

California Pest Rating

Xerotricha conspurcata (Draparnaud): A Hygromiid Snail

Helicoidea: Hygromiidae

Pest Rating: B

Initiating Event:

On February 2, 2015 USDA inquired as to the status of *Xerotricha conspurcata* in California. A pest rating proposal is required to determine future direction.

History & Status:

Background: *Xerotricha conspurcata* is an air-breathing snail that is predominantly detritivorous¹. High populations are reported to be problematical in vineyards and orchards¹. The snail can be moved long distances as a contaminating pest on consignments of tile and other building supplies.

Worldwide Distribution: *Xerotricha conspurcata* is native to the Mediterranean region of Europe². It is not known to occur outside of Europe. It might be present in Washington state¹.

Official Control: *Xerotricha conspurcata* is not listed as a harmful organism by any other states or nations³.

California Distribution: The only documented official specimen of *Xerotricha conspurcata* that might be from the environment of California was found in South San Francisco (San Mateo County) in 1998 (PDR 1117385). There are literature reports that the snail is established in four or five counties in the San Francisco Bay area⁴ but the source of these data are unknown.

California Interceptions: *Xerotricha conspurcata* was intercepted eight times in 1996 on rocks, *Eucalyptus* sp., chipped wood, concrete piling, lumber, wood, cardboard, and soil.

The risk *Xerotricha conspurcata* would pose to California is evaluated below.

Consequences of Introduction:

1) Climate/Host Interaction: *Xerotricha conspurcata* is native to the Mediterranean region of Europe. Much of California's climate is similar to this region. The snail is predominantly a generalist detritivore, so it is likely to encounter suitable host plants throughout the state. *Xerotricha conspurcata* receives a **High (3)** in this category.

Evaluate if the pest would have suitable hosts and climate to establish in California. Score:

- **Low (1)** Not likely to establish in California; or likely to establish in very limited areas.
- **Medium (2)** may be able to establish in a larger but limited part of California.
- **High (3)** likely to establish a widespread distribution in California.

2) Known Pest Host Range: *Xerotricha conspurcata* is primarily a detritivore but high populations may feed on plants. The snail receives a **Medium (2)** in this category.

Evaluate the host range of the pest. Score:

- **Low (1)** has a very limited host range.
- **Medium (2)** has a moderate host range.
- **High (3)** has a wide host range.

3) Pest Dispersal Potential: Snails have high reproductive rates and can be moved long distances when contaminated plants or items are moved. *Xerotricha conspurcata* receives a **High (3)** in this category.

Evaluate the natural and artificial dispersal potential of the pest. Score:

- **Low (1)** does not have high reproductive or dispersal potential.
- **Medium (2)** has either high reproductive or dispersal potential.
- **High (3)** has both high reproduction and dispersal potential.

4) Economic Impact: *Xerotricha conspurcata* is not documented as a pest in scientific literature. There are no reports that suggest that it will lower crop yields, lower crop values, trigger losses of markets, negatively change cultural practices, vector other organisms, injure animals, or interfere with water supplies. *Xerotricha conspurcata* receives a **Low (1)** in this category.

Evaluate the economic impact of the pest to California using the criteria below. Score:

- A. The pest could lower crop yield.
- B. The pest could lower crop value (includes increasing crop production costs).
- C. The pest could trigger the loss of markets (includes quarantines).
- D. The pest could negatively change normal cultural practices.
- E. The pest can vector, or is vectored, by another pestiferous organism.
- F. The organism is injurious or poisonous to agriculturally important animals.
- G. The organism can interfere with the delivery or supply of water for agricultural uses.

- **Low (1)** causes 0 or 1 of these impacts.

- **Medium (2)** causes 2 of these impacts.

- **High (3)** causes 3 or more of these impacts.

5) Environmental Impact: *Xerotricha conspurcata* is not expected to lower biodiversity, disrupt natural communities, or change ecosystem processes. The snail is not expected to directly affect threatened or endangered species or disrupt critical habitats. It is not likely to trigger additional treatment programs or significantly impact cultural practices, home/urban gardening, or ornamental plantings. *Xerotricha conspurcata* receives a **Low (1)** in this category.

Evaluate the environmental impact of the pest on California using the criteria below.

- A. The pest could have a significant environmental impact such as lowering biodiversity, disrupting natural communities, or changing ecosystem processes.
- B. The pest could directly affect threatened or endangered species.
- C. The pest could impact threatened or endangered species by disrupting critical habitats.
- D. The pest could trigger additional official or private treatment programs.
- E. The pest significantly impacts cultural practices, home/urban gardening or ornamental plantings.

Score the pest for Environmental Impact. Score:

- **Low (1)** causes none of the above to occur.

- **Medium (2)** causes one of the above to occur.

- **High (3)** causes two or more of the above to occur.

Consequences of Introduction to California for Common Name: **Medium (10)**

Add up the total score and include it here.

- **Low** = 5-8 points

- **Medium** = 9-12 points

- **High** = 13-15 points

6) Post Entry Distribution and Survey Information: *Xerotricha conspurcata* is reported to be found in four to five counties of the San Francisco Bay area. However, this is not confirmed with official specimens. The presence of this snail in California is doubtful. The snail receives a **Not established (0)** in this category.

Evaluate the known distribution in California. Only official records identified by a taxonomic expert and supported by voucher specimens deposited in natural history collections should be considered. Pest incursions that have been eradicated, are under eradication, or have been delimited with no further detections should not be included.

- **Not established (0)** Pest never detected in California, or known only from incursions.

- **Low (-1)** Pest has a localized distribution in California, or is established in one suitable climate/host area (region).

- **Medium (-2)** Pest is widespread in California but not fully established in the endangered area, or pest established in two contiguous suitable climate/host areas.

- **High (-3)** Pest has fully established in the endangered area, or pest is reported in more than two contiguous or non-contiguous suitable climate/host areas.

Final Score:

The final score is the consequences of introduction score minus the post entry distribution and survey information score: **Medium (10)**

Uncertainty:

The presence of this snail in the environment of California is uncertain. There is only one official specimen collected in 1998 and the origin of that specimen is not clear. It is possible that *Xerotricha conspurcata* is not present in California.

Conclusion and Rating Justification:

The presence of *Xerotricha conspurcata* in California is doubtful. However, if it were to establish in the state it is expected to have limited economic and environmental impacts. A "B" rating is justified.

References:

¹ National Agricultural Pest Information System (NAPIS). Purdue University. "Survey Status of Hygromiid Snail - *Xerotricha conspurcata* (All Years)." Published: 01/27/2015.

<http://pest.ceris.purdue.edu/map.php?code=IGDGAYA&year=alltime>. Accessed: 02/02/2015. <http://pest.ceris.purdue.edu/pest.php?code=IGDGAYA>

² GBIF.org <http://www.gbif.org/species/4564725>

³ USDA Phytosanitary Certificate Issuance & Tracking System (PCIT) Phytosanitary Export Database (PEXD). <https://pcit.aphis.usda.gov/pcit/>

⁴ Cowie, R.H., R.T. Dillon, Jr., D.G. Robinson, and J.W. Smith. 2009. Alien non-marine snails and slugs of priority quarantine importance in the United States: A preliminary risk assessment. *American Malacological Bulletin* 27: 113-132. <http://www.stoppinginvasives.com/dotAsset/9d6257ee-fcf9-4e74-afce-1183466d390a.pdf>

Responsible Party:

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Comment Period:

The 45-day comment period was opened on Monday, March 16, 2015 and closed on Thursday, April 30, 2015.