes had some anchors near the surface and didn't have to waste a lot of energy swimming.

Fry are miniature copies of adults. They take food (baby brine shrimp) with a similar enthusiasm.

PHOTO: Alyssa's Seahorse Savvy

Working with these and other freshwater pipefish later on, I did not have nerites in the tank and while I got fry, they never lived more than a few weeks. Several others who got the pipes from me also did not have luck raising fry when they did not have veligers in the tank. Years later, when researching my live foods book, I learned that nerite veligers have specialized mechanisms for harvesting calcium carbonate directly from the water that helps them to build their eventual shells when they settle out of the water column. It's possible this also was supplying the pipefish fry with a more concentrated source of calcium carbonate that helped them to grow and build their protective exoskeleton. There is still much to learn!

The fry grow quickly, reaching about 1" after a month, and reaching their adult size in about 6 months to a year, depending on how frequently you change the water. They start reproducing at about 8 months. Batches for young males are usually about a dozen or so fry. Larger males have given me nearly 100 fry, and some wild collected males have been reported with as many as 190 embryos. A normal batch, though, is about 30.



Over the years, a number of hobbyists (pictured above) have spawned the Gulf Pipefish in freshwater. Their secret: follow Hellweg's procedures.

I've passed out more than 1000 of these guys to dozens of other hobbyists, including some very advanced breeders, and so far, NOT ONE has succeeded with getting them to spawn. I've explained everything that I did, even given them copies of articles that I've written about them, and still not one of them has succeeded. Follow up conversations have indicated that NOT ONE of them has followed all of the steps above – most of them have tried to cut corners, kept them in the regular fishroom with lights on a timer and no exposure to daylight (hence no greeting ritual and no spawning!), not fed them live foods every day, not done regular water changes, not kept them with enough (or any) plants for anchors, etc.

.....

“I’ve passed out more than 1000 of these guys to dozens of other hobbyists, including some very advanced breeders, and so far, no one has succeeded with getting them to spawn... Follow up conversations have indicated that not one of them has followed all of the steps above.”

.....



THESE AMAZING AND UNIQUE ANIMALS require dedicated care. They cannot be maintained long term unless you are willing to go the extra steps to provide for their needs. They are not for the casual aquarist. Success requires planning and effort on your part. If you want to give them a try, by all means do so. But realize what you are getting yourself into and plan ahead. And don't forget to take some time each day to just sit and watch your fish!

Mike Hellweg is a MASI Fellow, master breeder, and expert horticulturalist. Visit the Darter Archives to access more than 100 MINIFINS articles covering a wide variety of aquarium fish.

AT A GLANCE

Syngnathus scovelli

The Gulf Pipefish

ORIGIN

Habitat:

Highly vegetated coastal waters

Biotope:

Gulf Estuary

STOCKING + HUSBANDRY

Size:

4-6"

Temperament:

Peaceful

Tank:

10 gallons

Group:

Needed to breed

Diet:

Micropredator

Breeding:

Paternal pouch-brooder

Lifespan: 2-3 yrs.

PARAMETERS

Temp:

68 - 78° F

pH:

8-9

dGH:

16 - 24

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A MASS-CULTURABLE CRUSTACEAN

Culturing Opae Ula for Aquatic Micropredators

by David Farel

A NUMBER OF EASY LIVE FOODS SPECIES are available in the hobby. If your fish need worms, we have Grindal worms. If they prefer insects, there are fruit flies. If raising fry, microworms and *Paramecium* are readily available. All of these species breed rapidly and without much difficulty.

Unfortunately, we have a shortage of easy crustaceans in the freshwater hobby. True, we have brine shrimp, which are only nutritious for their first few days, and take daily maintenance. There are the water fleas, *Daphnia* and *Moina*, but as anyone who has tried to keep them long term will tell you, these are hardly foolproof. We have cherry shrimp, but one may be reluctant to feed a classic “cute pet” to fish. For those seeking to keep micropredators that need high quality live foods daily (like pipefish and seahorses), we will need more foolproof foods.

