

Have you seen this creature in your lake?

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If you've seen this invasive, exotic creature in one of New Hampshire's lakes, ponds, rivers, or streams, NH LAKES wants to know!

What is it?

The Chinese mystery snail is a large freshwater snail that is an exotic species (meaning that it did not evolve here naturally) which has made its home in some of New Hampshire's waterbodies. Thankfully, it hasn't become a problematic, widespread invasive species in our state, at least not yet. But, we thought you might like to know about it so that you can help prevent it from becoming an unwanted pest in our lakes, ponds, river and streams.

What does it look like?

The Chinese mystery snail can grow up to a couple of inches in length, as measured from the lip of its shell to the tip of its whorl—roughly the size of a chicken egg. The shell is usually a uniform light to dark colored olive-green, smooth and strong, and may have up to six or seven whorls. It is often referred to as the “trapdoor snail” due to its hinged, fingernail-like plate that it uses to seal itself up to protect it from harm—including predators, drought, and unfavorable water quality conditions. It reproduces sexually and gives birth to live young, with females living up to five years and males typically living three to four years.

Where did it come from?

The Chinese mystery snail is native (meaning it evolved naturally with its predators) in Southeast Asia, Japan, and eastern Russia. In 1892, it was purposely imported into live Asian food markets in San Francisco. It is believed that the imported snails were intentionally released into nearby waterbodies to create a local supply for harvesting—in 1911, a robust population had made its home in San Francisco Bay. The Chinese snail was first reported in Boston in 1915. In addition, its popularity as an aquarium animal has more recently led to its introduction (via aquarium dumping) into many waterbodies.

Where are they found now?

During the last century or so, the Chinese mystery snail has spread its way into waterbodies throughout the country—it can now be found in at least 28 states, including New Hampshire. Once in a waterbody, the snails can be spread as adults or tiny juveniles via bait buckets and water holding areas on boats. They spend the majority of their lives half-buried in

the bottom sediment, and are sometimes found with their “trapdoors” sealed shut while floating on the water’s surface. They seem to prefer the quiet waters of lakes, ponds, roadside ditches and slow-moving streams. When they die, they are often washed onshore where they can be seen easily, and sometimes, unpleasantly smelled first.

What do they eat?

Chinese mystery snails feast on algae—they don’t seem to eat fish or vascular plants, making them a popular way to keep aquariums clean. (Also, they don’t seem to overpopulate aquariums and, since they can close up using their trapdoor when the water becomes unhealthy, they can indicate that something is wrong, up to a few weeks before the fish die—another desirable trait for aquarium owners.)

Cause for concern?

Chinese mystery snails have caused problems in waterbodies in this country—clogging water intake pipes, outcompeting native freshwater mussel and snail populations for food, and littering the bottom of waterbodies with their shells. So far, however, it appears that they haven’t worn out their welcome in New England’s waters—they are considered relatively harmless and haven’t noticeably disrupted the aquatic ecosystem. **However, there is concern that, given time, they could out-compete our native mussels and also serve as a host and vector to numerous parasites, some of which could be harmful to humans.**

What to do if you’ve seen the Chinese mystery snail:

The Chinese mystery snail is known to be found in a number of New Hampshire’s waterbodies. However, the full distribution of its population in this state is not known. If you have seen this snail in a waterbody, please let NH LAKES know! Report your sightings to NH LAKES at info@nhlakes.org or (603) 226-0299. (Please be sure to include your name, your contact information, when and the waterbody and town where you saw it.)

Even if you haven’t seen one, here’s what you can do...

Until we learn more about this mysterious creature, it would be best if we all tried to prevent its spread to keep our lakes, ponds, rivers and streams healthy for future generations to enjoy. Here are few tips on how you can help:

- If you have an aquarium that you would like to get rid of, do not release any of its inhabitants (animals or plants) into the wild, or into your toilet if you are connected to a municipal sewer system.
- If you are a fisherman, never release fish or plants into a different body of water from which they came and don’t dump leftover bait into the water.
- If you are a boater, remove all mud, plants and animals from your vehicles, vessels, and equipment, before you enter and after you leave a waterbody. And, drain water from the bilge and livewells before leaving the launch area.

With your help, we can get a better handle on the whereabouts of this invasive exotic organism in our waters and prevent it from becoming a problem in the future!



Chinese mystery snails have taken over this lake in Minnesota. No other snails can live there because someone introduced these giant ones, likely from their aquarium. Their shells litter the lake floor, and the entire lake bottom looks like this photo. Photo source <http://www.flickr.com/>.