

The Perfect Marine Snail for Your Freshwater Aquarium

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Gastropods are interesting and useful inhabitants of a well-balanced aquarium. They can be helpful in controlling problem algae growth, removing waste, and keeping the glass clean. However, any experienced aquarist can tell you that it isn't always easy to find the right balance with these little window-washers. Many of our native species are difficult to keep, are eaten by other aquarium inhabitants, or just don't have the required appetite for algae. On the other hand, some snails can reproduce excessively and become a nuisance. Surprisingly, one of the best native snails that I've kept in my stream tanks normally makes its home in the ocean!

Our native freshwater snails belong to two groups—the prosobranchs and the pulmonates. Most stream-dwelling species are prosobranchs, which respire by means of gills and have relatively heavy shells with an operculum (a plate of shell that closes the shell aperture after the snail withdraws inside). On the other hand, most pond and lake-dwelling snails are pulmonates, which breathe air, have relatively thin shells, and lack an operculum. Pulmonate snails are fairly easy to come by, and a trip to the edge of a local pond or slough in the Midwest will generally produce common species of *Physa*, *Helisoma* or *Lymnaea*. Native prosobranch snails are generally less common and are found mainly in streams having good water quality and low silt loads. Among the more common genera are *Elimia* and *Pleurocera*.

Ideally, my stream tank would be a good home for native stream species such as *Elimia* and *Pleurocera*. Unfortunately, these snails generally do not survive long in my aquaria. Part of the problem is predation—if you are keeping crayfish, or mollusk-eating fishes such as greenside darters or certain sunfishes, small snails soon become just another item on the

menu. The other shortcoming of these species is that they just don't seem to do the job—it takes a lot of them to keep the walls clean.

This brings us to the olive nerite, *Vitta usnea* (also known as *Neritina reclivata*; Fig. 1). I first encountered these snails during a trip to Dauphin Island, Alabama. The shells are 10-14 mm long, glossy olive green to brown, and marked with many fine, closely spaced, wavy lines that parallel the edge of the shell as it grows. The operculum is very dark green, nearly black, and the inner aperture is white. They are not gaudy, but they are glossy and quite attractive. This snail is common in the sheltered bays and bayous of the Gulf Coast, and their range can extend for miles upstream in coastal rivers. They tolerate a wide range of salinities, from freshwater to over 40 parts per thousand.

I tried olive nerites in a freshwater tank on a whim in 1995, and I have been amazed for years at what fine aquarium snails they are. Recently, I learned that others have also discovered the utility of this species in freshwater and brackish water aquaria, and that they can now be purchased from certain aquarium suppliers. Olive nerites are tough, with relatively heavy shells and a sturdy operculum. They are able to resist the attacks of crayfishes and other would-be predators. They are also long-lived. Individuals that I collected as adults have survived for over six years in aquaria. They are very active, and as few as a half-dozen adults are able to keep a 20-gallon stream tank free of algae, including *Oscillatoria*.

Another interesting aspect of *Neritina* is that they apparently cannot reproduce in freshwater. As with most prosobranchs, the sexes are separate (unlike pulmonate snails, which are hermaphrodites). The females lay white egg capsules just one millimeter long, each of which contains a large



Fig. 1.

Vitta usnea (Röding 1798) has also been known as *Neritina usnea* and as *Nerita reclinata* Say 1822. Operculum is visible in the shell at lower left. Photo by Bill Frank.

number of eggs. It is unclear whether the young hatch as veliger larvae or develop directly (Andrews, 1935). Most list-serve comments from aquarists report that the eggs fail to survive in freshwater. That these snails don't reproduce in freshwater is advantageous for two reasons. First, the tank will never be overrun with them. Second, if they were to be released they will not become the next invasive species, at least not in inland waters!

Acknowledgments

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Literature Cited

Andrews, E. A. 1935. The egg capsules of certain Neritidae. *Journal of Morphology* 57 (1): 31-59.

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