

Vineyard snail *Cerutuella virgata*

The vineyard snail is an agricultural pest in Australia and Europe. Infestations on field crops have clogged machinery during harvest and snail-contaminated crops had reduced marketability.

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

Other common names

Mediterranean snail, common white snail, maritime garden snail

Systematic position

Mollusca > Gastropoda > Pulmonata > Hygromiidae > *Cerutuella virgata* (Da Costa)

Global distribution

Native to Mediterranean region and Western Europe including the British Isles, France, Morocco, and northwest Spain. The snail also has been established in southern Australia

Quarantine status

This snail is listed as an exotic organism of high invasive risk to the United States (USDA-APHIS 2008). It has been found and eradicated in North Carolina. More recently, infestations were detected at the Port of Tacoma in Washington State in 2005 and an eradication program has been employed subsequently (Chambers 2008).

Feeding habits and plant hosts

The snail primarily feeds on decaying organic matter. It also feeds on seedlings of cereals (barley and wheat), legumes (alfalfa, clover and peas), and pasture vegetation; and new growth of vines, shrubs and trees.

Biology

Adult snails mate and lay eggs in autumn and winter. Eggs are buried in shallow topsoil. Juveniles grow and mature through the spring. During hot, dry summer conditions, snails climb to the heads and stalks of plants or fences and enter dormancy (called aestivation). The life cycle is annual or biennial.

Identification

Shell characteristics: Size 6-19 mm high and 8-25 mm wide; color white to tan background with or without a single darker brown spiral band on the apical surface along the coiled shell; banding patterns variable.

These shell characteristics alone do not define the



Vineyard snail infestation. (Photo: J. Novák, BioLib.cz)

vineyard snail and more detailed examination by a trained specialist is required for positive identification.

Signs of infestation

Presence of small to medium-sized snails on plants, fences and other structures. Aestivating (inactive) snails atop of plants and fences.

Management notes

In Tacoma, Washington, eradication measures included clearing of vegetation in public and private properties, and use of molluscicides in broadcast treatments and snail bait.

Economic and environmental significance to Michigan

The vineyard snail is an agricultural pest in Australia and Europe. Large numbers of the vineyard snail aestivating at the top of cereals can clog machinery and contaminate grains during harvest. Crops contaminated with snails may be unacceptable or downgraded for marketing or transportation. For instance, barley shipped from southern Australia has been rejected by quarantine authorities in Chile because it was contaminated with live vineyard snails. Besides agricultural fields and pastures, the vineyard snail also has been found in native ecosystems in southern Australia, indicating that the snail may impact native flora and fauna. The snail acts as an intermediate host of several parasites that affect humans and domestic animals. Pasture and roadside vegetation are commonly infested.

Although the vineyard snail has not been found in Michigan, invasion of exotic snails has been a serious problem here. Four species of exotic snails found in the Detroit area have been targeted for eradication since 2000 (Seeley 2005). Introduction of the vineyard snail into Michigan would likely prompt a new eradication program after years of exotic snail eradication efforts.

Likely pathways of entry in Michigan:

Imported tiles. Enter as hitchhikers on or in cargo containers on ships.

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).

References

- Baker, G. H. 1988. The life history, population dynamics and polymorphism of *Cernuella virgata* (Mollusca: Helicidae). Australian Journal of Zoology. 36: 497-512. (http://www.publish.csiro.au/?act=view_file&file_id=ZO9880497.pdf)
- Chambers, B. 2008. Port of Tacoma *Cernuella virgata* (C. virgata) eradication program in Pierce County, Washington. USDA APHIS PPQ. (http://www.aphis.usda.gov/plant_health/ea/downloads/tacoma_snails_ea6-30-98.pdf)
- Gordon, S. 2007. It's gonna take a lot of snail bait on Tideflats. The News Tribune. (<http://www.thenewstribune.com/news/environment/story/195142.html>)
- Rosetta, R. 2004. Pacific Northwest nursery IPM: snails/slugs. Oregon State University, Horticulture Department. (<http://oregonstate.edu/dept/nurspest/snails.htm>)
- Seeley, K. R. 2005. EPA-HQ-OPP-2005-0231; USDA APHIS comments on metaldehyde RED. USDA APHIS PPQ. (www.regulations.gov)
- USDA-APHIS. 2009. Pests of national concern for fiscal year 2009. (http://www.aphis.usda.gov/plant_health/plant_pest_info/pest_detection/downloads/survey/survey-2009/Appendix-G.pdf)

February 2010.