Enter, Opae Ula. Opae Ula (*Halocaridina rubra*) are a miniscule, brackish shrimp species found in the lava vents of Hawaii. Growing to less than an inch in size and reproducing rapidly, Opae Ula are an excellent feeder for small micropredator species.

A follow-up to “Keeping and Breeding the Gulf Pipefish”

The trick is to keep a *large* culture. Set up a brackish tub or barrel, at least 60-75 gallons (though, less works). It does not need any special furnishing, just a trickling airstone and a heater. Use marine salt to prepare the water, mixed to half of the recommended salinity (1.10-1.12). Have a strong light on the culture. It does not need to be pricy, just bright. Run the light on your aquarium’s lighting schedule.

Add a large starter, the more the better. A group of 40 shrimp can be purchased on Ebay for under \$70. Until algae and biofilms develop, feed a fine spirulina-based food every week or so. Once the tank has an ample quantity of algae, stop feeding.

After a few months, you should have several hundred shrimp. Don’t harvest so many that the populations drop, but you should be able to harvest a small netful of shrimp daily once production ramps up. You will not need to add food or change water. Just top it off. Like the best live foods, it’s that easy.



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ADVANCED *Invertebrates*

PHOTO: Pauline Walsh Jacobson

by Kevin Brown

A followup to “Easy Invertebrates”
in *The Darter*, May 2025

EDITOR’S NOTE

In “Easy Invertebrates”, Kevin profiled more than 20 hardy invertebrates found in the Caribbean. The goal was to provide a sampling for readers new to (or considering) the saltwater hobby.

In the process of putting the issue together, we cut some of the more difficult - but even more fascinating - profiles that Kevin submitted to us. Here, you’ll find some of the more bizarre (but still feasible) species in the hobby. Just keep in mind, this article is just a starting point, not a complete guide. Many of these species require specialized care. Be sure to do your own follow-up research before setting up a tank for any of these species!

Kevin Brown is a lifetime freshwater and saltwater aquarium keeper, specializing in invertebrates (notably, Berghia). He and his wife operate one of the largest online saltwater stores in the US, *Salty Underground*, which is conveniently located here in St. Louis. You can reach out through the Salty Underground Facebook page or at saltyunderground.com.



MOLLUSKS

The mollusks (Phyla Mollusca) are a massive, diverse group, second in size to the Arthropods. They include gastropods (slugs and snails), bivalves (clams, oysters, mussels, and scallops), cephalopods (octopi, squids, and cuttlefish), and a few other classes not in the hobby. Some of the more bizarre species can be found below. All are in the hobby.

Lettuce Sea Slug

Elysia crispata

The Lettuce Sea Slug is usually a utilitarian addition to the reef aquarium in the effort to remove unwanted algae. It has a highly folded **cerata** on its back which gives it a ruffled appearance like lettuce. The coloration of the will vary due to the color algae that it eats.

The Lettuce Sea Slug may also be referred to as the Lettuce Nudibranch, or Green Lettuce Nudibranch, although it is not a true nudibranch. Since the Lettuce Nudibranch only eats algae, it is completely reef safe. Caution needs to be taken as it can easily be pulled into powerheads if it gets to close.



RANGE:
Caribbean

HABITAT:
Shallow coastal waters

CARE:
Moderate

REEF SAFE?:
Yes

TANK:
10 gal.

DIET:
Algae

Will get sucked into powerheads or intakes if not covered. Requires algae to survive.

PHOTO: Antar, CC-NC



Spotted Sea Hare

Aplysia spp

This slug is mostly used to eat algae in the aquarium. It is much larger than the Lettuce Nudibranch and can quickly eat itself out of food. It can be kept long-term if additional algae is added to the aquarium.

The Spotted Sea Hare is reef safe but can release a harmless dark fluid if it is handled aggressively or attacked. Because of their potential size of 3-6 inches, they can knock around anything not attached like a small coral.

