

Carthusian snail *Monacha cartusiana*

Previously detected in the Detroit area, the Carthusian snail has a high risk of re-invading Michigan. Since it can feed on a wide variety of plants, this exotic land snail potentially impacts various agricultural and horticultural commodities as well as native plant communities.

[Michigan risk maps for exotic plant pests.](#)

Other common name

Helicid snail

Systematic position

Mollusca > Gastropoda > Hygromiidae > *Monacha cartusiana* (Müller)

Global distribution

Found in Europe, Mediterranean region.

Quarantine status: Small populations of this snail have been detected at rail yards in Detroit and Chicago (USDA-APHIS-PPQ). This snail is listed as a prohibited mollusk species by Michigan's plant protection regulations (MDA 2009).

Plant hosts

A wide variety of live and dead plants (Taylor 1917).

Biology

The Carthusian snail is an air-breathing land snail. It inhabits sunny and dry bushes and grassy slopes, hedges and street sides in low altitudes (Anon.). After mating, adult snails deposit eggs in loose, damp soil. Although egg-laying extends over several months, most eggs are found in autumn (Chatfield 1968). During the day, the snail adheres to the stems of plants and grasses, or other suitable objects (Taylor 1917).

Identification

Shell characteristics: round shell up to 15 mm in diameter; 5.5 to 6 whorls; shell white to pale brown in color, somewhat solid and translucent; under magnification, minute hair on a part of shell surface may be visible.

Management notes

During the 2004 CAPS survey for exotic snails and slugs, inspections focused on habitats such as refuse or under plastic tarps in rail yards and near warehouses (USDA-APHIS-PPQ). The Michigan State University Snail Laboratory (<https://www.msu.edu/~atkinso9/>) provides information on the Carthusian snail and other pest mollusks



Carthusian snails. (Photo: F. Geller-Grimm, Wikimedia.org)



(Photo: L. R. Kolouch, Bugwood.org)

found in Michigan.

Economic and environmental significance to Michigan

This snail feeds on a wide variety of plants, and may cause damage on agricultural and horticultural crops as well as native plants. In addition, invasive snails can potentially transmit plant and animal pathogens and displace native snails and slugs (Illinois CAPS program 2009). The risk of introduction to Michigan is high because this snail has been frequently intercepted at ports of entry

and small populations have been found in Detroit and Chicago (USDA-APHIS-PPQ).

Likely pathways of entry to Michigan

Marble, stone, and tile imports are considered risk pathways for exotic snails and slugs (USDA-APHIS-PPQ).

If you find something suspicious on a susceptible host plant, please contact MSU Diagnostic Services (517-355-4536), your county extension office, or the Michigan Department of Agriculture (1-800-292-3939).



Snail shells. Photo: L. R. Kolouch, Bugwood.org

References

Anon. Leaf snails (Hygromiidae).
Atkinson, J. W. Exotic, invasive, & pest snails and slugs of Michigan. Michigan State University. (<https://www.msu.edu/~atkinso9/index.html>)
Chatfield. 1968. The life history of the helicid snail *Monacha cantiana* (Montagu), with reference also to *M. cartusiana* (Müller). Proceedings Malacological Society of London. (<http://mollus.oxfordjournals.org/cgi/reprint/38/3/233.pdf>)
Illinois CAPS program. 2009 Illinois most “unwanted” invasive pests. Illinois Cooperative Agriculture Survey program. (<http://www.inhs.illinois.edu/research/CAPS/docs/2009%20most%20unwanted%20invasives.pdf>)
MDA. 2009. Michigan: summary of plant protection regulations. Michigan Department of Agriculture. (<http://nationalplantboard.org/docs/summaries/michigan.doc>)
Taylor, J. W. 1917. Monograph of the land & freshwater Mollusca of the British Isles. Part 23.
USDA-APHIS-PPQ. USDA APHIS PPQ MN pest detection surveys 2004.

February 2010.