

AIIS

Aquatic Invasive Species

CHINESE MYSTERY SNAIL



Photo from "Kemongsa Science In Picture" Volume 21, published by Kemongsa, 1993.

COMMON NAME: Chinese Mystery Snail

Many of the Oriental mystery snail's common names are interchanged, Japanese mystery snail, Japanese Black snail and Japanese trapdoor snail. Some believe that they have identified populations of Japanese mystery snails in the United States but they may just be Chinese mystery snails misidentified.

SCIENTIFIC NAME: *Cipangopaludina chinensis*

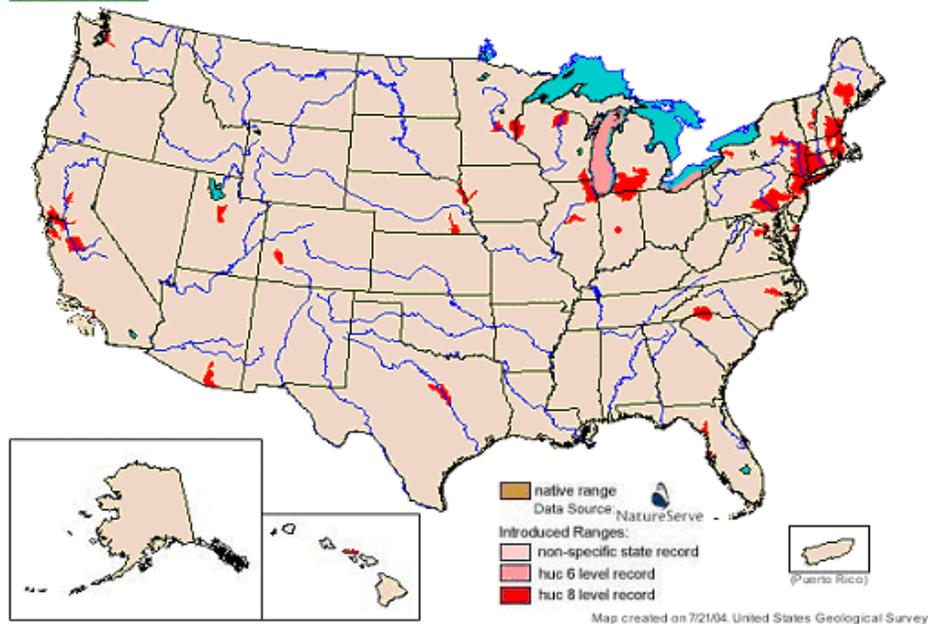
Other scientific names that will sometimes appear in older literature are *Viviparus chinensis malleatus*, *Viviparus japonicus*, *Viviparus stelmaphora*, *Paludina malleata*, *Paludina japonicus*, *Cipangopaludina malleata*, and the most common being *Viviparus malleatus*. *Cipangopaludina chinensis* has two different variations, var. *chinensis* and var. *malleata*. The Chinese mystery snail is in the mystery snail family, Viviparidae.

DISTRIBUTION: The Chinese mystery snail is native to Burma, Thailand, South Vietnam, China, Korea, Japan, the Philippines, and Java. It has been introduced into the United States in approximately 27 states. The Great Lakes have not gone unaffected by the Chinese mystery snail, Lake Michigan and Lake Erie have had introductions.

Indiana: Chinese mystery snails have been found in Fall Creek and the West Fork of White River, both locations are in Marion County.



Cipangopaludina chinensis



DESCRIPTION: The shell of the Chinese mystery snail is smooth and strong. It is a uniform color throughout without banding and is usually a light to dark olive-green. The shell can have 6 to 7 whorls. The whorls are strongly convex and each suture is very indented. The outer lip is either round or oval and has a black color to it. The shell can grow to a couple of inches in length.

LIFE CYCLE BIOLOGY AND LIFE HISTORY: You can find Chinese mystery snails in lakes, ponds, rice paddies, irrigation ditches, roadside ditches, and the slower portions of streams where there is some sort of mud substrate. They will stay partially buried in the mud where the water is quiet. The females will give birth to live, crawling young. They eat zooplankton and phytoplankton. Mystery snails have a feature called a “trap door” which allows them to close up the opening in their shell when water conditions are unfavorable. This poses problems when trying to eradicate with chemicals because the Chinese mystery snail can close up and wait until the chemical has dissipated before opening again.

PATHWAYS/HISTORY: In 1892, Chinese mystery snails were imported into live markets in San Francisco. In 1911, a thriving population was found in the San Francisco Bay. They were found in Boston, Massachusetts in 1915 and in 1950 Florida reported finding a population. By 1965, Chinese mystery snails were established both on the west coast and on the east coast as well as some of the Gulf States like Texas. The great Lakes have been affected also; Lake Michigan and Lake Erie populations were reported in 1965.

DISPERSAL/SPREAD: Chinese mystery snails were probably introduced into the United States through releases from the aquarium industry. This snail is readily imported for Asian food markets. Therefore, some releases may have been intentional in an effort to create a local food source. Once in a body of water the Chinese mystery snail could be transported via bait buckets and water holding areas on boats.

RISKS/IMPACTS: Chinese mystery snails can serve as vectors for the transmission of parasites and diseases. Some of the parasites and diseases that the Chinese mystery snail has been known to play host to can infect humans. Their shells will clog the screens of water intake pipes inhibiting the flow of water. Also, they naturally compete with our native snails for food and space.

MANAGEMENT/PREVENTION: Specific control methods for the Chinese mystery snail have yet to be developed but there are some general snail management techniques that could be applied. Biological control is always a method that most people support because it usually causes the least amount of damage to other aquatic organisms. By introducing fish or turtles that eat snails you may be able to lower the population. There is also the option to use a chemical control method. There are copper compounds that are sold as snailicides but they are usually not selective in the snails they kill. With Chinese mystery snails possessing the ability to “close up”, more damage would probably occur to native snails in the treatment area than to the target pest.

The best type of control is prevention. Preventing any further spread of the Chinese mystery snail will help keep our native ecosystems healthy. To help stop the spread of the Chinese mystery snail a few simple steps should be followed.

- ✓ Learn to identify the Chinese mystery snail and other exotic snails.
- ✓ If you have snails or other animals in an aquarium and you no longer wish to care for them, you should euthanize the animals before disposing in the trash. **DO NOT RELEASE THEM IN THE WILD!**
- ✓ Remove mud, plants, fish, and animals from all of your equipment and drain all water from the bilge and livewells before leaving the launch area.
- ✓ Clean your equipment with hot water or a pressure washer and allow it to dry for five days before transporting it into a new body of water.
- ✓ Never release plants or animals into a different body of water from which they came.

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