RANGE:
Tropical
Atlantic

HABITAT:
Shallow sea, incl.
tide pools

CARE:
Moderate

REEF SAFE?:
Yes

TANK SIZE:
50+ gal

DIET:
Macroalgae





PHOTO: Pauline Walsh Jacobson, CC-NC

RANGE: Tropical Atlantic	HABITAT: Shallow seabed	CARE: Moderate
REEF SAFE?: No	TANK SIZE: 40 gal.	DIET: Fish and crustaceans

Needs hides. May escape an unsecured tank.

ATLANTIC LONG ARM OCTOPUS

Macrotritopus defilippi

The Atlantic Long Arm octopus is a small unique octopus that doesn't get more than 8 inches across. It stays in a hole where it reaches out to catch passing prey. It often leaves the remains of its last catch to lure small fish or crabs for its next meal. Once it finds a home it does not leave and therefore does not pose much of a risk of escaping the aquarium.

Tongs will need to be used to bring food to the octopus. It is a messy eater, and the food remains will need to be cleaned out regularly. It can be fed small pieces of fish, shrimp, or anything else meaty. It is easily damaged so rock work should be stable. A piece of PVC tube can be given to make its home.

HORSE CONCH

Triplofusus giganteus

They are the biggest conchs in the Caribbean. Horse Conch gets as big as 1 and a half feet and can break open a lobster cage with their strong foot. They eat anything meaty and are easy to keep. They can be reef safe but eat snails, scallops, and clams.

They are unique for just what they are. They have a bright orange foot that is very strong. They can shut off a return pump by going over it. They are unique but what is small gets big very fast and an aquarist that wants one should know it will be a species specific aquarium in the long run.



PHOTO: Norm Leonard, CC-NC

RANGE: Western Atlantic	HABITAT: Intertidal & coastal waters	CARE: Moderate
REEF SAFE?: Yes	TANK SIZE: 100 gal.	DIET: Carnivore

Will bulldoze any unsecured corals or decor



FLAME SCALLOP

Ctenoides scaber

Scallops make a great addition to the variety of saltwater aquariums. Scallops are filter feeders and require the feeding of phytoplankton for their long-term survival. Although the water quality should be very good, not using a protein skimmer may allow other food sources to remain and improve their long-term success in keeping them.

Flame Scallops have a mantle that is all red or red with a white fringe. They will move on their own and usually settle in areas of high water flow.



RANGE:
Caribbean

HABITAT:
Shallow rocky reefs

CARE:
Advanced

REEF SAFE?: Yes

TANK SIZE: 20 gal.

DIET:
Phytoplankton

Requires regular phyto dosing and a high nutrient tank.

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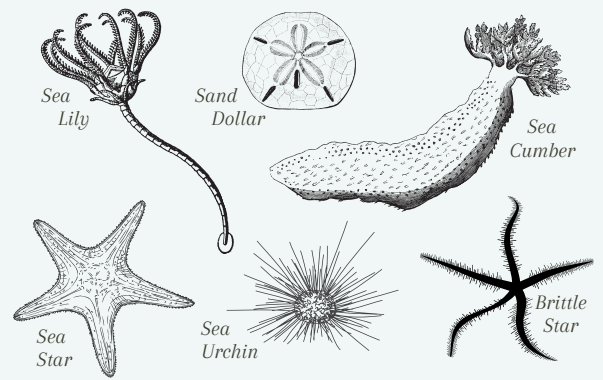
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ECHINODERMS

The invertebrates of phylum Echinodermata are one of several that simply do not dwell in freshwater. In the sea, they are a diverse group, containing over 7,000 species in 5 classes, including the starfish, brittle stars, sea lilies & feather stars, sea urchins, and sea cucumbers. They are a remarkably varied taxon, only really rivaled by Mollusca, and many can be kept in reasonable-sized aquaria. A few more Caribbean echinoderms are featured below.

