

THE SEAHORSE CHRONICLES

THE INVERTED TANKMATES

by BERNARD HARRIGAN

Last month's column completed a three part series on setting up a seahorse aquarium. The last step was to wait, let nature take its course, and let your tank cycle. While you're waiting there's millions of bacteria and algae multiplying and colonizing every surface area under the water. This is a good and valuable process that beginners in the hobby fail to realize. Test your water, add supplements as necessary, and let the algae cover your tank to a point where you want to clean it — but don't. When you see algae covering about one half of the surface area inside your tank, you're ready for the next stage. No, it's not cleaning your tank, or even adding the seahorses. It's adding the most useful tankmates for your seahorses, and they're not even fish.

The animal kingdom has 36 major divisions called phylum (phyla is the plural form). There is one phylum that consists of all the animals with a backbone. This includes mammals, birds, reptiles, amphibians, as well as fish. That's right, the phylum to which we humans belong (along with around 50,000 other species) consists of all vertebrates. The few million other species of the other 35 phyla are all invertebrates, that is, animals having no backbone.

It's best to add invertebrates before you introduce your seahorses — just like they were around on the earth before fish evolved. Now, you can't add just any invertebrate. Seahorses are slow moving and almost defenseless creatures. They can't compete for food with more aggressive or faster tankmates. Even some sedentary invertebrates can harm or eat seahorses; for example, certain corals and sea anemones.

Remember that this is a seahorse aquarium, not a reef tank. If you are going to add tankmates, add those that will help balance the ecosystem. Invertebrates can help with algae control, cleaning up detritus, and even filtering the water. Some eat pests that hitchhike their way into your aquarium, while others stir the substrate, thereby keeping it aerobic. The right invertebrates will keep your tank healthy and functioning at its best.

Thoroughly research the invertebrates you are thinking about keeping. Know and understand all their requirements. They are living creatures too, and it's you who have decided to include them in your aquarium. You are as much responsible for their well-being as you are for a cat or a dog.

Yes, speaking of a dog, some invertebrates have special needs that your seahorses don't, such as lighting, diet, or even certain supplements that need to be added to the water. Also understand that these needs can change as they grow. Check out how big they will

get. It's best not to add something that will outgrow your tank. Research each species of seahorse for compatibility with the invertebrate you are thinking about adding.

Some invertebrates that would be considered safe with the yellow seahorse, *Hippocampus kuda*, may not be safe with fry, or even the dwarf seahorse, *Hippocampus zosterae*. Research the invertebrates compatibility with each other. Hermit crabs need empty snail shells for new "housing" as they grow. If there are no appropriate empty shells around, they will kill a snail that has a suitable shell, and use that. The main food source for the harlequin shrimp, *Hymenocera pica*, is sea stars. Don't put them together if you expect your sea stars to be alive. I can't state this enough: thoroughly understand the needs and behaviors of every living creature you plan on keeping, especially if you intend on having them live with others in a closed environment like a fish tank.

Snails

There are around 40,000 species of snails discovered so far. The ones I recommend mainly eat algae, but some dine on detritus, cyanobacteria, and even diatoms. It is advised to keep one snail for every two gallons, so this should be the most numerous tankmate you'll add. My choices are: members of the Cerithiidae family, the *Astrea*, *Nassarius*, *Neritidae*, *Pusiostoma*, and "Turbo" species, the *Margarites pupillus* (Margarita snail), *Trochus niloticus* (Trochus snail), *Norrissia norrissi* (red-footed moon snail), and the *Strombus alatus* (fighting conch).

Shrimps

Shrimps are for more than just butter and garlic. Some consume detritus, parasites, and even pesky *Aiptasia* anemones that end up infesting your tank, coming in on live rock. They can be active during the day, or at night, territorial against their

own species or social. Most are very mobile and good at getting into tight crevices.

Some shrimp, when properly maintained, can even spawn in your tank. The young are hard to raise, but provide an additional food source for your seahorses. There are about 8,500 species of shrimp to choose from.

Warning — shrimps are one of those invertebrates I would not keep with small or young seahorses.

These are the shrimp I would keep with medium to large seahorses: *Lysmata* and *Palaemonetes* species, *Palaemon elejans* (rockpool shrimp), *Rhynchocinetes durbanensis* (camel shrimp), *Crago septemspinosus* (sand shrimp), and *Stenopus hispidus* (coral banded shrimp).

Crabs

Vigilance needs to be used when deciding whether or not a crab should be added. Many a cute little crab can grow into a cold callous killing crustacean. Even a two inch spider crab or horseshoe crab, that is not a danger to seahorses, can easily outgrow your tank, wreaking havoc as it lumbers along.

Luckily, there are approximately 4,500 different species of crabs to choose from. But even with that many, there are only a couple I would allow in my seahorse aquarium: *Petrolisthes* species, and the bluelegged hermit crab.

Feather Dusters

You can casually pick out feather dusters and fan worms. These are segmented worms related to the earthworm, but belonging to the class Polychaeta. They are filter feeders that basically live a sessile lifestyle. The worm constructs either a hard and calcareous tube, or a leathery one. At the top of the tube the worm extends its crown, a feathery structure called a “branchiae.” This branchiae gives the worm a flowering plant-like appearance that can be quite handsome. The worm uses this crown to catch food and to breathe. The feathery extensions act like a net, trapping food particles floating in the water. I said, “casually pick out” feather dusters and fan worms for your tank, because all are seahorse-safe.

What is covered here deals with maintaining a seahorse aquarium. It doesn't encompass reef tanks, or community tanks that house seahorses.

The tankmates listed above are by no means the only ones you can keep with seahorses. Ten new species might be discovered by the time this gets published. What this does give you is a sound starting point to help you have an easier time keeping seahorses. It's up to you to do the research from here on.