THE DIVERSITY OF ECHINODERMS



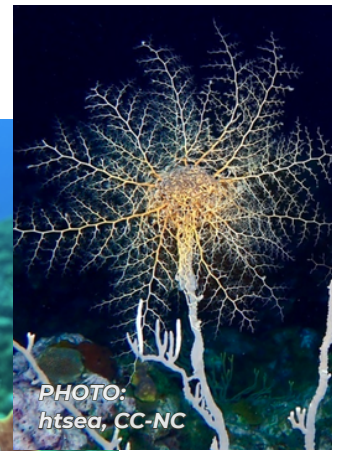
Basket Starfish

Astrophyton muricatum

This is the most unique of the starfish. It is usually found in gorgonian corals where it blends in. It catches food from the water column. In the aquarium it stays in a wadded up in mass until it senses food and then opens to catch it. When it opens up, it is almost alien looking and does not resemble a starfish. It likes high flow areas where the food is brought to it such as overflows in the aquarium.

Basket stars are reef safe. The Basket star is sensitive to extreme temperatures and water quality. It can also grow to over a foot across when opened up completely side to side. The downsides are that they can clog a small overflow and it may need to be directly fed if there is not enough food in the water column during fish feeding in the aquarium.

Closed vs open form



RANGE:
Western Atlantic

HABITAT:
Shallow reefs

CARE:
Moderate

TANK SIZE: 90 gal.

REEF SAFE?: Yes

DIET:
Omnivore



Orange Knob Starfish

Echinaster echinophorus

A slow moving dark red bumpy starfish, that requires an aquarium of at least 30 gallons with plenty of rocks. It can grow up to 8 inches. When the Knobby star is small it eats algae but when it matures it will start eating meaty foods. The Knobby star is not considered reef safe and like other invertebrates are sensitive to copper based medications.

The Knobby Starfish does best at temperatures above 76 degrees and not more than 82 degrees. If it gets too cold it will slowly die over several weeks. A sign of this is that the starfish will start falling apart and cannot be stopped. At this point the starfish should be removed.

RANGE:
Central Atlantic

HABITAT:
Shallow reefs & rocky areas

CARE:
Moderate

TANK SIZE: 30+ gal.

REEF SAFE?: No

DIET:
Carnivore





Live sand dollars only vaguely resemble their skeletal forms found on the beach.

Sand Dollar

Mellita spp.

Sand dollars are, in fact, urchins - a fact that is obvious from living specimens. They can be a unique addition to the aquarium. Sand dollars are densely covered with fine spines and stay buried most of the time. They feed on detritus in the sand and will need a large space for it to forage. 75 gallon aquarium would be a minimum size aquarium for this urchin.

One possible down side to having a Sand Dollar is that they will always be stirring up the substrate. If you want your sand bed to denitrifying this will not happen unless the substrate is several inches deep. The Sand Dollar is reef safe.

RANGE:

Tropical
Atlantic

HABITAT:

Sand beds

REEF

SAFE?: Yes

CARE:

Moderate

TANK 75
SIZE: gal.

DIET:

Detritus

Requires deep sand bed.

RANGE:

Tropical
Atlantic

HABITAT:

Sand beds

CARE:

Moderate

TANK 50
SIZE: gal.

REEF
SAFE?: Yes

DIET:
Detritus

Sea Biscuit

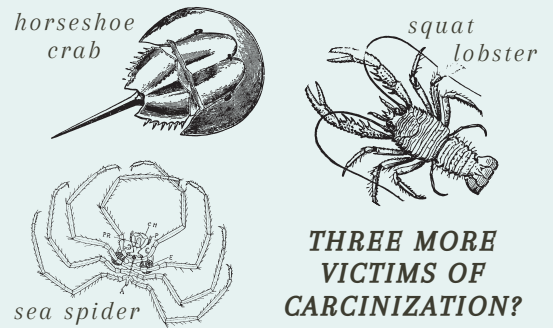
Clypeaster subdepressus

The Sea Biscuit is also in the urchin family. It is covered with very short spines and stays on top of the substrate. It covers itself with whatever is loose as a form of camouflage. The Sea Biscuit is a scavenger and will eat algae and fish food off the bottom of the aquarium.



ARTHROPODS

Arthropods are the largest invertebrate group. All have exoskeletons. Arthropods include insects, spiders, scorpions, springtails, and in the sea, crustaceans, horseshoe crabs and sea spiders, among others.



SEE THE NEXT DARTER

Horseshoe Crabs

Limulus polyphemus

The Horseshoe Crab is mostly greenish brown to light tan in color. The dorsal part of the body is rounded, and it has a long spike for the tail. The Horseshoe Crab is really not a crab, but more closely related to spiders. Horseshoe Crabs can grow very large, up to 12 inches in diameter.

When small, they are very efficient scavengers and are exceptional at aerating sand beds. The Horseshoe Crabs dig through sand in search of worms and any organic debris as a food source. It will move the substrate around almost nonstop. Although it may find some food scavenging, its diet should be supplemented with meaty items such as pieces of squid and shrimp.



RANGE:

Northwest
Atlantic

HABITAT:

Shallow coastal
habitats

REEF Safe-
SAFE?: ish

CARE:
Moderate

TANK 200+
SIZE: gal.

DIET:
Carnivore

*Needs deep sand bed and
open space to scavenge.*



The Search for WILD Swordtails



Xiphophorus helleri

by Patrick A. Tosie, Sr.

Originally published May 2009

MOST EVERYONE THAT KNOWS ME knows that I have a passion for cichlids. The Apistos and West African dwarfs have always been my favorites, with the Central American cichlids right behind. Another type of fish I like are the livebearers. They have a large family, many different colors, sizes and shapes. Some have very interesting and unique features, like the *Anableps anableps* swimming at the top of the water with their eye protruding half-way out of the water, and getting well over a foot long to the One Sided Livebearer, *Jenynsia lineata*, where a right male can only mate with a left female.

Within the livebearers you see some of the most common fish available, like the Guppy, Molly and Swordtail. If you are not in some great aquarium club, like ours, you may never know how many different varieties of even these common fish there are!

This brings me to another favorite of mine, the Swordtail, *Xiphophorus helleri*. The common swordtail comes in many different colors and a variety of finnage. These are all hybrids of *Xiphophorus helleri*. You don't often see the original in pet shops; they prefer to sell the more popular hybrids that are red, pineapple, gold wag, or some other variety. A few years ago I was planning a collecting trip with a couple friends, Rick Jokerst and Charlie Pyles to Honduras, but we were going to try an area that we have not collected before, San Francisco. San Francisco is in the state of Atlántida about an hour north of La Ceiba.



CHARLIE WAS ALREADY IN HONDURAS and he met Rick and myself at the airport and helped us get settled into our rooms. The first day we took it easy, walked around town and planned our collecting strategy. The next morning we were off, we headed north out of La Ceiba up Highway 50 for about an hour to a small town called San Francisco. We drove Charlie's little two-door Datson that I believe was held together with some baling wire (though, it did get us where we were going and was the right price!). Just outside of San Francisco we turned off the highway onto a gravel road. We drove for a couple miles until we came to a small river. It was the low water season so we were able to drive in the bed of the river close to where we wanted to collect. One side of the river had some small poorly constructed homes; the other side was an open field with cattle in it. The cattle could walk down into the water and they often did, even while we were collecting.



Pat graced this very sandbar on the Honduran collecting trip. Fish were found, fun was had, and only one cow was harmed in the process.



These roots were the source of much cursing and fewer fish. Spoilers for the next page.

The river had some smaller areas where the water was narrow, shallow, and faster moving as well as some small stagnant pools and some larger, deeper sections. At first look, the water was full of fish. We couldn't wait to get into the water. There were multiple trees that have been uprooted sitting in different areas of the stream. The river was full of Mexican Tetras a few Molly types and two or three types of cichlids. The first thing we did was snorkel the deeper ponds to see what was there. The pond had millions of the tetras (which loved biting the hair on your body) and mollies, a few cichlids and a few swordtails. -

The larger schools of fish stayed in the narrower, faster moving water and the larger cichlids were loners in the larger pools. I saw a few large, 8 to 10 inch fish in the deeper areas; they appeared to be a managuense type (known as "Jaguar cichlids"). Every time I go snorkeling, and see the millions of fish around me, I start thinking; there goes a dollar, that ones worth 7 dollars, Holy Cow, I am swimming with a million dollars of fish around me. I wonder, how can I get all these fish home?



*The Mexican Tetra, *Astyanax mexicanus*. While they were easy to catch, Pat's non-stygian population was not blind. We assume.*



THE MOLLIES AND TETRAS were fairly easy to collect, the cichlids a little harder and the swordtails were practically impossible to collect in the river. I noticed that a few isolated spots where trees were uprooted, there were small, nonmoving pools of water that fish were trapped in. It looked like it would be an easy area to collect in. Slow down Pat. Little did I realize how deep the pools were, how steep the banks were and the substrate was loose gravel that would slide down under your feet whenever you started to get near the edge. Looking into these pools I noticed some swordtails. Wow, they are great looking, should be easy to catch them in such a small area. Little did I know.....

Several hours later, and a lot of cussing at the roots and fish (I'm sure that helped, but the roots kept getting caught in my net!) but we were able to collect a number of these beautiful swordtails. Time to open a cool cerveza! In the open and larger pools of water, you could not catch any. If we had an area to seine, the swords would jump over the seine. When we were lucky enough and we did catch them, we enjoyed admiring their iridescent green body with vivid orangish-red line or two that went full length down their body and the yellow and black sword on the males. I would be carrying a large bag with me, and whenever I caught fish I would put them into the bag. Every now and then, I would go up to the car, get some fresh water and separate the fish, putting the swordtails into the breathable bags with a small square of poly and putting no more than 3 to a bag. Then I would put the bag into a cooler and the cooler in some shaded area.

The area was a beautiful and relaxing place. At one point, one of the local farmers drove his cattle down into the riverbed to drink, this wouldn't be so bad, but we were still in the water collecting with our cameras and supplies on the bank. After the cows left, we had to be careful where we stepped! When we first got there, no one else was around, the longer we were there, the more people showed up. First it was the kids, then some teenagers, then a few older people. One guy on a 10-speed bike rode down by us. Maybe we were in their swimming hole, it was a perfect spot to relax. We went to this location a couple days in a row, then took a day getting ready for our next site.

Rusty Wessel, Keith Shepard and Dan Woodland came down a few days later, and we all went to an area a little south of Jutiapia to collect a cichlid known as the Honduran Red Point. We did not have much luck, at the place where we were to collect, someone brought a cow down to the water and cut its throat and let it bleed into the water. I guess that's how the Honduran Red Point gets its color!! This area also has some beautiful red-tailed mollies.



Scholars (OK, editors) retracing and reconstructing Pat's steps posit that this "red finned molly" was in fact Poecilia salvatoris, the Liberty Molly, which is found in the area.





*A great place
to collect fish.
Exceptions
apply.*

Pat Tosie Sr. is a longtime MASI member, MASI Fellow, past MASI president and Darter editor. He is also a prolific Darter contributor, writing on topics as diverse as breeding fish, collecting fish, and cooking them. You can find him at MASI meetings.

Did I have a good time? Of course! Would I do it again? Yes, I will do it again! If you have never tried collecting, go to some local creeks (if you don't know where to go, ask me. I know a few spots around here where you can catch some fantastic looking darters, mad toms, and killies!) Before you plan a trip, try it locally and see how you do and what you need, everybody is different and have their own favorite techniques. Other things to look at are: What is your favorite fish? Wouldn't it be cool to see it and collect it in the wild?

Do a lot of research, talk to people who may have went collecting for the same type fish. Read magazines and club publications for articles on collecting (Ask our exchange editor for the exchange publications MASI receives). Next time I will tell you about catching fish at the end of the Baja peninsula.

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